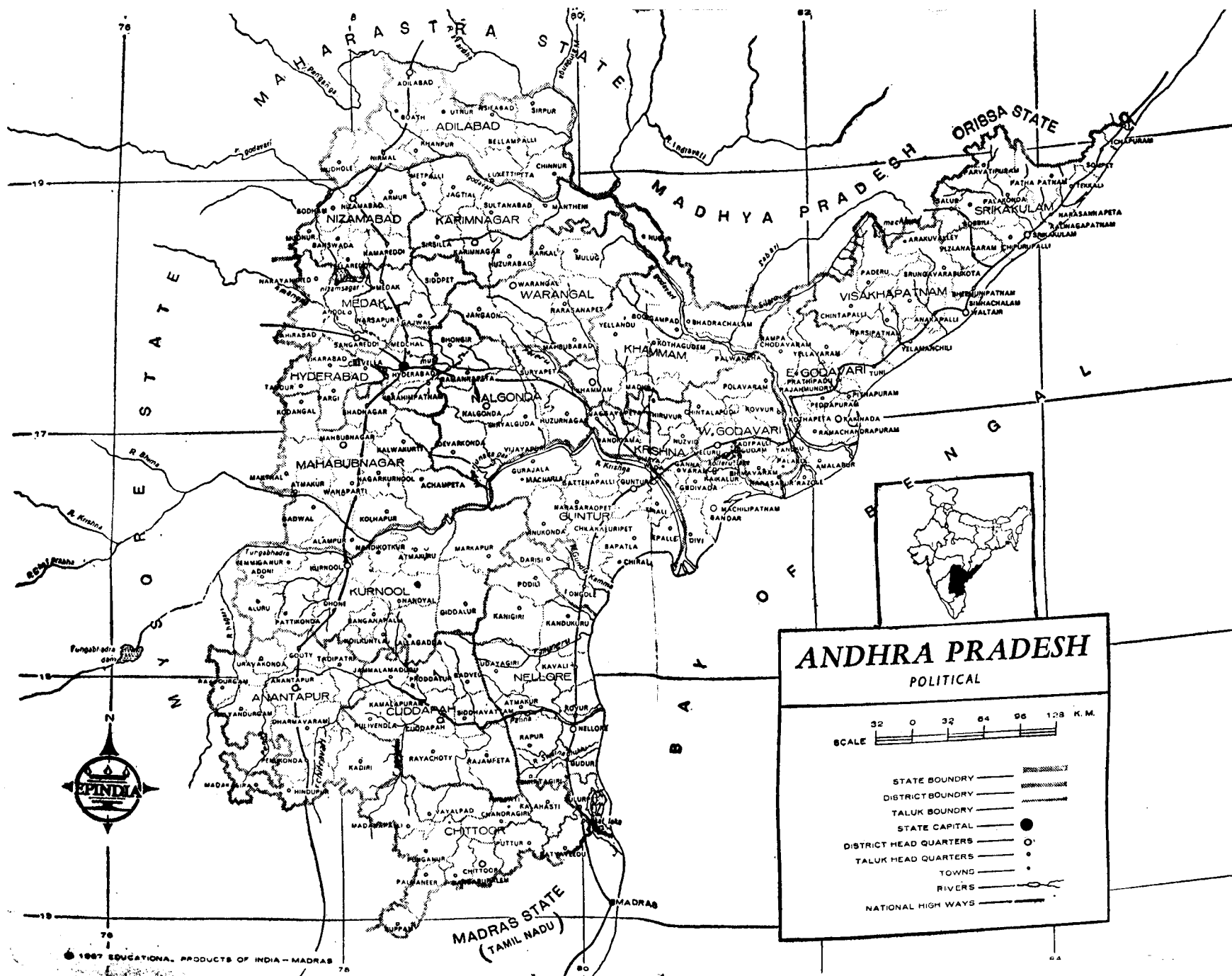


ANDHRA PRADESH ALMANAC

1968



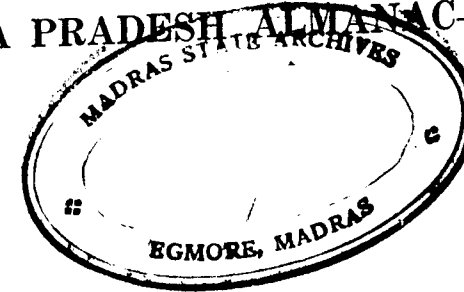
BASIC FACTS ABOUT ANDHRA PRADESH

State Capital	Hyderabad (Pop. 12, 51, 120)
Chief Language :	Telugu
Area, 1961	2,75,280 Sq. Km.
Total Population, 1961	3,59,83,000
Districts (Zilla Parishads)	20
Taluks, 1961	189
Villages, 1961	28,997
Gram Panchayatis, 1965-66	15,166
Panchayati Samitis (as from 1-7-64)	321
Towns and Cities, 1961	212
Urban Population	17.44%
Density of Population, 1961	131 per Sq. Km.
Literate persons, 1961	76.27 lakhs
Literacy, 1961	21.2%
State Income (at current prices) 1965-66	Rs. 1,329 crores
Value of agricultural output 1965-66	Rs. 776 crores
Per capita income (at current prices) 1965-66	Rs. 336.94*
Electric Power Consumption per capita, 1965-66	26.8 KWH
Fourth Five-Year Plan (Provision)	Rs. 522 crores @ †
Registered Factories, 1965	3,928
Modern Hospitals, 1966-67	392
Dispensaries	963
Hospital Beds	23,154
Doctors	2,606
Primary Schools	37,778
High Schools	2,264
Colleges of Gen. Edn.	119
Universities, 1965-66	4 ‡
Medical Colleges (Modern Medicine)	8
Engineering Colleges	7
Polytechnics	22
Members of Parliament from Andhra Pradesh : (Lok Sabha 41; Rajya Sabha 18)	59
Members of Legislative Assembly	288 §
Members of Legislative Council	90

* Quick estimates; @ Provisional; † Original provision
Rs. 700 crores; ‡ Includes one Agricultural University;
§ Includes one Anglo-Indian Nominated Member.

(Map of Hyderabad city is given on end papers at the end)

ANDHRA PRADESH ALMANAC-1968



With compliments of



TELUGU BHASHA SAMITI

An institution engaged in the publication of an encyclopaedia in Telugu

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First Edition

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Rs. 6-00 (Paper back)
\$ 3-00 (Abroad)

INTRODUCTION

In the modern world, when history is moving at a rapid pace, it is incumbent upon every civilized individual to keep abreast of events and to be well-informed so as to enable himself to play his role well. Media such as newspapers, magazines, periodicals, year-books, directories, almanacs, etc., are intended to fulfil the function of providing the necessary up-to-date information to the citizen. As such, in the modern era, the number of such media of information has become a yard-stick to evaluate the standard of civilisation of a country or region. But, unfortunately, India, when its size and population are taken into consideration, comparatively lags far behind. So any attempt such as this publication 'The Andhra Pradesh Almanac' is welcome and praiseworthy by itself.

But, to add to this, the present publication has got a unique feature of its own and, as such, may be taken to be a pioneering effort in a new direction. India is in all sense a vast and ancient country; but in another sense ever-young country. 'Unity in Diversity' has been her prime national characteristic throughout the ages. Culturally, economically and politically the various linguistic units of India have been contributing their mite to the common Indian heritage and any understanding of India would certainly be incomplete and lopsided if media with regional emphasis are wanting. The Andhra Pradesh Almanac, as an annual publication, is intended to satisfy this want as far as Andhra Pradesh is concerned. This is the first one of its kind in the English language, which happens to be the most widely understood language of the world. If the necessary information given about Andhra Pradesh is to reach not only Andhras but also non-Andhra Indians and a wide circle of interested foreigners, the available language medium is English only and for the present, we are left with no other alternative course.

INTRODUCTION

The present Almanac, as far as it goes, is a balanced one. It gives in a concise yet comprehensive manner all the necessary information about the geology, geography, history, Government, economy (agriculture, industry, commerce, finance) manners, religion, literature and music and art of the State of Andhra Pradesh with the general Indian background. In addition to this it gives districtwise information, and hence serves, within certain limitations, as a trade directory. The 'Who is Who' is comprehensive and gives the necessary biographical data of eminent contemporary Andhras in a compact manner.

The editor of this publication, the Andhra Pradesh Almanac, Mr. B. Subbarayan is already known to the reading public of Andhra as the Compiler of *Vijnana Sarvaswamu* (Telugu Encyclopaedia). He is an energetic young man devoted to liberal studies and the Almanac itself stands as an evidence of his tireless zeal, patience, industry and depth of knowledge.

Within the limitations a pioneering attempt would naturally be beset with, the publishers have largely met with success in their aim of bringing out an authoritative and reliable Almanac and I hope that the attempt would be met with suitable response from the reading public so as to enable the publishers to add some more features in the next issue and publish it simultaneously in Telugu also.

80, Maredpalli,
SECUNDERABAD.
Oct. 17, 1967.

M. VENKATARANGAIYA.

PUBLISHERS NOTE

As rightly observed by the veteran Professor in his introduction a basic need for a source book of information — all about Andhra Pradesh — was keenly felt. We have ventured to take up this and present the same in this form. We hope it will serve those for whom it is intended. Nevertheless, we feel as we go on issuing this publication year after year it will naturally be improved in content and form. Feed back from readers in the form of new ideas to improve the content is invited for consideration of our Editor.

We express our grateful pranams to revered Mr. Mamidipudi Venkatarangaiya (formerly Professor of Politics, University of Bombay) who blessed us with his introduction detailing the objectives of the book.

We express our grateful thanks to all those who encouraged in support of our effort. The advertisers supported this project financially to some extent. Messrs. G. Premchand of Madras, D. R. K. Raju of Hyderabad helped a lot in our effort.

And we take this opportunity of thanking all who rendered help in their fields of activity.

THE EDUCATIONAL PRODUCTS OF INDIA.

Madras,
Nov. 1, 1967.

ACKNOWLEDGMENT

Assigned by the Educational Products of India, I have undertaken to endeavour my best to present available facts, figures and materials on Andhra Pradesh in an acceptable pattern in this Andhra Pradesh Almanac 1968. Several years of my experience at Telugu Bhasha Samiti put me in confidence to undertake in marshalling and organising the materials presented here. Details of treatment of this text materials are laid out in 'How to use this book.' This is an annual publication.

Mr. M. Anandam, Deputy Chairman, Andhra Pradesh Legislative Council encouraged the idea in May 1967 when I sought his advice. The keel was laid as detailed in the contents and discussions were held with several knowledgeable persons. And many good friends of mine encouraged the idea of this venturesome undertaking and only their moral support and constant guidance resulted in this way. My colleague Mr. Cheemakurti Seshagiri Rao and other friends Messrs. D. Anjaneyulu, N. V. R. Seshagiri Rao and a few others who desire to be anonymous helped me in many ways. Particular mention must be made of painstaking effort of Mr. D. Nagaiya, Faculty Associate, Small Industry Extension Training Institute, Hyderabad, in re-rendering the industry in the 'Economy of Andhra Pradesh' and those items on industry in the districts. Mr. Vijaya helped in compiling tables for sun rise and set for certain stations in Andhra Pradesh.

Mr. P. Sudarsan, G. D. Art, Cartographic Artist, Mudrana Kala Mandir, 115-A, Lloyds Road, Madras-14, specially prepared Maps of Andhra Pradesh and Hyderabad city reproduced on end papers.

I owe a debt of gratitude to the Management of Telugu Bhasha Samiti, particularly to the Secretaries Mr. M. Satyanarayana and Dr. D. V. Subba Reddi for permitting me to undertake this assignment in my spare time.

Materials presented inside this book are based on authentic sources. Meticulous care has been exercised in presenting the data accurately. Weights and Measures are presented in Metric system. Errors, and omissions if any will be rectified in the next annual edition, if attention is drawn.

Madras.
Nov. 1, 1967.

B. SUBBARAYAN

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HOW TO USE THIS BOOK

The Andhra Pradesh Almanac 1968, a reference Annual consists of easy-to-refer sectionwise units as detailed in contents followed by Industrial and Commercial Directory classified into 30 different topics, Current Biography (Who is Who) and Astronomical Data.

In the arrangement of the main body of this book, you will find at times detailed treatment on such vital topics like Industrial Development and Industrial Potential and other aspects of Economy of Andhra Pradesh. Entries on Land and People, Brief Political History, Recent Political Background, Culture (Literature, Visual Arts, Dance and Drama), Education, Government Organisation, Mass Communications, Tourist Attractions are highly specified areas with functional and formal approach; these try to give substantial background on various facets of many related fields of activity in Andhra Pradesh. Directory information is given side by side (as in Visual Arts etc.) to serve immediate purpose of the reader. To make it more functional in design 'Not more than necessary but everything that is necessary' is the maxim followed in design and execution of this publication. Facts, figures and materials are arranged to look up answers to specific question quickly and easily and cross referenced wherever possible to help the reader in many ways.

The entry on industry is subdivided into major areas: Industrial Development; and Industrial Potential. The former acquaints the Industrial base that already exists in Andhra Pradesh. The latter pinpoints certain specific potentials for starting new industries in view of already existing industries and resources available in the State. This helps entrepreneur to locate and identify his ventures.

District Profiles attempt to acquaint salient features and background of each of the 20 districts arranged geographically on a set criteria. For instance, District historical background, physiography, economy sub-divided into important features such as forms of land use, cropping pattern, industry and so on are given.

EDITOR.



ABBREVIATIONS USED IN THIS BOOK

A.C.	— Air Conditioned	mi	— mile
A.D.	— Since Christ was born	Min	— Minimum
Add.	— Address	mm	— milli metre
AM	— Fore noon	MW	— Megawatt
Apr.	— April	N	— North
Aug.	— August	n.a.	— not available
b	— born	NCAER	— National Council for Applied Economic Research
B.C.	— Before Christ	Nov.	— November
°C	— Degrees Centigrade	Oct.	— October
Cent	— Century	PM	— After noon
Cu.m.	— Cubic Metres	PL 430	— Public Law 480
Cusecs	— Cubic feet per second	Pop.	— Population
Dec.	— December	Pres.	— President
Dt.	— District	Ps	— Paise
DWT	— Dead Weight	Pubn.	— Publication
E	— East	rv	— which see
Edn	— Education	Rs.	— Rupees
Feb.	— February	S	— South
ft.	— feet	Secy.	— Secretary
ha	— hectare	Sept.	— September
H T	— High Tension	Sq. Km.	— Square Kilometre
Jan.	— January	TF	— Telephone
Kc/S	— Kilocycles per second	TM Cft.	— Thousand Million Cubic feet
Km	— Kilo metre	TM Cu.m.	— Thousand Million Cubic metres
K W	— Kilo Watt	TQ	— Taluk
K W h	— Kilo Watt Hour	Univ.	— University
L T	— Low Tension	USAID	— United States Agency for International Development
m	— metres	W	— West
M. Ac. ft.	— Million Acre feet		
Mar.	— March		
Max.	— Maximum		
Mem.	— Member		

ANDHRA PRADESH ALMANAC—1968

is just timed to appear for

INDIAN INTERNATIONAL TRADE AND INDUSTRIES FAIR — 1968
MADRAS

As a source book for visitors to the Fair to explore trade and industrial potentialities in the State of Andhra Pradesh (See page 91).

Hon'ble Mr. Kasu Brahmananda Reddi, Chief Minister of ANDHRA PRADESH said about this Andhra Pradesh Almanac — 1968 when the first copy was presented to him on Andhra Pradesh Day, Nov. 1, 1967, "A Smart Hand Book on Andhra Pradesh. We must carry a copy wherever we go."

Note: Weights & Measures are expressed in Metric System. See Simple Conversion Guide.

GUNTUR

a very important place in Andhra Pradesh. A centre of education and many cultural activities, it has put on the world map

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ANDHRA PRADESH ALMANAC ADVT.

ANDHRA PRADESH—LAND & PEOPLE

LOCATION—The Andhra Pradesh one of the Seventeen States in the Republic of India is situated between latitudes 12° 14' & 19° 54' N. of equator and the longitudes 76° 50' & 86° 50' E. of Greenwich. It lies on the eastern sea board of the peninsula and south eastern part of Indian subcontinent. **Boundaries:** N. Orissa Madhya Pradesh and Maharashtra; E. Bay of Bengal; S. Madras; and W. Mysore and Maharashtra. It has a coastline of 960 km. Throughout the long coastline, there are 10 big and small ports, the major port being Visakhapatnam; two minor ports are at Kakinada and Machilipatnam. The others 7 are smaller ports. Andhra Pradesh is accessible both by land and sea. Area 2,75,280 sq. km.; Population: 3,59,83,477. With 8.4% of total area and 8.2% of total population in India Andhra Pradesh is the fifth largest State in the Indian Union and stands fourth in population. Capital: Hyderabad (Pop. 13,51,120).

GEOLOGICAL BACKGROUND—There are three main mountain chains in the State; (1) Eastern Ghats fringing the east coast line, with at some places a very narrow coastal plain; (2) the Deccan Plateau with the Sahyadri range of Adilabad pr. at the north border of the State and (3) the Horseley and other hills of the Chittoor and Anantapur districts at the south border. The Eastern Ghats and their southern continuation taken up by the Nallamalais run through the entire State. They are in the form of a great convex arc, convex to the west. The northern part of this hill range is composed Khondalites and related ancient rock formations. In the southern part Nallamalais are composed of folded rocks of a slightly younger age—the Cuddapahs. The Sahyadri range is composed of flat topped hills and is formed of the Deccan trap lava flows, with their characteristic stepped appearance. The hills of the southern parts are composed of granites and other formations, much dissected and standing out as big hills, just as the hills around Hyderabad city. The oldest formations of the State are the Khondalites and associated rock formation. These are considered to have been originally deposited in the sea bottom as sands and clays and subsequently subjected to folding and heating due to intrusion of molten rock materials and also depression into deeper layers of the earth's crust. These contain the graphite and manganese deposits in the State.

Dharwars—These old formations are succeeded by slightly younger group of equally metamorphosed rocks known as the Dharwars. These are the mica schists found in the Nellore pr with the mica bearing pegmatites and traces of copper mineralisation. In Anantapur and Chittoor districts they are found as hornblende schists with the gold

bearing quartz veins as near Ramagiri and Bisanatham. Copper mountains, near Bellary and the hills near Chandoli of Karimnagar, and nearby parts of Adilabad, contain the banded haematite quartzites. At places these are enriched to form iron ore as in the copper mountain range.

Granites—Intrusive into these formations are the vast granites and Charnockites which are considered by some to have come up in the form of molten liquid, solidifying in the places, we now see them. Most of the granites of the State are found more or less barren of economic mineral deposits. Some small deposits of chromite are found in the Charnockites near Vijayawada.

Cuddapah Group—These formations are followed by flat dipping beds of the Cuddapah group. These are found in a large crescent shaped basin in Cuddapah and neighbouring or as long narrow strips along the Godavari Valley in Khammam, Adilabad and intervening districts. These formations contain large deposits of limestone which are the basis of the cement industry of the State. Lime stone is used for flooring in the form of slabs or flags locally known as the Cuddapah or Shahabad slabs. Some basic sill deposits of barytes, asbestos, and steatite are found associated with this formation. Andhra Pradesh is the foremost producer of barytes in India. The diamond bearing conglomerates of Banaganapalle are also part of these formations. Some large iron ore deposits are found in these formations as well as in the sandstones of this group as in Khammam and Kurnool districts. Copper and lead deposits of Gani, Agnigundala and Yellambettu of Kurnool, Guntur and Khammam or belong to these. Markapur slates too belong to this Cuddapah group.

Gondawanas—Overlying Cuddapah rocks in part, there is the long strip of Gondawana formations in the Godavari valley. These sandstones and mud stones are considered to be formed in long river valleys and contain valuable coal deposits of the state, which have been a source of fuel and energy for the industries of the entire southern India. These are being exploited since the end of the last century. (See Khammam or.). After the deposition of the Gondwana there has been volcanic activity in peninsular India. The lavas which have flowed out have a stupendous volume and cover most of Maharashtra, Madhya Pradesh, and parts of the Gujarat and Mysore. Only the eastern fringe of these lavas are found in this State, along the western and the northern borders. A small flow of the same age is seen near Rajahmundry. These lava flows have been succeeded by sediments of marine origin along with the eastern coast. These contain some clay as near Bhimadol (W.G. or) and Rajahmundry. (See Mineral Resources.)

PHYSIOGRAPHY: Natural Regions: (1) Coastal plains (delta region); (2) Eastern Ghats; and (3) Peneplains (which means an area reduced almost to plain by erosion).

The Coastal plains—The littoral (pertaining to the shore as of sea etc.) part of the State represents the widest cross-section in the middle and tapers off into a narrow strip to the north, dotted with numerous hills and hillocks of the Eastern Ghats, the higher hill being Mahendragiri. The yaroda ridge lying south of Vizianagaram town protrudes into the fold cliffs of Dolphin's nose, which shelters the harbour at Visakhapatnam. Next, E. Godavari, W. Godavari, Krishna and Guntur districts constitute the broad central plain. The coast for several kilometres is largely fringed with mangrove swamps and sand arising upto 10 or 15 metres high. In fact, the true deltas built by the great rivers Krishna and Godavari cutting across the eastern hills lie between the swampy and peneplained areas. Curiously enough, hills and hillocks on the coastal plains virtually absent for about 150 km. into the interior. Where the river emerges out of the hill ranges there is a marked change in the landscape. At Indrakiladri, a gneissic ridge, near Vijayawada town, 72 km. away from the sea, the river Krishna crosses the hill range and begins to form the Krishna delta. The Akhanda Godavari branches off near Rajahmundry town at Dowleswaram, 64 km. away from the sea into Gowtami and Vasishta and Vynateyam. It gives rise to a highly fertile alluvium delta known as Konaseema in the eastern region. Depression known as Kolleru lake lies in the heart of these two river deltas bordering West Godavari and Krishna districts. The narrow coastal plain on the south is occupied by Nellore or. The land is poor with low plateau areas. The southern boundary lies along the Tirupati escarpment overlooking the Renigunta basin. Penna forms delta in Nellore or with coastal belts of alluvium 3 to 20 km. wide between low-level laterite and the blown-out sands of the shore. The great lagoon, Pulicat lake is located in this part. (See Water Resources)

The Eastern Ghats—Eastern Ghats are a chain of broken hills bordering the peneplained plateau in the interior. To the north of the Godavari, the Eastern Ghats widen and reach elevations of 900 m. to 1,500 m. The rampart of the eastern hills is completely breached for 160 km. between the Godavari and the Krishna. Cuddapah range of hills lie beyond the Krishna. The region forms a great crescent, the heart of it being the wide Nandyal valley, as its centre. Kunderu river, a tributary of the Penna drains into this valley. To the west, this trough is marked off from the Deccan plateau by the out facing scarp of Erramalai, Seshachalam and Palakonda range, formed of massive quartzites with slates and lavas. The Palakonda range rises about 900 m. from a fine scarp overlooking Anantapur and Chittoor basin. The eastern limb of the Kunderu basin is formed

by the parallel ranges of Nallamalai and Veligonda range, separated by a longitudinal valley drained by the Sagileru stream which joins the Penna. The hills are wooded but the vegetation is poor due to porous soils and low precipitation in the region.

The Peneplain—A peneplain is a land having highly eroded, flat hillocks scattered all over the surface. This almost plain land normally occurs between coastal plains and mountainous hinterland. The interior of the State consists of peneplains developed on the gneissic plateau. These occur in Anantapur, Kurnool and the Telangana districts. In the north, the faulting has preserved a belt of Gondwanas along the lower belt of the Godavari trough. The average elevation of the region lies between 450 m.—600 m. above sea level. In the south there is a sudden break of slopes from the Mysore plateau. The Krishna and the Tungabhadra valleys lie at altitudes of 300 m. to 450 m. In the north-west the watershed between the Bhima and the Godavari is a great table-land reaching 730 m. at certain places. The major portion is covered with red sandy soil derived from gneisses and granites. The general aspect everywhere is that of graded valleys and isolated hills or groups of hills breaking the monotony of the plains. Life is hard except in basins where soil wash and tank irrigation bring some prosperity. Bare hills, reddish or brown plains which scattered thorny shrubs, rivers merely ribbons of sands for more than half the year, tanks bounded into the little valleys—all combine to produce a barren and desolate aspect in much of the interior.

CLIMATE

Temperature—A hot summer followed by tropical rains and pleasant winter are the three chief seasons in Andhra Pradesh. The summer extends from Mar. to June, the hottest month being around May. In areas, *Ex. Waltair*, lying in the immediate vicinity of the sea, the summer months are generally cooler as the winter months are warmer. The difference between the maximum and minimum temperature increases as one goes away from the sea. The maximum temperature in summer varies between 37°C. and 44°C. but the areas in and around Rentachintala, Bhadrachalam, Ramagundam and Vijayawada have recorded 50°C. and above in some years. The lowest temperature in winter vary between 16°C. and 19°C. In some parts of Anantapur and Chittoor districts adjoining the Mysore plateau, summer may be characterized as mild.

Rainfall—The annual rainfall of the Andhra Pradesh has a wide variation ranging from a minimum of about 500 mm., at some places, to a maximum of over 1,400 mm. At others, nearly 3 times the minimum. Except in the extreme south-eastern portions, the months Dec.

Temperature (°C) of Selected Centres

Centre	1963		1964		1965	
	Max.	Min.	Max.	Min.	Max.	Min.
Ramagundam	34.0	22.4	44.1	14.0	34.3	20.5
Nizamabad	36.2	21.4	37.6	13.0	35.5	21.1
Hyderabad	31.1	19.13	39.9	11.7	32.5	19.5
Hanamakonda	33.0	21.6	43.1	14.8	33.8	21.9
Khammam	38.4	22.7	43.2	16.2	34.6	23.3
Nellore	33.5	24.1	42.3	19.1	33.9	24.3
Machilipatnam	31.8	23.0	34.1	18.6	31.0	22.4
Kalingapatnam	31.9	23.0	33.0	16.7	31.3	23.2
Rentachintala	34.8	22.0	44.1	16.0	34.3	21.8
Cuddapah	34.1	23.3	42.1	18.0	34.7	23.8
Kurnool	33.4	21.9	41.4	25.6	34.9	23.2
Anantapur	33.1	22.6	40.2	16.4	33.8	22.4
Kakinada	32.3	23.4	39.9	17.5	32.3	23.1
Visakhapatnam	31.4	23.3	36.2	17.9	32.8	23.9
Arogyavaram	30.5	19.4	36.7	13.6	30.8	18.5
Nidadavol	32.5	22.7	35.4	17.4	32.8	23.4
Mahbubnagar	31.8	19.6	41.1	15.3	32.8	21.2

: Provisional

Annual Rainfall (mm) in Andhra Pradesh for 1965-66

	Actual	Normal
Coastal Andhra	704.3	1004.4
Rayalaseema	435.1	671.8
Telangana	770.3	909.9
Total	680.1	895.4

SOURCE: Regional Director, Meteorological Department, Madras.

to Mar. receive little rain, the bulk of the rainfall being distributed in the remaining months especially June to Oct. **Monsoons**—The prevalence of the Indian south-west monsoon over Andhra Pradesh is during the months June to Sept. Monsoon rains contribute 81% of the annual rainfall in Telangana, 73% in Rayalaseema and 51% in Coastal Andhra Pradesh. Even during the monsoon period the rainfall is not distributed evenly over the area, but the variation tends to increase as we go northwards. Heavy rainfall is associated with low pressure systems which travel from the Head Bay of Bengal north-westwards towards Rajasthan. Only the northern portions of Andhra Pradesh are vitally affected by these systems, making the average monthly rainfall as high as 240 mm. in north Telangana and 170 mm. in the delta areas as compared to 100 to 120 mm. in the other areas. Telangana gets rain on nearly 11 days in a month during monsoon, North Coastal Andhra Pradesh 8 days, Rayalaseema 8 days, and South Coastal Andhra Pradesh 5 days. Floods are not uncommon in North Telangana and North Coastal Andhra Pradesh during monsoon. The south-western portions of Andhra Pradesh covering most of Rayalaseema may be termed as arid region. This region lies in the rain shadow area of the Western Ghats.

Sporadic pre-monsoon showers during Apr. and May due to heat and thunderstorms occur in all the areas of Andhra Pradesh, more or less evenly. But we do notice the general increase of rain as we proceed eastwards along any latitude. This is due to the incidence of cyclonic storms which form in the Bay of Bengal in the months of Oct. and Nov. and to a much lesser extent in the months of Apr. and May and travelling north-westwards, strike the coast of Andhra Pradesh. Once they cross, they weaken and in a large number of cases do not continue their path north-westwards but even take a north or north-easterly course. As such, much of the rainfall associated with them is restricted to the coastal belt. The Eastern Ghats also contribute to this effect. Flood havoc is much more severe in these storms than during the monsoon.

POPULATION

There are twenty districts in the State, the average area per district being 12,750 sq km. These cover 189 taluks with an average area of 1,518 sq km. per taluk. These taluks comprise of 1,000 revenue circles and the average area of a revenue circle is 290 sq km. There are 212 towns and cities and 28,987 villages in the State. Total area of Andhra Pradesh is 2,75,280 sq km. Total Population is 85,97,83,447.

Growth in population (1951-61): The population of the State in 1961 has risen to 359.83 lakhs from 311.55 lakhs in 1951 accounting for a rise of 15.1%.

LAND & PEOPLE

Population Picture (1961 Census)

No.	District	Area sq km.	Total population in thousands	Density (per sq km.)	Rural Pop. in thousands	Urban Pop. in thousands	Degree of Urbanization	Literacy (% to total population)
1.	Srikakulam	10,100	23,41	232	21,36	2,05	8.74	15.7
2.	Visakhapatnam	13,470	22,91	171	18,77	4,13	18.03	17.2
3.	East Godavari	10,830	26,08	241	21,25	4,83	18.54	26.0
4.	West Godavari	7,720	19,78	254	16,64	3,14	15.87	30.8
5.	Krishna	8,750	20,77	238	15,89	4,88	23.51	31.2
6.	Guntur	15,030	30,10	201	23,83	6,27	20.83	27.7
7.	Nellore	20,650	20,34	99	18,10	2,24	11.00	21.1
8.	Chittoor	15,160	19,14	126	16,95	2,20	11.47	20.9
9.	Cuddapah	15,340	13,42	87	11,65	1,17	13.20	21.8
10.	Anantapur	19,130	17,67	92	14,60	3,06	17.40	20.6
11.	Kurnool	24,030	19,09	80	15,42	3,67	19.23	21.4
12.	Mahbubnagar	18,440	15,91	86	14,31	1,60	10.04	13.5
13.	Hyderabad	7,740	20,63	266	7,80	12,83	62.18	85.1
14.	Medak	9,610	12,27	129	11,33	95	7.73	14.1
15.	Nizamabad	8,040	10,22	127	8,74	1,48	14.51	14.3
16.	Adilabad	16,330	10,09	62	8,53	1,56	15.49	11.7
17.	Karimnagar	11,870	16,22	136	15,07	1,14	7.06	12.9
18.	Warrangal	12,920	15,45	120	13,28	2,18	14.10	15.4
19.	Khammam	15,920	10,58	67	9,29	1,28	12.14	15.2
20.	Nalgonda	14,200	15,75	111	14,28	1,47	9.31	14.1
Andhra Pradesh		2,75,280	3,59,83	131	2,97,08	62,74	17.44	21.2*
All India		32,76,141	43,92,72	138	30,01,44	7,90,56	18	24

* This figure as % adult population is 23.85.

TRIBE-WISE POPULATION IN ANDHRA PRADESH

1. Andhs ..	1,468	17. Koyas ..	2,20,146
2. Bagatas ..	55,154	18. Malis ..	1,443
3. Bhils ..	83	19. Manre Doras ..	8,476
4. Chenchus ..	17,609	20. Mukha-Doras ..	9,965
5. Gadabas ..	21,840	21. Nayaks ..	2,902
6. Gonds ..	1,43,680	22. Porjas ..	9,350
7. Gowdus ..	3,392	23. Pradhans ..	9,701
8. Hill Reddis ..	3,894	24. Reddi-Doras ..	3,132
9. Jatapus ..	62,794	25. Ronas ..	23
10. Kammaras ..	24,629	26. Savaras ..	68,185
11. Khonds ..	21,754	27. Sugalis ..	96,174
12. Kolan ..	16,731	28. Thotisi ..	546
13. Konda-doras ..	86,911	29. Valmikiis ..	22,354
14. Konda-kapus ..	29,823	30. Yanadis ..	2,05,381
15. Konda-Reddis ..	35,439	31. Yerukulas ..	1,28,024
16. Kotla-Bentho-Oriyas ..	11,008	Total ..	13,22,011

SOURCE: Department of Public Relations & Information, Andhra Pradesh.

GROWTH OF POPULATION IN ANDHRA PRADESH (1901 to 1961)

Year	Population (in lakhs)	Percentage Increase over 1901 level	Decennial Increase		India	Density in Andhra Pradesh (per sq. km.)
			Total (lakhs)	Rate per-centage	Rate per-centage	
1901	189.99	..	..	..	..	..
1911	213.85	12.6	23.86	12.6	..	..
1921	214.86	15.1	1.01	0.5	5.7	78
1931	243.20	28.1	28.34	13.2	(-) 0.4	79
1941	274.19	42.3	30.99	12.7	11.0	88
1951	212.60	64.3	38.41	14.0	14.3	100
1961	259.78	89.4	47.18	15.1	13.4	114
					21.5	131

SOURCE: Census of India, 1961

Density of Population: The density of population works out to 131 per sq km. (All India: 138 per sq km.) as against 114 people per sq km. in 1951. It may be observed from the Table that Guntur or leads with 30.10 lakhs or 8.4% followed by East Godavari with 26.06 lakhs or 7.25%, Srikakulam with 23.42 lakhs or 6.5% and Visakhapatnam with 22.89 lakhs or 6.36%. Adilabad accounts for the lowest popula-

tion among all the districts of the State having only 10.09 lakhs or 2.81% of the total population of the State. So far as density of population is concerned Hyderabad or has the highest density, being 266 per sq km. Adilabad stands last with a density of 62 persons per sq km.

Khammam or accounts 30.84% the highest percentage of increase in population over 1951 while Mahbubnagar registered only an increase of 9.92%.

Sex Ratio: The rate of growth of the men population is reflected in the sex ratio. The sex ratio works out to 980 women per 1,000 men according to the 1961 census as against 986 women per 1,000 men in the previous decenium. It is interesting to note that in almost all the districts the number of men exceeds women except in Srikakulam and Visakhapatnam in the Andhra region and Mahbubnagar and Nizamabad in the Telangana region. Srikakulam or accounts for 1,035 women per 1,000 men while in the case of Nizamabad and Visakhapatnam the women exceed only by 5 per 1,000 men. The population of Hyderabad or reveals a large disparity between the men and women population, the ratio being 927:1,000.

Religious Pattern: For the entire state, Hindus constitute about 88% while Muslims 8% and Christians 4%. Sikhs and Buddhists form very small number with 0.03% and 0.02% respectively.

Hindus: Coastal region has large percentage of Hindus with 99% in Srikakulam. Following closely are Visakhapatnam and East Godavari Districts with more than 96%. However Guntur has only 78%, the lowest in coastal districts. Nellore too records less than 90% Hindus. Rayalaseema region except Chittoor has less than 90% of Hindus; by and large, Muslims fill the gap.

Muslims: With 15% of Muslims, Kurnool (Hindus 78%) leads next to Hyderabad or in Muslim population: Cuddapah comes close to it with 14% Muslims. In Telangana region, Muslim population is more than 10% only in Hyderabad and Medak districts. Mahabubnagar and Adilabad districts record 8% Muslims while all the other Telangana districts have 4 to 6%. Muslims focus generally in urban centres like Hyderabad city (36.4%); Kurnool city (34.09%); Guntur city (18.02%).

Christians: Guntur has highest percentage (13%) of Christians in the State. Following closely is Krishna with more than 10%. West Godavari, Nellore, Cuddapah, Kurnool and Khammam have 4 to 7%. In other districts in the State, the Christian population is less than 3%. Karimnagar has the lowest Christian population of 0.9

Others: 4,225 Sikhs in Hyderabad or constitute 0.28% of the district total. Similarly 5,754 Buddhists in Adilabad or constitute 0.57% of the district total. Except Mahbubnagar and Khammam districts all the other Telangana districts have 200 to 700 Sikhs each. Hyderabad, Visakhapatnam and East Godavari are the only other districts which have 100 to 300 each of Buddhists.

Language Pattern: Telugu: In the entire State of Andhra Pradesh 89% have Telugu as their mother-tongue. Coastal region and Karimnagar exceed 90% of Telugu speaking while Adilabad has only 85% of Telugu speakers. Cuddapah, Mahbubnagar, Medak, Warangal and Nalgonda have Telugu speakers ranging between 80 and 90%. Chittoor, Anantapur, Kurnool and Khammam have 70% to 80% of Telugu speakers.

Urdu: 1% State population have Urdu as their mother-tongue. Urdu speakers in Cuddapah, Kurnool, Hyderabad, Medak and Nizamabad exceed 10%, the highest is Hyderabad with 26% (Hyderabad city more than 38%). In Rayalaseema region, Kurnool has the largest number 2.6 lakhs of Urdu speakers followed by Cuddapah and Anantapur with about 1.65 lakhs. Chittoor has 1.3 lakh Urdu speakers. Guntur with 2.83 lakhs Urdu speakers or 8% of district total tops in coastal region while Nellore and Krishna have nearly one lakh each. In the other coastal districts, the number of Urdu speakers varies between 4,500 in Srikakulam and 33,000 in West Godavari.

Linguistic Minorities: Lambadi: In Andhra Pradesh, 1.6% of the State population speak Lambadi, a tribal language. 4 to 7% of district total in Warangal, Mahbubnagar, Khammam and Nalgonda speak Lambadi. Warangal has maximum number 1.6 lakhs of Lambadi speakers. Anantapur in Rayalaseema, Guntur and Krishna in coastal Andhra have more than 10,000 each of Lambadi speakers.

Tamil: 1.2% of State population speak Tamil. Chittoor or with 2.9 lakhs Tamil speakers constitute 15% of the district total. Thus 66% of Tamil speakers in Andhra Pradesh live in Chittoor or. Hyderabad with 44,665 or 2.2% of district total and Nellore with 41,033 or 2% of district total are Tamil speaking areas. 95% of Hyderabad Tamils live in urban parts of the district. Vijayapuri (Nagarjunasagar) has a Tamil population of 8,665 in the dam site. In other parts of the State, number of Tamil speakers is lower than 2,000.

Kannada: Kannada speakers constitute 1.1% of State population. About 40% of Kannada speakers in the State live in Anantapur with 1.7 lakh or 10% of district total. Kurnool with 90,000 or 5% of district total comes next to Anantapur. Kannada speakers in Hyderabad, Medak, Mahbubnagar and Nizamabad districts vary between 15,000

and 30,000. More than 15,000 in Chittoor or have Kannada as their mother-tongue.

Thus it can be seen in outlying bordering districts of Chittoor, Anantapur, Kurnool, Nizamabad and Adilabad more than 20% of the respective district population speak non-Telugu languages. Hyderabad city records 38.51% of Urdu speakers. Koya and Lambadi in Khammam constitute more than 20%. Adilabad, which borders Maharashtra State, is influenced not only by Marathi but also by a tribal language of Gond. Less than 10% constitute non-Telugu mother-tongue speakers in coastal region with lowest 1.67% in East Godavari. Significantly, Srikakulam and Visakhapatnam which are contiguous with Orissa State are not influenced by Oriya, as the bordering terrain is predominantly uninhabitable agency tract.

Literacy Pattern: For the entire State 23.85%* adult (above 15 years) population are (Men: 35.57%; Women: 12%) literate. Hyderabad or with 39.46% records highest literacy; closely followed by Krishna with 35.69%. East Godavari, West Godavari and Guntur have more than 30% while Adilabad, Karimnagar and Mahbubnagar record lowest ranging between 10 to 14.99%. All Rayalaseema districts record literacy around 25% to 26%. Among men literacy is highest in Hyderabad or with 54.16% of total men in the or followed by Krishna and West Godavari with 46%. East Godavari, Guntur, Cuddapah, Nellore come next with 40%. The lowest is in Adilabad with 21.86%. Among women in Krishna and West Godavari and Hyderabad literacy ranges between 20% and 25%. East Godavari and Guntur follow these with 15%. Cuddapah has poor literacy among women with 9.16% in contrast to literacy among men 40%. All the other districts range between 5% and 9% while the lowest literacy among women is in Medak and Karimnagar districts.

The Distribution of Population: Andhra Pradesh has 212 towns with a population of 62.75 lakhs and 28,997 villages with 297.03 lakhs. The percentage of urban population in the State is 17.4 only. Hyderabad, the capital has got a population varying from 10 to 20 lakhs. Densities of urban population are high both in the high and low productivity tracts but high densities of rural population almost coincide with the areas of high agricultural productivity. The highest concentration of rural population is to be found in the Krishna and Godavari Delta, the tract of highest productivity in Andhra Pradesh. In this delta, there is also a concentration of urban population; 3 cities and 74 towns out of 212 cities & towns in the State of Andhra Pradesh are situated in the delta. The rural densities reach high in some of the Taluks like Kothapet (537 per sq km.), Ramachandrapuram (505

*This figure as % of Total Population is 21.2; Table on PP. 7 gives % of literacy of Total adult Population.

per sq km.) in E. Godavari district. At the other end of the density scale are the hilly areas in the Eastern Ghats. Population density here is less than 60 per sq km. Because of the ruggedness of the terrain, inaccessibility and the fear of malaria, settlements are few and far apart. This is the zone of aboriginal tribes, the Koyas, Chenchus and Savaras leading a semi-pastoral life.

The riverine plains like those of the Nagavali and the Vamsadhara and the tank irrigated fertile coastal plains have a density more than 200 per sq km. The Nellore plain resembles the plateau in the distribution of population. The density of population in these two tracts is about 100 per sq km. But on the plateau both in Rayalaseema and Telangana, the distribution tends to become patchy marked out sharply by blank spaces which are forested or barren. On the plateau, relatively high densities are to be found in the valley, such as those of Kunderu, Papagni, Chitravati and Sagileru. The density here varies from 100 to 120 per sq km.

Apart from productivity, the location of a place as a strong defence point may also lead to concentration of population. Such is the case with Hyderabad West re and the adjoining towns, whose density is nearly 1761 per sq km. though the productivity value is not high. Location of industries, commerce, trading and government service potential too contribute vastly to distribution of population as in the case of Tanuku, Visakhapatnam, Kothagudem, Vijayawada, Hyderabad etc.

Andhra Pradesh Townwise Population Data: Urban population in the State constitute 62,74,508 (17.4%) covering 212 cities/towns/town-groups of Class I-a, I-b, II categories. Among these 1 to 19 cities/towns/town groups with population ranging between 50,000 and 12,51,120, eight are uni-functional. Hyderabad town-group, Visakhapatnam (Harbour town) and Anantapur are designated as Service towns while Guntur (tobacco and jute), Adoni (cotton textile), Vijayapuri (Nagarjunasagar Project) and Proddatur (Cotton ginning and weaving) are designated as Industrial. The other town Kothagudem which is purely a mining town is designated as a town with the characteristic of primary activity. The bi-functional towns with the characteristic of industrial-cum-services are the cities of Warangal, Kakinada, Eluru, Nellore, Bandar (Machilipatnam) and Kurnool. The remaining five towns are tri-functional. Among these Vijayawada, Rajahmundry, Tenali and Vizianagaram belong to the Industrial-cum-Commercial-cum-Services category and Nizamabad town is designated as Industrial-cum-Services-cum-primary activity. There are no large towns/cities with the predominant characteristic involving transport though cities like Visakhapatnam and Vijayawada are important centres of transport and communications.

TOWNWISE POPULATION DATA

Class I (a) POPULATION OVER 10,00,000

1. Hyderabad City 12,51,120

Class I (b) POPULATION BETWEEN 1,00,000 and 4,99,999

2. Vijayawada	2,30,397	7. Kakinada	1,22,865
3. Guntur	1,87,122	8. Eluru	1,08,321
4. Visakhapatnam	1,82,004	9. Nellore	1,06,776
5. Warangal	1,58,106	10. Machilipatnam	1,01,417
6. Rajahmundry	1,30,002	11. Kurnool	1,00,815
TOTAL Class I (b)			14,25,825

Class II POPULATION BETWEEN 50,000 & 99,999

12. Nizamabad	79,093	16. Kothagudem	69,728
13. Tenali	78,525	17. Vijayapuri	55,300
14. Vizianagaram	76,808	18. Anantapur	52,280
15. Adoni	69,951	19. Proddatur	50,616
TOTAL Class II			14,25,825

(See Page 14 also)

Class III: The following 51 place names numbering from 20 to 70 are towns with population ranging between 20,000 to 49,999 persons belong to class III category. Comparatively there are fewer towns with specific functional characteristic. Of the 51 towns only 18 are uni-functional, a good number of them having industrial characteristic. Chirala (Cotton Spinning & Weaving and Tobacco), Bodhan (Sugar Industry), Kagaznagar (Paper & Rayon), Malkapuram (Industrial Salt), Kalahasti (Brass & Bell Metal), Rayachoti (Cotton), Tadipatri (Cotton), Chilakaluripet (Tobacco), Mangalagiri (Cotton Handloom and Tobacco), Yemiganur (Cotton Handloom) and Dharmavaram (Silk Handloom) towns are uni-functional among the Class III towns of the State. Purely services towns are Khanamam, Karimnagar, Nalgonda and Adilabad. Ponnur (Nidubrol) in Guntur is the only town with primary activity agriculture while Bellampalli in Adilabad is a mining town. The other towns are known for the following types:

Service-cum-Industrials 1. Chittoor; 2. Tirupati (Brass & Bell-metal); 3. Ongole (Tobacco); 4. Mshbubnagar; 5. Peddapuram (Silk Weaving).
Primary-cum-Services: 1. Bapatla; 2. Salur; 3. Tanuku (Recently industrial base has been improved); and 4. Narasapatnam.

Industrial-cum-Primary: 1. Narasapur; 2. Pithapuram, and 3. Kadiri.
Services-cum-commercial: Tuni.

Industrial-cum-Commercial-cum-Services: 1. Cuddapah; 2. Gudivada; 3. Hindupur; 4. Narasaraopet; and 5. Palakol.

Primary-cum-Industrial-cum-Services: 1. Bhimavaram; 2. Nandyal; 3. Srikakulam; 4. Samalkot; 5. Tadepalligudem; 6. Bobbili; 7. Madanapalle; 8. Amalapuram; 9. Repalle and Jagtial.

Primary-cum-Commercial-cum-Services: 1. Anakapalli; 2. Gundur; 3. Parvatipur and 4. Kavali.

Transport-cum-Services-cum-Primary: Guntakal (Railway Junction).

Class III POPULATION BETWEEN 20,000 & 49,999

20. Cuddapah	49,027	46. Kalahasti	26,480
21. Guntakal	48,083	47. Salur	26,111
22. Anakapalle	46,402	48. Gudur	25,618
23. Chirala	45,410	49. Bobbili	25,592
24. Gudivada	44,801	50. Parvatipuram	25,281
25. Bhimavaram	43,821	51. Tanuku	24,657
26. Nandyal	42,927	52. Madanapalle	24,386
27. Chittoor	47,876	53. Nalgonda	24,383
28. Khanuriam	35,888	54. Kadiri	24,307
29. Tirupati	35,845	55. Peddapuram	24,302
30. Ongole	35,804	56. Amalapuram	24,063
31. Mahbubnagar	35,588	57. Rayadurg	23,779
32. Srikakulam	35,071	58. Tadpatri	23,129
33. Bapatla	33,688	59. Ponnur (Nidubrol)	22,872
34. Hindupur	32,445	60. Narasapatnam	22,788
35. Samalkot	31,924	61. Chilakaluripet	22,686
36. Karimnagar	31,554	62. Tuni	22,452
37. Bodhan	30,929	63. Mangalagiri	22,182
38. Kagaznagar	30,804	64. Repalle	21,941
39. Narasapur	30,064	65. Yemmiganur	21,051
40. Narasaraopet	29,744	66. Adilabad	20,970
41. Malkapuram	29,186	67. Jagtial	20,941
42. Bellapalle	29,101	68. Kavali	20,544
43. Palakol	28,481	69. Narayanpet	20,504
44. Pithapuram	27,910	70. Dharmavaram	20,405
45. Tadepalligudem	27,086		
		Total Class III	15,20,603

Class IV: Besides these, there are in all 142 towns in the State with a population of less than 20,000 belonging to Class IV towns. A majority of these towns are uni-functional connected mostly in the primary activity especially agriculture. Of 85 uni-functional towns, 60 belong to the primary activity group. Industry, especially cottage and small scale come next in importance in the next group of towns. Thus of the remaining 25 uni-functional towns 18 are industrial towns, 5 service towns, and 2 transport towns. Significantly, not even one town is exclusively commercial. Among these Industrial towns, Venkatagiri (Handloom), Markapur (Slate making), Dowleswaram (iron fabrication & PWD Workshops), Armur (Beedi making and Silk Handloom) and Mokhasa Mutyalampadu (Satellite town of Vijayawada) are important. Dornakal and Renigunta are the two transport towns with busy railway junctions. Of 30 bi-functional towns, 15 belong to the primary activity-cum-services. 11 to primary activity-cum-industrial and 4 to the Industrial-cum-services category. Among the primary activity-cum-industrial towns, Gadwal (Handloom), Vuyyur (Sugar), Tadepalle (Cement), Anaparthi (Tobacco), Sadasivpet (Handloom) are note worthy. Of the 27 tri-functional towns 20 are primary activity-cum-industrial-cum-service towns. Of these Nirmal (Toy Making), Tandur (Stone Quarrying and Mining), Kovvur (Tobacco), Mancherial (Cement) towns are important. Bhongir, Suryapet, Rajampet, Vinukonda, Badepalle and Farooqnagar are towns with some commercial importance. Gooty is a transport town.

"WE THE ANDHRAS"

We, the Andhras, are fortunately situated in some respects. I firmly believe that if any part of India is capable of developing an effective sense of unity it is in Andhra. The hold of conservatism is not strong. Our generosity of spirit and openness of mind are well-known. Our social instinct and suggestibility are still active. Our moral sense and sympathetic imagination are not much warped by dogma. Our women are relatively more free. Love of the mother-tongue binds us all.

SARVEPALLE RADHAKRISHNAN

(From the first Convocation Address of the
Andhra University, 1927)

BRIEF POLITICAL HISTORY

Early History : The name of 'Andhra' race is mentioned in 'Aitreya Brahmana' written about 3000 years ago. Historians trace that Andhras had their own kingdom in the south when Chandra Gupta Maurya was ruling in the north. Magasthenes, the Greek ambassador in the Court of Chandragupta, wrote in the fourth century B.C. that the Andhras were the only people next to the Maurya Emperor in power and prestige, and that their territory was very extensive containing thirty towns with strong fortifications and that their king possessed one lakh of infantry, two thousand cavalry and one thousand elephants. Pliny's writings at a later date corroborate this statement. The city of Dhan-yakataka, later known as Amaravati situated on the Southern bank of the river Krishna, was one of the capitals of Andhras. From the third century B.C. their empire expanded over a major portion of India.

Mention of Andhra was also found in the edicts of Asoka. Bhadrabahu, a Jain missionary visited south with his followers around third century before Christ. Asoka sent his mission to propagate the message of Buddha. These two incidents account for the infiltration of the Jain and Buddhist population to the region, now known as 'Andhra Pradesh'. Asoka's sway was extended upto Nellore according to inscriptions found in Mysore and Maski. Satavahanas captured the political power over the region when Simuka established his kingdom in 225 B.C. The 17th king Hala 23rd king Gautami Putra Satakarni (809-104-A.D.) and Pulamavi were illustrious rulers of Satavahana creed. Their reigns were golden ages for literature, art and sculpture. According to Ptolemy, Pulamavi-II married the daughter of Rudraman of Western Kshatrapa in Malwa and Gujarat. Satavahanas flourished for about four and a half centuries. There was a highly developed system of administration resembling Mauryan system of administration described by Kautilya. Satavahana empire extended upto Arabian sea on the west including the Deccan plateau up to Vidarbha in the north and Magadha, Pataliputra (Patna) on the east. Amaravati was one of the principalities of Andhra Satavahana administration. Archaeological excavations at Amaravati in Guntur or revealed a find of Roman coins. This establishes that the territory had a maritime contact with the contemporary Roman Empire. In the Satavahana period there were erected several Buddhist monuments in their empire. The Amaravati style of sculpture and architecture attained a uniqueness of its own. Yagnasri Satakarni (170 A.D.) was the last able Satavahana king. He ruled for 29 years and could recover some territory lost to Sakas. Later, Andhra Satavahanas had to face the attacks from the neighbouring invaders like Sakas, the Pallavas, the Yavanas which

ultimately resulted in the decline of the vast kingdom by third century A.D. giving way to several rulers occupying different parts of the Deccan region of erstwhile vast kingdom. Among these Naga, Vakataka, Brihatphalaya, Ikshavaku rulers deserve mention. Ikshavaku who ruled a principality as subordinates to the Satavahanas, became independent and later ruled over the tract around the Krishna and Godavari. Their capital was Vijayapuri on the banks of the Krishna in Nagarjuna Konda valley (Sripavata). To add to this, Sripavata was principal seat of learning for centuries in the south of the Vindhya and attracted students from all over the then civilised world. Nagarjuna's *Madhyamika* School of Mahayana is said to have been favoured, and developed by the Buddhists of this time. The works in Sanskrit and Prakrit of Nagarjuna, and those of his renowned Andhra disciples Aryadeva and Dignagacharya were later translated into the Chinese language and are considered to be great authorities on Mahayana Buddhism. Dignagacharya the famous Buddhist logician, was the head of a Buddhist seat of learning that flourished for some centuries at Vengi (Eluru).

Middle Ages : Internal strife resulted in the ascendancy of Pallavas, who, from Kanchipuram in the south, ruled a kingdom consisting of a multilingual region of Tamil in the south, Telugu in the north and Kanarese in the West. However, the territory between Mahanadi and Godavari rivers was ruled by Anantavarma Choda Gangadeva of Eastern Gangas. He reigned for sixty years and conquered Utkal (the present Orissa) and shifted his capital from Mukhalingam to Cuttack. Pulakesi II, conquered Vengi region from Mahendrarman, a Pallava ruler to establish Eastern Chalukya rule with Vengipura as capital. The Chinese traveller, Hsuan-tsang who visited India around 640 A.D. recorded in his writings about the political boundaries of Pallava, Chalukya and Chola Emperors. Andhra Kings were Hindus and they revived Hinduism and patronised Sanskrit. However, Ikshavaku Queens were allowed to follow Buddhism. By about 850 A.D., the great Chalukya emperor Vijayaditya III conquered a large portion of Andhra desa upto Kanchipuram and unified it under his rule. The original capital of the Chalukyas was Vengi (Near Eluru); but Vijayaditya shifted the capital to Vijayawada. Rashtrakutas ruled the region in between, when Raja Raja, (985-1013) conquered the territory and established Saktivarman as his Viceroy. Raja Raja fortified this arrangement by giving his daughter Kundavvai in marriage to Vimaladitya, brother of Saktivarman. Rajamahendravaram (now Rajahmundry) was built by an Eastern Chalukya King of Vengi. Nannaya, of the Telugu *Mahabharatam* fame, was a poet laureate in the court of Rajarajendra during 1022-63 A.D. Copper plate inscriptions of Vishnuvardhana-II (Eastern Chalukya) establish that Brahmin culture was encouraged by liberal grants to Brahmins.

Kakatiya Rule : After the decline of Chalukyan power, Kakatiyas of Warangal rose to prominence around 1160 and took hold of Nel-

lars and Cuddapah to extend their influence. Kakatiyas with the capital at Warangal, held their sway for about two centuries until 1326. Kakatiyas were great builders of temples, forts, irrigation structures; Ramappa and Laknavaram lakes are still in use. They patronised literature and fine arts. They encouraged maritime trade and commerce far and wide. Ganapatideva (1200-62), his daughter Rudramadevi (1262-1292) and her grandson Prataparudra II (1292-1323) were illustrious Kakatiya rulers. Marco Polo, the Italian traveller who passed thro' India at that time wrote about glorious rule of Kakatiyas. Fratricidal strife among the Hindu rulers of the Deccan resulted in confusion paving the way for the conquests by Muslim ruler of Delhi early in the fourteenth century. Muhammad-Bin Tughlak, a Sultan of Delhi, invaded the territory when Prataparudra, a Kakatiya King was taken to Delhi as prisoner of war. The great Kakatiya kingdom fell in 1326. Though Muslims went far south up to Madurai, they could not keep Andhra territory under their direct control. Reddi Kingdoms rose on the banks of the River Krishna from 1328 to 1424.

Vijayanagar Period: Vijayanagar Empire on the banks of Tungabhadra river early 14th century was founded at Anegondi by Vidyanarya. In the year 1338 Harihara was put on the throne by Vidyanarya in the presence of the patron deity Virupaksha in a typical Hindu style. Thus Hindu dharma was restored among the people while respecting other cults as well. Following the fall of Tughlak empire in Delhi, Bahmani Sultanate in the immediate vicinity of Vijayanagar posed a constant danger to its flourishing neighbour (1346). Among these Vijayanagar emperors, Krishna devaraya of Tuluva dynasty ruled the region between 1509-1530. This period was hailed as a golden age. He perfected the machinery of administration. His economic policies consolidated the country's resources. He erected many irrigation structures like Cumbum Tank, Bukkaraya Samudram, Kanigiri Tank. Himself an erudite scholar, Krishnadevaraya wrote Sanskrit & Telugu classics-Jambavatiparinayam, Ushaparinayam, Anukramavyasa. He patronised many literary luminaries of his time who constituted the ashta diggajas or eight poet laureates like Allasani Peddana, the famous author of *Manu Charitra*. He was also a great builder who created a satellite town Nagalapuram. As a connoisseur of art, he built a temple for God Virupaksha at Hampi. The foreign travellers Abdur Razaak, Nicolo Conti, Nuniz Paes and many other missionaries from Portugal paid rich tributes to his personal achievements in the cause of the Hindu culture and its revival as evidenced in temple buildings, and encouragement given to arts particularly architecture and sculpture. With the help of Timmarasu, his able Minister Krishnadevaraya put down Bahmani expansionist activities. When he conquered Amaravati and Kondaveedu talabhara was formed. He gifted land grants on this happy occasion. Warangal surrendered to him. Krishnadevaraya maintained very good diplomatic

relations with foreign countries particularly with Portugal which enjoyed maritime supremacy in those days. The great Vijayanagar Kingdom began to decline rapidly after the battle of Tallikota in 1565. Soon the seat of administration was shifted to Chandragiri with a section of Araveedu dynasty on the gadi.

Golkonda Nawabs: Around 1580 the entire Andhra region came under the rule of Qutb Shahi Sultans. They patronised Telugu literature, art and maritime enterprise. Properties were endowed to Telugu temples equally with Muslim mosques. They had statesmen like Akkanna and Madanna as their Ministers.

Asaf Jahis: With the Aurangzeb's conquest of the region (1684) Golkonda became a part of Moghul empire. Moghul Sultanate at Delhi appointed Asaf Jahi as the Subedar of the Deccan. Bijapur and Ahmednagar were ruled by Asaf Jahi with Hyderabad as capital. When Aurangzeb died in 1707, Nizamul-Mulk Asaf Jahi declared independence and named himself as *Nizam of Hyderabad*. Nizam brought under his influence all the Telugu speaking parts of Deccan. At this stage, the British and French came to prominence on the Coromandal coast. Nizams continued to rule Telangana as part of Hyderabad till 'Police Action' 1948 (See pp 21).

Entry of Foreigners: Salabat Jung (early 17th cent.) granted to the French four Northern Circars of Chicacol (the present Srikakulam), Rajahmundry, Eluru and Kondapalli as compensation for the cost of maintenance of a French contingent at his capital. Earlier the English erected another factory in 1611 at Machilipatnam acquiring rights from Golkonda Sultans. Dutch were trading when they established Iron workshops in 1628 at Madhavayapalem near Narasapur in West Godavari.

British Influence and Company Rule: In 1639 the Telugu town of Madraspattanam called Chennapattanam was given to the East India Company as a Zamindari cowl by Damara Ayyappa of the Kalahasti Velama family who was then the ruler of that area and all the surrounding Telugu areas, as the founder of Poonamalli, and also a vassal of the Andhra King of Chandragiri. The British built Fort St. George in 1643. In 1647 the District around Madraspattanam belonging to Chandragiri Kings, was overrun by the armies of Sultan of Golkonda and was annexed to the Golkonda Empire. But the British managed to get the territory back into their possession from Sultan of Golkonda through their Telugu agent Kasi Veeranna the elected leader of the merchants of Madraspattanam who could influence the great Andhra ministers Akkanna and Madanna at Golkonda. Fort. St. George became the seat of Govt. for all the English factories on the east coast of India in 1688.

Trade rivalry among the Europeans and internal strife in South India decided the balance of power in favour of England. Robert Clive, an English Company Executive, taking advantage of a strife between England and France, annexed the Northern circars (1761) after the Third Carnatic war. Later the British got the Andhra districts of Janjam, Visakhapatnam, Godavari, Krishna, and Guntur called the northern circars from Nizam Ali in 1765. After the successful termination of the Mysore wars with the fall of Tipu Sultan in 1799, the war booty was divided among the allies, as a result of which the Andhra areas of Kolar district and parts of Bangalore, Tumkur, and Chitaldrug districts were annexed to the revived Mysore state. The ceded districts, namely, Bellary, Kurnool, Anantapur and Cuddapah, that fell to the share of the Nizam, were ceded to the British Government of Fort St. George in 1800. In 1801, when the entire administration of the Carnatic was taken over by the Madras Government, pensioning off the Prince of Arcot, Azimuddaula, the Andhra districts of Nellore, Chingalput and North Arcot came under the administration of Madras Presidency. In 1911, a new Telugu district called Chittoor was constituted by the Madras Government incorporating into it a portion of Cuddapah or and a portion of North Arcot or. In about 1810 the Telugu areas of the Bastar State and the Chanda or also were acquired by the British Government, and were added to their Central Provinces (now Madhya Pradesh).

British Empire: After the first war of Indian Independence (which is popularly known as Sepoy mutiny) in 1857, political power was transferred to the British Crown during the regime of Queen Victoria. The British Government ruled the territory (11 districts of Telugu speaking area) as part of Madras Province for another 90 years until India attained Independence on Aug. 15, 1947. When a separate Orissa province was formed, by the King's order in council in 1936, some agency regions (now in Koraput), Ganjam district except Srikakulam division, were included in the new Orissa State. Srikakulam was tagged into Visakhapatnam or which was later (1950) divided into Visakhapatnam and Srikakulam districts.

Andhra Desa played a great role in the freedom struggle. Indian National Congress held one of its important sessions in Kakinada in 1923. Peda Nandipadu Srika, Guntur or was selected for No Tax Campaign 1921. Desabhakta Konda Venkatappaya, Andhra Kesari Tanguuri Prakasam, Bulusu Sambamurthi, Pattabhi Setharamayya and other Andhra leaders were in the forefront of the freedom struggle under Gandhiji's leadership.

Struggle for Andhra State: The nationalist movement brought in its train to the Andhra; a consciousness to have a separate Telugu

speaking State for the around development of Andhras. Early in this century, Andhra Maha Sabha was founded which popularised thro' a resolution in 1913 (Bapatla) the concept of a separate homogeneous province. The necessity for the formation of a Telugu linguistic state had been kept in lime light until the advent of freedom on Aug. 15, 1947. Indian Independence gave a momentum to this urge. The Government of India appointed the Dhar Commission of 1948 which did not yield any useful results. The J.V.P.* Report of 1949 followed it and a partition committee was appointed towards the end of 1949 for forming a separate Andhra Province before January 28, 1950, if possible. But this did not happen because of certain differences among the top Andhra leaders on the issue of location of capital.

Former Hyderabad State: Meanwhile, certain political developments in the former Hyderabad State were significant. After India's independence, the Nizam preferred to remain independent. A Stand Still Agreement was agreed upon between Nizam and Govt. of India. Led by Khasim Razvi the 'Razakar' movement promoted political unrest in that State. The nationalist elements in the State were forced to migrate to the bordering Indian Provinces. The 1948 'Police Action' launched in 1948 by Government of India brought law and order into the domain of the Nizam. The State acceded to Indian Union. The Razakar terrorism war put down. The rule of a military governor was introduced to promote peace in the State. (See pp. 23).

Telangana Struggle (1949-51): After 'Police Action', the Government of India through its military governor, J. N. Chowdary, first, later civil administrator M. K. Vellodi thro' his *Care Taker Government*** had to tackle the popularly known *Telangana Struggle* launched by the Communists to liberate the peasantry from the 'landed aristocracy'. On the eve of the 1952 general election, the Communist Party, which was until then banned, revised its political policy and accepted the parliamentary way of life. The ban on Communists was also lifted; this enabled them to participate in the first general election.

RECENT POLITICAL BACKGROUND (1952-1967)

Andhra State Formation: Against this background, ultimately, the movement for a separate Andhra State culminated, however, in the self-immolation of Potti Sriramulu after 58 days of fast unto death in December 1952. The Government of India conceded the demand to

* Jawaharlal Nehru, Vallabhai Patel and Pattabhi Sitaramayya.

** Burgula Ramakrishna Rao and V. B. Raju were co-opted as representatives of the people.

carve out a separate Andhra State constituting the Telugu-speaking coastal districts and interior Rayalaseema of the composite Madras through a central legislation. The single man Miera Commission (May 1953) went into the bilingual areas in Bellary district and gave its verdict to bifurcate Kannada speaking areas in Bellary, including Bellary town, and added to Mysore. Thus, the newly formed Andhra State lost control over the headworks of the Tungabhadra project. The Andhra State with eleven districts¹ plus three taluks² from Bellary came into existence on 1 Oct. 1953 locating the capital temporarily at Kurnool. According to an earlier *Sri Bagh Pact* (1937), it was later decided to continue the capital temporarily at Kurnool while it was decided to locate High Court at Guntur (1955); until then the Andhra High Court continued to function at Madras with a separate bench. The new State in 1953 faced the initial problem of formation of the first ministry since no single political party commanded an absolute majority. Communists emerged as the single major group, following the 1952 general election. The predominant Congress suffered setback because of a split in its ranks in 1951 and the seceders from the Congress formed themselves into separate political parties, known as *Krishaker Lok Party* (KLP) and *Kisan Mazdoor Praja Party* (KMPP) led by N. G. Ranga and Tanguturi Prakasam respectively. During the intervening period, immediately after the 1952 election and formation of Andhra State, KLP extended its support to the Rajaji ministry in the composite Madras State by joining the Congress Legislature Party as associate members.

Prakasam Ministry: The KMPP itself transformed into Praja Socialist Party (PSP) by joining the Socialist Party. Congress led first ministry of Andhra State (1953) was formed with T. Prakasam as Chief Minister, and N. Sanjivareddi as Dy. Chief Minister. The PSP opposed the move of joining the Ministry, when Prakasam left PSP to join the Congress. The KMPP elements in PSP under the leadership of Tanneti Viswanatham defected from the PSP to Praja Party (PP) to join the Prakasam Ministry. Viswanatham was included in the Cabinet as Finance Minister. The KLP initially extended its support; its State party leader G. Latchanna was included in the Cabinet but he resigned soon from the Cabinet on the issue of location of the capital. His party however, functioned in the opposition. Thus the first ministry was a coalition of Congress and Praja

1. Srikakulam, Visakhapatnam, East Godavari, West Godavari, Krishna, Guntur, Nellore, Chittoor, Cuddapah, Anantapur and Kurnool districts;

2. Adoni, Alur and Rayadurg and with some exchange of villages with bordering districts.

Party while the Communists, KLP and PSP functioned as opposition. After 13 months of its existence, the first Andhra ministry was overthrown by a vote of no confidence in 1955 necessitating a mid-term election.

Mid-term Election in Andhra-1955: To fight the mid-term election, the Congress United Front was formed by the Congress Party, KLP and PP. The United Front won the election with an overwhelming majority, reducing the communist strength to 15 seats in a house of 196.

Gopala Reddi Ministry: B. Gopala Reddi formed the ministry (1955), giving representation to KLP and PP. N. Sanjiva Reddi was allowed to retain his Dy Chief Minister's position. Subsequently, the KLP merged itself with the Congress unconditionally although the PP retained its separate identity.

Burgula Ministry in Hyderabad: The first popular ministry in the former Hyderabad State was set up in March 1952, with Burgula Ramakrishna Rao as Chief Minister. The Burgula ministry played a prominent role in bringing about transition from a chaotic feudal rule to organised modern democratic order in the State. Many reforms were introduced by the first popular ministry, most important among them was the progressive land reform by abolishing *jagirdari* system. He introduced the ceiling on land ownership and protected tenancy. K. V. Ranga Reddi, V. B. Raju and M. Chenna Reddi played a prominent role in the Burgula ministry. His ministry continued in the office till the formation of Andhra Pradesh (Nov. 1, 1956), when Ramakrishna Rao left State politics for a Governor's post in Kerala.

Formation of Andhra Pradesh: The urge for the division of composite Hyderabad State into its three component linguistic parts of Telengana, Marathwada and Karnataka and merge them with their respective contiguous states has been uppermost. The winds of the nationalist movement in the British India also swept the former Hyderabad State. The linguistic regions there formed their respective linguistic organisations to promote their respective mother tongues. Hyderabad Andhra Maha Sabha (Since 1930) played a very significant role to promote linguistic consciousness among the Telugu-speaking districts under its devoted leader Andhra Pithamaha Madapati Hanumantha Rao. This organisation provided supply of top leaders to the independent Hyderabad such as B. Ramakrishna Rao and those of the present day leaders Mandumula Narasinga Rao K. V. Ranga Reddi, V. B. Raju and M. Chenna Reddi had their initial training in the Hyderabad Andhra Maha Sabha. The Hyderabad State Congress favoured this division of Hyderabad in 1946. The formation of a separate Andhra in 1953 gave an impetus among the Telengana people to merge

with Andhra. Under the leadership of Ayyadevara Kaleswara Rao, the *Vishalandhra Maha Sabha* which represented this urge for the merger of the two parts of Telugu-speaking population namely *Andhra State Region* and *Telangana*, gave expression to the formation of an enlarged State of *Andhra Pradesh*. The States' Reorganisation Commission (1955) recommended the merger of Telangana with Andhra. However some Telangana leaders under the leadership of M. Chenna Reddi organised, at this stage without success, a movement for a separate Telangana State with Hyderabad as capital city. The Government of India subsequently (1956) enacted a legislation, thus bringing into existence the formation of *Andhra Pradesh*, Nov. 1, 1956 with Hyderabad as capital.

Sanjiva Reddi Ministry — I: The new enlarged State of Andhra Pradesh with 20 districts came into existence on Nov. 1, 1956 as per the provisions of States Reorganisation Act 1956 when the nine Telugu speaking (Telengana) districts¹ of Hyderabad State were added to the eleven districts² of Andhra State. Sanjiva Reddi was elected first Chief Minister of Andhra Pradesh. A Regional Committee was constituted to safeguard the interests of Telangana. Gopala Reddi joined his Cabinet as Finance Minister till 1958 when he was drafted into the Union Council of Ministers.

Election in Telengana — 1957: The 1957 election was conducted for Assembly in Telengana region and for Lok Sabha throughout the State. The States Reorganisation Act extended the term of the members of Assembly elected from Andhra region until 1962. Again, Congress won handsomely and by now the Congress Party in the State was fully stabilized.

Even after the 1957 election, Sanjiva Reddi was re-elected leader of the Congress Legislature Party. Chief Minister. Sanjiva Reddi did not include former KLP and PP elements in his Cabinet. The Praja Party left the United Congress Front to function in the opposition. In 1958, some dissident Congressmen, including former KLP elements, left the Congress Party to form a Democratic Party in the opposition under the leadership of M. Chenna Reddi and G. Latchanna. Meanwhile, the Socialist forces had undergone some changes in the State. A dominant section of the PSP under the leadership of P.V.G. Raju (Rajah of Vizianagaram) defected from the PSP to join the Socialist Party formed under the national leadership of Ram Manohar Lohia in 1955. P. V. G. Raju's group of Socialists, however, developed differences

¹ Mahabubnagar, Hyderabad, Nizamabad, Medak, Adilabad, Karimnagar, Khammam, Warangal and Nalgonda.

² See Page 22.

with the national Socialist leadership, resulting in the dis-affiliation of the Andhra unit. In 1959, the KLP — oriented democratic party, Socialists led by P. V. G. Raju and some PSP elements merged themselves to form Socialist Democratic Party (SDP) in the opposition. This new merger did not last long. Soon strains and stresses developed between the two component units. The crisis was hastened when Swatantra, under the national leadership of N. G. Ranga, was founded ((1959). The Democratic Party of the SDP transformed itself into the Andhra Pradesh unit of the Swatantra and P. V. G. Raju's faction of SDP joined the Congress towards the end of 1959.

Sanjivayya Ministry: In 1960, when Chief Minister Sanjiva Reddi was elevated to the position of President of All India Congress Committee, D. Sanjivayya succeeded Sanjiva Reddi to become the Chief Minister of Andhra Pradesh. P. V. G. Raju was also included in the new ministry.

Sanjiva Reddi Ministry — II: The Sanjivayya ministry continued until the end of the 1962 general elections. AICC President Sanjiva Reddi staged a come back to the Andhra political scene to become Chief Minister once again (1962). The 1962 election gave a majority to the Congress Party with 177 seats in a house of 300 (300 including nominated Anglo Indian). CPI emerged as the major opposition with 51 seats. The Swatantra, participating for the first time in a general election, managed to gain 19 seats. In the vacancy caused by the resignation of Sanjiva Reddi, it was then Sanjivayya's turn to be elevated to the AICC Presidency. He continued in this position until the Bhubaneswar Congress Session, (1964). Sanjiva Reddi continued to be Chief Minister until 1964 when he resigned on his own, following the strictures of the Supreme Court against him in a Road Transport case.

Brahmananda Reddi Ministry: Kasu Brahmananda Reddi, who entered Cabinet in 1956 as Finance Minister in the Sanjiva Reddi Cabinet, succeeded Sanjiva Reddi as Chief Minister although the former Chief Minister retained the leadership of the Congress Legislature Party. This dual control continued till the demise of Prime Minister Nehru in 1964, when Sanjiva Reddi was included in the Lal Bahadur Cabinet at the Centre. Chief Minister Brahmananda Reddi was then elected (since 1964) Congress Legislature Party's leader. Chenna Reddi formerly Planning Minister was included in his Cabinet as Finance Minister.

1967 General Elections: Under the leadership of K. Brahmananda Reddi in the 1967 general election, Congress emerged as a majority party with 165 seats in a house of 287. He was re-elected Chief Minister unanimously (Mar. 1967). Chenna Reddi who was included in

his Cabinet, had to leave it within a few days to join Central Cabinet as Minister for Steel, Mines and Metals.

Changes in Political set up: The 1967 election, witnessed some significant changes in the political complexion in the State. The CPI, which emerged as the main opposition in 1962, was split in 1964 with the formation of leftist oriented Marxist Communist Party. The split led to weakening of the Communist forces in the State and it had its impact on the outcome of the 1967 election. The CPI, led by its General Secretary C. Rajeswara Rao, got 10 Assembly seats and the Marxist Communist Party, led by its General Secretary P. Sundarayya, managed to gain 9 Assembly seats. The Swatantra, however, emerged as the leading opposition party with 28 Assembly seats. The post election scene has undergone several shifts at the Assembly level. In fact a divided Congress that participated in the general election, gave rise to many rebel Congress men contesting as independents. The Congress men who defected were again divided in their loyalties to the Congress men, who were elected as independents, formed themselves into two blocks, known as Peoples' Democratic Party (PDP) and Jana Congress. In June, 1967, some of the PDP members were admitted into the Congress Legislature Party, increasing its strength to 184. In the opposition, the Swatantra and Jana Congress joined together to form the Democratic Front with a membership of 42. This group is led by Swatantra leader G. Latchanna, and it gained official recognition as the main Opposition Party in the Assembly. The significance of the present Assembly lies in the political representation of two political parties for the first time, namely Jana Sangh with 3 Assembly seats, and Republican Party of India with 2 seats.

A Virile People

The Andhras are a virile people, proud of their traditions. They are devoutly religious people capable of sacrifice. Much is expected from them by the Country.

—Mahatma Gandhi (1922)

ANDHRA PRADESH—Legislative Assembly Comparative Election Analysis 1962 & 1967

1962										1967									
No. of Constituencies		300		287		No. of Constituencies		287		No. of Constituencies		287		21,071,776		13,720,871		65.11	
Electorate		19,007,856		11,689,197		Valid Votes Polled		Valid Votes Polled		Valid Votes Polled		Valid Votes Polled		Valid Votes Polled		Valid Votes Polled		Valid Votes Polled	
Valid Votes Polled %		61.50		61.50		Valid Votes Polled %		Valid Votes Polled %		Valid Votes Polled %		Valid Votes Polled %		Valid Votes Polled %		Valid Votes Polled %		Valid Votes Polled %	
Name of Party	No. of Candi- dates	Seats	Won		Votes	Polled		Name of Party	No. of Candi- dates	Seats	Won		Votes	Polled					
			No.	%		No.	%				No.	%		No.	%				
Congress	294	177	60	5,523,359	47.25	Congress	285	165	57.49	6,148,941	44.82								
Swatantra	141	19	6.33	1,215,987	10.40	Swatantra	90	29	10.10	1,478,917	10.78								
CPI	136	51	17.00	2,282,767	19.53	CPI	103	10	3.48	1,047,307	7.63								
—	—	—	—	—	—	Com (M)	83	9	3.14	1,086,424	7.92								
Jansangh	70	—	—	1,21,721	1.04	Jansangh	80	3	1.05	308,457	2.25								
RPI	18	—	—	46,338	0.40	RPI	12	2	0.70	47,916	0.35								
SSP	15	2	0.67	70,878	0.61	SSP	8	1	0.35	49,669	0.36								
PSP	6	—	—	34,732	0.30	PSP	2	—	—	26,317	0.19								
Independent	302	51	17.00	2,393,415	20.47	Independent	402	68	23.69	3,576,923	25.70								
Total	982	300	100.00	11,689,197	100.00	Total	1065	287	100.00	13,720,871	100.00								

ANDHRA PRADESH — Lok Sabha Comparative Election Analysis 1962 & 1967

1962				1967			
No. of Constituencies				No. of Constituencies			
Electorate				Electorate			
Valid Votes Polled				Valid Votes Polled			
Valid Votes Polled%				Valid Votes Polled%			
43	19,007,856	...	62.81	35*	85.36	6,625,150	48.16
28	1,775,495	...	14.91	3	7.32	1,905,892	13.85
20	2,505,619	...	21.04	1	2.44	1,531,223	11.13
—	—	...	—	—	—	910,285	6.62
8	139,049	...	1.17	—	—	195,357	1.42
3	144,872	...	0.96	—	—	74,456	0.54
—	—	...	—	—	—	56,896	0.41
1	8,287	...	0.07	—	—	23,046	0.17
44	1,653,436	...	13.89	2	4.88	2,434,681	17.70
147	11,938,021	...	100.00	41	100.00	13,756,986	100.00
Total	11,938,021	...	62.81	Total	100.00	13,756,986	100.00

***Includes one uncontested seat**

CPI—Communist Party of India; Com. (M)—Communist Party (Marxist); R P I—Republican Party of India; P S P—Praja Socialist Party; S S P—Samyukt Socialist Party.

ECONOMY OF ANDHRA PRADESH

NATURAL RESOURCES

FOREST RESOURCES: The forest area comprises 23.8% of the total area and this is higher than the all India figure of 15%. The forest vegetation is highest in Khammam at 49.7% of its geographical area; Nalgonda has the least forest area with only 7.3%. However, Adilabad with 46.8%, Visakhapatnam 37.6%, Cuddapah 32.5%, Kur-nool 25.6% are major forest districts. Adilabad, Khammam and Visakhapatnam reached optimum standard as per National Forest Policy (33.3%). Eleven districts are below state average 23.8%. Anantapur, Medak and Nalgonda are exposed to frequent draughts, as well as food and fodder famines, the reason being small forest area and low rainfall.

The natural vegetation of the region is either forest, scrub jungle, thorny bush and grass depending on the amount of precipitation, soil conditions and interference by man. The principal forest tracts are situated in Telengana, in the agency areas of Visakhapatnam, Godavari districts, and in the Nallamalais of Kurnool and its extensions.

Moist Deciduous Forest: Timber like teak, rose wood, ven teak, maddi, yepi, yelama, satin wood occur in agency forests of Visakhapatnam, Srikakulam, East Godavari, Adilabad, Karimnagar, Warangal and Khanmam. *Jalari tumba* in the high elevations of Nallamalai forests in Rayalseema belong to this type.

Tropical Dry Forest: Superior deciduous species like teak, yepi, maddi which grow to height of 10 to 15 m. belong to this type. Yepi grows best in certain soils with the quartz content; Red sanders, yelama is exacting on certain geological formations.

Misc Type Forests : Mogi occurs in Seshachalam ranges where the terrain is 600 m. in elevation. Tropical thorn forests occur on the outer periphery of the reserved forests. Tropical inferior deciduous forests are formed in the interior of reserved forests with the larger percentage of non-thorny types like *yelama*, *billu*, *chigan*, *guggilam*, *somi*, *tella-tumma*, *took*i and others. Ever green scrub type with *alli*, *bhira*, *jamun*, *nekkisa* and *uti* occur wherever the sub-soil moisture is high. Tidal or mangrove forest occurring on the east swampy areas have *mada* and *tella mada* species. Beach or dune forests are found on the surf board of the Bay of Bengal. Bamboo forests occur extensively in the reserve forests at all elevations. *Sanna-*

veduru is extensively found in this region. Moist regions and the sides of the rivers, however carry bigger thorny species of bamboo.

The scrub land region is to be found in every district and mostly in the foothill zone; they are stunted trees and in some places palmyrahs, patches of grass are found in the forests on the plain and hill sides. Forest department in Andhra Pradesh manages forests in the State thro' 7 circles with 41 Divisions-sub-divided into 180 ranges controlling 637 section with 2520 beats spread through out the State.

Forest Distribution in Andhra Pradesh
(as on 1-4-1967)

District	Forest Area sq km.	Geographical Area sq km.	Forest Area to Geogra- phical Area
1. SRIKAKULAM	1068	10100	15.4%
2. VISAKHAPATNAM	5071	13470	37.6%
3. EAST GODAVARI	2543	10830	22.8%
4. WEST GODAVARI	769	7720	9.9%
5. KRISHNA	953	8750	10.9%
6. GUNTUR	1888	15030	12.6%
7. NELLORE	3805	20650	18.4%
8. CHITTOOR	4706	15100	31%
9. CUDDAPAH	4973	15340	32.5%
10. ANANTAPUR	2134	19120	11.5%
11. KURNOOL	6138	24030	25.5%
12. MAHABUBNAGAR	3069	18440	16.6%
13. HYDERABAD	999	7740	12.4%
14. NIZAMABAD	1808	8040	21.9%
15. MEDAK	987	9610	9.7%
16. ADILABAD	7794	16330	46.8%
17. KHAMMAM	8765	15920	49.7%
18. WARANGAL	3914	12920	29.5%
19. KARIMNAGAR	2567	11870	21.6%
20. NALGONDA	1101	14200	7.3%
Andhra Pradesh	66,506	2,75,280	23.8%
All India	6,95,013	30,53,800	22%

SOURCE: Chief Conservator of Forests, Andhra Pradesh.

Fauna: Among carnivores, the tiger, the panther and the cheetah are often found in the forests of Andhra Pradesh. The smaller carni-

vores such as wolves, jackals, as well as the bears, get a fairly good representation. Once a few elephants used to roam wild in the forest now they are not be found. The horse which is not indigenous to the soil is only to be seen domesticated. The domesticated sheep and goats are of the peninsular type and differ both from the Himalayan type and Nilagiri wild type. In the field of cattle wealth, the Andhra holds an eminent position. It is the home land of the reputed Ongole breed of bulis. Several types of deer are to be seen not only in the forest areas but also in the scrub region. The four-horned chousingh is to be seen in the Telangana forest, and the sambar is a favourite for the Shikari. There is a pelicanry in Kolleru region of West Godavari etc.

Forest Produce in Andhra Pradesh (1966-67): Timber: 4,29,324 cu. m. Firewood: 48,77,36 Tonnes. Other Products: 28,450 Tonnes. Value of Forest Produce: Rs. 3,52,68,918. Total Revenue on Forest Products: Rs. 5,37,00,000.

MINERAL RESOURCES

Economic Resources: Coal, manganese mica, iron ore, barytes, lime stone are the minerals of economic importance that are found in abundant quantities in Andhra Pradesh. Mica forms 12% of India's total production while Manganese constitutes 11%. Iron ore with high iron content is found in Khammam and Krishna districts. Kothagudem, Tandur and Yellandu in Khammam etc have collieries. Iron ore is mined in Krishna etc. Garividi in Srikakulam is a major manganese mining centre, while Visakhapatnam, Cuddapah districts also have manganese mines. More than three fourths of India's mica output is mined around Gudur in Nellore etc. Asbestos in Cuddapah, Limestone in Guntur, quartz in Hyderabad are other economic minerals.

Asbestos: Asbestos output in Andhra Pradesh is 90% of Indian production. But mining has so far developed in a rather limited way. The mines were first developed in an improvised manner and there is no mechanisation. The spinning grade fibre is presently exported to Belgium and Japan and 'C' grade ($\frac{1}{4}$ inch and powder) is utilized by Asbestos Cement Companies in India. Production of Asbestos in tonnes: CUDDAPAH (1962-63) 117.9.

Barytes: Barytes is the name given to naturally occurring Barium Sulphate. Barytes occurs in Anantapur, Kurnool, Khammam Krishna and Cuddapah etc. Large working mines are in Pulivendla etc (Cuddapah etc.) Almost the entire output of barytes is now being used in oil drilling and paint manufacture. The mineral when ground to various degrees of fineness serves as an extender in paints and as a filler in paper, textile, leather and associated industries. Like asbestos,

the bulk of Indian production of barytes is from Andhra Pradesh. It is mostly marketed both in the form of crude lumps and as powder. So far no attempt has been made to process this mineral for chemical industry, although the demand for barium chemicals is quite high.

Production of barytes in tonnes: (1962-63). CUDDAPAH 21,783.00; ANANTAPUR 5,416.29; KURNOOL 3,094.78; KHAMMAM Nil; NELLORE 130.00; Total 30,424.07

Chromium: Chromium occurs mainly as Chromite. It occurs to a small extent in the hills west of Kondapalli in Krishna dt and in parts of Khammam dt. There is no production of chromite in the State at present.

Clay: Extensive deposits of clays are found in East Godavari, Nalgonda and Adilabad districts. Fire clays occur as 5 m. to 10 m. bed in the coal measures near Asifabad.

Production of Clay in Tonnes: ADILABAD (Fire clay) 319.00; ANANTAPUR 1,182.96; CHITTOOR 319.00; MEDAK Nil; HYDERABAD Nil; CUDDAPAH (White clay) 2,781.00; KURNOOL (White clay) 962.90; MEDAK (Fire clay) Nil; NELLORE 60.00. Total 5,027.86 (1962-63).

Coal: The Gondwana Coal bearing rocks occur towards the north of the State as a broad belt traversing the districts of Adilabad, Karimnagar, Warangal, Khammam, East and West Godavari. Recently coal seams were encountered in the tube wells near Nizvid in Krishna dt. Coal mining in the State was commenced at Singareni during the last century. At present intensive mining is done at Kothagudem, Yellandu and Tandur. During 1964-65, Singareni Collieries produced 34,75,300 tonnes of coal employing 32,470 persons. Recently, the Singareni Collieries Company sank two more shafts to 216 m and 262 m around Kothagudem area. Two more shafts are proposed for Bellampalli area.

Production of Coal (Tonnes)

Coal Field	1960-61	1962-63	1961-62
Kothagudem	11,77,784.7	16,18,667.8	12,86,904.1
Yellandu	3,11,833.1	—	4,14,644.3
Bellampalli	10,65,705.5	11,99,656.5	8,27,156.4
Mandamari Division	—	32,117.5	1,77,679.0
Ramagundam Division	—	—	5,25,902.3
TOTAL	25,55,323.3	28,50,441.8	32,32,186.1

Coal Potential of Andhrapradesh

Name of Area.	Area on Lease sq km.	No. of seams.	Aggre gate thick- ness m.	Reserves in lakh tonnes.		
				300 m depth prov- ed.	450 m depth (Pro- bable)	600 m depth (Proba- ble).
Tandur and Canals	183.18	2	10.5	1,000	1,750	2,000
North Godavari	75.75	4	10.13	1,400	1,400	1,700
South Godavari	94.38	4	21	1,400	2,000	2,000
Kothagudem	486.90	2	2.39	5,000	6,400	6,290
Singareni	49.21	8	Varying thick- ness.	300	300	300
TOTAL				9,100	12,155	13,250

SOURCE: Director of Mining & Geology, Andhra Pradesh.

Diamond: Andhra Pradesh is unique in having supplied to the world some of the famous diamonds like the Kohinoor, the Regent, the Pitt etc., from the Krishna Basin. There is currently a programme to examine old diamond workings in the State and assess their potentialities. There is no production of diamonds in the State at present.

Gold: The extension of Kolar gold field was traced in the Kanugundi Estate in Palamaner rd of Chittoor dt where there is an outlier of Dharwar schists and quartzites containing auriferous veins of quartz. The prospects of revival of the extinct gold mining industry at Ramagiri and in the Chittoor dt are being investigated.

Graphite: In Andhra Pradesh it occurs in Palavancha (Khammam dt, near Jangareddigudem (West Godavari) and Chodavaram (East Godavari). Working mines are near Ashwaraopet.

Graphite Production in Tonnes (1962-63): EAST GODAVARI 20.3; KHAMMAM 118.96; VISAKHAPATNAM 170.10; WEST GODAVARI Nil. Total 309.36.

Iron Ore: Iron-Ores mainly occur as haematite and magnetite. The deposits are distributed in Anantapur, Kurnool, Cuddapah, Chittoor, Khammam, Warangal, Krishna, East Godavari, Karimnagar and Adilabad districts. Iron Ore is mostly used for the manufacture of iron. The red oxide of iron is employed in the paint industry as a pigmenting material. Results of experiments conducted at the National Metallurgical Laboratory for trying these ores in the production of pig iron

with coal and coalsit (soft coke) have been encouraging. Conditions are suitable for location of a small steel plant. All the ore is exported to Japan and other foreign countries.

Iron Ore Production (Tonnes): ANANTAPUR 8,370.0; CHITTOOR 1,40,587.5; CUDDAPAH 5,052.0; EAST GODAVARI Nil; KHAMMAM 43,141.39; KRISHNA 97,039.10; KURNOOL 1,08,444.89; NELLORE 5,128.00. Total 1,07,762.88. (1962-63).

Limestone: Limestones of cement grade are found in Adilabad, Karimnagar, Hyderabad, Nalgonda, Mahbubnagar, Kurnool, Visakhapatnam and Cuddapah districts. High grade limestone suitable for chemical and allied industry is found in Kurnool, Anantapur and Adilabad district. Associated with the flag stone industry (commonly called Cuddapah or Shahabad slabs) is a large amount of limestone waste which is unutilised at the moment. The State also possesses large reserves of marble in different shades. At the moment the marble is not being worked.

Limestone Production (Tonnes): ADILABAD 2,92,608.00; ANANTAPUR 768.68; GUNTUR 11,90,819.00; CUDDAPAH Nil; GUNTUR (slabs) 21,336.00; HYDERABAD (slabs) 1,19,937.92; KARIMNAGAR Nil; KARIMNAGAR 10,990.00; KURNOOL 3,708.00; KURNOOL (slabs) 28,708.55. Total 19,69,065.15. (1962-63).

Mica: Andhra Pradesh is one of the three principal mica producing States in India, the others being Bihar and Rajasthan. The main mica bearing pegmatites of the State are found in the Nellore or where mining is being carried on since 1889. The main problem facing the industry is search for deeper hidden deposits. The Geological Survey of India and the State Department of Mines and Geology are carrying out detailed mapping so that criteria could be established for the search for new hidden deposits. Mica is used in the electronic and electrical industries. Scrap and plate mica are important in production of ground mica for the manufacture of roofing material, wall paper, plastics, paints and glass bonding mics. Although this mineral has diverse uses the entire output in the State is exported.

Mica Production in Tonnes: NELLORE 8,334.30; WEST GODAVARI 2.27; VISAKHAPATNAM Nil; Total 8,336.57 (1962-63).

Quartz: Numerous quartz reefs are found in and around Hyderabad and other areas in the granite country. Vast extent of beach sands are found near Ongole. Crystal quartz is found in small quantities in some of the veins.

Production of Quartz in Hyderabad: 19,879.33 Tonnes (1962-63).

Talc: Large deposits of talc are found in Anantapur and Kurnool or near Jalakalva. Recently, some good deposits have been discovered in Mahbubnagar or also.

Talc of high purity, i.e., low in iron, and of particular physical properties is used in the electronic industry as an insulator. Output during 1960-61 was 7,843 tonnes.

Slates: In Andhra Pradesh slate occurs near Markapur (Kurnool or). The industry uses it only for making school slates and black boards. About 80% of the material mined is wasted in the process and thrown aside. The utilisation of this scrap by a systematic study can tone up the slate industry in the State.

Slate Production in Tonnes: KURNOOL Nil; NELLORE 3,832.00; Total 3,832.00 in 1962-63.

Titanium: Titanium metal is used for high grade steels. Titanium dioxide is the familiar raw material in making superwhite pigments. Lately some work at the Andhra University has revealed extensive deposits of Ilmenite bearing beach sands along the eastern coast. The beach sands contain besides titanium minerals, magnetite, monazite, zircon, garnet, etc. in varied proportions.

Manganese: Manganese occurs mostly in the form of two black minerals Pyrolusite and Psilomalene. The bulk of the Manganese deposits in the State are in Srikakulam or which incidentally has the distinction of one of the earliest producers of this mineral in India (1892). Some deposits in the hilly agency areas have been reserved for exploitation by the State. The main difficulty in the utilization of the ores found in the State has been their relatively low grade (11%) with high phosphorous content.

Reserves of Principal Minerals in Andhra Pradesh

Mineral.	Estimated Quantity
Asbestos	250,00 tonnes
Barytes	1,43,780 tonnes
Calcite (High-grade limestone)	1,204,000 tonnes
China Clay	9,103,000 tonnes
Coal	1,246,000,000 tonnes
Iron ore	
(Less than 60% iron content)	385.0 million tonnes
(over 60% iron content)	5.7 million tonnes
Limestone (Cement grade)	12,772,320 million tonnes
Magnesian limestone	3,365 million tonnes
Steatite	80,000 tonnes
Marble	21,188 million tonnes
Source: Director of Mining and Geology, Andhra Pradesh.	

Operation Hard Rock

Geological Prospecting by Aerial Survey: An Aerial Survey to locate mineral reserve with collaboration of USAID was inaugurated

on July 19, 1967, in Andhra Pradesh. 'Super Canso' aircraft will conduct the mineral reconnaissance job. The flight crew are the pilot, the copilot, a navigator and the instrument operator who manipulate the electro magnetic system, a contour magnetometer, a scintillation counter, an Aeropath 35 mm camera and a Visicorder, all latest aids to aerial mineral survey.

Each day, after a favourable report from a diurnal station which looks out for magnetic disturbances in the flight area, the plane takes off to a predetermined area in the East Cuddapah basin and flies in parallel lines stretching sometimes so long as 160 km. activating the different instruments on board. On an average, about 800 km of such contour flying is done each day. Thus, an area of 51,800 sq km in Andhra Pradesh, where geologists expect deposits of non-ferrous metals such as copper, zinc and lead will be covered by the two aircraft.

Groundwork: Meanwhile on the ground, the graphs showing the readings of the instruments will be matched with the 35 mm film taken of the area, and promising indications of mineralisation will be precisely located for ground drilling to determine the extent of deposits. By studying the pattern of mineral deposits from the graph the geophysicist can identify whether they are copper, zinc or other metal bearing ores because of his previous experience and knowledge of the pattern in which each of these metal formations occurred.

The Canso is fitted with powerful engines to give it more manoeuvrability for the survey work which entails flying at a constant height of 120 m irrespective of the terrain. For instance, it has to climb quickly if confronted with a hill. It can do so at the rate of 1,200 m per minute. The aerial mineral survey work, known as Operation Hard Rock, is being attempted for the first time in India. It is organised by the Ministry of Mines and Metals, Government of India, with the assistance of a U.S. Government loan of about Rs. 262.5 lakh to cover the foreign exchange cost of the survey. Two American firms, the Parsons Corporation of Los Angeles and the Aero Service Corporation, have contracted for the entire survey work in Andhra Pradesh, Bihar and Rajasthan.

Andhra Pradesh Mining Corporation Limited: A State Government undertaking was set up for the exploration and exploitation of mineral resources and promotion of mineral-based industries. It is working presently on an iron mine at Brahmagunda, a lime stone mine at Ramatirtham, clay mines at Dwaraka Tirumala and Punya Kshetram, a quartz mine at Shadnagar and an asbestos mine at Pulivendla. It is expected that clay washing plant under completion at Dwaraka Tirumala would meet the internal requirements of ball clay used in ceramic industry effecting an annual saving in foreign exchange to the tune of Rs. 25 lakhs. Experimental mining of chrysotile grade of

asbestos is also taken up by the Corporation. The Corporation exported during the recent years, ironore valued at Rs. 1.5 crores. It entered into an agreement with Japan to export barytes.

Copper Mining at Agnigundala: It was reported in Aug. 1966 that the Government of India had a proposal to develop a copper mining project at Agnigundala in Guntur or. The project is to be implemented with the collaboration of Ashland Oil Refining Company Limited of the United States on certain attractive terms. Researches at Agnigundala reveal that there is a 20 km stretch of copper belt which can be profitably exploited and utilised. The Union Mines and Metals Ministry announced its decision during Oct. 1967 to set-up a special Government of India undertaking to implement the scheme.

WATER RESOURCES

Rivers: The Krishna and the Godavari are the two most important rivers of the State. Both of them flow east wards through the Eastern Ghats to the Bay of Bengal. Both are fed by the two monsoons (South-west and North-east) and are of a perennial type. The others of lesser importance are the Penna, Vamsadhara and Nagavali.

Godavari: The Godavari is the largest river of Peninsular India. It has a total length of 1,498 km. and has a catchment area of 315,000 sq km. It rises in the Western Ghats at Triambak near Nasik in Maharashtra and enters Andhra Pradesh near Busar in Adilabad or. This river flows a length of 720 km. in the State and has a catchment area of 90,650 sq km. A large part of the area through which this river flows is densely forested. Its passage thro' the Eastern Ghats is through a picturesque Paikonda above Polavaram in West Godavari or. It is 2.7 km. wide at Rajahmundry below which it splits upto into Vasista Godavari, Cewtami Godavari and Vainateya branch which form a large delta. The 3 branches join the sea at Antarvedi near Narsapur, Yanam and near Razole respectively. On its way the Godavari receives several important tributaries like Manjira, Maneru, Pranhita, Indravati and Sabari. The Pranhita flowing north of Adilabad or forms the boundry between Andhra Pradesh, Maharashtra and Madhya Pradesh States.

Krishna: The Krishna, the second important river in Andhra Pradesh rises near Mahabaleswar in the Western Ghats. It flows thro' Maharashtra, Mysore and enters Andhra Pradesh in Makthal or of Mahbubnagar or while the Tungabhadra which is its chief tributary enters Andhra Pradesh in Adoni or of Kurnool or. The total length of the river is 1200 km. and its total catchment area is 251000 sq km. It flows through a length of 720 km. in the State and the catchment area including that of Tungabhadra is 192000 sq km. in Andhra Pra-

deah. The river splits up into two branches near Puligadda in Krishna district forming Divi island and further splits up into three more branches after passing 14 km. from Divi island and then finally flows into the sea. Its chief tributaries are the Dindi, Musi, Paleru, Muneru and the Tungabhadra. Other tributaries of the river are Koyna, Varna, Manchiganga, Ghataprabha, Maleprabha, Bhima and the Gundlakurma. The most important and the largest tributary is the Tungabhadra which is composed of the Tunga and the Bhadra rivers rising in western Mysore and joining together just below Shimoga (Mysore State).

Penna: The River Penna rises in Kolar or of Mysore. After running 40 km. in Mysore State it enters Andhra Pradesh in Anantapur or and then passes through Cuddapah and Nellore districts. It joins the sea at Utukuru about 28 km. from Nellore. It has no delta worth the name. Its important tributaries are the Jayamangala, Chitravati, Kunderu, Papaghni and the Sagileru.

Vamsadhara: The Vamsadhara rises in Jeypore (Orissa) and after running 96 km. in Orissa State enters Andhra Pradesh near Pathapatnam in Srikakulam or. Its total length is 224 km. and the catchment area is 11400 sq km.

Nagavali: The Nagavali (Lengulya) rises in Rayaghad (Orissa State) and flows through Srikakulam or after flowing a distance of 96 km. in Orissa. Its length in Andhra Pradesh is nearly 112 km. It joins the sea at Mofusabander in Srikakulam or.

Kolleru Lake: The Kolleru lake is a fresh water lake lying to the south of Eluru or in West Godavari or and north of Kaikalur taluk in Krishna or. This lake is formed due to the growth and coalescence of the Godavari and the Krishna deltas on either side, leaving a body of sea water in the middle. It is very shallow and elliptical in shape with an area of nearly 259 sq km. during the monsoons.

DEVELOPMENT OF WATER RESOURCES

Ancient Irrigation Structures: Kakatiya Period: The Andhra Rulers of hoary past developed irrigation in their regions by digging big lakes like Ramappa, Laknavaram, Pakhal (See Page 237). These and other irrigation works of the Kakatiya period (12th Cen.) are still serving the people in Telengana area.

Vijayanagar Period: Very big tanks like Cumbum, Kanigiri reservoir, Anantapur tank, Eukkaraya Samudram, Nandyal tank and the ingenious anicut system of Tungabhadra river are some of the monumental irrigation works handed over to us by the Vijayanagar

rulers (13th-15th Cents.). They have saved the Rayalaseema from complete devastation due to drought and famine in the past. **British Period:** The anicuts across the mighty Godavari, the turbulent Krishna, the spasmodic Penna, Nagavali, Tungabhadra, and many other smaller rivers are the legacy of the British Engineers. The untiring efforts of Arthur Cotton brought into existence the Godavari anicut at Dowleswaram and the Krishna anicut at Vijayawada (1852-55). The Kurnool-Cuddapah canal linking the Tungabhadra and Penna rivers extending farther south was but one step further in the same direction. All these anicuts irrigate a total extent of about 12 lakhs ha. **Nizam's Contribution:** The Osman Sagar, Himayatsagar, Pocharam Lake, Nizamsagar, Dindi, Paler and Wyrva Projects are the contributions of the eminent engineers of the erstwhile Hyderabad State during pre-independent period.

Era of Mighty Dams: Advent of Indian Independence (1947) gave impetus to the rapid progress in the development of the natural irrigation facilities for development of food production. Just 2 years before Indian Independence the Tungabhadra Project has been taken up for execution in 1945 as a joint venture of the former composite Madras and Mysore States. The planned development taken up by the country under the five year plans has resulted in taking up a large number of major, medium and minor irrigation projects. Prakasam Barrage constructed (1957) across the Krishna river at Vijayawada, for relieving the strain on the old anicut while stabilizing the existing ayacut, serves an additional ayacut of 40,000 ha. The gigantic Nagarjunasagar multi purpose project on the same river (foundation stone was laid by Jawaharlal Nehru in Dec. 1955) was completed in its first phase when Indira Gandhi formally inaugurated the release of water through Jawahar Canal & Lal Bahadur Canal of the Dam on Aug. 4, 1967. Upper Pennar, Bhiravavinitppa Project, Rallapadu, improvements to Kurnool-Cuddapah Canal, Sarala sagar, Manair and Musi are already achieved.

The Tungabhadra High Level canal scheme Stage-1, designed to benefit an ayacut of 47,656 ha in the famine stricken Rayalaseema is nearing completion (1967). Partial benefits have already been derived when water was let into North and South canals. Another mammoth project across Godavari at Pochampad for the benefit of six of the nine districts of Telengana has been fully investigated and the medium sized scheme is under way. Under Vamsadhara Reservoir Scheme the works on the pilot Neradi anicut scheme have been put on ground. In all, 37 major and medium rivers practically remain unharnessed. Further potential is available for exploitation by bigger projects like upper-Inchampali on Godavari, Pulichintala on Krishna, Somasila on Penna and other medium projects on the minor rivers. Out of the dependable yield of 18,50,250 lakh Cu.m. (150 M.Ac.Ft.) of water

every year, the present utilisation in Andhra Pradesh is only 3,20,710 lakh cu.m. (28 M.Ac. Ft.) or 17%. The utilisation in the head reaches of the rivers in Mysore and Maharashtra States is not likely to exceed 6,16,750 lakh. Cu.m. (50 M. Ac. Ft.) the balance of about 9,12,790 lakh Cu.m (74 M.Ac.Ft.) of water can irrigate nearly 64.8 lakhs ha. (16 million acres) of dry parched land in the State of Andhra Pradesh.

THE NAGARJUNASAGAR PROJECT

Nagarjunasagar Project envisages the planned utilization by taming the turbulent waters of river Krishna. The Nagarjunasagar Control Board was constituted in October 1955 to give concrete shape to the project. The Board examined the detailed project report formulated earlier in 1954 by the two participating states viz., erstwhile Hyderabad and Andhra and took decisions regarding their execution. During the years 1955 and 1956, administrative and planning tasks demanded much closer attention, since on their proper tackling depended the smooth progress of the entire project. And only by 1957 actual construction of the dam and canals commenced.

Dam Site: The project is situated (16°35' N, 79°17'E) near Nandikonda village in Miryalguda rd of Nalgonda dt. At this very site a great civilization flourished as early as 2nd century AD. Acharya Nagarjuna after whom the reservoir is named founded and fostered a Vidyapeeth about 2000 years ago which drew students from far and near (see p 223). The foundation stone for the project was laid by Jawaharlal Nehru on December 10, 1955. The project in its entire scope, comprises the construction of a gravity type masonry dam—the tallest and largest masonry dam in the world—two irrigation canals on either side of the river and a power house with 8 generating units each with 50,000 KW installed capacity. The main dam, when completed, will be 122.7 m high (ultimate stage), 96 m wide at the base and about 1½ km. long. By this barrier (dam) across the river water is lifted from the bed of the river to a height of about 75 m to be let down into two canals (left & right). The masonry dam is flanked on either side by compact earth dams 25.5 m high. Each flanking dam is also about 1½ km. long. The project envisages the construction of a right canal 392 km long with a carrying capacity of 21,000 cusecs—the world's biggest irrigation canal—for irrigating about 8.1 lakh ha. (20.58 lakh acres) of ayacut. The left canal 328.8 km. long with a carrying capacity of 15,000 cusecs will irrigate about 4 lakh ha. (10 lakh acres). By extending this canal up to a further length of 104 km a further area of 1.752 lakh ha. (4,33 lakh acres) can be irrigated. A roadway of which 8.4 m. will run on the top of the dam linking the flanks over the central spillway. Both main canals in the early reaches run sometime 30 m below the ground and

to 30 m above the ground. Eight penstocks of 4.8 m. in diameter each will be installed in the dam. On completion of canals, 12 lakh tonnes of rice will be produced in addition 0.5 lakh tonnes of sugar. Total annual cash benefits of Nagarjuna Sagar amounts to Rs. 100 crores, while controlling floods.

THE DAM AND THE CANALS

Dam: The Nagarjunasagar dam when completed will impound the water of the Krishna in a 285 sq km man-made lake, the biggest in India and the third largest in the world. The ultimate storage capacity of the reservoir is estimated at about 1,15,940 lakh cu.m. of water, thus dwarfing the Bhakra Reservoir of 91,270 lakh cu.m. capacity. The dam is 1426 m long flanked on either side with earth dams making a total length of about 4.8 km. Water for irrigation from the reservoir will flow through two canals, viz. the Nagarjunasagar Right canal and the Nagarjunasagar left canal. The construction work on the main dam in masonry, was inaugurated on July 12, 1957. The work on the 900 m long coffer dam was started in February 1956 and completed in May the same year.

Right Canal: In the first phase of the project (now under execution) the Right Canal takes off on the rightside of the dam at an elevation of 146.7 m and runs to a length of 203 km. The right canal irrigates about 4.5 lakh ha. (11.74 lakh acres) benefiting large tracts in Guntur, Nellore and Kurnool and 0.6 lakh ha. (1.5 lakh acres) of second crop in Krishna delta. In the ultimate phase, the canal extends to a length of 392 km with a carrying capacity of 21,000 cusecs—the world's biggest irrigation canal to irrigate about 8.1 lakh ha. (20.58 lakh acres) of ayacut. The canal section is 75 m wide and the full supply depth is 4.5 m at the bed. The canal is taken through turnels in two lengths of 0.8 km (½ mi) and 2 km (1.85 mi) respectively connected by open cuts. The foundation stone for the construction of the Right Canal, was laid in Oct. 1956. The 30 m high earth dam across Bugga Vagu at the 27th km. estimated to cost Rs. 119.24 lakhs, the aqueduct across Chandravanka river at the 18th km estimated to cost Rs. 16.03 lakhs are the major construction works on the Right Main Canal.

Left Canal: In the first phase of the project (now under execution) the Left Bank Canal takes off from the foreshore of the reservoir a little upstream of the dam at an elevation of 146.7 m and runs to a length of 177.6 km through a twin tunnel with a total discharging capacity of 11,000 cusecs and ultimate length being 328.8 km in Nalgonda and Khammam districts serving the needs of Miryalguda and Huzurnagar taluks of Nalgonda dt, Khammam rd of Khammam dt and Nandigama, Tiruvur, Nuzvid and Gannavaram taluks of Krishna dt. In the ultimate stage, the irrigable area under the left canal is 5.8

lakh ha. (14.5 lakh acres). The left Bank Canal crosses the river Haila at the 19th km by means of an aqueduct estimated to cost Rs. 44 lakhs. The foundation stone for the aqueduct, was laid in Feb. 1959. The work on the tunnel of the canal was inaugurated in Sept. 1959. The horse-shoe shaped 2252 m long tunnel is claimed to be the largest and first of its kind in India. The 9.6 m diameter tunnel has a carrying capacity of 15,000 cusecs.

Progress of work: Entirely designed and executed by indigenous engineering talent, Nagarjuna sagar is a State Plan Scheme. The expenditure on the project, is therefore, met from out of the funds made available by the Government of India in the form of loans sanctioned to the State Government from time to time. The Project was originally estimated to cost Rs. 81.12 crores. The Project, according to the revised programmes, is estimated to cost Rs. 139.53 crores. This figure is expected to go up to Rs. 165 crores. The expenditure incurred on the project (for dam and canals) from the commencement is about Rs. 120.67 crores upto the end of March 1967.

The work on the dam and both the canals is proceeding apace. The excavation of the main canal upto 81 km. on the right side and 70 km on the left side has been completed and irrigation potential for 2.32 lakh ha. (2.04 lakh ha. Right Canal and 0.28 lakh ha. left canal) was created by July 1966. Another 0.28 lakh ha. or a total area of 2.60 lakh ha. has been brought under irrigation by July 1967. In terms of total work load 97% of masonry and concrete for the dam, 90% of earthwork banking for the earth dam 53% of the earthwork excavation of the main canal on the right side and 54% on the left side has been completed by mid 1967. The tunnel works on either side have been completed. Work on the excavation of branches and distributaries is in progress. The significant feature of the Nagarjuna Sagar is maximum man power utilization which in peak times exceeded 1.5 lakh persons per day engaged in the Dam and two Canals.

Foreign Aid to the Project: United States is aiding Nagarjuna-sagar thro' its PL 480 funds in India under a Project Agreement entered into between the USAID (An agency of the Government of United States) and the Government of India. Funds for 13 River Valley Projects including Nagarjuna-sagar undertaken by the various states of India are provided by the United States. The loan assistance covered between 1959 and 1963 under this agreement for Nagarjuna-sagar is Rs. 63.34 crores. Besides this assistance, foreign exchange to the tune Rs. 1.40 crores required for import of machinery equipment for the construction of the dam and excavation of canals was obtained under the United States Export Bank Loan and the USAID non-Project Loan Agreement etc.

Nagarjuna-sagar claims to have utilized indigenous machinery but for 3% of total outlay for imported machinery which is lowest for any other comparable projects in India.

NAGARJUNASAGAR AMONG WORLD DAMS

Particulars	Concrete, Masonry in lakh cu.m.	Max. height in meters	Gross storage capacity in lakh cu.m.
Dams in India			
Nagarjuna-sagar	5.4	122.7	1,15,940
Rihand	1.7	81.3	1,06,080
Bhakra	4.0	222.0	91,280
Koyna	1.1	80.4	27,742
Dams in U.S.A.			
Hoover	3.4	217.8	3,82,380
Grand Coulee	8.0	165.0	1,20,960
Shasta	5.0	180.6	55,500
Hungry Horse	2.2	169.2	48,772

SALIENT FEATURES OF NAGARJUNA SAGAR DAM

Max Flood discharge of river Krishna	10 lakh cu.m.
Gross storage capacity	1,15,940 lakh cu.m.
Net storage capacity	68,000 lakh cu.m.
Water spread area	285 sq km.
Height of Dam (Max)	122.7 m. (400 ft.)
Length of Dam	4.8 km.*
Base width (Max)	96 m.
Top width	8.4 m.
Power Development	4 lakh KW.
Masonry including concrete	53.5 lakh cu.m.
Earth work	28 lakh cu.m.
Cement consumed	10 lakh tonnes
Man power (peak per day)	45,000 persons
Estimated cost of dam (Phase: I)	Rs. 47.65 crores

* Of this 1.426 m. (4,756 ft.) is masonry and the rest earth dam.

Canals

Particulars	Right canal		Left canal	
	Phase I	'Ultimate'	Phase I	Ultimate
Length of Main canal (km.)	201.7	392	177.6	328.8
Bed width (Max) Normal canal (meters)	72.3	75	28.5	28.5
Depth of flow (meters)	3.54	4.5	5.55	6.63
Discharge — Max (cusecs)	11,000	21,000	11,000	15,000
Head Regulator (meters)	146.7	146.7	146.7	146.7
Distributories in km.	5,280	..	7,680	..
Total length of Field channels (km.)	14,400	..	9,600	..
Earth work (Lakh cu.m.)	495	..	260	..
Irrigable area (lakh ha.)	4.67	8.2	3.52	5.8
Krishna Delta second crop (lakh ha.)	60,000	60,000	—	—
Manpower (per ha. per day)	45,000	—	34,000	—
Cost crores	47.74	—	44.15	—

Consolidated — Dam and Canals

Total Estimated cost — Phase I	Rs. 139.54 crores.
Ayacut Phase I & II	Rs. 14.00 lakh ha.
Man power (total — peak)	1.24 lakhs
Benefits :	
Food grains	
Sugar	12 lakh tonnes
Annual value of crop production	0.5 lakh tonnes
Electric Power generation	Rs. 100 crores
	4 lakh kw.
Vast Potential for Industrial Development	

Tungabhadra Project: Tungabhadra (Pampa) is formed by the confluence of two rivers namely the *Tunga* and the *Bhadra* at Kundali in Shimoga District, Mysore State, in the hills bordering South Kanara. The total length of the Tungabhadra is 690 km and the area drained by it is about 67,500 sq km. The Tungabhadra finally falls into the Krishna, the second largest river in the South. Tungabhadra project consists of 1. A dam at Mallapuram for impounding 3,766 T.M.Cu.m.

(133 T.M.C.ft.) water 2. The right Bank canal of 208 km. running in the districts of Bellary and Kurnool called low level canal and a high level canal of 185.6 km. on right side. 3. The left bank canal also 203 km in length traverses thro' the Raichur dt of Mysore State. 4. A net work of distributaries emanate from canals. 5. Development of power at dam and at various sites along the canal. This is a multi-purpose project inaugurated on Feb. 28, 1945 as a joint venture of the then Madras and Hyderabad Governments. After the re-organisation of states, this has become a joint venture of Mysore and Andhra Pradesh. The total command of the canals drawn from this reservoir is 13.2 lakh ha. of which irrigation is proposed over an extent of about 5.1 lakh ha. in the two states. The approximate total cost of the project including Hydro-electric project is about Rs. 100 crores.

The Dam, Reservoir and Canals: The dam is a medium size straight gravity type consisting of three parts. 1. Main Dam in masonry across the river 1714 m length, of which 690 m in the middle portion as spillway with 70 m of composite dam at left end, 2. Earth dam 150 m long to close small opening in the hill on the left side of the main dam, 3. Composite dam 458 m long on the extreme left flank. The maximum height of the dam over the deepest foundation is 48.6 m with a roadway width of 6.6 m at top; the storage capacity of the reservoir at F.R.L. + 489.9 m is 3,766 T.M.Cu.m. with a live storage of 2,682 T.M.Cu.m. above the minimum draw off level 465 m. Penstocks and out lets are provided in the dam for power and irrigation. The total length of main canal is 327 km with sill at level +465 m and of which first 22.4 km is known as *power canal*. The ayacut in this reach is already served by pre-Moghul channels i.e., *Kaya* and *Basavanna* channels. After the reorganisation of states, the head works and the right bank canal upto 153 km fell in Mysore while the rest in Andhra Pradesh. (See *Power Development in Andhra Pradesh*).

Godavari Delta System: See *East Godavari* dt under DISTRICT INFORMATION Section.

Krishna Delta System: See *Krishna* dt under DISTRICT INFORMATION Section.

Pochampad Project: This utilizes 1,864 T.M.Cu.m. (66 T.M.C.ft.) water of the Godavari. This involves construction of a masonry dam (Dam site is Doodgaon Camp, Nizamabad dt) and excavation of a canal system to irrigate in Karimnagar and Nizamabad districts. Cost 40.10 crores. The preliminary works are under way.

Vamsadhara Project: Cost 13.97 crores. It is proposed to have a barrage at Neradi and a dam at Gotta across the river Vamsadhara

in Srikakulam dt. First stage envisages to have Neradi Barrage with two canals taking off on either side is proposed to irrigate an ayacut of 10,000 ha wholly in Andhra Pradesh. A joint venture with Orissa State, left canal irrigates 4800 ha of which 3000 ha fall in Orissa.

Narayanapuram Anicut Scheme: This is across Nagavali to provide irrigation potential for stabilization of existing wet ayacut of 12,800 ha and a new ayacut of 2000 ha. Began in 1954, the scheme is almost completed.

Padmanab Project: This small scheme on North Mahendra tanaya in Sompeta rd in Srikakulam began in 1959 envisages to stabilize the irrigation potential of wet ayacut of 1900 ha and a new ayacut of 82 ha.

Varaha Reservoir Scheme: Cost: Nearly one crore. The scheme envisages Ralyana pulova Reservoir in Visakhapatnam. 28% of the work on spill way and earth dam sections is completed.

Turrigedda Pumping Scheme: This is on Godavari river in East Godavari (Cost: 66.97 lakhs) by pumping water from the river. The scheme completed in 1934 provides irrigation to 6100 ha of which 3400 ha is wet ayacut.

Krishna Barrage: This is otherwise known as Prakasam barrage completed in 1957. This is to stabilize erstwhile Krishna anicut of 4,40,000 ha plus an additional ayacut of 40,000 ha. (Cost: nearly 3 crores.) See Krishna dt.

Paleru Channel: This envisages at a cost of Rs. 20.76 lakhs. construction of a masonry anicut across Paleru river near Jilelamudi 10 km north of Kandukur and to execute a supply channel on the right side for a length of 26 km for supplementing Bitragunta tank and four other tanks below to benefit 2188 ha.

Kanpur Canal Scheme: To benefit 91 non deita tanks on the right flank of the river Penna in Atmakur, Rapur and Nellore rd to irrigate about 6,800 ha. Ultimately, 3,10,00 ha would be benefited. Cost 213.24 lakhs. Completed about 27% of the total work by 1966.

K.C. Canal: Existing anicut at Jankesula across Tungabhadra to be improved by installing 90 cm (3 ft) falling shutters and strengthening the anicut to take extra stress and providing a new head sluice. The first 118 km is widened and increased the depth to 2.70 m with a concrete lining. The improvements costing Rs. 754.24 lakhs provide water for an ayacut of 1,20,800 ha.

Zurredu Project: The scheme envisages to utilize the water of Zurredu river by bunding up the stream at Doddanla hills in Bana-

ganapalli (Kurnool dt). It irrigates 720 ha of abi and 200 ha of tabi. Cost 30.33 lakhs. The scheme has been completed.

Tungabhadra Low Level Canal: The low level canal is one of the canal systems of the Tungabhadra project on the right bank of the Tungabhadra river. The first 20 km of this right bank canal is called power canal which ends at Gundlakari Vanka after passing thro' the Hampi Power House. This emerging canal traverses 325 km thro' the districts of Bellary and Kurnool from where the Kurnool Branch takes off and runs a further distance of 48 km. It irrigates a wet ayacut of 57,480 ha.

Tungabhadra High Level Canal: (ANANTAPUR dt) T.B.P. Board and Andhra PWD jointly undertook this scheme in two stages. Stage-I costs 13 crores to irrigate 47,846 ha on Andhra side as sanctioned by C.W. & P.C. and 27,200 ha on Mysore side. M.P., North canal was completed; the South canal is nearing completion.

Kadam Dam: The dam across Kadam stream in Adilabad dt irrigates 26,000 ha abi 8,000 ha tabi. It consists of a gravity dam and composite dam spillway and a canal of 68 km. The unprecedented floods breached the dam during 1958. The restoration works have been almost completed by 1966.

Swarna Project: (ADILABAD dt). It is proposed across Swarna near Jowli Village (Nirmal) on Hyderabad Nagpur highway. This irrigates an ayacut of 2600 ha abi and 200 ha garden crop. Cost 77.41 lakhs.

Remadugu Project: (NIZAMABAD dt) Costing 35.06 lakhs, this medium irrigation scheme is proposed across Remadugu stream 13 km to the east of Dichpally railway station. It benefits 200 ha. It is almost completed.

Lakshnapur Project: A medium irrigation scheme across the Parginala stream in Pargi rd in Hyderabad dt to benefit an ayacut of 1040 ha in Lakshnapur village.

Jutpalli Project: Earth dam of 1248 m and 21 m of weir to dispose of a flood discharge of 11,852 cusecs has been completed in Tandur rd. Hyderabad dt. Cost 20.20 lakhs. Ayacut: 980 ha.

Rajolibanda Diversion Scheme: At Rajolibanda 128 km down the stream of Tungabhadra dam an anicut across the Tungabhadra river is proposed at a revised estimated cost of 383 lakhs. A canal of 142 km length takes off from the left bank. Of the total 35,200 ha potential for 28,000 ha has been created by 1966.

Salivagu Project: A medium irrigation scheme across Salivagu stream 6 km from Parkhal-Hanamakonda Road in Warangal dt. It benefits 1140 ha at a cost of 40.57 lakhs.

Musi Project: A major irrigation project across the river Musi (In Nalgonda dt) a tributary of Krishna. It irrigates 12,720 ha at a cost of 443.73 lakhs. The scheme has been almost completed.

Lanka Sagar Project: It is proposed near Rajagudem village in Madhira tq, Khammam dt. It irrigates 2040 ha abi at a cost of 76.55 lakhs.

Vottigedda Reservoir: A dam across Vottigedda a tributary of Nagavali proposed near Ravada, Parvatipuram tq in Srikakulam dt. It benefits 6668 ha. About 15% is reported to be completed by 1966.

Nallavagu Project: This envisages to utilize the waters of Nallavagu, a tributary of Manjira river. The site for the proposed reservoir lies near Sultanabad. Narayanakhet tq in Medak dt. It irrigates 2360 ha at a cost of Rs. 6-78 lakhs. The scheme is under advanced stages of completion.

Kotepalli Vagu Project: A dam across Kotepalli Vagu a sub-tributary of river Bhima a tributary of Krishna at 3 km South of Kotepalli, Vikarabad tq Hyderabad dt. It irrigates 3640 ha abi and 350 ha tabi at a cost of 73.65 lakhs.

Kinnerasani Project: It is proposed to construct a reservoir across Kinnerasani river, a tributary of the Godavari near Kothagudem in two stages. In the first stage water supply is proposed to fertilizer factory and thermal station at 22,000 and 32,000 kilo litres per day respectively. In the ultimate stage, an ayacut of 4,000 ha is proposed to be irrigated in addition to increasing the water supply to thermal station at about 2 lakh kilo litres per day. The scheme sponsored by State Electricity Board is under accelerated progress.

Tandava Project: A dam is proposed across Tandava river at Gantavari Kothagudem, Narsipatnam tq in Visakhapatnam dt. It irrigates 14,200 ha at a cost of nearly Rs. 3 crores.

Pampa Reservoir Scheme: It is proposed to construct a reservoir damming the river Pampa near Annavaram, Tuni tq in East Godavari dt. It irrigates 440 ha.

Gostani Reservoir Scheme: This envisages a reservoir across Gostani river, Tatipudi village. Sringavarapu kota tq. Visakhapatnam dt. It is to stabilize the irrigation for the existing ayacut of 5391 ha. It is taken up as a deposit contribution work at a cost of Rs. 4.57 crores.

The Upper Penna Project: The project has been completed at a cost of 168.04 lakhs to benefit an ayacut 2137 ha (Part).

Rallapadu Project (Stage II): This is proposed as an earth dam across the Manneru river near Rallapadu about 32 km below the existing Mopad reservoir with a canal of 19.3 km long on the right bank of the reservoir to irrigate 3270 ha. The cost of the scheme is Rs. 103 lakhs. The work has been completed.

Pincha Reservoir Project: An earth dam is proposed across the river Pincha near Palakalagutta south of Mudumpadu village in Rayachoti tq, Cuddapah dt. It irrigates 1555 ha at a cost of Rs. 57.274 lakhs.

Bhairavanitippa Project: An earth dam of 2.4 km long is proposed at Bhairavani tippa in Anantapur dt. The project was completed at a cost of 141.92 lakhs. By 1965, an ayacut of 6493 ha has been completed for first and second crops.

PROJECTS PROPOSED FOR FUTURE EXPLOITATION

Panasanandivada Project: On Nagavali (Srikakulam dt). Cost: 84 lakhs. Ayacut: 19600 ha. This is not proposed to be taken up until Vamsadhara Project is completed.

Yerrakaluva Reservoir Scheme: Polavaram tq W.G. District. Rs. 65 lakhs. Ayacut: 3600 ha. Awaiting CW & PC clearance.

Upputeru River Improvements: From Railway Bridge to Kondagi lock in Krishna dt. Cost: Rs. 586; Ayacut: 15064 ha. Gives relief to Kolleru lake area from floods. Awaiting CW & PC clearance.

Kavali Canal Scheme: Left flank of Pennar above Sangam anicut, Kovur tq, Nellore dt. Cost: 92 lakhs; Ayacut 8800 ha.

Cheyzeru Reservoir: Togurupet, Rajampet tq. Cuddapah. Cost: Rs. 88.76 lakhs. Ayacut: 5088 ha. (Two crops)

Sudda Vagu: Mudhol tq; Adilabad dt. Cost: Rs. 60 lakhs; Ayacut: 7,200 ha.

Satnala Project-I: Across Rallavagu, Adilabad tq. Cost: Rs. 85 lakhs. Ayacut: 2400 ha (two crops).

Peddavagu: A multipurpose flood control project, Asifabad, Adilabad dt. Cost: 500 lakhs. Ayacut: 13,200 ha of which 4,400 is wet.

Mulavagu Project: Sircilla tq. Karimnagar dt. Cost: 21 lakhs; Ayacut: 1250 ha (two crops).

Somasila Project: Across Pennar, Cost: 10.60 crores. 1. Stabilizing Ayacut (old wet): 76,800 ha. 2. New Ayacut: 59,600 ha.

Byneru Reservoir Scheme: Polavaram, W.G. dt. Cost: 49.44 lakhs. Ayacut: 1428 ha (Cost per ha works out to Rs. 835).

Peddavagu Project: Gummadapalli village, Palwancha tq, Khammam dt across Peddavagu a tributary of Godavari Cost: 51 lakhs. Ayacut: 5040 ha.

Satnala Project II: At Kampa, Adilabad tq on a tributary of Penganga, again a tributary of Godavari. Cost: 63.86 lakhs; Ayacut: 4200 ha.

Haldi Project: Near Hakimpet, Medak dt on Haldi a tributary in the Godavari basin. Cost: 3.8 lakhs. Ayacut: 1480 ha.

Guntur Channel Scheme: Under Prakasam Barrage Scheme (1957) at Vijayawada. The Scheme envisages a high level canal taking off from the right bank just up stream of Prakasam Barrage to irrigate 10,800 ha in Guntur dt. The supplies for this channel are proposed to be drawn from the river above Prakasam Barrage thro the existing out fall sluice located in the Undavalli—Vaikuntapuram flood bank on the right flank of Krishna. The length of the channel is about 45 km. Cost: 120 lakhs. It is to be taken up under advance payment of Betterment levy system.

Tammilam Reservoir: A flood control project in West Godavari near Tarepalli village. Cost: 282 lakhs. Ayacut 6000 ha. It protects Eluru town from floods.

Yeleru Reservoir: Across Yeleru river, Yerravaram village E.G. dt. Cost: 300 lakhs. Stabilizing Ayacut: 32,000 ha. New ayacut: 8,000 ha.

Gajuladinne Project: Dam across Pillaperu at Gandipalem, Udayagiri tq, Nellore dt. Cost: 97 lakhs. Ayacut: 400 ha. (Cost per ha works out to Rs. 2,010).

Kalyani Reservoir Scheme: Dam across Kalyani, a tributary of Swarnamukhi 3 km above Arepalli village Chandragiri, Chittoor dt. Cost: 31.68 lakhs; Ayacut: 1153 ha (Cost per ha works at Rs. 2,440).

Pullivendala Project: This is to be achieved with close alignment with Tungabhadra High level canal and Chitravati river in Cuddapah dt. Cost: Rs. 580 lakhs. Ayacut: 20,00 ha. A famine relief work envisaged by Mr. Mackanji.

Ukachiivagu Scheme: Chittoor dt. Cost: Rs. 31 lakhs; Ayacut: 1152 ha.

Tungabhadra High Level Canal (Stage II): Anantapur and Cuddapah districts; a dam across Penna near Mylavaram, widening and

lining Main canal from head to Urava Konda deep cut; excavation of 3 canals. Cost: Rs. 8.53 crores; Ayacut: 53,970 ha.

Godavari Barrage Scheme: Under Godavari delta system near Dowleswaram, E.G. dt to replace the existing anicut and to stabilize the existing ayacut a barrage is proposed across the four sections viz—Dowleswaram, Ryali, Maddur and Vijjeswaram. (See East Godavari dt informatoin). Cost: 17 crores; stabilizing Ayacut: 4,00,000 ha; New ayacut: 10,360 ha.

Gajuladinne Project: A reservoir on Hundri river near Gajuladinne in Frattikonda tq. Kurnool dt. Cost: Rs. 96.36 lakhs. Ayacut: 5000 ha.

Kolleru Flood Control Scheme: Expert committee constituted by Govt. of India recommended Kolleru scheme at a cost of Rs. 16 crores. The scheme, if implemented would result in additional output of 1.6 lakh tonnes valued at Rs. 6 crores.

Erragunta Project: Narainpur, Kolapur tq, Mahbubnagar dt. Cost: 17.78 lakhs; Ayacut: 10.40 ha.

Yeluguru Vagu Project: Warangal dt. Cost: 29.80 lakhs. Ayacut: 1120 ha.

SOIL TYPES IN ANDHRA PRADESH

Soils are formed out of different rock types due to the continued effects of the different climatic factors. The soils in Andhra Pradesh are of two types: 1. 'Sedentary' representing those soils which remain at the place where they are formed from the rocks e.g. black, red and laterite soils and 2. 'Transported' which represent soils carried away by rain water or rivers and deposited away from the place at which they are actually formed. The alluvial soil in the delta lands is of this type. The soil types occur in Andhra Pradesh are classified into seven categories:

1. **Alluvial Soils:** Found mostly in the delta regions these soils predominate in the lower reaches of the major rivers of the State. The extent of alluvial soil is more towards the eastern side of the river than towards the west, in the case of Vamsadhara, Godavari, Krishna and Penna rivers. The rich Rice and Sugarcane growing areas of the State are found in these deltas. Also banana and mango fruit gardens are very extensively grown on alluvial soil in East Godavari, West Godavari and Krishna districts.

2. **Coastal Alluvial:** The entire coast line of the State has coastal alluvium. However, the width of this belt is not uniform all along the coast; it is thinner in Srikakulam and Visakhapatnam districts, widest in Godavari, Krishna and Guntur districts and fairly wide towards the south. Rice is the main crop grown in this soil.

3. **Deep Black Soils:** Almost the entire deep black soil zone in the State lies in Telangana region, the major part comprising the long belt along the northern border of the State from Adilabad to the West to Khammam to the East. The entire forest region in Adilabad, Karimnagar, Warangal and Khammam districts lies in this portion. Another small triangular piece of deep black soil is localised to the western half of Mahbubnagar to, Adoni to and the northern half of Alur to in Kurnool to.

4. **Medium Black Soil:** Medium black soils also are confined to Telangana region only. Between the two deep black soil zones, a vertical strip running from North to South along the western border taluks in Nizamabad, Medak, Hyderabad and Mahbubnagar districts contain the soil. However, Narayankhed and Zahirabad taluks in Medak to lying in this belt have laterite soil.

5. **Unclassified Black Soils:** The western portions of West Godavari, Krishna and Guntur districts lying adjacent to the coastal alluvial and alluvial belt in these districts, the southern part of Nalgonda to the south eastern portion of Mahbubnagar to, a central vertical strip in Kurnool to and the north-western corner of Cuddapah along with Tadpatri to of Anantapur to form a continuous belt roughly in the shape of a horse-shoe which contains almost all the unclassified black soils in the State. Three or four stray patches of this type of soil also are found in Vayalpad and Chandragiri taluks in Chittoor to, the western taluks of Anantapur to, in parts of Kanigiri, Giddalur, Atmakur and Sidhavatam taluks and the northern most portions along the border in Adilabad and Sirpur taluks.

In the three types of black soil described above, jonna, sajja, korra (Italian millet), tobacco, turmeric and chilli are grown apart from cotton which is the chief crop in such soils. Almost all the cotton growing areas in the State lying in Kurnool, Anantapur, Adilabad, Cuddapah and Mahbubnagar districts have one or the other type of black soil. Rice and Sugarcane are also grown in these soils where there are irrigation facilities. The Rice and sugarcane areas in Nizamabad and Medak districts contain these soils.

6. **Red Soils:** Red soils are very extensive in the State. The Deccan plateau and a major portion of Rayalaseema have red soils. The three coastal districts of Srikakulam, Visakhapatnam and East Godavari also contain a sizable area adjacent to coastal alluvium or alluvium, under red soils. A small area in Nuzvid to in Krishna to, the dry taluks of Vinukonda, Palnad, Sattenapalle and Ongole in Guntur to and Nellore to excepting portions of the coastal taluks, contain red soil.

Generally horsegram, other pulses and groundnut are grown in red soils. Fruit gardens also are raised in these soils where the rainfall is fairly satisfactory. The considerably extensive fruit gardens in Chittoor and Cuddapah districts are grown in red soils where the annual rainfall is 700 to 1000 mm. A few important commercial crops like cotton, tobacco and sugarcane are also grown in red soils, where irrigation facilities are available. The sugarcane growing areas in Chittoor to are of red soil.

7. **Laterite Soils:** These occur to a very limited extent and are found in Narayankhed and Zahirabad taluks in Medak to, Yellavaram and Peddapuram taluks in East Godavari to, Kavali, Kovur, Gudur and Sullurpet taluks in Nellore to, Satyavedu and Puttur taluks in Chittoor to. Pulses, fruits, arecanuts, cocoanuts and even Rice are grown in laterite soils.

AGRICULTURE IN ANDHRA PRADESH

General: Farmlands in Andhra Pradesh are broadly divided into three categories: Wet, Garden and Dry. Rice and Sugarcane crops exclusively are grown in magani wet lands. And wet lands are irrigated through assured sources of water supply like Government canals. Generally, flood irrigation is practised in wet land cultivation. Garden lands are however, irrigated by shallow wells, deep wells, tanks; water being lifted by mhot, piccotah etc. Banana, vegetables, fruits, cocoanut, tobacco, ragi, onions, betel vine grape are raised as garden crops. The third category cropland dry land is not quite dependable for farm production. Jonna, millets, pulses, groundnut, castor, chilli, cotton constitute dry farming crops.

Value of Crop Production in Andhra Pradesh: The aggregate value of important agricultural commodities produced in Andhra Pradesh during 1965-66 was estimated at Rs. 776 crores as against Rs. 790 crores in the year 1964-65. Foodgrains accounted for Rs. 437 crores as against Rs. 458 crores in the previous year and Pulses for Rs. 22 crores as against Rs. 24 crores in the previous year. The value of the commercial crops (Sugarcane, Groundnut, Gingelly, Castor, Copra and Cotton) in 1965-66 was estimated at Rs. 216 crores as against 228 crores during previous year. The value of other crops was estimated at Rs. 123 crores as against Rs. 104 crores in 1964-65.

Land Utilization: The total geographical area of the State, according to the professional survey and village papers worked out to 6,78,92,736 acres or 2,74,28,665 ha as against 6,78,23,040 acres or 2,74,00,508 ha maintained by the Survey of India, showing an excess of 69,696 acres or 28,157 ha or 0.1%. The variation is generally due

to the adoption of different methods of survey operations by the State and the Centre.

LAND UTILIZATION PATTERN — 1965-66

Serial No.	Classification.	Area in ha.	Area in acres	% to total geo-graphical area.
1.	Forests	61,27,000	1,51,15,832	22.3@
2.	Barren & Uncultivable land	21,17,000	52,41,908	7.7
3.	Land put to non-agri. use	20,20,000	49,67,001	7.2
4.	Cultivable Waste	14,20,000	35,06,214	5.2
5.	Permanent Pastures*	11,69,000	28,88,677	4.3
6.	Misc. tree crops†	3,11,000	7,68,826	1.1
7.	Current Fallows	24,30,000	60,04,740	8.8
8.	Other Fallow lands	9,42,000	23,28,578	3.4
9.	Net sown area	1,10,35,000	2,72,67,960	40.0
Total geographical area		2,74,28,665	6,78,92,736	100.0

@ This is 23.8% in March, 1967.

*Including Grazing lands.

† Tree crops and groves not included in the net area sown.

Total differs because of rounding off.

Area sown more than once: 4% Hence Total Cropped area: 44%.

Irrigation Pattern: The net area irrigated by the different sources of irrigation during 1965-66 is 29,77,045 ha in the Andhra Pradesh. Kurnool or has the highest percentage of the net area irrigated (87.1%) to the net area sown. The other districts which show high percentage area: East Godavari (61.2%), Krishna (63.3%), Srikakulam (55.9%) and Adilabad (57.0%).

Irrigation Pattern 1965-66			
Serial	Sources of irrigation.	Area (ha)	Percentage.
1.	Government canals	12,08,937	40.6
2.	Private canals	16,899	0.6
3.	Tanks	11,89,210	39.9
4.	Wells	4,54,191	15.3
5.	Other sources of irrigation	1,07,808	3.6
Total		29,77,045	100.0

Government Canals and Private Canals: The total area irrigated under Government Canals is 12,08,937 ha and represents 40.6% of the total area irrigated in the State. In Andhra Region the total area irrigated under Government canals, is 10,72,098 ha representing 36.0% and in Telangana region the area irrigated under Government Canals is 1,36,839 ha representing 4.6% of the total area irrigated.

The highest area under irrigation by Government canals is in Krishna or which accounts for 2,46,118 ha constituting 20.4% of the total area under this head in the State.

Tanks: An area of 11,69,210 ha has been irrigated by tanks and represents 39.9% of the total area irrigated in the State. The area irrigated by Tanks in Nellore or is largest numbering 1,89,683 ha or 16%.

Wells: The total area irrigated by wells in the State is 4,54,191 ha or 15.3% of the net area irrigated. Wells are the main sources of irrigation in the districts of Nellore, Anantapur, Cuddapah and Chittoor representing an area of 2,09,704 ha or 46.7% of total area irrigated by wells in the State.

Misc. Sources of Irrigation: The total area irrigated under this head is 1,07,808 ha representing 3.6% of the net area irrigated in the State. The major portion of the area under this head is covered by the districts of Visakhapatnam, Guntur, West Godavari, Krishna and Chittoor which represent 52.0% of the area irrigated by other sources of irrigation in the State.

Area of Crops Irrigated: The total area irrigated under different crops during 1965-66 was 35,53,069 ha or 29.2% of the total cropped area. The percentage of the total gross irrigated area to the total area sown is highest in West Godavari or representing 78.7%. The other districts in importance are East Godavari, Krishna, Srikakulam, Nellore and Nizamabad where the respectively percentage were 59.5; 56.0, 43.5; and 42.0 The area irrigated in Andhra Region and Telangana Region is 25,96,168 ha or 72.9% and 9,56,921 ha or 27.1% of the gross irrigated area in the State. The gross area irrigated in Nizamabad or has accounted for 42.0% of the total cropped area in the district. Adilabad or has the lowest percentage of the area irrigated being 6.2 percent in the entire State.

Some Factors: Agriculture and Irrigation.

Total Geographical Area	2,74,28,665 ha.
Cultivable area	1,71,20,000 ha.
Land remaining uncultivated	59,60,000 ha.
Net sown area	1,10,35,000 ha.

Irrigated area	29,77,045 ha.
Further Irrigable area	56,40,000 ha.
Average Rain Fall (varies between 700 mm and 1140 mm)	90 mm.
Net yield of 6 major 29 Minor Rivers 18,50,250 lakh cu.m.	145 M.Ac. ft
Flow utilized under existing irrigation system	26 M.Ac. ft
17% 3,320,710 lakh cu m.	
Balance Potential available for exploitation 83%	124 M.Ac. ft
15,30,510 lakh cu m.	
Value of Crop Production 1965-66	Rs. 776 crores.

CROPPING PATTERN IN ANDHRA PRADESH 1965-66

(Total Cropped Area 1,20,68,600 ha.)

CEREALS: Rice: 26%; Wheat: 0.1%; Jonna: 20.3%; Sajja: 4.4%; Ragi: 2.6%; Maize: 1.8%; Korra: 4.2%; Variga: 1.1%; Samai: 0.6%; Misc Millets: 1.1%.

PULSES: Horsegram: 2.5%; Bengalgram: 0.6%; Greengram 3.7%; Redgram: 1.5%; Blackgram: 1.5%; Misc Pulses: 0.5%.

COMMERCIAL CROPS: Chilli: 1.1%; Onion: 0.1%; Fruits and Vegetable 2.0%; Misc Crops: 1.2%; Groundnut: 10.2%; Cotton: 2.3%; Coconut: 0.3%; Gingelly: 1.9%; Castor: 2.2%; Misc Oil seeds 0.7%; Tobacco: 1.3%; Sugarcane: 1.1%; Fodder Crops: 1.4%; Misc non-food crops: 1.3%.

Percentage of Area under Food Crops: The area under food crops during 1965-66 was 78.4% of the total area sown.

Non-Food Crops: The area under non-food crops during 1965-66 was 25,84,000 ha as against 25,95,336 ha in 1964-65 representing a decrease of 11,627 ha. This decrease is mainly noticed under Gingelly, Castor and Fodder crops. There is an increase of 1,56,713 ha or 6.4% when an increase is compared with the normal area 24,57,365 ha under non-food crops.

CEREALS

Rice: Andhra Pradesh has 3.2% of the total Rice area of the Indian Union. Among Rice growing States, it ranks 7th in the country for area. Luckily Andhra Pradesh ranks 3rd in production among rice producing States in India. Rice tops the list among the principal crops in the State. During 1965-66 Rice represents 26.0% of the total cropped area as against 27.1% during 1964-65. Of the total area in the State under this crop 91.4% was irrigated during 1965-66 as against 91.9% in the previous year. Rice is cultivated

in all the districts of the State. Srikakulam, East Godavari, West Godavari represent 78.5% in Andhra Region and 55.4% in the Andhra Pradesh. There is a decrease of 3,20,581 ha of area under Rice in the State during 1965-66 year over 1964-65. The decrease in the area under Rice has been recorded in Andhra Region for 2,94,644 ha. (86.5% of the total decrease) and in Telangana Region for 43,419 ha. (13.5% of the total decrease).

Generally Rice is grown in wet lands irrigated by canals or tanks which are either rainfed or river fed. In some parts the crop is grown under semi-dry conditions also. In the Telangana Region Abi or Monsoon rice, also known as Winter crop, is sown at the end of June to ripen in Nov.-Dec. Tabi or summer rice is sown in Dec. to ripen in Mar.-Apr. Likewise in the Andhra Region winter season is from June to Oct. for the first crop (Sarwa), and Dec. to Feb. for the second crop (Dalwa). Harvesting is normally done during the months of Nov.-Dec. for the first crop and Mar. to May for the second crop. When compared to 1964-65 there is a decrease of 20.9% in the production of Rice in the State during 1965-66. This decrease in the production is due to the adverse seasonal conditions. During 1965-66 in the output of Rice a decrease of 10,29,500 tonnes has been recorded in the State. This decrease has been shared by Andhra Region for 8,64,400 tonnes (84.0% of the total decrease) and Telangana Region for 1,64,800 tonnes (16.0% of the total decrease). East Godavari, Krishna, Guntur, Nellore districts alone constitute 55.2% of the total output in the State.

Jonna: Andhra Pradesh accounts for 14.3% of the area under Jonna crop in India and ranks 3rd among the Jonna growing States in the country occupies 2nd place among the principal crops cultivated in the State. This crop accounts for 20.3% of the total cropped area. It is largely grown in the districts of Guntur, Nellore, Kurnool, Mahbubnagar Nalgonda, Warangal, Khammam and Adilabad which alone represent 69.8% of the area under this crop in the State during 1965-66. High yielding hybrid Jonna varieties CSH-1. CSH-2 are recently introduced on a large scale.

Sajja: Andhra Pradesh accounts for 4.6% of the Sajja area of India and among the Sajja growing States it occupies 6th place in the country. It is also an important crop in the State. The area under this crop constitutes 5,30,386 ha or 4.4% of the total cropped area in the State. The major portion of the area under this crop is shared by Vishakhapatnam, Guntur, Nellore, Kurnool, Anantapur, Chittoor, Mahbubnagar, and Nalgonda which represent 82.1% of the area under the crop in the State. In the districts of Mahbubnagar and Nalgonda alone, 80.4% of the area under this crop in Telangana Region, has been recorded. This crop is generally sown in June

CROP PRODUCTION ... PRINCIPAL CROPS 1965-66

Sl. No.	Name of the crop	Estimated Area in '000 ha		Estimated Production in '000 Tonnes		State's rank in per-centage		State's rank in per-centage	
		All India	Andhra Pradesh	All India	Andhra Pradesh	All India	Andhra Pradesh	All India	Andhra Pradesh
1.	Rice	34,948	3,135	8.9	7	30,124	3,899	13.9	3
2.	Wheat	12,772	13	0.1	14	10,549	2	0.08	15
3.	Joanna	17,145	2,449	14.3	3	7,372	1,000	13.6	4
4.	Sajja	11,404	530	4.6	6	3,540	237	6.7	7
5.	Ragi	2,193	321	14.6	3	1,284	230	18.3	3
6.	Maize	4,674	126	4.6	8	4,558	180	3.9	7
7.	Small Millets	4,323	846	19.6	2	1,576	188	11.9	4
	Total Millets (Items 3 to 7)	39,737	7,393	11.0	..	18,280	1,835	10.0	..
	Total Cereals and Millets (Items 1 to 7)	87,456	7,508	8.6	..	58,953	5,736	9.7	..
8.	Bengalgram	7,833	71	0.9	9	4,371	17	0.4	10
9.	Redgram	240	182	7.6	5	1,661	66	4.0	5
10.	Kharif Pulses	5,841	644	11.0	4	1,288	N.A.	..	..
1.	Rabi Pulses	5,335	412	7.7	6	2,537	N.A.	..	..
	Total Pulses	21,405	1,309	6.1	..	9,857	265	2.7	..
	Total Food-grains	1,08,861	8,816	8.1	..	68,810	6,001	0.9	..

ANDHRA PRADESH ALMANAC

Sl. No.	Name of the crop	Estimated Area in '000 ha		Estimated Production in '000 Tonnes		State's rank in per-centage		State's rank in per-centage	
		All India	Andhra Pradesh	All India	Andhra Pradesh	All India	Andhra Pradesh	All India	Andhra Pradesh
1.	Sugarcane	2,343	136	4.9	5	(a) 11,641	1,077	9.3	10
1.	Onions	(b) 649	14	..	..	N.A.	100	..	..
4.	Dry Chilli	22	137	21.1	2	(c) 375	83	22.1	3
5.	Dry Ginger	472	0.8	3.7	3	(c) 21	0.4	0.2	7
6.	Potatoes	7,156	1,239	0.2	14	(c) 3,831	2	0.1	15
7.	Groundnut	2,450	224	17.3	2	(d) 3,958	620	15.8	3
18.	Gingelly	356	289	9.1	4	400	38	9.5	3
9.	Castor	2,886	1.6	75.6	1	70	38	54.3	1
10.	Rape & Mustard	1,761	28	0.1	15	1,248	0.2	0.1	15
1.	Linseed	7,810	279	1.6	9	324	4	1.2	12
2.	Cotton	320	91	3.6	8	(e) 4,765	83	1.7	8
3.	Mesta	371	7	28.4	1	(f) 1,235	366	29.6	2
14.	Sunhemp Fibre	N.A.	152	4.3	7	548	8	1.3	2
25.	Tobacco			..	..	N.A.	126	..	..

ECONOMY OF ANDHRA PRADESH

- Production in terms of Gur or Jaggery
- No All India estimates are issued
- The production figures are in terms of dry chillies and dry ginger
- The production figures are in terms of unshelled nuts
- The production figures are in terms of bales of 177.808 kg. lint.
- The production figures are in terms of bales of 181.437 kg. lba.

N.A. -- Not available

and harvested during Sept. and Oct. Andhra Pradesh has produced 6.7% of the total output of Sajja in the country and is 7th among the Sajja producing States. High yielding hybrid Sajja HB-1 is recently introduced.

Ragi: Andhra Pradesh has 14.6% of the total area under this crop in India and ranks 3rd among the Ragi growing States in the country. Ragi occupies 8th place among the principal crops with 18.3% total output grown in the State during the current year. During 1965-66, it has an area of 3,21,493 ha or 2.6% of the total cropped area in the State. The chief Ragi growing districts in the State in order of magnitude are 1. Chittoor, 2. Mahbubnagar, 3. Visakhapatnam, 4. Srikakulam and 5. Anantapur which alone represent 69.3% of the total area under the crop in the State. Generally, Ragi is grown as a dry crop. This crop is grown along with pulses and Castor. The area irrigated under this crop in the State is 1,27,454 ha or 39.6% of the total area under this crop. In some districts it is raised as first crop in wet lands and in some as an irrigated dry land crop.

Maize: Andhra Pradesh has 4.6% of the total area under Maize crop in India and ranks Nineth among the Maize growing States and with 3.9% of the total output of Maize in the country it ranks 7th among the Maize producing States in the country. It occupies 12th place among the principal crops grown in the State with an area of 1.8% of the total cropped area in the State. The area cultivated under this crop in the Telangana Region alone represents 95.6%. It is mainly cultivated in the districts of Kurnool, Medak, Warangal and Nizamabad which alone represent 83.4% of the area in the Telangana Region and 70.7% of the total area in the State under the Maize crop.

Small Millets: Andhra Pradesh has 19.6% of the total area under Small Millets in India and ranks 2nd among the Small Millets growing States in the Country.

Small Millets group comprises 1. Italian Millets or Korra; 2. Kodu Millets (Varagu); 3. Samai; 4. Varigalu or Barigalu—Common Millets; 5. Godalu Savara Millets. During 1965-66 small Millets account for 7% of the total cropped area in the State.

Korra: Korra is grown as a dry or irrigated crop in almost all districts and is generally mixed with Cotton. The crop represents 59.4% of the total area under the total Small Millets in the State and ranks first among the Small Millets in the State. Korra crop is chiefly grown in the districts of Kurnool, Anantapur which alone represent 72.0% of the total area 5,02,976 ha under the crop in the State.

Varagu: Varagu is commonly grown with Red gram on poor rainfed soils. The yield is higher in the alluvial or deep black soil. The crop is chiefly grown in the districts of Guntur, Nellore and Mahbubnagar which alone represent 76.96% of the total area under the crop in the State.

Samai: It is usually grown as an early dry crop in poor soils and is generally mixed with pulses. It is mainly cultivated in the districts of Anantapur and Visakhapatnam which alone represent 43.1% of the total area under the crop in the State. 70,631 ha are under cultivation.

All Millets: The area under total millets comprising of Jonna, Sajja, Ragi, Maize and Small Millets is about 11.0% of the area under total Major and Small Millets in India. During 1965-66 the area under total millets is accounted for 36.1% of the total cropped area in the State as against 35.8% in the previous year. Though millets form an important staple food of the people in the State and is grown in all the districts it is mainly confined to the districts of Guntur, Nellore, Kurnool, Anantapur, Mahbubnagar and Nalgonda which alone represent 55.6% of the area under Millets in Andhra Pradesh. When compared to the previous year there is a decrease of 1,89,697 ha or 4.2% of the area under this crop.

PULSES

Bengalgram: During 1965-66 Bengalgram has an area 70,707 ha cultivated in Andhra Pradesh. This records 0.6% of total cropped area in the State. The crop is mainly cultivated in the districts of Guntur, Kurnool, Hyderabad, Nizamabad, Medak, Adilabad, Karimnagar and Mahbubnagar which alone represent 83.8% of the total area under this crop in the State.

Redgram: The area sown in 1965-66 under this crop is 1,81,598 ha or 1.5% of the total cropped area in the State as against 1.4% in the previous year and occupies 13th place among the principal crops grown in the State. This crop is largely grown in the districts of E. G. Dt, Guntur, Kurnool, Anantapur and in several districts of Telangana Region. The area under this crop in Telangana Region represents 56.7% of the total area under Red gram in the State.

Greengram: The area under the crop during 1965-66 is 4,53,911 ha or 3.7% of the total cropped area in the State and occupies 6th place among the principal crops grown in the State. The crop is mainly confined to the districts of Krishna, Nalgonda, Guntur, Warangal and Karimnagar representing 62.2% of the total area under the crop in the State.

Blackgram: The crop occupies 14th place among the principal crops cultivated in the State with an area of 3,50,091 ha or 2.9% of the total cropped area in the State. Blackgram is an important crop in the districts of Guntur, Krishna, Medak, Hyderabad, Nizamabad and Adilabad covering an area of 1,54,570 or 80.7% of the total area under this crop in this State.

Horsegram: Horsegram occupies 7th place among the principal crops cultivated in the State with an area of 3,50,091 ha or 2.9% of the total cropped area in the State. Cultivation of this crop is mainly seen in the districts of Mahbubnagar in Telangana Region and Anantapur in Andhra Region which alone represent 35.6% of the total area under this crop in the State.

Mist Pulses: An area of 62,939 ha or 0.5% of the total cropped area in the State, has been sown during the current year with other Pulses.

COMMERCIAL CROPS

Sugarcane: Andhra Pradesh has 1,35,874 ha or 4.9% of the total area under Sugarcane in India and ranks 5th among the Sugarcane growing States in India and has occupied seventeenth place among the principal crops cultivated in the State and is one of the foremost commercial crops representing 1.1% of the total cropped area in the State during the 1965-66. During the year 96.6% of the area under Sugarcane has been irrigated. This crop is mainly confined to the districts of West Godavari, East Godavari, Visakhapatnam, Chittoor, Krishna and Nizamabad, which alone have represented 81.0% of the total area under the crop in the State.

Chilli: Chilli occupies 21.1% of the total area under the crop in India and Andhra Pradesh ranks 2nd among the States growing Chilli in the country. Chilli crop ranks 16th among the principal crops in the State with an area of 1,37,171 ha or 1.1% of the total cropped area in the State. In 1965-66, 31.3% of the total area under dry and irrigated conditions. The crop is grown in almost all the districts of Andhra Pradesh.

Onion: An area of 13,940 ha or 0.1% of the area in this State has been recorded under Onion during 1965-66. 84.4% of the area under Onion is irrigated during 1965-66. It is an important crop in the districts of Hyderabad, Guntur, Cuddapah, Anantapur, and Medak, which alone represent 8931 ha or 64.1% of the total area under this crop in the State.

Groundnut: The area under the crop in the State represents 7.3% of the total area in India and ranks 2nd among the Groundnut

growing States in the Country. Groundnut ranks 3rd among the principal crops grown in the State with an area of 12,39,394 ha or 10.2% of the total cropped area in the State. During 1965-66 88,565 ha or 1.1% of the total area under this crop in the State is irrigated. An increase in area of 1,47,494 ha or 13.5% is noticed in 1965-66 over the previous year under this crop. This is due to the favourable marketing conditions. Due to the unfavourable seasonal conditions the production is receded by 2,79,370 tonnes in the current year over the previous.

Gingelly: Andhra Pradesh has 9.1% of the total area under Gingelly in India and ranks 4th among the Gingelly growing States in the country. It ranks 11th among the principal crops in the State with an area of 2,24,234 ha or 1.9% of the total cropped area in the State. Of the total area under this crop in the State 9.5% is irrigated. The main districts that grow Gingelly crop are Visakhapatnam, East Godavari, West Godavari, Karimnagar and Adilabad which alone account for 1,45,833 ha or 65% of the total area under this crop in the State.

Castor: The total area under Castor in Andhra Pradesh constitutes 75.6% of the total area cultivated in India and takes the 1st place among the Castor growing the States in the country. Castor takes 10th place among the principal crops in the State. The area under this crop is 2,69,719 ha or 2.2% of the total cropped area in the State. It is a rainfed crop. The percentage of the area irrigated under this crop is quite insignificant. The crop is grown mainly in the districts of Nellore, Hyderabad, Mahbubnagar and Nalgonda which alone represent 80.9% of the total area under castor in the State.

Tobacco: Tobacco is one of the most important commercial crops in Andhra Pradesh, ranking first among the tobacco growing States in India. The area under tobacco cultivation in the State is nearly 38.5% of the total area under this crop in India. In Andhra Pradesh the crop is cultivated in an area of 1,52,800 ha. East Godavari, Guntur, Krishna and Kurnool alone cover 84.7% of the total area in the State under this crop. There are two important varieties cultivated namely *Virginia* and *natu* (Desi). During 1965-66 about 9.5% of the tobacco area is irrigated. This crop ranks 15th among the principal crops cultivated in the State.

Coconut: The area under Coconut represents 0.3% of the total cropped area in the State during 1965-66. The area under Coconut in Telangana Region is insignificant. The area in the districts of East Godavari, West Godavari, Srikakulam and Chittoor accounts for 92.0% of the total area under this crop in the State. Area 33302 ha.

Cotton: The State has 3.6% of the total area under cotton in India and ranks 8th among the cotton growing States in the country. Cotton occupies 9th place among the principal crops cultivated in the State. The area under cotton during the 1965-66 is 2,79,233 ha or 2.3% of the total cropped area in the State; cotton is an important crop in the districts of Kurnool, Adilabad and Anantapur which alone represent 82.2% of the total area under this crop in the State.

Activities of the Agriculture Department—1965-66: The activities of the Agriculture Department are broadly classified under the following heads: 1. Education; 2. Research; 3. Extension and 4. Engineering.

The year 1965-66 marked the end of the Third Five Year Plan. Due to implementation of various Agricultural Production Programmes during this year an additional production potential of 1.15 lakh tonnes of Food grains, 0.12 lakh tonnes of oil seeds, 0.24 lakh tonnes of Sugarcane (Gur) and 0.11 lakh bales of Cotton, was created. During 1965-66 a sum of Rs. 427.85 lakhs as against the provision of Rs. 513.86 lakh was spent on the programmes relating to Agricultural Production, Minor Irrigation, Land Improvement, Soil Conservation and Development of Ayacuts.

Education: Due to transfer of the Agricultural Colleges at Bapatla and Tirupati from the Directorate of Agriculture to the Andhra Pradesh Agricultural University, the activities of the Department were confined to the running of three agricultural schools at Suryapet, Yemmiganur and Ghantasala, 67 students were given training during 1965-66. See Education.

Research: Agricultural Research was in progress at the main and sub-stations during 1965-66. The research work constituted introduction of new varieties, Hybridisation work, pure line selection and agronomic trials. Important Crops covered under Research Programme: 1. Rice; 2. Millets; 3. Maize; 4. Sugarcane; 5. Pulses; 6. Oil seeds; 7. Fodder; 8. Cotton; 9. Fruits and Vegetables; 10. Turmeric; 11. Chilli; 12. Mesta; 13. Tobacco; 14. Entomology and 15. Plant Pathology. The Agricultural Chemistry section in addition to attending to work on the important schemes including soil survey work in Nagarjuna Sagar and other projects attended to soil testing of 13,322 soil samples and 368 water samples received from the ryots' holdings and gave suitable recommendations to the farmers.

High Yielding Variety Programme: During 1965-66 high yielding varieties like Taichung Native-1 Rice* variety, Hybrid Jonna

*I.R.8 is a new high yielding variety that is introduced during 1966-67.

C.S.H.I. were grown in some of the Research Stations to test their field performance. It was found that Taichung Native-1 variety was a high yielder and found suitable for growing in the Rabi season. Hybrid Jonna (C.S.H.I.) and Hybrid Sajja were also found to give very high yield and suitable for the Kharif and Rabi seasons under rainfed as well as irrigated conditions.

Extension: The successful results of Research are communicated to ryots by the Extension Wing of the Department of Agriculture. In addition, the Extension Wing implemented the Crop Production Plan Programme which aimed at increasing the production of food and important commercial crops, besides arranging supply of modern agricultural inputs like the improved seeds, fertilisers, pesticides and agricultural implements etc., through various Agricultural and Co-operative Depots rendering necessary technical advice to the farmers.

Grape Vine Development: Free technical advice and a subsidy at Rs. 10 per vine subject to a maximum of Rs. 100 per individual is given. An amount of Rs. 3,960 was distributed to 96 house holders in Hyderabad, for planting 396 new grape vines during the year 1965-66. The scheme was also extended to the District Head quarter cities of Warangal, Mahbubnagar, Karimnagar, Sangareddy, Cuddapah, Kurnool, Anantapur and Chittoor. Out of Rs. 10,000 allotted for the mufasils, districts towns, an amount of Rs. 8,100 was utilised for planting 810 new Grape vines in 176 houses during the year.

Anab-e-shahi Grape Cultivation in Rayalaseema: Under this scheme the area under grape cultivation was increased by timely advice and propaganda as detailed below during the year:

District.	No. of Vines planted.	Area covered in hectares.
Cuddapath	3,102	6.40
Anantapur	5,868	13.60
Chittoor	1,868	4.00
Kurnool	8,400	20.80
Total	19,238	44.80

Grape Research Unit, Hyderabad: This is an Advisory and Research Unit which was initiated by the appointment of a Grape Adviser in 1965 to control and guide Grape growers. On the eve of starting of this scheme there were only 312.90 h.a. With the intensive

campaign and advisory work under this scheme, is now 840 hectares of which 600 * hectares are in and around Hyderabad. Research trials were also undertaken in the growers fields on the use of gibbarrillic acid, to improve the quality and yield of Grapes, besides pruning and other cultural trials.

Intensive Agricultural District Programme: The Intensive Agricultural District Programme popularly known as *Package Programme* implemented with the technical and financial assistance of *Ford Foundation* (USA) and started in 1961 was continued during 1965-66 in W. Godavari dt. All the 16 blocks in the District were covered by the Intensive Agricultural dt. Programme in 1965-66. 1,24,748 production plans covering 894 villages were prepared, covering all crops in an area of 4,06,110 hectares; 575 composite demonstrations were laid from the inception of the scheme, 32,295 soil samples were collected and of these 25,532 soil samples were analysed and necessary technical advice rendered to the farmers. According to evaluation work conducted in the Kharif of 1965 the yield of Rice was 1,708 kg/ha as against 1,650 kg/ha in 1964. (Andhra Pradesh: 1327 kg/ha in 1965).

An amount of Rs. 21,64,390 was spent on various items under the IADP scheme during 1965-66. (See West Godavari dt.).

Intensive Agricultural Area Programme: I.A.A.P. It is otherwise known as *modified Package Programme* and continued in the areas having assured water supply irrigation facilities in the 117 re-de-limited blocks of the 10 districts of East Godavari, Krishna, Guntur, Nellore, Chittoor, Kurnool, Nizamabad, Warangal, Karimnagar and Mahbubnagar during the year 1965-66. The crops selected under the scheme are Rice (Paddy), Jowar, Ragi, Maize, Sugarcane, Groundnut, Cotton, Bananas and Vegetables under Kharif and Rabi seasons. The coverage during 1965-66 is 100% both under Kharif and Rabi seasons. Under the scheme, 9,360 composite demonstration plots have been organised in the 10 districts and a subsidy of Rs. 30 for each plot has been given to cultivators amounting to Rs. 1,00,800.

Fertilizers Consumption: A quantity of Nitrogenous Fertilizers 4.52 lakh tonnes in terms of nutrient Nitrogen was consumed in Andhra Pradesh during 1965-66. Guntur dt leads mostly for Flue cured Virginia Tobacco. Next West Godavari claims second place due to activities of Intensive Agricultural District Programme (*Package Programme*). Nizamabad occupies third place for Sugar cultivation. The lowest consumption was in Hyderabad dt. In 1963-64 consumption of Fertilizer in the State amounted to 7.44 kg per ha (Nitrogen 4.85 kg/ha; P_2O_5 1.5 kg/ha; K_2O 0.90 kg/ha).

Ware Housing: State Ware-housing Corporation manages 37 Warehouses with 166 sub-ware houses with a total capacity to store

* This has increased recently to 1000 ha.

11,970 tonnes of Food grains in Andhra Pradesh. Besides, 14 Warehouses are managed in Andhra Pradesh by Central Warehousing Corporation.

Land Reforms in Andhra Pradesh: The Government of Andhra Pradesh in consultation with the Government of India enacted the *Andhra Pradesh Ceiling on Agricultural Holdings Act, 1960*, which prescribed the minimum extent of land that a person may hold. The bill was passed by the Assembly on July 9th, 1960.

The Act fixes ceilings on existing holdings as well as on future acquisition of agricultural lands. Under the Act, the ceiling area in respect of every person or every family consisting of not more than five members has been prescribed to be an extent of land equal to four and a half times the family holding. An additional extent of one family holding is allowed for every member in excess of five. The extent of land which constitutes a family holding for the category of wet lands bearing settlement *Tarams* or *Annawari* classification ranges from 2.4 to 9.6 ha depending on the classification of the land and for dry lands the extent of family holding ranges from 14.4 to 28.8 ha. As regards future acquisition the Act provides that no person on or after the notified date should purchase or take on usufructuary mortgage or otherwise voluntarily acquire any land if in consequence of such purchase, mortgage or acquisition, the total land held by him would exceed three family holdings. When a person comes to hold land in excess of the ceiling area in any manner, he should furnish a declaration to the Revenue Divisional Officer. The ceiling will not apply to the Central or State Government, religious, charitable and educational institutions, co-operative farming societies, cattle breeding, dairying, wool raising, sugarcane farms operated by sugar factories and efficiently managed farms consisting of compact blocks.

Animal Husbandry: Andhra Pradesh occupies the fourth place among all the States of the Indian Union in respect of livestock population and ranks first in the number of poultry and sheep. The State has roughly 1/10th of the country's cattle population, 1/5th of its sheep and 1/6th of its poultry. Livestock occupies an important place in the State's rural economy. There are 33 Key Village Blocks serving about 2.4 lakh cows and she buffaloes of breedable age. There are at present 12 livestock farms in 12 districts in the State.

Sheep Development: There are 25 sheep and wool extension centres in the State.

Poultry Development: In the Third Plan two intensive Poultry Development Blocks were started in the State.

Veterinary Aid: In 1965 there are 652 Veterinary hospitals, dispensaries etc. in the State which work to one institution for every 1,000 cattle.

Dairying and Milk Supply: There are two categories of schemes being implemented in the Third Plan under Dairying and Milk Supply viz. (1) the *Integrated Milk Project* at Vijayawada and the ancillary schemes of the project and (2) the *Milk Supply Schemes* in areas not covered by the Integrated Milk Project.

Integrated Milk Project: This project started in the Third Plan intended for full exploitation of the milk potential available in Krishna and Guntur districts and cater to the milk requirements of about 3 lakhs consumers in the twin cities of Hyderabad and Secunderabad and 0.50 lakh in the towns of Vijayawada and Guntur. The estimated cost of the project was about Rs. 4.35 crores. Hyderabad Dairying Plant is almost ready for production and the Milk powder Factory at Vijayawada may come into production in the second or third year of the Fourth Plan.

Milk Supply Schemes: In the Third Plan a provision of Rs. 2.27 crores was made for milk supply and urban dairy schemes in Chittoor, Nellore, Warangal, Rajahmundry, Kakinada and Visakhapatnam.

FISHERIES

Andhra Pradesh possesses rich resources for the development of fisheries both marine and inland. The State has a coast line of about 960 km with an average width of 32 km of continental shelf which means that the fishing grounds extend to an area of about 1,080 sq km. The inland water resources of the State are estimated to be 32,000 ha. The annual output of fish by the end of the Third Plan was 2.65 lakh tonnes. Master Plan to develop fish resources on Godavari (W.G. nr) and Pulicat (Nellore) are underway. Visakhapatnam, Eluru, Rajahmundry, Kakinada, Narasapur are marine fishing centres a few of which are considered for development as fishing harbours.

ELECTRIC POWER IN ANDHRA PRADESH

Andhra Pradesh has a unique combination of 3000 MW hydro-electric power potential and 400 crore tonnes of coal reserves for thermal generation. The oldest thermal station in Andhra Pradesh is at Hyderabad — on the Hussainsagar lake — was commissioned in 1923. In the Telangana region, the development of power was concentrated mostly to the metropolitan cities, till the formation of Andhra Pradesh. In the Andhra region, the power development in the late twenties was done on a limited scale through the private companies. The erstwhile composite Madras State undertook bulk generation of

power in 1938 with the commissioning of the Visakhapatnam and Vijayawada Thermal Stations. The power development in the Andhra region may be said to have commenced with the advent of the hydro-era after the formation of the State. The first unit of the Machkund Hydro Electric Station was commissioned in August 1955 and the Tungabhadra hydel early in 1957, thus bringing the entire area under one supply zone from hydro-resources. In the Telangana region, the Nizamsagar Hydro Electric Station was commissioned in 1956 followed by Ramagundam Thermal Station in 1957. The aggregate power demand in Andhra Pradesh was 180 MW at the beginning of the Third Plan. The peak load met by the end of the Third Plan i.e. 1965-66 was 258 MW. The installed capacity at the beginning of the Third Plan was 213 MW. During 1963-64 capacity of 27.2 MW was installed, comprising one set of 9 MW at Tungabhadra Dam Power House, of which Andhra share is 7.2 MW, and two gas turbo sets of 10 MW each at Hyderabad. Thus, as on 1-4-1964, the installed capacity stood at 240 MW. During the course of 1964-65, three more units of 9 MW each one at Tungabhadra Dam and two at Hampi were commissioned and Andhra share in the three sets is 21.6 MW. The Nellore Thermal station having a capacity of 30 MW has also been pressed into service. The total addition made during 1964-65 is therefore 51.6 MW bringing the total installed capacity to 291.8 MW. No additional units were added in 1965-66.

As stated above, the total installed capacity at the beginning of the Third Plan was 213 MW. It rose to 292 MW at the end of the Third Plan. During the Fourth Plan it is proposed to increase it further to 982 MW as below:

Total Installed capacity at the beginning of the Fourth Plan	292 MW
Kothagudem I Stage (Achieved during 1966-67)	120 MW
Kothagudem II Stage (to be achieved during 1967-68)	120 MW
Upper Sileru (to be achieved during 1967-68)	120 MW
Ramagundam A.I.D. Unit (to be achieved during 1968-69)	62 MW
Kothagudem III Stage (to be achieved during 1969-71)	220 MW
Lower Sileru I Unit (to be achieved during 1969-71)	100 MW
Total	1,034 MW
Less: Retirement of old and obsolete sets	52 MW
Net total installed capacity by the end of 1970-71	982 MW

By the end of March 1967, the installed capacity was raised to 412 MW, and is expected to increase to 642 MW by March 1968. According to the Fourth Annual Power Survey, a demand of 944 MW is anticipated in Andhra Pradesh by the end of 1970-71, which can be achieved only if the installed capacity is raised to 1,227 MW. Thus there would be a short fall in installed capacity to the extent of 245 MW at the end of the Fourth Plan. The following schemes are under consideration to meet this shortage:

Pumped Storage Scheme at Nagarjunasagar	2 x 50 MW	100 MW
Additional Set at Kothagudem under III Stage		110 MW
New Set in Vijayawada		50/60 MW
Ramagundam Extension Scheme		200 MW

Due to the reduction in the size of the annual plan, the provision for power scheme in 1967-68 had to be limited to Rs. 32 crores only as against a demand of Rs. 42.5 crores. A total generation of 2,710 million units has been contemplated during 1967-68 against 1,488.4 million units in the previous year.

Besides the above schemes, work in respect of Srisaillam Hydro Electric Scheme, which is a sanctioned scheme is also in progress (1967). This scheme envisages installation of 4 units 110 MW each in the first stage. Also a scheme for expansion of Kothagudem Thermal Station during the Fourth Plan, to install four units of 125 MW and two units of 250 MW is under contemplation of the Andhra Pradesh State Electricity Board and State Government.

Power in Fourth Plan: In the draft Fourth Plan of Andhra Pradesh, a provision of Rs. 200 crores has been made for power development. This amount does not however include Rs. 35 crores required in the Fourth Plan Period for the work on Srisaillam Project.

Andhra Pradesh State Electricity Board: The Board was constituted on April 1, 1959. All aspects pertaining to generation and main transmission irrespective of voltage including the construction and operation of the main transmission lines forming part of a project under the then Government were transferred to the Board with effect from April 1, 1962. In all matters relating to the Power Houses which are inter-state projects, the Board acts as a distributing agency for the power shared by Andhra Pradesh.

HYDRO POWER IN ANDHRA PRADESH

The Machkund Hydro Electric Scheme: It is a joint venture of Andhra Pradesh and Orissa. The two States share the capital outlay and power benefits in the ratio of 70 : 30 respectively. The Govern-

ment of Andhra Pradesh administers the scheme. This scheme was designed to harness the waters of Machkund river, sub-tributary of river Godavari to develop power on the right bank of the river near Duduma falls. A gross head of 252 m is available. An installed capacity of 1,14,750 kW is available under this scheme of which 70% is the share of Andhra Pradesh. Total Estimated cost Rs. 1,828 lakhs. (Civil works and Power Station—Jointworks).

Tungabhadra Hydro Electric Scheme: The scheme is a joint venture of Andhra Pradesh and Mysore States, the capital cost and benefits being shared by the two Governments in the ratio of 80 : 20 respectively. The scheme provides for the development of power from waters let out into the irrigation canals at two places one at the foot of the Tungabhadra Dam and the other at Hampi ruins, 204 km below the Tungabhadra Dam where a drop of 33 m is available. The scheme comprised the installation of 8 hydro-sets of 9 M.W. each — at the Tungabhadra Dam Power House and 4 sets at the Canal Power House (Hampi). Of the 8 hydro-sets of 9 M.W. each 4 sets—two at the Tungabhadra Dam and two at Hampi were installed during the Second Five Year Plan. Of the remaining four hydro-sets, one unit was commissioned during 1963-64 and the other three units in 1964-65. Total estimated cost Rs. 845 lakhs (Civil works and Power Station—Joint works. See Development of Water Resources).

Nizamsagar Hydro Power Station: The Nizamsagar reservoir completed in 1931 has a storage capacity of 8,220 lakh cu.m. (29,700 m.c. ft.) Nizamsagar power house is a seasonal station constructed below the reservoir. Three units of 5,000 kW each have been installed at the power house during the First Plan Period. Since the generating capacity of this station is variable depending upon the irrigation discharges from the Nizamsagar it is inter-connected with the Hussainsagar Thermal Station at Yerragadda sub-station. It serves to save coal at Hussainsagar. Total estimated cost: Rs. 259.80 lakhs.

Upper Sileru Hydro Power Scheme: The scheme provides for the utilisation of the waters of Sileru river by constructing a low diversion weir at Guntawada and installing two hydro units of 60 MW capacity each initially. Orders for the generating equipment for this project have been placed with Swiss manufactures under Swiss Credit. Civil works at Guntawada weir are almost completed. The excavation work of the flume channel has been completed. Works relating to forebay embankment, forebay dam, intake dam, penstocks and power house building are also nearing completion. The power house is situated about 64 km. from Chintapalli of Visakhapatnam. It is programmed to commission one unit of 60 MW during 1967 and

the other by March 1968. Total estimated cost Rs. 1700 lakhs (approximate).

Lower Sileru Hydro Power Scheme I Stage: The Lower Sileru Hydro Project is the tail end project in the Machkund-Sileru river basin. It envisages the utilisation of a drop of 198 m available near the confluence of the Tadikavagu with the Sileru river. The total installed capacity of the power station will ultimately be 6 units of 100 MW sets and the scheme is proposed to be commissioned in the first stage at an estimated cost of nearly Rs. 3,500 lakhs. The scheme has been cleared by the Planning Commission as Fourth Plan Scheme. Preliminary works were taken up as advance action during 1965-66 and the scheme will be completed towards the end of the Fourth Plan period.

The scheme comprises a dam at Donkarayi, a contour flume channel 15 km long, a forebay, head race tunnel 2 km long and penstocks ending in a Power House situated at Pollur with suitable tail race discharge arrangements. Civil works have already been started and negotiations for plant and equipment are afoot. The 1st set is scheduled to come into operation by June 1969 and the balance sets during the Fourth Plan. Total estimated cost Rs. 3,500 lakhs (approximate).

Srisaillam Project: After the receipt of the Planning Commission's clearance and the Government of India's approval for the project, administrative sanction by the State Government was accorded in Sep. 1964. The Dam and Power House are programmed to be completed early in the Fifth Plan and one unit of 110 MW is expected to be commissioned by 1971-72. The remaining units will be commissioned in the year 1972-75. The works relating to coffer dam, diversion tunnel, diversion channel, are in good progress. The expenditure incurred on the project upto 31-3-1966 is about Rs. 11.05 crores. The construction of transmission lines under this project is being done by the State Electricity Board. Srisaillam Project provides excellent facilities for developing hydro power at low cost, without in any way diminishing the irrigation benefits. The project site being centrally located in Andhra Pradesh also facilitates economic transmission of power to various load centres. The project mainly comprises: 1. A straight gravity dam of about 120 m above the deepest bed level across the river Krishna near the famous Srisaillam temple in Kurmool vr. 2. A power house on the right side to accommodate a total of 7 units of 110 MW each. Initially four units will be installed. 3. A transformer yard to step up power from 11/13.8 kW to 220 kW for inter connection with Nagarjunasagar and Cuddapah sub-stations. The estimated cost of the project is Rs. 4,575.48 lakhs including transmission line and sub-stations for

four units. The main dam will be built in stone masonry availing of the resources built up at Nagarjunasagar Project (Q.V.) which is located at 192 km. downstream of Srisaillam Project and nearing completion. The diversion arrangements consist of a 9 m dia. circular tunnel, 675 m long through the left flank on a diversion channel 9 m wide on the right edge for a total capacity of about 30,000 cusecs. This tunnel and channel are required to divert the river flows during the lean months enabling the construction of the Dam in the deep channel course. The total volume of masonry involved in the construction of dam is about 20 lakh cu.m.

The project though essentially a Hydro Electric Project brings in certain indirect irrigation benefits also for some years to come by integrated operation of the two reservoirs at Srisaillam and Nagarjunasagar. It would be possible to irrigate 1.8 lakh ha under second crop in Nagarjunasagar ayacut and Krishna Delta, during the interim period resulting in additional food production of about 2,50,000 tonnes of rice per annum. From the sale of electric power alone, the project brings in a handsome return of about 21 to 23%.

Project Progress: The construction work on this project was inaugurated on 24th July 1963 by Jawaharlal Nehru. The coffer dam was inaugurated by the Chief Minister on 31-1-1966.

HYDRO POWER* RESOURCES IN ANDHRA PRADESH

	Gross Head meters	Net Draft Available Causecs	Estimated Power (KW at 60% Load Factor)
1. Upper Sileru	93	..	300,000
2. Srisaillam	97.5	..	770,000
3. Nagarjunasagar	77	..	314,000
4. Singareddi	10.5	37,500	145,000
5. Ixampuram	22.5	37,500	310,000
6. Lower Sileru	237	5,000	420,000
7. Rampadasagar	13.5	34,200	172,000
8. Inchempalli	36	37,500	500,000
9. Pranhita	29.5	37,500	280,000
10. Pulichintala	33	..	20,000
		Total	3,281,600

Note: * Andhra Pradesh has, in addition, 400 crore tonnes of coal for thermal generation.

SOURCE: Techno-Economic Survey of Andhra Pradesh, NCAER 1962.

THERMAL POWER STATIONS

Among the more important and old thermal power stations in Andhra Pradesh, Ramagundam Thermal Station, Hussainsagar Thermal Station, Vijayawada Thermal Station, Visakhapatnam Power House and Nellore Thermal Station deserve mention.

Hussainsagar Thermal: The Hussainsagar Thermal Station situated on the bank of the Hussainsagar lake in Hyderabad is the oldest and the second largest Thermal Station in Andhra Pradesh supplying power to the twin cities of Hyderabad and Secunderabad and suburbs including industrial areas. The station was first commissioned in 1923 with two turbo sets of 3,000 KW. It was expanded in stages, the last addition of 5,000 kW set being in 1961. Two turbo sets each of capacity of 2,500 KW were diverted from Nellore and installed to meet the increasing power requirements of twin cities.

THERMAL STATIONS IN ANDHRA REGION

In Andhra region, the Vijayawada Thermal Station commenced power generation in 1933 with two kW turbo sets. It was subsequently expanded in stages by commissioning three more sets of 3,000 K.W. The Visakhapatnam Harbour Power House taken over by the Government Department in 1939 has since been catering to the power needs of Srikakulam and Visakhapatnam districts till the Machukund Hydro Electric Station was commissioned. Two turbo sets of 750 KW and another of 1,500 kW capacity were available at the time of taking over the station. Subsequently three more units of 1,500 KW capacity each were added to the station.

Ramagundam Thermal Scheme: Ramagundam Thermal Station was commissioned in June 1957 with a capacity of 37.5 MW to cater to the power needs of the region and also to meet the increased demand in the twin cities of Hyderabad and Secunderabad. The station is located in the heart of the rich coal and mineral belt with the prospects of housing a growing industrial complex. The power plant comprises three generating sets and six boilers. The boiler capacity is adequate for about 20 MW generation. To derive the benefits of full generation capacity at this station, a new boiler of higher capacity has been installed and is to be commissioned shortly. Water supply for this station is being obtained from the river Godavari at a distance of about 8 km from the power station. The expansion of the Ramagundam power station was contemplated as 'B' station envisaging the installation of a 32.5 MW set at Ramagundam. Civil works are in progress. Manufacture of Boiler Plant and accessories, air compressors, transformers, condenser and con-

densate pump: is in progress. Cooling water system was completed. Manufacture of Switchyard equipment is in progress. The scheme is being financed by the U.S. Agency for International Development. It is expected to commission the set by Nov. 1967. Total estimated cost 62.5 MW station Rs. 1,080 lakhs.

Kothagudem Thermal Scheme: The first stage of the scheme taken up during the Third Plan period envisages the installation of two 60 MW sets, the site being at Palavancha in Khammam m. Palavancha, presents an ideal location for a steam power station. Coal, available in abundance there, has a low calorific value and high ash content. It is not readily useful for industrial or locomotive purposes but ideally suited for power generation, economically and advantageously used at pit head. The station is also centrally situated with reference to Inchempalli, Sileru, Nagarjunasagar and Srisailem Hydro Power sites. Work was started at the site in Nov. 1964. The installation of 60 MW unit of the first stage was completed and the unit was commissioned mid 1966 and second unit early 1967. The scheme is financed by the International Bank for Reconstruction and Development. Total estimated cost of first stage: Rs. 2,755 lakhs. The second stage of the scheme envisages the installation of two 60 MW sets. In respect of foreign aid, the International Development Association an associate of the World Bank has advanced a loan of Rs. 10 crores for the scheme. The two units of 60 MW are programmed to be commissioned in the year 1967-68. Total estimated cost of Stage II Rs. 1,078 lakhs. Water for the Kothagudem Thermal Scheme is drawn from the Kinnerasani Reservoir. This dam project is estimated to cost Rs. 445 lakhs. Potential exists at this site for 10 lakh KW development of Thermal Power.

It was with a view firming up the Tungabhadra Hydro Power during non-irrigation season, the installation of one 30 MW Thermal set was envisaged during the Second Plan Period under a composite scheme designated as 'Tungabhadra-Nellore Hydro Thermal Scheme'. The 30 MW Thermal Station at Nellore has been commissioned in Mar. 1965. The foreign exchange was met under Yen credit and machinery was imported from Japan. The total estimated cost of the 30 MW Thermal Station at Nellore is Rs. 456.19 lakhs.

Telangana Hydro Thermal Scheme: This scheme envisages the integrated development of power generated at Hussainsagar Hydrel Ramagundam Thermal and at Nizamsagar Hydrel stations in the Telangana region. This is a spillover scheme from the Second Plan period and is completed to a large extent during the Third Plan.

POWER DATA

Per capita consumption (1965-66)	26.8 KWH
Total length of Transmission line HT (km.)	27,551.56
LT (km.)	23,524.78
Generating capacity	291 MW*
Agregate Max. Demand reached	258 MW
Total no. of Villages & Towns served with Electric Power	5,550†
Total no. of services	5,24,778

Power Generation Pattern :

Category	% 1964-65	% 1965-66	Units (KWH) Generated in 1965-66
Hydel	77.21	58.58	843,900,135
Thermal (Steam)	21.74	38.10	548,787,929
Thermal (Diesel)	0.24	0.47	6,771,664
Purchase from Madras and Mysore	0.81	2.85	41,127,109
	100	100	1,440,586,837

Power Utilisation Pattern :

Category	% 1956	% 1964-65	% 1965-66
Industrial	74.73	57.03	54.5
Agricultural	2.86	15.55	16.47
Domestic	8.94	8.15	8.14
Public lighting	2.47	2.10	1.94
Miscellaneous	11.00	17.17	18.95
Total	100.00	100.00	100.00

Source: Admn. Report 1965-66 — Andhra Pradesh State Electricity Board.

*412 MW in March, 1967.
†6024 by March, 1967.

INDUSTRIAL DEVELOPMENT IN ANDHRA PRADESH

Contribution of the mining and manufacturing sector to the State income was Rs. 61 crores in 1952-53, Rs. 78 crores in 1955-56, Rs. 92 crores in 1960-61 and Rs. 114 crores in 1965-66. As percentage of total State income, it has remained almost stagnant around 9%. There are 3928 factory units registered under Factories Act employing 2.2 lakh persons in 1965.

In the First Five Year Plan,* a modest attempt was made to develop industries with an allocation of Rs. 80 lakhs i.e. about 1.25% of the total outlay of Rs. 64.32 crores. Only one major industry, namely, Hindustan Ship Yard Ltd., at Visakhapatnam was brought under control of Govt. which was until then in private sector. (See Visakhapatnam dt.). Till the end of the First Five Year Plan, the industrial structure consisted mainly of processing industries like oil and rice mills, ginning and pressing factories and sugar mills. In the second Five Year Plan, a sum of Rs. 14 crores or about 8.7% of the outlay of Rs. 175.4 crores was earmarked for the development of industries. Consequently a beginning was made with the growth of new industries like Engineering works, Chemicals, Wood and other servicing industries. Similarly during the third five year plan, State Government intensified its efforts to step up the pace of industrial development and an allocation of Rs. 18.8 crores was made for mining and industry (Rs. 15.2 crores for industries) out of a total outlay of Rs. 280 crores. In addition, the Central Government also proposed to invest Rs. 57 crores for the development of major industries in the State. To accelerate the growth of industries in a planned manner, the State Government has set up three developmental corporations—Andhra Pradesh Industrial Development Corporation for major Industries, Andhra Pradesh Mineral Development Corporation for exploiting the mineral resources of the State and Andhra Pradesh Small Scale Industrial Development Corporation for small scale industries. The State Financial Corporation aids industrial ventures with financial assistance programmes. The existing industrial structure is analysed in this section.

THE STATE SECTOR

In the State Sector, during the Second Plan period, expansion schemes relating to the Andhra Paper Mills, Rajahmundry and the Government Ceramic Factory at Gudur were implemented. During the Third Plan, the expansion scheme was treated as a "spillover" scheme. However, the Government not willing to make further investments on the Mills transferred it to a joint stock company with effect from July 11, 1964 and the expansion programme of the company's

* See planned development.

output upto 100 tonnes per day—under the new dispensation has been making satisfactory progress. The Gudur Ceramic Factory underwent considerable expansion in respect of the manufacture of high tension and low tension electric insulators as well as in the quantity and quality of sanitary ware produced in the factory.

STATE INDUSTRIAL UNDERTAKINGS

The Government Ceramic Factory, GUDUR; ESTABLISHED: 1948; PRODUCTIONS: Porcelain ware; Sanitary ware etc.; VALUE OF OUT-PUT (1965-66): Rs. 5,89,875.

The Government Glass Factory, Gudur; ESTD: 1955; CAPITAL: Rs. 2 lakhs plus Rs. 1.50 lakhs. PRODUCTION: Diversified Products; VALUE OF OUT-PUT: Rs. 4,71,690 (1965-66).

Nizam Sugar Factory Ltd., Nizamabad; ESTD: 1933; CRUSHING CAPACITY: 4250 tonnes per day; CAPITAL: Rs. 143.89 lakhs; RESERVES & SURPLUSES: Rs. 176 lakhs; OUT-PUT: 56250 tonnes; RECOVERY: 9%.

Subsidiary Units: (Power alcohol from Molasses); ESTD: 1942; CAPITAL: Rs. 6.69 lakhs; OUT-PUT: 8182000 liters per year (37730 liters per day).

Confectionery; ESTD: 1958; CAPITAL: Rs. 7 lakhs; OUT-PUT: 5 tonnes; CO₂ is another by-product.

The Singareni Collieries Ltd. Yellandu, Kothagudem (Khammam DT): A joint State and Central Undertaking; ESTD: 1887; CAPITAL: Rs. 5.59 crores; OUT-PUT: 40 lakh tonnes; VALUE OF OUT-PUT: Rs. 12 crores. MIN. WAGES PER DAY: Rs. 5.22; MIN. SALARY PER MONTH: Rs. 136.

THE PRIVATE & CO-OPERATIVE SECTORS

The decade also witnessed the birth of new major industries in the Private and the Co-operative sectors of Andhra Pradesh. Two projects of particular significance to an agricultural State like Andhra Pradesh are the fertilizer projects at Kothagudem and Visakhapatnam. A company designated as the Hindustan Allied Chemicals Ltd. has been registered and the State Government have agreed to make available a block of about 400 ha including some government lands. Due to increased import duties and other factors, it has since been decided to substitute naphtha as the raw material instead of coal, as was originally intended. The Government of India, have accorded their approval to this change and will commence production in early 1969. The Coromandal Fertilizers Ltd. which are responsible for the plant at Visakhapatnam have also been making steady progress and are expected to go into production shortly (1967-68). The Indian Detonators Ltd., that went into production last year with the collaboration of Hungary (for electric detonators) are now planning to

set up a plant for the manufacture of high explosives in collaboration with an American Company.

During the Third Five Year Plan the State Government have established five sugar factories in the Co-operative Sector, the last of which has gone into production in Nov. 1964 at Nizamabad. The Government of India have granted licence for the location of Co-operative Sugar Factories at Zaheerabad and Bheemasingi with crushing capacity of 1,250 tonnes each. The sugar factories at Seethangaram, Bobbili, Samalkot, Chelluru, Tanuku, Chagallu, Vuyyuru and Challapalle have been granted licences by the Government of India to expand their crushing capacity.

Small Scale Industries: The Small Scale Industries have a vital role to play in the transition of an agricultural State (Andhra) to an industrial economy. Keeping this basic factor in view the State Government are offering assistance for the advancement of small scale industries through the following four district channels: (1) Schemes to provide for dissemination of information regarding the possibilities of developing small industries, the type of small industries that could be set up, the profit potentialities of such industries; (2) Schemes to provide financial aid to small scale industries; (3) Schemes to provide physical facilities like power, water, buildings, etc. to small scale industries; and (4) Schemes for training of workers who are already working in these small industries or who could be absorbed into the small industries. In respect of the first category the Government have decided to have a Technical cell in the Directorate of Industries that will among other things, prepare model schemes with different levels of capital etc. for the entrepreneurs, apart from the provision of consultancy services for all the problems of small scale industries. Regarding the second category, financial aid to small scale industries is being provided directly from the Government under the State Aid to Industries Act and through the State Financial Corporation as well as the Andhra Pradesh Small Scale Industrial Development Corporation. In the last five years, the total aid given to the small scale industries under the State Aid to Industries Act to various firms etc amounts to Rs. 36.92 lakhs.

Industrial Estates in Andhra Pradesh

The programme of establishment of industrial estates in the State was taken up with a view to giving encouragement for entrepreneurs to establish industries by providing facilities like ready-made factory buildings etc. on rental basis, power, water etc. During the decade (1956-68) the following types of industrial estates namely: (a) Government Industrial Estates; (b) Assisted Private Industrial Estate (See Tables). Two Rural Industrial Estates are located

at Kissannagar in Nizambad DT and at Saddapalli in Anantapur DT. On the conventional Industrial Estates 260 factory buildings have been completed, out of which 258 have been allotted and 256 occupied providing employment to as many as 3,800 persons. On the Assisted Private Industrial Estates, 247 plots have been developed and 226 plots have been allotted. 28 units are working providing employment to 258 persons by 1966. The State Government have recently decided that small industries entrepreneurs, should have the benefit of owning the units in the Industrial Estates thro' hire purchase.

INDUSTRIAL ESTATES

as on 31-3-1966.

Location.	Category.	Remarks.
1. Chendulal Baraderi (Hyderabad)	Urban	
2*. Sana'anagar (Hyderabad)	Urban	
*3. Vijayawada (Krishna DT)	Urban	
4. Cuddapah (Cuddapah DT)	Semi Urban	
*5. Froddatur (Cuddapah DT)	Urban	
6. Rajahmundry (East Godavari DT)	Urban	Assisted Private Estate.
*7. Samalkot (East Godavari DT)	Semi Urban	
8. Adoni (Kurnool DT)	Urban	Assisted Private Estate.
*9. Nandyal (Kurnool DT)	Rural	
10. Guntur (Guntur DT)	Urban	Assisted Private Estate.
*11. Vishakhapatnam (Vishakhapatnam DT)	Urban	
*12. Nellore (Nellore DT)	Urban	
*13. Warangal-Hanumakonda	Urban	
14. Anantapur-Pepempeta (Anantapur DT)	Urban	Assisted Private Estate.
15. Chittoor (Chittoor DT)	Semi Urban	Assisted Private Estate.
16. Eluru-Satrapadu (West-Godavari DT)	Urban	Assisted Private Estate.
17. Pattancheru (Medak DT)	Rural	

Location.	Category.	Remarks.
<i>Industrial Estates completed but not functioning as on 30-9-1965</i>		
1. Vikarabad (Hyderabad)	Semi Urban	
*2. Saddlapalle (Anantapur DT)	Rural	
*3. Mahboobnagar (Mahboobnagar DT)	Semi Urban	
4. Nizambad-Janakampet (Nizambad DT)	Urban	
*5. Suryapet (Nalgonda DT)	Semi Urban	
6. Kothagudem (Khammam DT)	Urban	
<i>Industrial Estates under construction in preliminary stage as on 31-3-66</i>		
	Urban	Assisted Private Estate.
*1 Hyderabad		
2. Moula Ali (Hyderabad)	Semi Urban	
*3. Kisanagar (Nizamabad DT)	Urban	
4. Janakampet (Nizamabad DT)	Urban	
*5. Nirmal (Adilabad DT)	Semi Urban	
6. Mancherial (Adilabad DT)	Semi Urban	
7. Tirupati (Chittoor DT)	Semi Urban	
*8. Machilipatnam (Krishna DT)	Urban	Assisted Private Estate.
*9. Khammam (Khammam DT)	Semi Urban	Assisted Private Estate.
10. Palakci (West Godavari DT)	Urban	
11. Vijayanagaram (Visakhapatnam DT)	Urban	Assisted Private Estate.
*12. Amadalavalasa (Srikakulam DT)	Semi urban	
*13. Jangaon (Warangal DT)	Semi Urban	
*14. Gadwai (Mahboobnagar DT)	Semi Urban	
*15. Budhavarani (Mahboobnagar DT)	Rural	
*16. Jandrapet	Semi Urban	
*17. Karimnagar (Karimnagar DT)		
* Denotes Industrial Estate sanctioned by Central Government.		

Rural Industries: In pursuance of the recommendations of the Rural Industries Planning Committee, the Planning Commission have sanctioned three Rural Industries Projects to Andhra Pradesh for the intensive development of small industries including village industries in selected rural areas, during 1962-63 at Nalgonda, Narasaraopet (Guntur *or*) and Anantapur. The Rural Industries Project is an area development scheme envisaging the development not only of industry but of their allied important sectors like agriculture, irrigation, communications, electrifications, animal husbandry, education etc., to foster the growth of a co-operative agro-industrial economy.

For the year 1965-66, the Planning Commission have tentatively allotted a sum of Rs. 24 lakhs for the three projects referred to above. Besides the continuance of the old schemes it was decided that the following new schemes might be taken up for implementation during 1966-67: (a) Production Wing attached to the Dye-House and Design Extension Centre at Nalgonda and (b) Scheme for the manufacture of Bandage Cloth in Anantapur Project.

Regionwise Distribution of Registered Small Scale Units in Andhra Pradesh as in March, 1966.

Region. pus Districts.	No. of units.	Region. and Districts.	No. of units.
I. Telangana			
1. Hyderabad	942	13. West Godavari	262
2. Warangal	146	14. Nellore	261
3. Karimnagar	85	15. Visakhapatnam	196
4. Khammam	57	16. Srikakulam	32
5. Mahbubnagar	56		
6. Nizamabad	35		
7. Medak	32		
8. Nalgonda	28		
9. Adilabad	20		
		Sub-total	2,092
Sub-total	1,401		
II. Coastal Region			
10. East Godavari	515		
11. Krishna	415		
12. Guntur	411		
		Sub-total	537
		Andhra Pradesh Total	4030

Another important step taken by the Government to help the industrialists is the launching of the scheme of industrial development areas. Under the scheme by the end of the Third Plan about 800 ha near Hyderabad were acquired and handed over to prospective industrialists. A similar scheme for Visakhapatnam is also now in the process of formulation.

Statutory Corporations: With a view to creating a climate more conducive to the growth of industries in the State, the Government have constituted three autonomous Corporations namely: *The Andhra Pradesh Industrial Development Corporation; The Andhra Pradesh Small Scale Industrial Development Corporation* and *The Andhra Pradesh State Financial Corporation*. The Andhra Pradesh Industrial Development Corporation was established in Dec. 1960 with an authorised capital of Rs. 3 crores aims to give financial aid to industries besides direct promotion of certain industries. The Corporation is empowered to offer the following services: 1. Providing Finance in the form of long or medium term loans. 2. Guaranteeing loans from other financial institutions; 3. Underwriting of new issues of shares and securities; 4. Participation in the share capital of new industrial project without controlling interest; 5. Direct promotion of industries; 6. Acting as a holding company for specific projects. Since its inception, the Corporation has so far sanctioned financial assistance to as many as thirty-six industrial undertakings to the tune of Rs. 5.44 crores. It has been estimated that the total cost of the projects set up with financial assistance from the Corporation, amounts to Rs. 52 crores. In addition to financial assistance, the Corporation has promoted three manufacturing units: *Ball Bearings, Sheet Glass*, and *Light Tension Insulators* in collaboration with private sector enterprises. In addition to these ventures, the Corporation has also been granted by the Government of India letters of Intent for the manufacture of Pig iron (100,000 tonnes), power cables (1,860 km per year), Electric Motor (560 numbers), soda ash, (soda ash and 200 tonnes of ammonium chloride per day). The Corporation has, in respect of these projects, conducted feasibility studies and is actively negotiating with collaborators—both Indian and foreign—for setting up these projects.

The Andhra Pradesh Small Scale Industrial Development Corporation was founded in 1960. This was established by the State Govt. for promoting rapid industrialisation of the State in the small scale industries sector by granting loans and participating, where possible, in their capital structure. Aims: 1. Servicing and Productive activities; 2. Financing activities and 3. Such other activities as would be conducive for the growth of small scale industries.

General Purpose Engineering Workshops: (a) Samalkot; (b) Tadepalligudem; (c) Cuddapah; (d) Nandyal and (e) Warangal:

(a) Cast Iron, Casting upto 150 kg; (b) Tools for Blacksmithy like Anvils, Sewage blocks, cooling troughs, vices, portable forges etc; (c) Gun Metal castings; (d) Mechanised Potters Wheels; (e) Agricultural implements; (f) All types of fabrication; and (g) Steel Furniture.

Tool Room Servicing Centre-- Industrial Estate, Visakhapatnam: (a) Machine tools in high speed steel and Tungston carbide tipped; (b) Reamers and milling machine cutters; (c) Press tools; (d) Jigs and fixtures; (e) Job works in milling, turning, grinding, shaping, heat treatment and electroplating.

Tiles Manufacturing Unit: Pendurti, Visakhapatnam or Mangalore Tiles.

Bicycle Spare Parts Unit, Industrial Estate, Vijayawada: Different types of bicycle spares and accessories such as axles, carriers, stands, gear cases.

Builders Hardware Unit, Dowleswaram: But hinges, T. hinges, & Parliamentary hinges, Tower bolts and Aldrops (Bright Polished nickel chromium plated of standard and special sizes).

Stoneware-pipe factory, Rajahmundry: Stoneware-pipes of various sizes.

Model Sheet Metal Workshop, Urvakonda: (a) Steel trunks and steel furniture and (b) G.I. Buckets.

Since inception the Corporation has been giving undivided attention to the development of the Small Scale Industries Sector. The Corporation has so far sanctioned as many as 107 loan applications for an aggregate sum of Rs. 78.77 lakhs. Loans granted by the Corporation may be utilised for the following purposes: (a) Purchase of plant and machinery and installation thereof; (b) Purchase of land for factory sites; (c) Construction including extension of factory buildings or purchase of factory buildings; (d) Working capital and (e) Any other purpose approved by the Board of the Corporation. It has also taken over the management of six raw material servicing centres located at Hyderabad, Warangal, Vijayawada, Visakhapatnam, Samalkot and Cuddapah and twenty production units dispersed throughout the State.

The production units managed by the Corporation are manufacturing a fairly comprehensive range of articles:

Furniture Mill-cum-Mechanised Wood Workshop, Sanatnagar Hyderabad, and Production-Saw Mill-cum-Timber Plant, Warangal All varieties of standard and special wooden furniture.

Radio Spare parts & Receivers Unit Sanatnagar: (a) Transformers; (b) Chokes; (c) Chassis, Metal and Wooden cabinets; (d) Bakelite based terminal strips; (e) Dial plates; (f) Community receivers and (g) Inter-cum-sets.

Small Gauge Insulated Copper wires Unit, Sanatnagar: Bars and Super enamelled Copper wires.

Chandulal Baradari Industrial Estate Hyderabad: 1. *Laboratory & Artware Units:* (a) Fire Bricks; (b) Fire Clay Mortars; (c) Glazed and Decorative tiles and Art ware; (d) Acid Jars. 2. *Ceramic Service Centre:* Sanitary ware. 3. *Scientific Glass Apparatus & Ampoules Unit:* (a) Glass Ampoules; (b) Test Tubes & Laboratory Equipment. The servicing Centres are catering to the needs of small scale industries by procuring and supplying controlled raw materials including ferrous, and non-ferrous both imported and indigenous. Since July 1, 1962, materials worth more than Rs. 200 lakhs have been sold to the small scale industries up to the end of Feb. 1966 through the servicing Centres.

The Andhra Pradesh State Financial Corporation: During the decade of its existence has sanctioned loans amounting to Rs. 10.42 crores covering a very wide variety of industries ranging from traditional industries like rice milling and oil extraction etc. to more modern industries like manufacture of scientific precision instruments, safety fuses for explosives, electronics etc.

CENTRAL SECTOR UNDERTAKINGS

It was only at the end of the Second Plan, that the Union Government decided to locate the Heavy Electricals and the Synthetic Drugs Projects in Andhra Pradesh, while in the Third Plan period the Hindustan Machine Tools has set up a Machine Tool Factory at Hyderabad and Defence Electronics Factory a part of the Mig. Complex was set up at Hyderabad. The investment in Public Sector Projects in Andhra Pradesh was of the order of Rs. 6 crores in second plan on expansion programmes of the Shipyard and Praga Tools Corporation and a small machine tool unit at Hyderabad. During the Third Plan however, three projects viz., the Heavy Electricals, Synthetic Drugs and Hindustan Machine Tools were set up at a total investment of about Rs. 50 crores.

The Praga Tools Limited, Hyderabad: The Praga Tools Limited was started in the year 1948 with an initial authorised capital of Rs. 1

more with the object of manufacturing high speed cutting tools, measuring instruments and other machine tools. The then Government of Hyderabad acquired (1948) substantial portion of share capital and the Industrial Trust Fund took up the managing agency of the company as representatives of Government. In 1954 the State Government took up the management of the company directly by appointing an operative Director. During the Second Plan, the Government of India decided to participate in the share-capital of the company and from 1958 the company was managed directly by a Board of Directors representing the Government of India and the Government of Andhra Pradesh. The Government of India acquired a major share-holding in the company, while the State Government had 33.8% of the total paid-up capital of Rs. 1.5 crores. During the Third Plan the company undertook an expansion programme for the production of drill bits, tool and cutter grinders and lathe chucks, besides the establishment of a new forge and foundry shop at Kukatpalli at an estimated cost of Rs. 1 crore. It has already exceeded the target of producing machine tools worth Rs. 100 lakhs per year. Another important event that occurred in 1964 was the taking over of the unit by the Union Ministry of Defence.

Hindustan Machine Tools-V Unit: The Hindustan Machine Tools is a public sector undertaking producing different varieties of machine tools and have already established factories in different parts of the country, viz., Bangalore (2 units), Pinjore (Punjab) and Kalamachery (Kerala). They have now established their 5th unit at Hyderabad in an area of 280 ha Kudbulapur, Ramanagar and Namarbagh villages. The Project valued at about Rs. 8 crores is producing special purpose machines, gear shaping machine and gear hobbing machines.

Defence Electronics Factory, Hyderabad: The Government of India established during 1967 the Defence Electronics Factory at Hyderabad in an area of 140 ha. One of the three projects being set up for the integrated manufacture of MIG fighters. Hyderabad plant, valued at Rs. 8 crores manufactures the required electric and electronic components for the MIG fighters.

Bharat Heavy Electrical Plant: The Heavy Electrical Project at Ramachandrapuram, Hyderabad is one of the four major industrial projects established by the Government of India under the Indo-Czech economic co-operation in the Third Plan. Designed to build steam turbines and turbo-alternators with an annual capacity of about 300 MW besides related equipment like condenser pumps, cooling-water pumps, airjet pumps, it is estimated to cost about Rs. 27.5 crores. The annual output of steam turbines and turbo alternators was estimated to be of the order of Rs. 15 crores. The project employs about 3,600 persons. The plant was inaugurated by the

Prime Minister on 11th Dec. 1965 in an area of 2540 ha at Ramachandrapuram. Under expansion programme Switch Gears unit was also started.

Synthetic Drug Unit: The Synthetic Drugs Unit at Hyderabad is one of the major projects established in the country by the Government of India for the drug industry. This project was established with the assistance of USSR in an area of 360 ha in Kukatpalli and Balanagar villages. The Cost of the Project is about Rs. 20 crores. It started production in the middle of 1966. Its production capacity is about 850 tonnes of Synthetic Drugs of the sulpha group, anti-TB drugs, anti-pyretics, vitamins, besides intermediates.

Defence Laboratories at Hyderabad: The Government of India, established at Hyderabad, Defence Metallurgical Research Laboratory, Defence Research and Development Laboratory and Defence Electronic Research Laboratory at capital cost of Rs. 5 crores. An area of about 229 ha. was made available to the Defence Department by the State Government free of the cost in Kanchanbagh, Kandikal and Saltana-wala villages of Chandrayangutta area. All laboratories have started functioning in temporary premises pending construction of permanent buildings.

Railway Electrical Signalling Equipment Factory: Indian Railways have established a project exclusively for the manufacture of signalling equipment factory in area of 140 ha at Nacharam Industrial Development area Hyderabad.

Bharat Heavy Plates and Vessels Plant and Hindustan Shipyard: see Visakhapatnam under DISTRICT INFORMATION section.

Other Central Sector Projects that will be located or already under the process of location in Andhra Pradesh, according to the decision of the Government of India are the Rs. 30 crore Zinc Smelter Plant and a complex of Rs. 4 crore Zirconium Plant, Rs. 2 crore Ceramic Fuel Fabrication Plant, and Rs. 2 crore Uranium Oxide Plant near Hyderabad. In addition, the Government of India are setting up the Hindustan Aeronautics Ltd., Electronics Unit of Atomic Energy Establishment. Thus the capital will become a key centre in the defence set up of the country.

BRIEFS ON ANDHRA INDUSTRIES

Basic Ferrous Metals: A Ferro-Manganese plant with a capacity of about 20,000 tonnes per annum is working at present.

Secondary and Intermediary Products: Facilities such as cast iron foundries, steel casting units, re-rolling mills and structural fabrication units are available in the state.

Metal Products: Medium scale industries for the production of welding electrodes, razor blades, utensils, enamel ware, hard-ware, tin containers etc., are existing to cater to the requirements of the State in particular and export the surplus to the rest of the country.

Agricultural Machinery: A unit for the production of power tillers has already been set up and production started (1965). Another unit is likely to come into production during the course of the next two or three years.

Prime Mover, Boilers, Steam Generating Plants: Government of India has set up a Public Sector unit (Bharat Heavy Electricals Ltd., Ramachandrapuram) for the manufacture of turbines, pumps etc., with an annual production of the value of Rs. 15 crores (see pp. 84).

Industrial Machinery: Two Machine Tool units (HMT & PRAGA TOOLS) are set up in the public sector in the State, one for the manufacture of special purpose machine tools and other for a variety of drilling, milling machines, tools & cutter grinders (see pp. 83 & 84). Private sector units are set up for the manufacture of Refrigerators, sealed unit for air conditioners, sewing machines etc. There exist small scale establishments for the manufacture of small scale sugar plants and equipment for chemical industry.

Electrical Machinery: Units for the production of ACSR cables, wires, switch gear, electric metres are already existing.

Transport Equipment: A ship building yard at Visakhapatnam has been in existence for several years. (See Visakhapatnam, pr.). Recently a unit has been set up for the manufacture of Mopeds (Auto Cycles) and small scale Auto Ancillary units are also existing.

Instruments: There is a well established unit for the supply of scientific and laboratory instruments in the State. The Government of India has set (1967) up a public sector unit with a capital cost of Rs. 3 crores for the production of Electronic instruments for Aero Engines.

CHEMICAL AND ALLIED INDUSTRIES

Fertilisers: Two fertiliser projects of fairly large size are under implementation. One of them Coromandal Fertilisers Limited is in an advanced stage of construction at Visakhapatnam. This unit which is expected to go into production in 1967 will produce 365,000 tonnes of Ammonium phosphate and 16,500 tonnes of prilled urea. The second unit will be located at Kothagudem and is expected to start production in the year 1969. The present installed capacity for super phosphate is 28,320 tonnes in terms of P_2O_5 nutrient. Another unit has been licensed recently to produce super phosphate equivalent to a P_2O_5 content of 600 tonnes per annum.

Sulphuric Acid: There are at present five factories in the State for the production of Sulphuric Acid. The total capacity of these units is 63,800 tonnes. 2 more factories with a total capacity of 2,01,600 tonnes have been licensed.

Hydrochloric Acid: The licensed capacity for the manufacture of Hydrochloric acid is 3,020 tonnes.

Acetic Acid: The total licensed capacity for the Acetic acid and its derivatives like Acetic Anhydride and Ethyl Acetate is of the order of 12,000 tonnes. These units are located at Tanuku (See West Godavari pr) and Sirpur (Adilabad pr) and there is also a unit at Hyderabad coming up.

Caustic Soda: The present capacity for the manufacture of caustic soda is 12,864 tonnes distributed in two units of 3,000 and 10,000 tonnes each.

Alcohol: The present total licensed capacity and the existing capacity for the production of power and industrial alcohol 304 lakh litres.

Drugs & Pharmaceuticals: A central Sector project for the manufacture of Drugs and Pharmaceuticals is located at Hyderabad. See page 85. The plant will manufacture mostly Sulpha Drugs and the capital outlay is about Rs. 10 crores. Besides this project the State has 5 medium sized units and 8 small scale units. Most of these units are located at Hyderabad, one unit at Vijayawada. The manufacturing programme is mostly for Liver Extracts and Injections.

Industrial Gases: *Oxygen:* There is a unit for Oxygen at Visakhapatnam with a capacity of 3.114 lakh cu m Oxygen and 1.932 lakh cu m of Acetylene. *Carbon Dioxide:* The state has a considerable share in the country's production of Carbon Dioxide. There are four units with a total capacity of 4,317 tonnes per annum.

Soaps & Detergents: There are, four major units manufacturing soaps and detergents of various kinds with a total capacity of approximately 1,600 tonnes per annum. Besides these units there are 20 small sized units also mainly concentrated in Hyderabad.

Synthetic Resins & Plastics: There is a unit at Hyderabad with a capacity of 600 tonnes per annum for the manufacture of phenol Formaldehyde. A unit with an installed capacity of 10,000 tonnes of styrene and 7,500 polystyrene is under implementation at Visakhapatnam.

Oil (Petroleum) Refinery: An oil refinery (Caltex India Ltd.) with an annual installed capacity of 15 lakh tonnes of Crude oil is located at Vihakhapatnam.

AGRO-BASED INDUSTRIES

Andhra Pradesh is rich both in Agriculture and forest wealth as well as livestock population. The potentialities of industries utilising these resources are outlined below.

Cotton Textiles: The production of cloth in the State in the mills sector is of the order of 35 million metres. The handloom sector contributes nearly 20 million metres.

Acetate Filament Fibre: Already one unit with a capacity of two million kg of acetate filament fibre per day is in production.

Sugar: 19 Sugar factories with an aggregate crushing capacity of 21,150 tonnes per day are already existing in the State.

Rice Milling: There are 72 medium sized rice mills and 2,500 small rice mills. The total milling capacity of both the large and small sized could be put at 3 lakh tonnes against a total production of 42.7 lakh tonnes of rice in the State. The balance of the production is mostly milled by hand pounding method. A modern rice milling unit is established in State of Andhra Pradesh.

Rice Bran Oil: Small capacity rice bran oil extraction units are already established in five different places in the State.

Oil Milling: There are 26 large and medium sized units and 242 small sized units engaged in the production of vegetable oils. About 40% groundnut production in the State has been exported to other States for processing and other industrial uses. The annual production in the State is likely to increase to 27 lakh tonnes by 1971 i.e. more than double the production of 1956.

Hydrogenated Oils: There are at present 2 units with an aggregate capacity of 63 tonnes per day of hydrogenated oils.

Fruit Canning Industry: There are at present 3 fruit canning units with an annual capacity of 1,500 tonnes.

Tobacco Industry: The Andhra Pradesh is one of the foremost tobacco growing States in the country. The area under tobacco cultivation in the State is nearly 38.8% of the total tobacco growing area in India. The outturn of the tobacco in an year is of the order of 1,30,000 tonnes. There are two units for the production of cigarettes in the State. (See Guntur pr).

FOREST BASED INDUSTRY

Paper etc. There are at present 2 paper mills in the State of Andhra Pradesh with an aggregate annual capacity of 40,000 tonnes. Plans are under way to expand one of the units to 70 tonnes per day production capacity.

(See District Information for districtwise industries).

Industrywise Factories registered under the Factories Act.

Industry.	1956	1961	1964
Process allied to Agriculture	153	102	167
Food except Beverages	1408	1528	2392
Beverages	12	8	6
Tobacco	617	521	877
Textiles	75	75	143
Footwear	22	8	11
Wood and cork except furniture	90	123	224
Furniture and Fixtures	32	19	40
Paper & Paper products	3	4	4
Printing, Publishing & Allied Industries	163	107	163
Leather & Leather products	53	23	41
Except footwear	4	2	8
Rubber & Rubber products	56	49	105
Chemicals & Chemical products	10	13	17
Products of Petroleum & Coal			
Non-Metallic Mineral Products except products of petroleum & coal	143	132	197
Basic Metal Industries	13	12	47
Metal products except machinery and transport equipment	142	87	162
Machinery except electrical Machinery	134	172	296
Electrical machinery apparatus appliances & Supplies	3	4	13
Transport & Transport equipment	116	68	161
Miscellaneous Industries	86	48	86
Electricity, gas and steam	24	10	29
Water & Sanitary services	11	4	14
Personal services	374	20	18

Source: Chief Inspector of Factories, Andhra Pradesh.

ADDITIONAL MANPOWER REQUIREMENTS IN ANDHRA PRADESH

(1961-71)

(in thousands)

	Employment in 1961	Employment in 1971	Additional Manpower 1961-71
Large Scale Industry	236	345	107
Small Scale and Cottage Industry	1202	1613	411
Mining	83	185	102
Power	..	33	33
Tertiary	2497	3346	849
TOTAL	4018	5520	1502

NOTE

- 1961 employment has been estimated by increasing the 1951 Census figures at the rate of population growth in 1951-61.
 - Given the proposed investment, the employment of large scale industry in 1971 is estimated by using an average capital-labour ratio of Rs. 20,000:1 for the sector.
 - Employment in small scale industry is estimated by using a C/L ratio of Rs. 5,000:1 with the given investment in small scale industries. Employment in cottage industry is estimated to increase at the same rate as total population.
 - Employment in mining is estimated on the basis of an investment-labour ratio of Rs. 3,500:1, given the investment during 1961-71.
 - Employment in power in 1971 has been estimated on the basis of a net output of Rs. 6,000 per worker.
 - Increase in employment in the tertiary sector is estimated by using the relation that increase in tertiary employment in any period has ratio of 1.3:1 to the increase in non-agricultural production employment.
 - The investment-labour and other ratios used are those appropriate to the nature of development programme suggested and data available with the council.
- Source: Techno-Economic Survey of Andhra Pradesh, NCAER, 1962.

INDUSTRIAL POTENTIAL IN ANDHRA PRADESH

The potential for industrial development in Andhra Pradesh is considered from two angles: *resource-based* and *demand oriented*. It is found that despite the large variety of minerals existing in the State, necessary base for mineral based industries remains to be created. Fishery, animal husbandry and forest potentials are great; yet the opportunities provided by them for industries in the immediate future are relatively limited as these resources themselves need to be developed. Agricultural resources, however, are well developed in the State and have so far provided the fillip for the growth of industries and the potential for further industrial development in this sector is bright.

With the already existing infrastructure requisite market, the State's central location in the whole of India, there exists immense possibilities of developing agro-based, forest based, mineral based and engineering industries in Andhra.

MANUFACTURING REGIONS IN ANDHRA PRADESH

There are immense possibilities of developing basic metal industries in the State. At present most of the engineering industries are localised in three different manufacturing areas in the State viz., Hyderabad, Visakhapatnam and Vijayawada.

Hyderabad: Hyderabad, the capital city of the State of Andhra Pradesh has a few heavy engineering industries, medium and small scale engineering industries. Besides public sector undertakings (see page 63), private sector organisations have developed several medium scale engineering industries such as units for the manufacture of refrigerators, air conditioning compressors, sewing machines, washing machines, electronic equipment, electric meters, PVC wires and wire drawing equipment etc. The small sector units for the manufacture of power tillers, welding electrodes, steel furniture, tin containers, re-rolling mills, electric distribution transformers, switch gear, drawing and scientific instruments etc. are also in existence in and around Hyderabad. Besides the existing industries, projects for the manufacture of cast iron spun pipes, steel forgings, ball and roller bearings, jigs, tools and fixtures, medium size electric motors, winding wires, high tension and low tension insulators etc. are in various stages of implementation.

SUGGESTED ANCILLARY INDUSTRIES IN HYDERABAD

City of Hyderabad offers possibilities for the development of ancillary industries to cater to the requirement of large scale units

*This section may be consulted along with 'Industrial Development' (Page 75-80)

like Synthetic Drugs project, Hindustan Machine Tools, Usha Refrigeration Industries and others. The following are some of the important items for ancillary units to be taken up in the city: pillar proof caps, pressure die castings, coolant pumps, pattern shop, starter relays, glass bottles, moulded rubber goods, potassium permanganate, chloroform, sodium acetate, potato starch, dextrine and maize starch, pectin and papain, bakelite moulded parts, thermoplastic goods, water proof packing paper, corrugated board boxes, gum tape, varnished cambric cloth, sewing thread, shoe laces, wooden cable drums, steel strappings straw cover for bottles and acrolin. Interested entrepreneurs may approach the Small Industries Service Institute, 79, Azamabad, Hyderabad-20 for technical guidance.

Visakhapatnam Region: In the Visakhapatnam area, there exists a ship building yard (See Visakhapatnam *nr*), steel foundry, re-rolling mills, and other engineering industries. A Central sector undertaking for the manufacture of heavy plates and vessels has been set up with a capital cost of Rs. 18 crores. A steel plant is also being planned for this region. In the near about region, there also exists a ferro-manganese plant. In view of the already existing industries and also to cater to the needs of the refinery, fertilizers chemicals and petro-chemical industries that are coming up in this area suitable ancillary industries could be developed to cater to the needs of these major industrial units.

Vijayawada Region: Vijayawada area is the centre of agro-based industries, steel and iron foundries, small scale engineering industries for the manufacture of steel furniture, agricultural implements, equipments and spare parts for agro-based industries etc. Recently an auto-industrial estate is also started. There are immense possibilities of developing medium and small scale units for automobile and agro-based industries.

Besides the above three major manufacturing regions, there exists units for the manufacture of mopeds, aluminium cables, PVC wires, crucibles, builders hardware in other parts of Andhra Pradesh.

METALLURGICAL INDUSTRIES

Basic Ferrous Metals: An alloy steel plant with an initial annual capacity of about 20,000 tonnes per annum to cater to the requirements of tool and constructional steels for the various engineering industries in the State would be a necessity. A sponge iron plant with an annual capacity of about 50,000 tonnes could either be built as part of the alloy steel plant or alternatively be set up as a separate unit to utilise the available high grade iron ore for catering to the

needs of steel foundries and steel plants in India, as by 1970-71 a shortage of Steel scrap is apprehended. A Pig Iron Plant, utilising the iron ore, non-coking coal available in the State is being planned. The Anglo American consortium has recommended to the Government of India for setting up the fifth Steel Plant at Visakhapatnam. A unit for the manufacture of Alloy and Special Steels is a necessity to cater to the requirements of Alloy Steels for the various Engineering industries.

Secondary & Intermediary Products: Projects for setting up cast iron pipes, Steel balls and Steel forgings units are likely to come into production shortly. Ample scope exists for the development of industries for the manufacture of various secondary and intermediate products.

Non-Ferrous Metals: A zinc smelter is being set up in the public sector by the Government of India utilising imported Zinc concentrates. There is a similar scheme for setting up a copper smelter also utilising imported copper concentrates. There are chances of developing copper mining within the State. (See Mineral Resources). There is a good case for setting up an aluminium smelter also utilising the alumina produced in other States of India. Consequent to the above development, various non-ferrous metal forming and fabrication units could be developed.

A unit for the manufacture of aluminium foils and strips would be very desirable. A unit for the production of non-ferrous sheets and tubes is a natural corollary to the proposed copper and zinc smelters.

Misc. Metal Products: There is a good potential for setting up units for the production of agricultural implements, machine tools, small tools, garage tools, tin containers and drum, wire netting, zip fasteners, kitchen ware and domestic appliances. A unit for the manufacture of gas cylinders could be set up to cater to all India market.

Secondary and Intermediary Products: Projects that are worthy of being developed are manufacture of aluminised thin sheets, tin plates, welded and seamless steel pipes, wire and wire products, precision and malleable iron castings etc.

Metal products except Machinery & Transport: Projects for the manufacture of the aluminised thin sheets with a capacity of 20,000 tonnes per annum, precision castings 1,000 tonnes per annum, grinding media 5,000 tonnes per annum, gas cylinders 60,000 pieces per annum may be developed to cater to the whole Indian market.

MANUFACTURE OF MACHINERY

Agricultural Machinery: 112 lakh hectares of land is cultivated mostly by manual labour with the assistance of bullocks. Mechanisation has been introduced but is not universally adopted. There is growing awareness to utilise Tractors, Power Tillers, Pump sets etc. by the agriculturists. There exists a unit for the manufacture of power tillers at Hyderabad. There are also schemes for manufacture of 10 H.P. power tillers. In view of the fact that the State of Andhra Pradesh is predominantly an agricultural State, there is abundant need for agricultural tractors, agricultural implements etc. As such, it will be worthwhile to set up a unit for the manufacture of 6,000 numbers of agricultural tractors per annum with HP range between 15-30 and also a unit for agricultural implements such as plough, disc harrow etc., with a capacity of 6,000 numbers per annum. Besides these, another unit for the manufacture of internal combustion engines of range upto 30 HP for use with pump-sets and other agricultural machinery etc. could also be set up.

Mining Machinery: Singareni group of collieries with an annual production capacity of 30 lakh tonnes per annum of coal is situated in the State. (See Khammam pt). Besides this, there are several mines for the mining of various minerals such as iron ore, limestone, ferro manganese, quartz, mica, clay, asbestos, barytes etc. To cater to the mining requirements of these units, a unit for the manufacture of coal mining and construction equipment with an annual turn over of Rs. 2 crores is desirable.

Industrial Machinery to serve new Industries: The projects that are likely to come into existence during the course of the next two or three years are for the manufacture of ball and roller bearings, hydraulic hoists, jigs, tools and fixtures. From the variety of engineering products that are being manufactured as well as planned to be manufactured shortly, it will be seen that sufficient technical and managerial skills, have already been developed even in the production of high precision and sophisticated items such as special purpose machine tools, and steam turbines. With this background, it is possible to develop other engineering industries to cater to the varied needs of the State, and the requirements of agro-based industries. There are more potentialities for setting up further pharmaceutical industries. A unit to serve the requirements of equipment for pharmaceutical industry would be a necessity. Units for the production of electrical hoists, material handling equipment, gears etc. could serve the needs of the various industries. A unit for the production of machine tool accessories would be a natural adjunct to the already existing machine base. To serve the all India requirements of the printing industry, a unit for the production of printing machinery is being seriously considered for being set up.

Electrical Machinery, Apparatus and Appliances: Steps are being taken for setting up units for the production of medium HP electrical motors, winding wire, electrical lamps and industries. **Prime Movers:** A unit for the production of Internal Combustion Engines as also a unit for manufacture of boilers for agro-based industries will serve the needs of agricultural as well as agro-based industries.

Boiler & Generating Plants: A unit for the manufacture of package boilers and water tube boilers to cater for agro-based industries such as solvent extraction plants, sugar factories etc. could be set up.

To modernise existing industries: There are several agricultural based, forest based, mineral based industries in the State as follows:

1. Nineteen sugar mills with an aggregate annual crushing capacity of over 20 lakh tonnes; 2. Seventy-two medium size rice mills and over 2,500 small size rice mills with an aggregate milling capacity of 30 lakh tonnes per annum; 3. Three fruit canning units with an annual capacity of 1,500 tonnes; 4. Two cigarette manufacture plants with an annual production of over 1,200 crore cigarettes (more than 20% of the cigarettes produced in India); 5. Five cement plants with an annual capacity of 9 lakh tonnes; 6. Two paper mills with an aggregate annual capacity of 40,000 tonnes.

To cater to the replacement needs, substantial expansions and also for the establishment of new units, it would be worthwhile to set up units for the manufacture of industrial machinery such as the following:

Category	No. of Units.	Annual output. Rs.
1. Sugar Mill Machinery Unit such as Milling Tandems and Centrifuges	1	1 crore
2. Modern Rice Milling Plants	1	60 lakhs
3. Dhal, Oil & Flour Mill Machines	1	60 lakhs
4. Jute, Textile Machines	1	60 lakhs
5. Equipment for Pharmaceutical Industry	1	1 crore
6. Valves for Liquids and Gases	1	50 lakhs
7. Printing Machinery 600 nos.	1	1.21 crores
8. Electrical Hoists	1	30 lakhs
9. Cranes and Material Handling equipment	1	80 lakhs
10. Machine Tools Accessories	1	50 lakhs
11. Typewriters 10,000 pieces	1	50 lakhs
12. Gears and Speed Reduction Gear Boxes	1	120 lakhs

Electrical Machinery: To cater to the growing needs of the power distribution system, and domestic needs, units for the manufacture

ed transformers, electric fans, nichrome wire, domestic electric appliances would be worthwhile consideration.

Transport Equipment: To cater to the needs of the transportation industry, it would be worth while to set up the following industry:

	No. of Units.	Annual output in No. of pieces.
1. Tyre Factory	1	1,00,000
2. Scooters	1	60,000
3. Chassis Frames for Trucks, Jeeps etc.	1	40,000
4. Auto Ancillary Units (Piston and Liners Unit, Thin Bearing Unit, Transmission and Suspension Ancillaries, Electrical Accessories, Carburettors, Magneto Auto Hard- ware)	7	Rs. 4 crores
5. Battery Factory	1	50,000

Instrument: A unit for the production of engineering precision measuring instruments such as micrometers, verniers, calipers etc. would be a useful addition to the industrial complex around Hyderabad capital city of Andhra Pradesh. Ideal climatic features of Hyderabad are very well suited for the location of Instrumentation industry.

AGRO-BASED INDUSTRIES

Agriculture based Industries: At present a substantial part of the industrial crops is exported to other states. In most cases, the products remaining within the State are utilised by the industries mainly for primary processing and therefore the complete chain of industries for each product is not substantially developed. It is therefore, necessary to develop a comprehensive agro-industrial complex in the State taking advantage of the State's strong agricultural base.

Based on Cotton: By 1971, the demand for cloth in the State will be approximately 72 crore metres. It is reasonable to assume that 1/3 of the total requirement would be available from the handloom sector and the balance of 48 crore metres of cloth is to be obtained from the mill sector. To have this production, about 10,000 looms would be necessary. As against this only 1,500 looms are planned to be installed. Hence, if the State is to be self-sufficient in the requirements of cloth production, it would be necessary to install 8,500 looms in the mill sector. In view of this huge gap, it is worthwhile to establish at least about 2,500 looms to partially cater to the requirements of production within the State.

Based on cotton-seed, modern cotton-seed crushing units of 60 tonnes day capacity and solvent extraction units for further extracting oil from the oil cake of 50 tonnes day capacity can be established. Cotton-seed flour, obtained by grinding the oil cake, is a very useful supplement and enriches the diet and remove malnutrition. One or two cotton-seed flour units can be initially set-up to popularise the product.

Sugar: As the availability of sugarcane in the State is increasing, it is possible to establish at least four more new sugar factories (in addition to existing 19 factories) with a total crushing capacity of about 4,000 tonnes per day.

Molasses are at present used for industrial alcohol. Molasses mixed with oil cake can form a good cattle feed. It adds palatability to the animal food and acts as a binder for other nutrients. Four units each with a capacity of 500 kg per day are suggested to produce cattle feed. Molasses is an important source of water soluble vitamins, and pharmaceutical industry could be encouraged for making these vitamin products, chemical industries based on fermentation of complex organic molecules and in particular, on starches and carbohydrates are rapidly developing. Molasses is an excellent raw material for this process.

Manufacture of acetic acid and acetates from industrial alcohol can be attempted at many of the existing distilleries.

Acetate Filament Fibre: Since Andhra Pradesh is an important producer of alcohol, it is possible to set up a Unit with a capacity of 20 lakh kg. of staple fibre along with acetate filament yarn.

Rice Based: The Ford Foundation sponsor of IADP (See W. G. D.) programme during 1963 have conducted a survey of the existing rice milling method in India and suggested the establishment of 50-100 numbers of modern paddy storage and rice milling units throughout India. At least 20 modern rice milling units could be established in Andhra Pradesh to modernise the Rice Milling methods and also to handle the increased production of about 10 lakh tonnes during the course of the fourth plan period.

Rice Bran Oil: There is scope for establishment of several bran oil extraction units. It is reasonable to expect that at least six numbers of such units with an aggregate oil capacity of about 50,000 tonnes per annum could be established.

Based on Oilseed: From the groundnut oil cake produced at present, oil can be further extracted through solvent extraction process.

This is just beginning to be done in the State. The wide fluctuation in prices of solvent extracted oil and cake in relation to that of groundnut cake and their pure dependence on foreign markets are responsible for the slow growth of these plants. There is scope for atleast 4 solvent extraction units with 50 tonnes capacity per day at the major crushing centres. It is necessary to encourage the use of solvent extracted cake as cattle feed. Low fat groundnut flour is a rich source of proteins and can therefore be used for producing protein rich foods. Multi-purpose food from groundnut flour is evolved by the Central Food Technological Research Institute, Mysore. Groundnut can be converted into butter which is quite popular in the U.S.A. The ICI developed a fibre from groundnut proteins. It is called 'ARDIL' and resembled natural wool. A synthetic fibre plant could be set up.

Castor oil could be refined in a refining plant and used for medicines, hair oils, dehydrated and hydrogenated castor oil, paints and varnishes and industrial lubricants. Castor growing centres of the state like Nalgonda will be suitable locations.

Vanaspati: From groundnut oil and cotton-seed oil, Vanaspati manufacture can be taken up in the Nagarjunasagar ayacut. At present there are only 3 units in the State. Two more units can come up.

Fruit Canning Industry: Andhra Pradesh is rich in fruits and grows mango, citrus, bannana and grape. The area under different kinds of fruit cultivation are as follows:

Mango: 1,41,402 ha; Citrus: 21,636 ha; Banana: 11,278 ha; Cashew-nut: 10,652 ha; Grape: 800 ha. The existing fruit production itself could justify the establishment of at least two more canning factories with an aggregate capacity of 2,500 tonnes of finished products per year.

Based on Chilli: From chilli, chilli powder can be made and a new extract called 'oleoresin' can be made from red chillies which can be used in the place of red chillies. 3 to 4 units can have good scope in the coastal districts of the State.

Livestock Based Industry: The livestock population of Andhra Pradesh is quite high and there are no big tanneries in the State. About 19 lakh numbers of hides, 8 lakh numbers of skins are available per year in the State. The availability of huge quantities of hides and skins could justify the establishment of a modern tannery and modern shoe factory for the manufacture of 60 lakh pairs shoes per year.

Based on fish: Next to curing of fish, freezing prawns and canning of fish, manufacture of shark liver oil and fish meal are important industries. These plants can be set up at Kakinada or Kalingapatnam. A properly organised fish meal industry can be a good foreign exchange earner.

Forest Based Industry: The abundant forest wealth and also large quantities of bagasse from 19 numbers of existing sugar mills could justify the establishment of paper and pulp units with an aggregate capacity of at least 280 tonnes per day.

If paddy straw cum bagasse is preferred for paper making, the capacity may be limited to 50 tonnes a day.

Particle board from agro-industrial wastes: Paddy husk, groundnut shell, reeds and grasses can be used for the preparation of soft and hard boards without a binder. These boards have wide applications in heat and electrical insulations, sound proofing and partition walls. Saw dust, wood wastes and bagasse can also be used.

Saw dust briquettes: In places where there is a concentration of saw mills, saw dust can be collected and saw dust briquettes can be manufactured. In order to make more efficient use of saw dust as fuel, it is advantageous to briquette it. The advantages claimed are their cleanliness, ease of handling and igniting, small volume of coke, low ash content and compactness. The other materials that can be briquetted are lamboo cuttings, wood chippings, bagasse etc.

Agro-input Industries: Items like pesticides, sprayers and dusters offer scope for manufacture in the coastal districts of the State.

CHEMICAL AND ALLIED INDUSTRIES

Fertilisers: Andhra Pradesh is predominantly an agricultural and fertiliser conscious State and the demand for the fertiliser will be so large that there is need for setting up of an additional capacity besides the two units (Visakhapatnam and Kothagudem). The figures given in the agricultural section (See page 56) are indicative of the extent under cultivation for various crops, though it would be realistic to assume substantial increase owing to the extensive irrigation and agricultural programmes taken up for implementation in recent years (See Development of Water Resources p. 36). If it is assumed that there may not be any radical change in the present cropping pattern (See p. 54) the State's demand for Nitrogenous fertilisers in terms of nutrient nitrogen will be of the order of 2.5 lakh tonnes for the principal crops and one lakh tonnes for other crops. Thus the total demand for Nitrogen in the State may be around 3.5 lakhs tonnes by 1970-71. Even after the completion of the two fertilizer schemes currently under implementation an additional capacity of about 2.0 lakh tonnes of Nitrogen has to be created to meet the anticipated demand of chemical fertilisers in Andhra Pradesh. Such project could be based at a suitable coastal site with port facilities. Kakinada is indicated for consideration as a suitable location which has these advantages.

Phosphatic Fertilisers: The demand for these fertilisers in Andhra Pradesh is estimated around 2 lakh tonnes by 1970-71. After taking into account the phosphatic fertilisers that will be produced by the projects currently under implementation, there appears to be ample scope for additional capacity to the tune of about 50 tonnes. The additional capacity might preferably be created in the same unit that would produce Nitrogenous fertilisers. The Zinc smelter proposed to be set up at Visakhapatnam is expected to produce Sulphuric Acid to the extent of about 50,000 tonnes per annum from Zinc smelter gas. Advantage can be taken of this production in planning the phosphatic fertiliser capacity. A coastal location may also offer the advantage of facilitating the imports of required Phosphate rock.

ORGANIC INTERMEDIATES AND PHARMACEUTICALS

Hyderabad is emerging as an important centre for the development of the pharmaceutical industry (see page 85) and will therefore be an ideal location for setting up manufacturing facilities for the production of organic intermediates and ancillaries to the pharmaceutical industry. The manufacture of the following items is indicated.

Chlorosulphonic Acid & Fuming Sulphuric Acid: A capacity of 3,000 tonnes and 1,000 tonnes of these acids may be suggested. The required raw materials, Sulphuric Acid and Chlorine are available within the State. These capacities may be created in the vicinity of Hyderabad. The demand is mostly in the Synthetic Drugs Unit.

Oxalic and Formic Acids: Considerable quantities of both the acids are used in the chemical synthesis of drugs and pharmaceuticals. Formic Acid is not yet manufactured in India. A small quantity of Oxalic Acid is manufactured in India by some chemical firms in the Bombay region. However, most of the demand for these acids is being met from imports. The demand for Formic Acid in the Synthetic Drugs plant per annum is of the order of 210 tonnes. A plant with a daily capacity of two tonnes of Formic Acid can be considered for Hyderabad. This plant could also take up the manufacture of Oxalic Acid. The requirement of Oxalic Acid in the Synthetic Drugs Plant is of the order of 20 tonnes per year. The major raw materials required in the manufacture of Oxalic Acid are Carbon Monoxide, Caustic Soda and Lime. All these materials can be produced from within the State.

Acetanilide: This is the chemical raw material for Sulpha drugs. The requirement of the Synthetic Drugs Plant at Hyderabad is approximately 400 tonnes per annum. It would therefore be worth while to set up a factory for its manufacture in the neighbourhood of the Drugs project at Hyderabad. The raw materials that go into produc-

tion of Acetanilide at various stages are (i) Benzene; (ii) Sulphuric Acid; (iii) Nitric Acid; (iv) Iron borings; (v) Hydrochloric Acid; (vi) Acetic Acid. All these materials with the possible exception of Benzene are locally available. Benzene is also expected to be available within the State in the near future in view of the distinct possibilities of locating a Steel Plant at Visakhapatnam and a Coal Carbonisation unit at Kothagudem. Till such time, Benzene could be obtained from bye-product recovery units attached to the Coal Carbonizing units of the existing Steel Plants. It may also be available from petrochemical sources. The annual capacity of the plant envisaged could be 15,000 tonnes together with an equal capacity 15,000 tonnes for the manufacture of Aniline. The surplus Aniline could be diverted to other consumers.

Absolute Alcohol: Absolute Alcohol will be one of the major raw materials for the Synthetic Drugs Plant. The annual consumption will be of the order of 1,300 tonnes. A plant with a capacity of 7,000 litres per day which would be an economic size, may be established around Hyderabad which will be ancillary to the Synthetic Drugs plant. This will ensure regular supply of the required quantity of Absolute Alcohol to the Drugs Plant. The raw materials required for the manufacture of Absolute Alcohol is 95% Alcohol which may be made available from distilleries situated in the State.

Methyl Ether of Benzene Sulphonic Acid: This is required to the extent of about 100 tonnes in the Drugs project. Its manufacture may therefore be taken up as an ancillary unit. The starting materials for this intermediate are Benzene, Chlorosulphonic acid, Methyl Alcohol and Caustic Soda. The procurement and assembly of these materials for this intermediate are Benzene, Chlorosulphonic acid, Methyl Alcohol and Caustic Soda. The procurement and assembly of these materials can be conveniently done at Hyderabad.

Nitro Chloro Benzol: The requirement of this intermediate in the Drugs project is about 131 tonnes per year. The required raw materials are Chloro Benzol, Nitric Acid and Sulphuric Acid.

P. Acetanyl Pheol—(Para Acetamol): The raw materials required for its manufacture at various stages of manufacture are Phenol, Sodium Nitrate, p. Nitro Phenol, Iron filing, Hydrochloric Acid, Acetic Anhydride, and Acetic Acid. Most of these materials are locally available. The rest will shortly be available from indigenous sources. As such the manufacture of these may be envisaged at Hyderabad.

Phthalic Anhydride: In view of its importance as an organic intermediate and the expected demand and the anticipated gap, an annual capacity of 500 tonnes of this intermediate may be considered. A suitable location will be Visakhapatnam and an annual capacity of 500 tonnes of this intermediate may be considered. A suitable loca-

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tion will be Visakhapatnam and there are possibilities of steel plant being located there. Till such time, naphthalene which is the starting material could be obtained from the existing Steel Plants elsewhere in India.

MARINE RESOURCE BASED INDUSTRIES

Marine Chemicals: The State of Andhra Pradesh has along coast line of 960 km and salt cultivation on a large scale could be profitably undertaken. The present annual production of salt is of the order of 2.5 lakh tonnes. The potentialities particularly at a place like Visakhapatnam for the establishment of an Alkali Complex for the manufacture of Caustic Soda and Soda Ash are immense. An integrated Scheme of this nature will create a concentrated local demand

If the salt is extracted on scientific lines, there is good scope for manufacturing different types of salt—table salt, dairy salt, industrial salt and mineralised cattle licks and all the by-products that can be extracted from salt bitters like mixed salt, potassium chloride, potassium sulphate, magnesium sulphate, magnesium carbonate, potash alum, magnesium trisilicate etc. Hydrated calcium silicate can be made using marine gypsum as a source of calcium. Technical guidance can be obtained from the Central Salt and Marine Chemicals Research Institute, Bhavnagar, Gujarat.

Alkalis: An Alkali complex envisaging the manufacture of Caustic Soda, Soda Ash with a suitable scheme for the utilization of chlorine is under active consideration. The pattern of Chlorine utilisation can be suitably conceived. A number of alternatives are possible. Part or whole of the chlorine may be converted to Ammonium Chloride. The chlorine may also be utilised for the manufacture of pesticides like BHC, organic solvents, chlorinated compounds etc. The annual demand for caustic soda in Andhra Pradesh is estimated around 50,000 tonnes. The expected short fall in the country's demand by 1970-71 is of the order of 185,000 tonnes. This is expected to go up further if the capacity proposed for the aluminium industry materialises. The installation of additional Caustic Soda capacity to the tune of about 50,000 tonnes per annum may therefore be considered. Visakhapatnam is considered to be a suitable location in view of the availability of salt in the proximity. A major requirement for the establishment of this industry is the availability of adequate power. The State is expected to be in a sound position with regard to the supply of power in the very near future when a number of thermal and hydro electric schemes currently under implementation will be completed. Since this industry would consume the power in bulk with high and uniform load factor, it may be possible to purchase power at concessional rates. Further, there is also the possibility of integrating this

unit with the Soda Ash Ammonium Chloride plant which is proposed to be set up at Visakhapatnam, employing the dual process with the simultaneous production of Soda Ash and Ammonium Chloride. The projected daily capacity of 200 tonnes each of the co-products. If some of the chlorine that would be obtained as a bye-product from the Caustic Soda unit is also to be converted into Ammonium Chloride, arrangements for Ammonia production and or procurement may be integrated with the Soda Ash project resulting in considerable economy for both. This will also open up opportunities for the development of chlorine based industries in the vicinity.

Diaphragm Manufacture for Electrolytic Cells: A large number of Caustic Soda units currently in production and a substantial portion of the units proposed for installation adopt diaphragm cells for the electrolysis of brine. The diaphragms used in these cells have a specified life period. Depending on the condition of use they wear out after certain period of service and therefore require replacement. The diaphragms have certain physical and mechanical properties and have a specified degree of porosity. Because of these characteristics and in view of the fact that the standards of performance expected of these diaphragms are stringent, the manufacture of this material has not been taken up in the country. The necessary raw materials and ingredients are available within the country. Though they consist basically of fibrous materials, the production methodology and the manufacturing technique seem to be lacking. It would therefore be worth while to establish a unit of optimum output so that this could not only cater to the indigenous requirements and displace the current imports, but may also be export oriented. This may be established as an adjunct to the Caustic Soda unit.

Chlorine Based Industries: The additional capacity created on Caustic Soda will create matching capacity for Chlorine as well. The following units may be considered to utilise the available chlorine in the State. 1. Utilization of liquid chlorine in the paper and textile industry in the manufacture of solvent refrigerants, pesticides and plastics. The total demand for liquid chlorine is estimated around 1,12,000 tonnes by 1970-71 in India.

Liquid Chlorine: The demand for liquid chlorine within the State is expected to be around 15,000 tonnes. A suitable capacity may be created along side the Caustic Soda Plant.

Benzene Hexa Chloride (BHC): This is an important pesticide and the expected annual demand in the country by 1970-71 is approximately 45,000 tonnes. Andhra Pradesh is an intensively agricultural State and the local demand of this pesticide is expected to be substantial in the near future. A unit to manufacture 6,000 tonnes per annum may be considered for location within the State. This unit

would be linked with the Caustic Soda manufacture and will require approximately 3,000 tonnes of chlorine per annum.

Refrigerants (Freons): The total annual demand for Freon by 1970-71 is expected to be around 6,000 tonnes. Good export market for this refrigerant is in sight. A plant with an optimum economic refrigerants may be considered.

Organic Chlorinated Solvents: Trichloroethylene, tetrachloroethylene, Carbon tetrachloride, ethylene dichloride are the important chlorinated solvents. The raw materials for the manufacture of these items besides Chlorine will be Acetylene. Since the manufacture of Calcium Carbide has also been proposed, a unit for the manufacture of these solvents may be considered as part of the Chlorine utilisation programme. The capacity of the unit could be in the neighbourhood of 4,000 tonnes per annum.

Plastic Industry: The plastic industry could be divided into two sections. One is for the manufacture of resins, compounds and moulding powders and the other is the processing sector. The important moulding powders are Phenol formaldehyde, Urea formaldehyde and Melamine formaldehyde. The popular thermoplastics are polyethylene, Polystyrene, Polyvinylchloride (PVC), Nylon and cellulose derivatives. In the first group viz., Thermosetting moulding powders, the manufacture of the following may be considered within Andhra Pradesh.

Phenol Formaldehyde: A unit may be located around Hyderabad with an annual capacity of 1000 tonnes of moulding powder.

Urea Formaldehyde: The unit proposed for the manufacture of Phenol Formaldehyde can also take up the manufacture of Urea formaldehyde. The suggested capacity is 500 tonnes per annum. The equipment of Urea can be met from the fertiliser unit nearing completion at Visakhapatnam or the one proposed to be set up at Kothamreddy.

Melamine Resins: So far no capacity seems to have been created for this item. Alongside the Phenol formaldehyde and Urea formaldehyde units, facilities for the manufacture of approximately 300 tonnes per annum of this resin may be envisaged. The estimated demand of this product by 1970-71 is around 6,000 tonnes. Since some capacity for thermoplastics has already been created and some more in the process of implementation in the State, the creation of matching capacities in moulding powders will be a complementary step.

Nylon: The main raw material for Nylon manufacture is benzene. Small quantities of Ammonia and Sulphuric Acid are also used. All these starting materials can be conveniently assembled at Visakhapatnam. A unit with an annual capacity of 5,000 tonnes of Caprolactum (Nylon Salt) may be considered for location at Visakhapatnam.

Processing of Plastics: As most of the plastic raw materials would be available at Visakhapatnam and Hyderabad it is necessary that capacities are created to process them there. Although precise estimates are not available on the future demand of the various plastic products, it is felt that there is considerable demand for these products within the country. There are ample export possibilities for these products. A large central processing unit may therefore be considered for location in the State. The capacity that can be aimed at may be in the neighbourhood of 100 lakhs rupees worth of goods per annum.

ELECTRO THERMAL INDUSTRIES

Calcium Carbide: The demand for this chemical by 1970-71 is estimated to be around 1,50,000 tonnes. Having regard to the expected demand in relation to the present installed capacity, a unit with an annual capacity of 10,000 tonnes per annum may be considered for location in the State. The essential requirements for carbide manufacture stone is available in Andhra Pradesh at several places especially in Anantapur and Kurnool districts. The total reserves are estimated around 12 lakh tonnes. The State will be in a sound position to supply adequate quantities of power, shortly. It may also be possible to provide power at concessional rates. A suitable location around Guntakal or Cuddapah may be considered.

Calcium Cyanamide: The manufacture of this chemical is yet to be introduced in India. The major use of Cyanamide is in Agriculture. Although it has a higher cost per unit of fixed Nitrogen than other common fertilisers, its alkalinity and its ability to speed up equilibrium in mixed fertilisers are likely to make it economical. From this point of view, the State of Andhra Pradesh which is intensively agricultural may merit the location of a unit for the manufacture of Calcium Cyanamide. Its use as chemical raw material particularly for the manufacture of plastic resin (Melamine) are increasing and as a chemical it enters into the manufacture of acrylonitrile. This is also a power intensive industry and the availability of adequate quantities of power at reasonable rates is a necessary pre-requisite. This industry may be considered for Andhra Pradesh since power in the required quantities can be made available shortly. Since this is also a power intensive industry like the Calcium Carbide industry and since substantial quantity of the former are required for the manufacture of the latter, the two industries may be considered together.

Silicon Carbide: The raw materials required for the production of Silicon Carbide are Sand and Carbon. Carbon can be obtained from Coke, Coal Tar, pitch of Petroleum coke. These raw materials are available in the State or can be procured from the neighbouring States. Sand of suitable quality containing an appropriate quantity of Silica is locally available. Adequate quantities of saw dust that is used in the manufacture can be made available from within the State. A medium capacity plant can be considered for location in the State. Besides catering to the local demand, this can ensure the needs of the neighbouring states especially the consumption in the Bombay region. Considerable quantities of this important abrasive are being imported at present.

Electrode Paste: The estimated demand for this paste in electrothermal and electro-metallurgical industries in this and the neighbouring States is of the order of 6,000 tonnes per annum. This does not take into account the requirements of the aluminium industry. This is also a power intensive industry and from this point location of a unit in the State of Andhra Pradesh, is considered suitable. Creation of the capacity, it is felt, will obviate the need for the import of high quality paste used in self baking (Soderberg) type electrodes. The raw material required are Carbonaceous materials like, Anthracite coal, Coke, Petroleum Coke, Coal Tar pitch etc. These can be conveniently procured and/or assembled at Visakhapatnam or Kothagudem.

PETRO-CHEMICAL COMPLEX AT VISAKHAPATNAM

Visakhapatnam already has an oil refinery. The capacity of the refinery is likely to be increased during the Fourth Plan period. Since it has advantage of coastal location and is a major port, any short fall in the availability of Naphtha could easily be made up by coastal shipping from other refineries. The availability of adequate quantity of Naphtha at Visakhapatnam may therefore be assumed to be assured. In view of the priority accorded by the Government for the fertilizer and petro-chemical industries based on Naphtha, any short fall in the over all requirements of Naphtha in the country is likely to be supplemented by imports, if need be. All other infrastructure facilities exist at Visakhapatnam. A petro-chemical complex with the following pattern of production may well be conceived in the first phase for an annual Naphtha throughput of approx. 10,000 tonnes.

Acetylene: 50,000 tonnes; Vinyl chloride: 64,000 tonnes; P.V.C. 80,000 tonnes; Methanol: 40,000 tonnes; Formaldehyde: 40,000 tonnes.

The production may subsequently be diversified to increase the Naphtha throughput to about 4,00,000 tonnes a year with the following product mix. (See page 107).

Ethylene: 82,000 tonnes; Propylene: 55,000 tonnes; Butadiene: 9,000 tonnes; Polyethylene: 40,000 tonnes; Ethanol: 13,000; ETP rubber: 15,000 tonnes; Ethylene Oxide: 15,000 tonnes; Poly propylene: 12,000 tonnes; Methyl ethyl ketone: 7,500 tonnes; Benzene: 17,000 tonnes; Polybutenes: 5,300 tonnes.

VISAKHA STEEL PLANT: CONSORTIUM'S RECOMMENDATIONS

The Government of India signed an agreement on the Jan. 27, 1965 with *British-American Steel works for India Consortium (BASIC)* for a study of the Fifth Steel works in the public sector. The proposed steel works would have an initial annual capacity of about 15 lakh tonnes of steel with a capacity for expansion to about 40 lakh tonnes. According to the Agreement, BASIC were asked to investigate six different sites in three areas, namely, Visakhapatnam, Bailadila, Goa, Hospet, Salem & Neyveli. BASIC recommended two sites to the Government of India for their final selection. The consortium had also to investigate major existing engineering facilities in India and submit proposals for Indian participation. Subject to a decision on the site and the adequacy of the Indian participation proposals, the Consortium were to prepare within nine months thereafter a detailed project report for the selected site. The BASIC group investigated six potentially feasible site areas for the location of the Fifth Integrated Steel Plant in the Public Sector. Two coastal areas and four inland area were studied and several specific sites were visited in each of the areas. Supported by experienced engineers and analysts, the BASIC team undertook to investigate:

Raw Material	Topography
Transportation	Water Table
Steel Requirements	Electric Power
Water	Land Acquisition
Labour Supply	Waste Disposal
Meteorology	Heavy Equipment Transport

A large amount of data pertinent to each of these sites was accumulated, which in many instances was supported by discussion and conference with State and local authorities. BASIC carefully reviewed and analyzed the information secured, keeping in mind that the terms of reference specified that the two most feasible sites must be recommended. A broad evaluation of the merits of Visakhapatnam as one of the feasible site areas is given below.

For a tidewater steel facility, a Visakhapatnam site would be the preference of BASIC between the two possible sites inspected. The port and harbour are more developed and access by railway and highways are more readily adaptable to transportation requirements.

Exposure to high velocity winds and heavy rainfall is less than that at Goa and better soil and drainage conditions exist.

Fresh water-supply is lacking and to support a Steel complex with township and ancillary industries, the Raiwada Reservoir Project would have to be implemented. This expense of Rs. 47,600,000 should be considered as an extra capital expense chargeable to a steel plant installation. It is, however, more than offset by excessive expenses for transportation facilities that would be required at a Goa site to sustain plant operations.

Visakhapatnam ranks third lowest in the cost of the assembly of raw materials, transportation and power and has ample reserves of raw materials available. The potential port facilities at Balacheruva can be developed into a second harbour for exclusive use of the steel plant to add flexibility for import or export goods or materials if an economical need develops in the future. By all comparisons Visakhapatnam is a desirable location for a steel entity and it would offer the flexibility and operational maneuverability that only tide water plants can attain and is accordingly strongly recommended by BASIC as one of the two choice for location of the Fifth Steel Plant. The total costs of raw materials and the transfer, the power cost and the finished product distribution, by comparison, indicate that Hospet and Bailadila would have lower costs based on these items only.

There are however other factors which influence the construction and operation of a large steel integration that affect its location. These are somewhat intangible in nature but they are important to the success of the project and include the area's adaptability to a large industrial expansion programme, the expansion potential of currently installed services and utilities, and the element of timing the progress and growth in the area with the construction and commissioning of a steel complex and its many requirements. BASIC's analyses of these factors together with the transportation problems of moving ore out of and coal and other supplies into the Bailadila area over a single track railway precluded its selection for the Fifth Steel Plant. For the immediate future, the activities in the Bailadila area should of necessity be concentrated upon meeting its commitments to mine and ship iron ore for export and local use. This development should expand the local economy by attracting associated industries.

The Neyveli and Salem sites would be higher cost operations than Hospet, Bailadila or Visakhapatnam principally due to iron ore and transportation costs. The characteristics of the Kanjamalai ore necessitates concentration and pelletizing, increasing its cost by about 35 per cent over the cost of pellets at Goa. Being further from the coal sources than the other proposed locations, the transportation costs are naturally higher. The Salem district should not be entirely

eliminated as a potential steel producing area, however, because it is favourably located for distribution of finished material into the south and it has a source of raw materials that can be developed within limits, into the production of steel products, but on a smaller scale than the Fifth Steel Plant project.

Although, by cursory examination Goa would seem to offer many cost reducing possibilities due to its good harbour facilities and river transportation system, the high cost of moving raw materials other than ore and the shipping of finished products over the single meter gauge railway from and into the interior, also the high cost of power cancel any savings that the water transporting facilities offer. Power costs in the quantity needed for a steel plant could probably be negotiated to lower the schedule cost but corrective measures to improve transportation would involve exceptionally high expenditure.

The iron ore mining situation in the Goa area may also present, rather difficult problems due to the numerous small mines that a plant would have to depend upon for the supply of 24 lakh tonnes ore annually. Very few of the 400 or more mining concessions could afford to mechanize their operations, to produce at the rate required and problems of combining these concessions at present are not practical.

Several of the larger projects in the Goa area contemplate the construction of pelletizing plants to use to the fines accumulated at the ore mine stations. When these plants are placed into operation and the product meets requirements, the export market should eventually support a programme of transportation improvement. The construction of a steel plant at Goa is not impractical and will no doubt be required, but its inclusion in the Fourth Plan is not timely in view of the extensive programme necessary to support production.

The importation of foreign coals is not contemplated for the initial installation but future developments and expansions in India's steel making industry may dictate a revision in planning.

Although no site is or can be ideal in every respect, all six areas contain sites which are possible for steel plants and may well be developed in the future—through perhaps not all on so large a scale as 15/40 lakh ingot tonnes a year. The immediate issue is to select, as the first, that site which will best influence the economy as a whole.

For reasons which will be developed herein, BASIC recommends the deep water location at Visakhapatnam as being the most desirable site, for the Fifth Steel Plant.

Source: Department of Information and Public Relations, Govt. of Andhra Pradesh, Hyderabad.

TRANSPORT

Air Ways: Visakhapatnam, Vijayawada (Gannavaram), Hyderabad (Begumpet) are connected by air regionally. There are Daily Caraville services between Delhi-Hyderabad-Madras. Hyderabad is also connected by other types of aircraft services.

Railways: Recently constituted (1966) South Central Railway with Secunderabad as Zonal HQ serves the State to a major extent. Southern Railway (Madras) serves a small length between Madras & Gudur on the Madras-Calcutta trunk line. Beyond Waltair, South Eastern Railway serves to some extent. The total length of railways in Andhra Pradesh is 4,531 km which works at 1 km of Railway route per 58 sq km of area. About 60% of this route length is served by broad gauge. The Madras-Calcutta trunk route has two tracks; with the completion of second bridge over Godavari at Rajahmundry which is under way, doubling can be achieved by 1970. Second bridge on Krishna at Vijayawada is already functioning since 1965.

Roads: The total road length of motorable surface in Andhra Pradesh is 25,306 km in 1959. This has increased to 38,109 km in 1966-67 of which 2,300 km belong to National Highways and 19,700 km is managed by State highways. The number of Motor Vehicles registered in the State stands at 85,305 in 1966-67. The Andhra Pradesh Road Transport Corporation constituted in 1958 manages the nationalised bus transport in the Telangana districts, Krishna, Guntur and West Godavari. Long distance express buses ply between Hyderabad connecting most of the district head quarters as well as Tirupati, Vijayawada and other important centres. National Highway No. 5 passes thro' Visakhapatnam, Rajahmundry, Vijayawada, Guntur, Nellore connecting Cuttack with Madras. National Highway No. 7 passes thro' Adilabad, Nizamabad, Medak, Hyderabad, Kurnool and Anantapur connecting Kanyakumari in the South with Mangawan via Nagpur. National Highway No. 9 passes thro' Vijayawada, Hyderabad connecting the former with Poona. National Highway No. 43 connects Vizianagaram with Raipur.

Waterways: Ports: Visakhapatnam is one of the major ports in the South India. 703 ships entered the port during 1964-65 with a gross tonnage of 55,00,000 tonnes. Exports handled: 19,10,000 tonnes, imports handled: 19,60,000 tonnes.

Minor Ports: Barua, Bhimuniapatnam, Kakinada, Kalingapatnam, Machilipatnam and Narasapur.

Canals: Buckingham canal connects Kakinada town with Madras city linked by Godavari and Krishna Canals thro' a net work of locks facilitating navigation. The total navigable canal length in Andhra Pradesh 1,600 km.

MINOR PORTS TRAFFIC 1965-66

	Receipts	Expenditure	Imports	Exports	Wt. of Cargo Handled
	Rs.	Rs.	Tonnes	Tonnes	Tonnes
Bhimuniapatnam	137	4,071	..	..	..
Kakinada	6,85,400	14,39,953	76,440	2,67,494	3,43,934
Machilipatnam	1,04,324	2,33,317	14,929	2,67,494	3,43,934
				22,784	37,713

LENGTH OF RAILWAYS, ROADS AND INLAND WATERWAYS

	Route km
Railways*	4,643
Broad gauge	2,613
Metre gauge	1,991.2
Narrow gauge	400
Roads**	37,109
National Highways	2,261
Other Roads	33,848
Inland Waterways***	1,845
Godavari Canal	796
Krishna Canal	772
Kurnool-Cuddapah Canal	
Buckingham Canal	256

* Andhra Pradesh at a Glance, Department of Information, Andhra Pradesh.

** Chief Engineer, Highways, Andhra Pradesh.

*** Annual Report, Andhra Chamber of Commerce.

Source: £ A portion of metre gauge is changed into broad gauge.

PROPOSED INVESTMENT FOR RAILWAY DEVELOPMENT (1961-71)

	Length of Track (Miles) *	Investment (Rs. Crores)
Priority A		
1. Construction of link between Hyderabad-Ongole	180	15.30
2. Doubling of Kazipet Dornakul- Vijayawada line	120	8.30
Priority B		
1. Construction of Bhamagundam Bhimadole-Halakota-Tatpur line	108	9.48
2. Construction of Bailadalla- Bilaspur-Kothagudem line	110	9.35
3. Construction of Kothagudem- Rajahmundry line	80	6.80
4. Doubling of Guntur-Vijayawada and Rajahmundry-Vijayawada lines	92	6.40
TOTAL		55.33

1 mile = 1.6 km

Source: Techno-Economic Survey of Andhra Pradesh, 1962.

MOTOR VEHICLES REGISTERED IN ANDHRA PRADESH

Item	1955-56	1966-67
1. Stage Carriages	2,955	7,043
2. Goods Vehicles	6,628	16,950
3. Cars	11,281	31,146
4. Motor Cycles	3,644	20,294
5. Taxis	275	1,832
6. Others	..	8,540
TOTAL	24,783	85,805

Source: Hand Book of Statistics Andhra Pradesh, 1966-67.

PLANNED ECONOMY IN ANDHRA PRADESH

The re-organisation of the State twice during the ten year period 1951-61 namely first time when the First Plan (1951-53) was half way through and for a second time, after the Second Plan (1956) was drawn up, was mainly responsible to a somewhat weaker growth of Industries and for achieving any significant measure of progress as has been recorded elsewhere in India. The plan programmes in the first two plans could not be drawn taking into account the special resources, needs and demands of Andhra Pradesh. Preponderant agricultural character of the State compelled to have accent on farm oriented programmes and agro-based industries. However, the end of second plan and third plan periods have focussed attention on industrial growth with the location of various Central Sector projects (see Industrial development) and State Corporations for promotion of Industries in the State.

The First Five Year Plan

In Andhra Pradesh the First Five Year Plan came to a close in Mar. 1956. The outlay on the First Five Year Plan was of the order of Rs. 94.97 crores. The Sectorwise expenditure was as follows: (a) Agriculture: Rs. 12.30 crores; (b) Irrigation: Rs. 21.86 crores; (c) Power: Rs. 37.84 crores; (d) Mining and Industries: Rs. 1.15 crores; (e) Transport: Rs. 3.43 crores; (f) Education: Rs. 4.51 crores; (g) Medical, Public Health, Housing, Miscellaneous, Welfare Schemes: Rs. 13.82 crores. Irrigation and Power received the highest precedence claiming together as much as Rs. 59.70 crores or about 62% of the total outlay. Six major irrigation projects, and 17 medium irrigation projects in Andhra and two major and 11 medium irrigation projects in Telangana were included in the First Plan. The two major irrigation projects in Telangana viz. Koilsagar and Bheemanapalli projects were completed by the end of the First Plan period. Work on Nagarjuna Sagar was taken up (1955).

Agriculture: Agricultural programme including animal husbandry, fisheries, and community development claimed about Rs. 12.30 crores or over 13% of the total outlay. The impact of agricultural schemes of the First Plan was reflected in increased food production. In Andhra Pradesh, production of cereals including pulses rose from 40.1 lakh tonnes in 1950-51 to 54.2 lakh tonnes in 1955-56. Likewise, during the same period, the production of oil seeds rose from 11.1 lakh tonnes to 12 lakhs tonnes. The total cropped area increased from 92.2 lakh ha in 1950-51 to 116.8 lakh ha in 1955-56. Besides 12,480 ha were brought under irrigation by the major and medium irrigation

projects and another 39,520 ha by minor irrigation schemes. **Power:** The first generating unit of 17 MW capacity at the Machkund Hydro Electric Project was commissioned in August 1955 and the second unit four months later. At the commencement of the First Plan the installed capacity in Andhra area was 21,000 KW which increased to 62,200 KW at the end of the Plan period. **Education:** In the field of education, 1,500 basic and non-basic schools were opened during the First Plan period. The scheme of opening of single-teacher schools for the relief of the educated unemployed was implemented during the last two years of the Plan and 1,829 schools were opened. The number of pupils in the basic training schools increased from 1,256 to 2,926 at the end of the Plan. **Health:** Under medical schemes the bed strength of the various hospitals was raised by 900-200 in the King George Hospital, Visakhapatnam, 250 in the Headquarters Hospital at Eluru, 50 in Headquarters Hospital at Kurnool and 400 in the various other Government Hospitals and dispensaries. To improve public health in the State, 34 anti-malaria schemes were in operation. The Regional Nutrition Unit carried out field surveys in connection with the Beri Beri Research Scheme. The National Filaria Control Programme was also taken up and survey was conducted in 41 Panchayats one Municipality in the districts of East Godavari and West Godavari. Under the B.C.G. Vaccination Campaign, 18 lakhs of people were tested and 6.23 lakh vaccinated. To offer better maternity and child health services to rural population, eight maternity and child welfare centres were established. **Social Welfare:** Special measures were taken for the amelioration of the less advanced sections of the community. Accordingly, 44 Harijan Welfare Schools and 21 hospitals were opened during the First Plan period. In addition, 65,000 scholarships were awarded. The Community Development Programme too recorded commendable progress. The programme, by the end of the First Plan, covered an area of 29,518 sq km and a population of over 41 lakhs spread over 2,828 villages. Against a total Government expenditure of about Rs. 80 lakhs, the people contributed in the shape of cash, kind and labour about Rs. 61 lakhs.

The Second Five Year Plan

In tune with all India Planning, Andhra Pradesh Second Five Year Plan had been formulated with reference to the following principal objectives:

- (a) A sizeable increase in national income so as to raise the level of living in the country;
- (b) Rapid industrialisation with particular emphasis on the development of basic and heavy industries;

(c) A large expansion of employment opportunities; and

(d) Reduction of inequalities in income and wealth and a more even distribution of economic power.

The progressive strides in Andhra Pradesh under the Second Five Year Plan were significant, especially in the spheres of industrial expansion and community development. Against the original allocation of Rs. 175.74 crores a sum of Rs. 188.60 crores was actually spent on the Second Plan. The sector-wise expenditure was as follows: (a) Agriculture: Rs. 29.25 crores; (b) Irrigation: Rs. 65.55 crores; (c) Power: 38.53 crores; (d) Mining and Industries: Rs. 10.15 crores; (e) Transport: 9.53 crores; (f) Education: Rs. 12.36 crores; (g) Medical, Public Health, Housing, Miscellaneous Welfare Scheme: Rs. 23.23 crores.

Agriculture: In the 2nd Plan, agriculture claimed Rs. 29.25 crores and irrigation schemes Rs. 65.55 crores, together accounting for over 50% of the total Second Plan expenditure. **Irrigation:** Under irrigation schemes, during the Second Plan period, work on all the 'spill-over' schemes was continued, besides taking up two new major projects, and 13 new medium projects in Andhra and 11 new medium irrigation projects in Telangana. As a result of this all-round emphasis on irrigation schemes to benefit agriculture, the total food-grains production at the end of the Second Plan stood at 63.19 lakhs tonnes. During the Second Plan period an additional area of 1,65,760 ha was brought under irrigation by major and medium irrigation projects. An area of about 1,19,600 ha was benefited by the minor irrigation schemes. **Power:** There has also been a substantial improvement in the generation and consumption of electricity during the Second Plan period. Important power schemes included in the Second Plan were the Machkund Hydro-Electric Schemes, the Tungabhadra Hydro-Electric Scheme, the Upper Sileru Hydro-Electric Scheme and the Telangana Thermal Scheme. At the end of the Second Plan period, the installed capacity was more than doubled. It rose from 98 M.W. at the end of the First Plan to 213 M.W. at the end of the Second Plan. The number of villages and towns electrified increased from 685 at the end of the First Plan to 3,238 by the end of the Second Plan. The per capita consumption also rose from 7 units to 15.

Industries: The ground was prepared for a more rapid growth of industries in the State. During the Second Plan period, it was proposed to increase the production capacity of the Rajahmundry Paper Mills from 10 tonnes to 15 tonnes per day, expand the Government Ceramic Factory at Gudur and start the Sri Venkateswara Paper and Strawboard Mills at Tirupati. Of these, the proposal to run the Sri Venkateswara Paper and Strawboard Mill was eventually dropped.

and the expansion of the Government Ceramic Factory, Gudur was completed. However, the expansion of the Rajahmundry Paper Mills could not, as contemplated, be completed due to foreign exchange difficulties. The Government contributed share capital to five co-operative sugar factories to revitalise the industries in the co-operative sector. Eight Industrial Estates were established. With a view to creating a climate more conducive to the growth of industries, three autonomous corporations namely the *Andhra Pradesh Industrial Development Corporation*, the *Small Scale Industrial Development Corporation*, and the *Mining Corporation* (Pp. 34) were constituted. Today, they are giving undivided attention to the all-round development of industries in their respective spheres. **Education:** In the field of Education, 5,789 primary and junior basic schools, 541 middle schools and 381 high schools and multi-purpose schools were started and 5,51,000 school-going children of 6-17 age group were additionally enrolled during the Second Plan period. Towards the expansion of medical facilities, 18 V.D. Clinics, 14 E.N.T. Clinics, 32 T.B. Clinics, 22 Dental Clinics, 49 Family Planning Clinics, 14 Eye Clinics, 12 Leprosy clinics, 165 primary health centres and 77 subsidised Rural Dispensaries were established during the Plan period in the State. 43 local fund institutions were also provided.

Community Development: In the sphere of community development and Panchayati Raj, Andhra Pradesh, in the South has played a pioneering role during the Second Plan. Andhra Pradesh was the first State in India to usher in Panchayati Raj (q.v.) when in July 1959, twenty ad-hoc Panchayati Samitis one in each district were constituted. Statutory Samitis were constituted in Nov. 1959, in the wake of the enactment of the Andhra Pradesh Panchayat Samitis and Panchayat Raj Act. At the beginning of the Second Plan there were 3 multi-purpose Blocks, 28 community development blocks, and 47 M.E.S. and 12 post intensive Blocks covering an area of 35,669 sq km and 4,799 villages with a population of 57 lakhs. After the introduction of Panchayati Raj or democratic decentralisation, the pattern and scope of the programme stood altered. Accordingly, in the place of N.E.S. Blocks, Community Development Blocks and Post Intensive Blocks the programme was divided into two phases of five years each viz. Stage I and Stage II Blocks and by the end of the Second Plan there were in all 328 Blocks 5 multi-purpose Blocks situated in tribal areas, 5 Community Development Blocks, 82 Stage II Blocks, 192 Stage I Blocks and 43 Pro-extension Blocks covering an area of 20,546 sq km and 20,901 villages with a rural population of 206 lakhs.

Co-operation: In the sphere of co-operation, as many as 548 large sized and 5,547 small sized co-operative societies, 25 land mortgage banks, and 22 co-operative societies were started in addition to the construction of 566 godowns. **Social Welfare:** In respect of social wel-

fare under the Second Plan, as many as 12 schemes costing Rs. 37.20 lakhs were implemented. The important physical achievements in this sphere consisted of establishment of 5 State Homes, 21 welfare extension project 10 district shelters, 2 certified schools, and one Remand Home for girls.

The Third Five Year Plan

Planners have set the following aims in view while developing Third Plan for Andhra Pradesh in tune with All India Pattern:

- (1) To secure an increase in national income of over 5% per annum, the pattern of investment being designed also to sustain this rate of growth during subsequent plan period.
- (2) To achieve self-sufficiency in foodgrains and increase agricultural production to meet the requirements of industry and exports;
- (3) To expand basic industry like steel, chemical industries, fuel and power and establish machine-building capacity, so that the requirements of further industrialization can be met within a period of 10 years or so mainly from the country's own resources;
- (4) To utilise to the fullest possible extent the man power resources of the country and to ensure a substantial expansion in employment opportunities; and
- (5) To establish progressively greater equality of opportunity and to bring about reduction in disparities in income and wealth and a more even distribution of economic power.

The total expenditure during the Third Five-Year Plan came to Rs. 350.71 crores in Andhra Pradesh. The Sectorwise expenditure was as follows: (a) *Agriculture, animal husbandry, fisheries and community development:* Rs. 47.92 crores; (b) *Irrigation:* Rs. 125.10 crores; (c) *Power:* Rs. 90.62 crores; (d) *Mining and Industries:* Rs. 15.34 crores; (e) *Transport:* Rs. 16.84 crores; (f) *Education:* Rs. 21.41 crores; (g) *Medical, Public Health, Housing and Miscellaneous Welfare Schemes:* Rs. 53.48 crores.

Agriculture: In respect of foodgrain production the Third Plan target was to create 27.65 lakh tonnes of additional production potential, against which the actual achievement came to 20.69 lakh tonnes

thus taking the total foodgrains production to 83.88 lakh tonnes. In respect of livestock development, the four livestock farms stated in the last year of the Second Plan, and one new livestock farm at Nagarjunasagar started in the first year of the Third Plan were continued, besides strengthening the ten livestock farms by way of providing additional equipment, buildings, etc. At present, there are 96 veterinary dispensaries 321 block veterinary dispensaries and 109 delimited block veterinary dispensaries. During the Third Plan period, three intensive poultry production-cum-marketing centres have been established at Hyderabad, Vijayawada and Visakhapatnam which envisages establishment of commercial poultry units, supply of quality chicks etc. *Expanded Nutrition Programme:* Under the Scheme during the Third Plan period 497 poultry units were established in 300 villages; and 19 block poultry units were setup.

Irrigation and Power: In respect of irrigation and power, the total additional potential created under major and medium projects during the Plan period stood at 1.408 lakh ha while the achievement under land utilization came 1.08 lakh ha. The first phase of the State's most ambitious multi-purpose project, the Rs. 140 crore Nagarjunasagar (q.v.), has almost been completed. In respect of the medium irrigation projects taken up during the period, significant progress has been achieved. The total number of additional towns and villages electrified during the Third Plan period came to 2,250 and the total by the end of the Plan period to 5,550.

Education: The number of primary schools is estimated to have increased from 34,040 in 1960-61 to 38,000 by the end of 1965-66, while the enrolment in classes I to V is anticipated to go up from 29.76 lakhs to 37 lakhs respectively. This would represent 92% boys and 63% girls in the age group 6-11. The enrolment in classes VI and VII by the end of the Third Plan is expected to be 4.5 lakhs, while the enrolment in the high school classes IX to XII increased from 1.96 lakhs to 3.41 lakhs.

Health: Public health schemes also received good impetus. During the Third Plan, 6 T.B. clinics have been opened taking the total number of T.B. clinics and hospitals in the State to 43 covering all the districts. Under the Leprosy Control Scheme, 3 leprosy sub-centres were established during the Plan period, taking the total to 18 leprosy centres of which 2 have been converted into leprosy control units. This bed strength of the teaching hospitals was increased from 1,530 to 5,223, in the district hospitals from 1,383 to 1,878 and in taluk hospital from 417 to 845. In the T.B. clinics, the bed strength rose from 1,243 to 1,647, during the Third Plan period.

CULTURE

INTRODUCTION

As the rest of the constituents of the Indian Union, Andhra Pradesh too, in its own inimitable way, contributed its own part to the common cultural heritage of India, maintaining at the same time its own individuality. Though, throughout the ages, owing to many historical reasons, many races, peoples and religious groups contributed in their own way to the cultural development of Andhras, the keynote of that growth has always been a synthesis on the basis of eternal values. The Andhra cultural wealth developed in such a way is reflected to-day in feasts and festivals; literature, music, dance, drama, arts and crafts, attitudes and actions, educational pattern and mode of life of the Andhras. Here only a thumbnail sketch of those various facets of Andhra Culture is attempted to be given under appropriate heads.

RELIGION, FEASTS AND FESTIVALS

The *dwaita*, the *visishtadwaita*, the *advaita*, and *saiivite* faiths coexist in Andhra Pradesh among Hindus, while Muslims and Christians also though small in number, live side by side with tolerance. The *Sakti*, in her finer and cruder manifestations is also worshipped. In the better and richer type of villages, the temples of Vishnu, Siva and Sakti prevail. Vighneswara, Srirama and Hanuman are also provided in these shrines. Religious or sectarian fanaticism in general does not exist in the State of Andhra Pradesh.

Some of the famous temples in Andhra Pradesh are at Simahachalam (Sun temple in Arasavalli in Visakhapatnam Dt.), Draksharama, Bhadrachalam, Annavaram and Antarvedi in the East Godavari Dt., Mangalagiri in Guntur Dt., Achanta, Palakol, Dwaraka Tirumala in West Godavari, Tirupati and Kalahasti in Chittoor, Kanaka Durga at Vijayawada in Krishna and Ahobalam in Kurnool Dt. The other famous temples are in Srikakulam, Mukhalingam, Kotappakonda, Srisailam and Mahanandi*. All of them are structures of great antiquity and

*See *Tourist Attractions* pp. 209—238.

possess rare architectural value. Christian churches in places like Medak and mosques in Hyderabad are noteworthy. In addition to these, local deities called *Gramadevatas* are held in reverence. Jataras are celebrated. They do not belong to any particular denomination. The Hindu priest would officiate at their ceremonies; nevertheless the villager regards them with awe and never fails to do obeisance before them. These are located generally on the village outskirts, the idol consisting of a stone smeared liberally with oil, saffron, kumkum and turmeric. The Gramadevatas, one comes across in rural Andhra are innumerable and are given local names such as Gangamma, Gogulamma, Nukalamma, Vellamma, Chinnamma, Muthyalamma, Bangaramma, Ankalamma, Pyditalli, Perantamma and Potaraju. If disregarded for too long, people believe they cause diseases and disasters in the village. Animal or fowl sacrifice is practised to appease them. The religion of the hill tribes is based largely on superstition and animism. These forest dwellers, living in close association with nature, are in need of protection from the elements all the time. Witchcraft and animal sacrifice are also widely believed, though they are becoming things of the past by the spread of modern education. The most terrible visitation in the eyes of the Koya tribe in Godavari Valley are eclipses of the sun and the moon for they believe that the devil in the shape of a serpent or a tiger is thereby trying to swallow the earth. They ward it off by beating drums all the time the eclipse lasts.

FEASTS AND FESTIVALS

Andhras observe many feasts and festivals. Most of them have some religious significance; but they are notable mainly for the occasion for gaiety and merry making they provide. On such days every household is decorated with floral and green leaf *torana* hung across the windows and doors. The courtyard is decorated tastefully with designs of *muggu* powder (*rangoli*) and the doorsteps are painted with daubs of turmeric and kumkum pastes. Joss sticks and dhup, sambrani are burnt in all the homes and the air is filled with the aromatic smell. People wear new clothes; the lady of the house cooks special dishes and generally some community function is held near the village temple or at a common place. There are nine major festivals observed by Andhras; seven of them religious and two agricultural.

UGADI: Ugadi is a Telugu New Year Festival in Mar/Apr. This is regarded auspicious for the peace, prosperity and happiness of the family in the ensuing year. The family members wear new clothes on this occasion and the entire day is spent in feasting and merry making. In the evening the elder of the family reads out the forecast for the following year from the Hindu almanac at a ceremony called '*Panchanga Shravanam*'.

SRIRAMA NAVAMI: It is the celebration of the birth of Sri Rama in Apr. It is observed with devotion and prayers. The Ramayana is read out before huge gatherings and at the end of which *panakam*, a drink made out of jaggery and *vadappu* a preparation with greengram dhal are distributed.

VINAYAKA CHATURTHI: Vinayaka is god of success. This festival too is observed Aug/Sept. with great devotion to ensure success for all the family's undertakings in the ensuing year.

DASARA: This festival falls about Sep/Oct. and is celebrated for ten days '*Dasara Navaratri*'. On the ninth day craftsmen and artisans worship their tools '*Ayudhapooja*'. The tenth day *Vijayadashami* is celebrated with eclat.

DEEPAVALI: The Festival of lights which falls three weeks after Dasara is to celebrate the slaying of the mythological tyrant *Narakasura* by Lord Krishna and his consort Satyabhama. End of *Narakasua* resulted in freedom to 16,000 maidens whom the tyrant had kept in captivity. Wearing new clothes, children celebrate the festival by lighting fire works.

SANKRANTI: The festival falls on 13/14th of Jan. when the farmer expresses his gratitude to nature after a good harvest. It is an important festival for Andhras.

MAHASIVARATRI: The festival Feb/Mar. is celebrated in honour of Lord Siva who constitutes the trinity of *Brahma*, *Vishnu* and *Siva*.

Panduga, *Eruvaaka* are celebrated by Andhra farmers. The housewives celebrate *vratams* and *nomus*. *Shravana mangala varamu*, *Kartika somavaramu* are typical examples. The hill tribes celebrate the *Chaitra* festival when the harvest is gathered and there is a whole month before them to dance and make merry. During this month the men go to woods for a game. They hunt staying there for days, sometimes weeks, never returning unless they acquire a trophy in the shape of a male wild beast.

LITERATURE

According to an accepted version of literary critics, Telugu literature traces back its roots to the second decade of eleventh century, though earlier literary works are few and far in between. That was the time when a part of *Mahabharata* was rendered by Nannaya from Sanskrit into Telugu. Nannaya, poet laureate in the court of Rajarajanarendra of Rajamahendravaram (now Rajahmundry) was considered to be the pioneer Telugu writer. Though he could finish only the first two and a portion of the third parva out of the 18 parvas of the epic, the translation attained a special significance. Tikkana (13th cent.) resumed and completed the rest but for a small gap after Nannaya. This gap was filled later by Errapragada (14th cent.). Thus spanned over three centuries, the Telugu Mahabharata is a liberal admixture of prose and verse and is a significant work of all time. The Mahabharata writers are known as 'kavitrayment' trinity in early Telugu literature. In between, Palkurki Somanatha (12th cent.) composed a Saivite treatise 'Basava puranam' in *Dwipada*. Influenced by Sanskrit classics, Nannechoda wrote *Kumara Sambhava*. Though a latecomer in Telugu, Ramayana had many Telugu versions. The Popular *Bhaskara Ramayana* and *Ranganatha Ramayana* as well as Tikkana's *Uttara Rama Charitra* merit mention. Srinatha (15th cent.) has been described as the Byron of Andhra. *Palnati veera charitra* was his historical classic. His contemporary and near relative, according to a legend Potana devoutly rendered the great *Bhagavata Purana* saying *palikediti bhagavatamata palikinchidivadu Rama Bhadrundata*, to stress that his inspiration was divine. Even today Potana's Bhagavata story woven around Lord Krishna, is recited by scholars and common people alike in Andhra. That was

his popularity. "*Desabhashalandu Telugu lessa*" was Krishna devaraya's *lex non scripta*. Krishna devaraya's reign was hailed as the golden age of Telugu literature. This was said to be the starting point of original Telugu writings in the form of *prabandhas*, Allasani Peddana's *Manucharitra*, poetess Molla's *Ramayana*, Pingali Suaranna's *Kalapoorodaya*, Ramaraja Bhushana's *Vasu charitra* are merited literary productions of this period. *Sataka* is yet another literary form original and unique in Telugu full of wisdom and mysticism. Vemana, hailed as poet of the people excelled in *Sataka* form. Later, the Southern School of Telugu Literature took roots under Nayaka Kings (17th cent) in Tanjore. *Yakshagana*, a folklore type of literary form emerged along with other *desi* forms sung by women on festive occasions. Perhaps, Muslim invasions and later political subordination of the country under the Dutch, French, Portuguese and British rulers of alien origin drove Telugu literature into rapid decline. The literary output in 18th and mid 19th century was meagre according to one estimate.

Spurred by political awakening in the latter half of nineteenth century, a new era began in Telugu literature with accent on prose writings. Gidugu Venkata Ramamurty and Gurazada Apparao (*Kanyasulkam*) revolutionised the literary field by establishing (see MODERN DRAMA) good prose traditions using spoken form of Telugu. In this period of renaissance as it is often called by experts, influenced by English literature and thought, Kandukuri Veeresalingam (1848-1919) wrote *Rajasekhara Charitra* based on *Vicar of Wakefield* by Goldsmith, a well known English author. *Ganapati* brought fame to Chilakamarti Lakshmi Narasimham. *Avadhanam* is yet another peculiar form of Telugu literary tradition. It is a form of literary 'acrobatics'. Tirupati Sastry and Venkatasastri known as *janta kavulu* or Tirupati pair (Tirupati Venkata kavulu) mastered this *avadhanam*. *Asukavita* or extempore versification is one more unique feature of Telugu literary tradition. All these literary forms rely strongly on certain rigid metrical standards.

Against this background of traditional school in letters, a free school of lyricists with romantic vein and a strong

base of progressivism began to grow. Inspiration in life is the main stay of literary production according to the progressive school. Devulapalli Venkata Krishna Sastry belongs to transition from classical to modern school. By early 1940s *Sri Sri* (Srirangam Srinivasa Rao) Patabhi, Narayanababu zealously led the progressive group and established themselves passing on their tradition in thought process to Arudra, Tilak Dasaradh, and Narayanareddi; there are poets of merit who combine tradition with modernism. Viswanatha Satyanarayana, a veteran writer produced popular novels. Short story too was introduced during this period when Padmaraju's *galivana* (Cylone) won world recognition (1950). More recent trends in Telugu literary output turn to existentialism when a group of young men started *Digambara* school (1966). Advent of cinema, in recent times, began effectively utilizing the services of variety of fiction writers, short story writers, poets, play-wrights for scenerio, song, dialogue writings.

Non-fiction writing, once limited to text book production developed into writing of books on History, Science and other knowledge giving subjects and journalism. Mutnuri Krishna Rao, and Kasinadhuni Nageswararao were the successful pioneers in Telugu journalism, when they founded *Krishna patrika* (1902) & *Andhra Patrika* in (1912). Perhaps *Vijnanachandrika Grandha mandali* founded by Komaraju Venkata Lakshmanarao was the earliest to endeavour to disseminate knowledge on an organised scale. His indefatigable efforts resulted in the production of science books and a pair of encyclopaedia volumes: *Andhra Vijnana Sarvaswamu* (1923), covering only the first letter in the Telugu alphabet. After Indian Independence, institutions like Telugu Bhasha Samiti (1947) for bringing out subjectwise encyclopaedia *vijnana sarvaswamu* (16 vols.), Sangrahandhra Vijnana Kosha Samiti, to encourage literary production were founded by Andhra thinkers and men of letters.

Earlier, institutions like Andhra Sahitya Parishad, Kakinada, Andhra Saraswata Parishad Hyderabad and recently established Andhra Pradesh Sahitya Akademi are engaged in the promotion for the cause of literature on an organised scale. Navya Sahitya Parishad, Hyderabad, Andhra Viswa Sahiti, Hyderabad, Sahiti Samiti, Tirupati, Visakha Writers Assn., Vishakapatnam, Sarasa, Madras etc are engaged in the promotion of the cause of local writer, fraternity.

CENTRAL SAHITYA AKADEMI AWARDS

TELUGU LITERARY WORKS 1955—66

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|------|--|----------------------------------|
| 1955 | <i>Andhrula Sanghika Charitram</i> (Social History) | * (late) Suravaram Pratapa Reddi |
| 1956 | <i>Bharatiya Tatva Sastramu</i> (Translation of S. Radhakrishnan's <i>History of Indian Philosophy</i>) | Bulusu Venkateswuralu |
| 1957 | <i>Sri Ramakrishnuni Jivita Charitra</i> (Biography) | Chirantananda Swami |
| 1960 | <i>Natyasastramu</i> (A Study of Bharata's <i>Natyasastra</i>) | Ponangi Srirama Apparavu. |
| 1961 | <i>Andhra Vaggeyakara Charitramu</i> (A History of Telugu composers and song-writers) | Balanthrapu Rajanikantha Rao |
| 1962 | <i>Viswanatha Madhyakkaralu</i> (poetry) | Viswanatha Satyanarayana |
| 1963 | <i>Pandita Parameswara Sastri Veehunama</i> | * (late) T. Gopichand |
| 1964 | <i>Kreestu Charitra</i> (poem) | G. Jashua |
| 1965 | <i>Misra Manjari</i> (poems) | Rayaprolu Subbarao |

* Posthumous Award

In 1958, 1959, and 1966 there is no Award for Telugu.

VISUAL ARTS

Perhaps the earliest paintings ascribed to Andhras by experts are in the Ajanta caves No. 9 & 10 which are considered to be nearly 2000 years old. They depict Buddhist ideal of universal love. Men and beasts are depicted vividly. The line is utilised to express the form and its contours. Its very mass and weight have actually resulted from a mixture of techniques of both sculpture that the 'forms' all are animated and full of movement and the human forms in particular are usually elongated more than in any other schools of India art. The Amaravati and Nagarjuna konda etc. of early Christian era are fine examples. It is difficult to trace what Andhra artists created in between when there was a big leap to 11th when Chalukyan art and architecture in Bikkavol and Draksharama flourished. Though the recent finds at Alladurg in Medak Dist. fill the gap to some extent, these are yet to be diligently studied to have a clear picture. At Hanamakonda, Kakatiya sculptures in thousand pillar temple (about 12th century) resemble earlier Chalukyan style of architecture. These were treated with elegance. Massive structures and great monuments of architecture were erected during Vijayanagar Period at Hampi (in ruins now), Tadipatri (13-16th cent). Lepakshi near Hindupur (Anantapur dt.) is another example (16th century) of classical Andhra art forms. By the efflux of time many creations of Andhra artists have gone into obscurity. Of the recent efforts a mention must be made of Damerla Ramarao enthused by Coultrey (1919), Adivi Bapiraju (1895-1952) inspired by Pramod Kumar Chatterjee, C. N. Venkatarao and those of Varada Venkata Ratnam whose works adorn art galleries. Architecture in Hyderabad city was influenced by the Saracenic element. Charminar, Osmania University are a few examples of these.

Of the more recent painters of Andhra origin, mention may be made of Paidiraju of Vizianagaram, Mokkapati Krishnamurthy, H. V. Ramgopal of Madras, Pilaka Lakshmi Narasimhamurthy, K. Srinivasulu, Koduru Ramamurti, P. T. Reddy of Hyderabad, M. Reddappa Naidu, (E.G. Dt.) S. V. Rama Rao of Gudivada who belong to promising group of Artists from Andhra. S.V. Ramarao brought honour to Andhra Pradesh when he was awarded, Lord Croft prize in England (1965).

DIRECTORY OF ARTISTS

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& Architecture,
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Lingampally, Hyderabad-27.

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'Rishikesh'
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C/O. Rifaqat Ali,
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Taherd Ahmed,
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Botany Department,
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Secunderabad-25.

S. D. Raj,
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Dharmavant High School
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1317-6-2-27, Yakutpura,
Hyderabad-23.

A. N. Mahurkar,
1-10-350, Begumpet,
Hyderabad-16.

A. Yadagiri Rao,
18-4-212, Aliabad,
Hyderabad-2.

P. Venkatramana,
22-1-272, Kala Kabar,
Inside Chaderghat, Hyderabad

K. Venkatratnam,
Civil Defence Training Institute
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Kavita Deuser,
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Amancharla Gopal Rao,
All India Radio,
Vijayawada (Krishna Dist.)

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S. Sanjeevdev,
Thummapudi
Tenali Taluk, Guntur Dt.

Ganapathy Sthapathy,
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E. Kumarila Swamy,
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School of Arts & Crafts,
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B. V. Narasimha Rao,
Addepalli Mansions,
Palakol West Godavari Dist.

K. Rajah,
Lalit Kala Samitti,
Siddipet Medak Dist

Osman Siddiqui,
Govt. College of Fine Arts &
Architecture, Hyderabad-1.

D. Satyavani
Damerla Rama Rao Memorial
Art Gallery & School,
Rajahmundry (E. G. Dist.)

SOURCE: Andhra Pradesh Lalita Kala Akademi.

MUSIC

The earliest musical work produced in Andhra region is said to be a collection of seven hundred verses *gatha sapta sati* in Prakrit completed during King Hala Satavahana reign around first century A. D. The work testifies the existence of music and musical instruments in those days of remote past. Amaravati and Nagarjuna Konda sculptures which are said to be nearly 2000 years old have visual descriptions of musical instruments. In the Kakatiya period 12th century Jayappa was a wellknown musicologist and choreographer. His works *Geetaratnavali* and *Nritya ratnavali* are renowned. 13th century onwards too Vijayanagar period had music traditions of its own. The celebrated Vidyaranya and Ramamatya were leaders of the Southern School. Sarangdeva in the kingdom of that period of Yadava Singanna wrote *Sangita ratnakara*. A commentary on the *Sudhanidhi* by Sarvajna Singhana appeared later. Kalanidhi was another commentary. *Vasanta rajeeyam* is yet another treatise on music by Kumaragiri of Kondaveedu. Among the patrons of music, Proudhnadevaraya, Krishnadevaraya (16th century), Achyutha, Nayaka rulers (*Sangita sudha*, *Chaturdandi devaraya*, and *Nayaka* rulers (*Sangita sudha*, *Chaturdandi prakasa*, *Sangita Saramrita*) are the most well known of that period. Music was practised as a functional unit of related arts: dance, drama and other theatrical arts. Bharata the exponent of Indian Choreography, mentions in his treatise *Natya Sastra* that *Jati*, as raga is known as 'Andhri' in those days, along with other ragas *gaudi*, *karnati*, *lati*, *varati* (these are named after their respective political linguistic region, music in those days was of two kinds *marga* and *desi*; *marga* was for classical elite while *desi* was for common folk. Matanga gives in his *Brihaddesi*, Lakshanas of ragas. *Charchari*, *Dwipada*, *Elaprabhanda*, *Kanda prabhandha* too find a place in *Brihaddesi*. Palkurki Somanatha (13th century) wrote *Basavapurana*, *panditaradhyacharitra* in the popular 'desi' ballad *Dwipada*. This work gives a fund of information about the prevailing musical forms in those days.

Tallapaka Annamacharya (1424-1503) composed 32,000 verses in total belonging to two different categories; 1. *Sringara padamulu* (erotic lyrics) and 2. *adhyatma kirtanalu* (devotional lyrics). Kancharla Gopanna (Ramadas of Bhadrachalam) composed *kirtanalu* in praise of Srirama. Tyagaraja, Muthuswami Dikshitar and Syama Sastri form musical trinity of the recent past. Thought and literary aspect predominate in their compositions. Tyagaraja (1767-1847) lived in Tamil country (Tiruvayur). His *kritis* numbering several thousands end with *tyagarajanuta* (one who was praised by Tyagaraja). They were written in Telugu and a few in Sanskrit. Muthuswami Dikshitar's *kritis* mostly in Sanskrit and a few in Telugu end with the *Guru Guha* mudra invoking Subrahmanya, the family deity. Syama Sastri, had his compositions in Telugu, Tamil and Sanskrit ending with *syama rishnasahodari* mudra (Invoking Kamakshi, his family deity). Kshetrajna or Kshetrappa (1600-1660) a devotee of Kuvva Gopalakrishna, created new musical structure *padams* numbering 350 requiring more details of aesthetic expression to bring out the subtle shades of the mental attitudes. *Veedhi atakam* and *yakshaganamu* (opera) were popular musical plays in Rayalaseema and the south. *Yakshagana* is a style of musical rendering utilised in melo drama. *Vipranarayana Charitram* by Langajamma and *Ushaparinayam* and *prahlad* by Melatur Venkatramasastri are fine examples of *yaksha gana*. Vadivelu, Chinnayya Pillai, Chinnayya and Sivanandam were popular in the South India (The Tanjore quartet). Mysore Vasudevachari, Mysore Sadasiva Rao, Swati Tirunal of Travancore were Telugu composers of Non-Andhra origin.

South Indian music or Carnatic music as it is often called, evolved over the period, a variety of musical forms: *geetam*, *varnam* and *kriti* which represent a pure form while *padam*, *javali*, *thana*, *daruvu* represent applied form. In recent times, Music was extensively patronised by Ananda Gajapati of Vizianagaram. College of Music was established in Vizianagaram. Dwaram Venkataswamy Naidu (d. 1965) the violin-wizard, headed the college for a long time. Rallapalli Ananta Krishna Sarma (Tirupati) himself a noted musicologist, brought to light the well-known *kirtanas* numbering 1200 of Tallapaka Annamacharya from Tirumala and Ahobalam.

CULATUM

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Babu Rao, SITAR VIDWAN,
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Seeta & Anasuya C/o.
All India Radio Hyderabad.

SOURCE: ANDHRA PRADESH SANGITA NATAK AKADEMI, HYDERABAD

DANCE

In the historic times, dance in Andhra was a dedicated form practised invariably in the presence of deity in the temples. Devadasi system was in vogue during Vishnukundin and Eastern Chalukyan times. These devadasis were specially employed to practise dance according rigid systems of classical *Natyasastra*. They had to perform duties of 'aarati' and 'Pavalimpu seva' to the presiding deity. Manikyamba the builder of Drakshrama temple was a typical devadasi. Kakatias who were ardent followers of Saivism, encouraged Sivatanandava dance throughout their kingdom. According to authoritative sources, there existed sixty four dance institutions at Srisailem-the seat of Mallikarjuna, a siva shrine.

KELIKA style of dance was in vogue when the deity was taken in procession (*utsava*) in the streets. Devadasis used to dance in the procession. For some time, court dancer or *rajanartaki* system was in vogue. Yakshaganas were invariably practised later by these devadasi-turned raja nartakis when their former systems fell into disuse by the efflux of time. However kuravanjis formed a different dance style. kuravanji dance was prevalent in the south.

KUCHIPUDI DANCE: To attract the elite Sidhendrayogi of Muvva, Krishna Dt. around 15th century created Kuchipudi form of Bharatanatyam. Kuchipudi style is a watermark in Indian classical choreography. The near ballet type dance-drama 'Bhama kalapam' was his composition. In essence, Kuchipudi dance consists of *Nritta*, *Nritya* and *Natya*. In Kuchipudi dance performance, every character of ballet is introduced to the audience thro' the words of a song interspersed with several *jatis*. It is said that the Kuchipudi dance form is a comprehensive one as conceived by the great sage, Bharata the exponent of Indian classical dance. *lasya*, *tandava*, and *abhinaya* are liberally employed by the artists in rendering slokas. While rendering ballet, Kuchipudi form presses into service all the moving limbs: *samyuta* and *asamyuta hasatas*

kati, *netra*, *bhru* and neck movements and *karanachari*, *angahara* and *mandalas*. Wide range of *abhinaya*—*aharaya*, *angika*, *satvika*, and *vachika* of classical Bharata natyam are covered. Though Kuchipudi form is classical by nature the rendering appealed to masses. Gita Govinda of Jayadeva, padams of Kshetravaya tarangams of Narayana tirtha formed the repertoire of Kuchipudi dance. *Bhama kalapam*, *Golla kalapam*, *Harichandra*, *Prahlada*, and *Usha Parinayam* are popular today in this system of Dance. Kuchipudi lays stress on *jada* among other costumes and ornaments. *Jada* or plaited hair, is delicately and tastefully rendered with 27 different pieces symbolising 27 stars. 4 pieces on the head represent *Chaturveda*, a sun ornament and a moon ornament also form part of it. At the tail of the *jada* there are three round balls representing *tribhuvanas* (three worlds). Again another set of three smaller balls are hung under each big ball. *Satyabhama* symbolising *prakriti* is a typical character in Kuchipudi style, while Sri Krishna represents *purush*. *Satyabhama* in *Bhama Kalapam* renders all the eight types of *Nayikas* of Indian aesthetics (*alankara sastra*).

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Sitamma and Smt. Kotipalli
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Muramanda, East Godavari Dt.

Jeevaratnamma,
Chikkadpalli, Hyderabad,

SOURCE : ANDHRA PRADESH
SANGITA NATAKA AKADEMI
HYDERABAD.

MODERN DRAMA

Sarasa Vinodini Nataka Sabha started by playwright and actor Dharmavaram Krishnamachari in the last quarter of nineteenth century gave spur to modern Telugu stage. Mention may be made of the commercialised dramatic companies such as Dharwar, Parsi, Sangli, Surabhi. *Chitranaleeyam*, a dramatic adaptation from an episode from Mahabharata and *Sarangadhara* a romantic drama based on Chalukyan history attracted in those days crowded houses. *Gayopakhyanam* by Chilakamurti Lakshmi Narasimham too was a popular play. *Vasantasena* based on Sudraka staged by Surabhi company was a hit in those days. Hariprasadarao, at the turn of this century, started Guntur company. Balijepalli's Harichandra and adaptations from *veni samharam*, and *sakuntalam* formed the main pieces of his repertoire. Gurazada Apparao created in the *Kanyasulkam* (1918) a social satire based on widow remarriage and social emancipation of women. Another forceful play based on history *Prata-Parudriyam* by Veda Venkataraya Sastri was a stage success. These two were stuffed with liberal use of spoken dialect eschewing all obsolete intricate grammatical structures. These two plays hailed as master pieces of the day, are popular even now. Sthanam Narasimharao now in his late sixties, taking the role of Maduravani in *Kanyasulkam* brilliantly portrayed that role. Manjuluri Krishna Rao similarly brought fame to mantri Yugandhara in *Pratapa rudriyam*. Later, the Mylavaram Drama company, the Bala Bharati Nataka Samajam organised the theatrical activities with their centre at Vijayawada with *Ranapratap*, *Sakuntalam*, *Savitri* forming main themes in their

repertoire. Sanjiva Rao, Yadavalli Suryanarayan, Addanki Sri-ramamurti were top performers in that Dramatic Company in 1910 and made mark with *Harichandra and Pandavodyogavijayamulu* of Tirupati Venkata Kavulu. Another professional troupe under the name and style of Sri Rama Vilasa Sabha (1920—1935) with top performers Govindarajula Venkata Subbrao, Sthanam Narasimha Rao, and Pulipati Venkateswarlu along with earlier *prataparudriyam* and *Kanya Sulkam* in their repertoire held the field for some time along with *Saranghadhara* and *tulabhara*. Banda Kanakalingeswara Rao's contribution to the Andhra stage is a distinguished one. Later, T. Raghvachari (*Bellary Raghava* as he was popularly known) entered the Telugu Theatre with fresh approach and left a stamp of his own with distinction. His role *Rajaraja* in *saranghadhara*; *Chanakya* in *Chandragupta*; *Hiranya Kasipa* in *Prahlada* and *Ramadas* deserve mention. Raghava produced a few social themes written by P. V. Rajamannar. Advent of Cinema resulted in extinction of professional drama companies by 1940.

However, the histrionic urge among Andhra youth gave birth to amateur drama activity. There are more than 700 such amateur groups in Andhra Pradesh according to a survey conducted in 1966 by the State sponsored Sangita natak Akademi. The water mark of the amateur activity was Raja rao's production *mabhoomi* (sponsored by *Praja Natya Mandal*) based on a theme of peasant uprising. Kurma Venu Gopalaswami of Andhra University contributed much to the experimental theatre. More recent trends in the Theatre movement to day is the revival of *Andhra Natya Kala Parishat* through a chain of drama competitions and award of prizes for successful entries. Radio plays and one act plays predominate in these days.

The Andhra Pradesh Sangit Nata Akademi has a programme to give expert technical advice and assistance necessary to amateur drama groups. The *Andhra Pradesh Sangita Natak Akademi* has three different activities: Music, Dance, Drama. It renders financial assistance to give fillip to amateur groups and hold seminars on drama and other allied topics. The Akademi has an air-conditioned auditorium namely *Ravindra Bharati*, with a mini-theatre 1966 centrally located in Hyderabad. It is fully equipped with the atrical equipment based on modern acoustics.

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- | | |
|--|---|
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**Gandikota Joginatham,
Kakinada.**

**Somanchi Yagnanna Sastri,
Bombay Corporation, Bombay.**

**Pathuri Ramakrishna Murthy
Actor, Tenali.**

**V. Chandra Sekharam,
Mono-Actor Artiste,
23, Raman Street, Madras-17.**

**Kocherla Kota Satyanarayana,
Bhimadol West Godavari Dt.**

**Neralla Venumadhav,
Mono-Actor Artiste, Warangal.**

**Kavuluri Venkateswar Rao,
Playwright, Eluru.**

**Ramanamurthi,
Actor, Madras.**

ANDHRA PRADESH ALMANAC

K. Satyanarayana Sastry,
Hyderabad.

Devella Satyanarayana,
Playwright, Anantapuram.

Nandyala Sreenivasalu,
Playwright, Madras.

G. Marudhi Rao,
Playwright, Madras.

Pothkuuchi Sambasiva Rao,
Playwright and Actor,
208, New Boisiguda
Secunderabad.

M. Ramalingeswar Rao,
Drama Producer, Guntur.
K. Padmavati Devi, Madras.

N. R. Nandi,
Playwright, Rajahmundry.

Chatti Poorniah, Srikakulam.

J. V. Somayajulu, Srikakulam.

V. Siva Rao, Srikakulam.

Kamala Chandra Babu, Madras.

G. S. R. Murti, Vijayawada.

D. Gopalachari
Drama Director & Actor,
Madras.

K. Venkateswara Rao, Waltair.

Suravarapu Venkateswarulu,
Waltair.

Chalam R. V. Khargpur.
N. Jagannatham,
Playwright, Vijayawada.

Gundimeda Venkatasubba Rao,
Playwright, Chatrapur.

Bankupalli Chendrasekharam,
Kotabommali.

Gidugu Ramamurti,
Manager, Natyakala
Printing Press,
Khairatabad, Hyderabad.

M. V. Ramanamurti,
Puppeteer (Leather Shadow)
Senior Technical Assistant
Central Leather
Research Institute Adyar,
Madras 20

SOURCE : ANDHRA PRADESH SANGITA NATAKA
AKADEMI, HYDERABAD.

GENERAL EDUCATION

The Andhra Pradesh Primary Education Act. 1961 came into force from April, 1961. Under the Act, universal free and compulsory primary education for all Children of the age group 6-7 years as envisaged in the Constitution was given effect to in the State from the academic year 1961-62. Next year it was extended to the age group of 6-8 years. By the end of 1965-66 all the children of the age group of 6-11 have been brought into the ambit of the Scheme. For the successful implementation of the scheme by the end of 1965-66, 14,300 teacher posts were sanctioned. With a view to achieve better enrolment, incentives like provision of mid-day meals, supply of books etc. were offered to the needy pupils. There are now as many as 37,778 primary schools in Andhra Pradesh as against 29,093 in 1956-57 with a strength of 31,93,945 and 24,82,612 respectively. The number of teachers employed now is 80,815 as against 77,121 in 1956-57.

On the elementary education during the Second Plan an expenditure of Rs. 505.45 lakhs was incurred in Andhra Pradesh, while the Third Plan figure stood at Rs. 972.72 lakhs. During 1964-65 the integrated Elementary education syllabus was introduced in Class VI and during 1965-66 in Class VII. With a view to giving a fillip to the teaching of English in elementary schools, there are at present 12 English language Teaching Campaign Centres for the purpose of retraining Secondary Grade Teachers working in Primary Schools. All these centres, are attached to either a Government Training School or a high School and are manned by personnel trained at the Regional Institute of English, Bangalore. By the end of 1965-66, about two thousand teachers were retrained in the latest techniques of teaching English. In respect of elementary education in the agency areas in Andhra region of the State, there are four Ashram Schools, 43 midday meals Centres and 9 Boarding Homes in the districts of Visakhapatnam, East Godavari, West Godavari and Srikakulam.

MIDDAY MEALS SCHEME :

To attract more number of children to schools, an experimental scheme for the supply of mid-day meals in 20 select Samiti Blocks was launched in the State during 1959-60. The scheme is being continued. In 1962-63 midday meals were supplied to school children in co-operation with the CARE Organisation. The following year the scheme, encouraged by the initial success, was expanded to benefit over 8 lakhs of children covering all the districts of Andhra Pradesh. In addition, a milk feeding programme was started in Andhra region benefitting about 1.50 lakhs children. In 1964-65, milk powder, Corn meal, and vegetable oils were supplied by the CARE in India for feeding as many as 9,52,000 Children. The following year, the CARE supplied 58,51,000 kg. of Milk powder, 26,98,870 kg. of vegetable oil and 1,29,54,615 kg. of rolled wheat for the continuance of the Scheme.

BASIC EDUCATION :

The number of Junior Basic and Senior Basic Schools in the State has increased to 364 and 2,718 respectively by the end 1966 from 685 and 44 in 1955-54 respectively.

SECONDARY EDUCATION :

In 1966-67 there were 4388 schools as against 1062 during 1956 inclusive of multipurpose higher secondary and middle schools. Of these 2264 are high schools and higher secondary schools and multipurpose schools. For the corresponding periods the number of pupils stood at 14,97,273 and 4,67,605 respectively, while the number of teachers employed 58,377, and 29,587 respectively,

In 1964-65, Government have sanctioned an additional provision of Rs. 25 lakhs for upgrading 150 middle schools into high schools, opening of additional sections in the existing schools, maintenance of additional staff in secondary schools under Zilla Parishads in Telangana area. As the demand for upgrading was great, the Govt. also permitted the upgrading of more non-Government middle schools into high schools in all 257 middle school including 11 schools under Government management were upgraded into high schools during the year 1964-65.

Science Teaching in Secondary Schools, was improved at a cost of Rs. 4 lakhs for laboratory equipment and furniture to selected secondary schools under Govt., Zilla Parishads and aided managements. As the demands for the opening of more high schools was pressing, Government permitted the Zilla Parishads to upgrade more middle schools into high schools and to open incomplete high schools whenever necessary on condition that the expenditure on both recurring and non-recurring items should be borne by the school committees concerned for the period of two years and they become eligible for aid with effect from 1967-68. On secondary education, on expenditure of Rs. 273.24 lakhs was incurred during the Second Plan, while the third Plan figure stood at Rs. 528.01 lakhs.

GENERAL EDUCATION IN ANDHRA PRADESH AS ON 31-3-1966

	Number of Institutions	Pupils	Teachers
1. Primary Schools	37,778	31,93,945	80,815
2. Higher Elementary Schools‡ for Boys & Girls	2,141	5,06,108	16,844
3. High Schools † for Boys & Girls	2,264	9,95,032	41,704
4. Training Schools for Men & Women	126	15,689	983
5. Oriental School for Boys & Girls	73	9,041	577
6. Adult Literacy Centres for Men & Women	321	8,052	346
7. Commercial Schools for the handicapped	69	2,937	153

‡ Includes Middle Schools.

† Secondary Education.

Source: State Administration Report 1965-66.

The accommodation position of schools posed a problem of formidable magnitude and to ease the situation in the Telangana area in particular, a sum of Rs. 29 lakhs to each of the nine Zilla Parishads of Telangana area was sanctioned by the State Govern-

ment towards the construction of buildings for secondary and primary schools on a 50-50 basis. As an encouragement to aided institutions, the grant-in-aid rules for secondary schools have also been liberalised from 1962-63.

ADULT EDUCATION :

The adult education scheme has two objectives firstly the liquidation of illiteracy among adults and secondly improving the knowledge and education already possessed. Most of the adult literacy centres were situated in the Block areas and the officers at the Block level were responsible for maintaining the Centres. As there was no provision in the Third Plan for the adult literacy programme, an amount of Rs 66,000 was sanctioned under non-plan for this purpose. This grant was paid to the Adult Literacy Centres which were handed over to the Samitis or to those run by private managements.

A fillip was given to the programme of adult education during 1965-66 through the implementation of a Government of India sponsored pilot project with effect from Feb. 1966 in selected Panchayati Samiti Blocks in the State: (1) Bodalakur in Nellore Dt., (2) Kodigenahalli of Anantapur Dt., and (3) Acham peta of Mahbubnagar Dt. Under the pilot scheme one hundred centres in each of these Samitis have been selected for the implementation of the scheme. The pilot scheme envisages a 4 month course of instruction to 20 adult illiterates in each of the centre, the target being 6,000. Instruction in the centres is being imparted by educated adults on a voluntary basis. There is also provision for women adult literacy centres, if the enrolment in a centre comes to 20 women who will be taught by women volunteers. The estimated cost of the scheme in Panchayati Samiti block is Rs. 25,000. The pilot project scheme is being implemented on an experimental basis. This will go to constitute a guiding factor for the expenditure of the scheme during the Fourth Plan period. The Functional Literacy Project under UNESCO Programme was undertaken by Andhra Mahila Sabha, Hyderabad at Shadnagar Block, Mahbubnagar in Jan. 1967.

GIRLS' EDUCATION :

The enrolment of girls rose to 12,50,752 in 1965-66 from 9,02,956 in 1956-57 at the primary stage, while for the secondary stage the corresponding figures are 4,40,308 and 91,840 respectively. The number of women teachers employed for the purpose also registered a steep rise. At the primary stage it rose to 16,476 in 1965-66 from 13,811 in 1956-57 while for the Secondary stage the corresponding figures are 11,102 and 3,204 respectively.

In the light of the recommendations of the National and State Council for Education of Girls and Women, the following schemes were launched during 1963-64.

1. Free education to all girls of Classes I to VIII in Telangana region with effect from 1963-64.
2. Free education to all girls in secondary and higher secondary schools (all classes) irrespective of caste or creed or income limit of the parents from the academic year 1964-65.
3. Employment of part-time women teachers where qualified women teachers for appointment in full time basis are not available and
4. Increase in the number of scholarships for girls studying in Polytechnics.

NATIONALISATION OF TEXT BOOKS : An independent high power committee viz., the Book Publication Committee, was constituted by Government to be in overall charge of the nationalization of text books pending the formation of the Andhra Pradesh Book Production Corporation. The Committee recommended that the nationalization of text books might be taken up in Telugu medium in a phased programme. Accordingly under the scheme of nationalisation of text books by the end of 1965-66, text books up to VII Class were nationalised. The Government of Sweden and Australia have sent gift papers worth Rs. 20 lakhs on the understanding that books printed out of this paper will be distributed free of charge to the poor and needy children.

PROPAGATION OF HINDI : Hindi is taught as a compulsory subject from Class IV in Telangana area and from Class VI in the Andhra area. It can also be studied as an optional subject in Class IV and V in the Andhra area. In order to train teachers to

teach Hindi in Secondary Schools of the State, a special "*Hindi Pandits Training Course*" is conducted in two training colleges at Rajahmundry and Hyderabad, in addition to the diploma courses offered by the Dakshina Bharat Hindi Prachar Sabha of Madras and the Hindi Prachar Sabha of Hyderabad.

The study of Sanskrit is receiving adequate attention in the State. A council of Sanskrit education, was constituted in the Telangana area in 1956. A scheme of integrated syllabus in main languages i.e., Sanskrit, Arabic, and Persian for oriental and secondary schools in the State has been approved by the Government. The scheme came into force in all classes upto VII Class in 1965-66, and class by class each year thereafter.

SCHOLAR-SHIPS AND CONCESSIONS: A generous policy of scholarships and freeships is being pursued in Andhra Pradesh with a view to fostering the spread of education among the members of the rising generation. Education up to class VIII is free in the State. Besides the usual types of scholarships such as general, special scholarships for the agency areas and for Muslims during 1965-66, a new scheme was sanctioned for special merit scholarships to top ranking boys and girls in the H. S. C. and the S. S. L. C. examinations.

CONCESSIONS AND BOOK ALLOWANCES: Children of professional goldsmiths thrown out of employment and the annual income of whose parents is less than Rs. 1,500 are exempted from the payment of tuition fees upto XII Class in all schools. Besides, book allowance upto VIII Class at Rs. 10 per year and from Class IX to XII at Rs. 20/-per year is also sanctioned. The children of Defence personnel including children of civilian personnel and personnel working in the territorial army and also the children of those who have been killed or disabled are exempted from the payment of fees in all the educational institutions in Andhra Pradesh. Children belonging to scheduled castes, scheduled tribes and other Backward communities studying in secondary schools are also exempted from the payment of special fees.

BENEFITS TO TEACHERS: In the gradual evolution of an enlightened community, the role of a teacher needs no over-

emphasis. Many benefits were extended to the teaching fraternity in the State during the decade, and the most important among them is easily the raising of the age of superannuation of all non-gazetted teachers working in all institutions under all managements from 58 to 60 years, subject to the condition that their work, health and conduct are satisfactory.

In addition, the Andhra Pradesh Teachers' contributory Provident fund-cum-pension and gratuity rules have been brought into force from April 1961 to benefit all the categories of teachers employed in elementary, secondary training and special schools, and anglo-Indian schools run by aided managements municipal councils, Zilla Parishads, Panchayati Samitis and Panchayatis. Financial assistance was also extended to those who retired prior to April, 1961.

ADMINISTRATION SET-UP: In keeping with the spirit of times, many a far reaching administrative change was effected during the decade in the overall administrative set-up of the Directorate of Public Instruction. The primary objective of the re-organization was the maximisation of efficiency while manning the vast net-work of educational institutions. In October, 1965, the Directorate of Public Instruction was bifurcated into two distinct units, namely the *Directorate of Higher Education** and the *Directorate of Public Instruction*. The Director of Public Instruction is also the *Commissioner for Government Examinations*. The administrative set-up at the district-level also underwent radical changes since July, 1965. Under the new dispensation, one District Educational Officer was appointed for each Revenue District. Gazetted Inspectors meant for inspection of educational institutions attached to the District Educational Officers' Offices. A separate office of the District Educational Officer has been provided exclusively for the twin cities of Hyderabad and Secunderabad. At the block level the office of the Deputy Inspector of Schools under the direct control of the District Educational Officer was brought into being. These officers are meant exclusively for inspection work.

* Directorate of Higher Education was merged with Directorate of Public Instruction in Sep. 1967.

COLLEGIATE EDUCATION

In 1956-57, there were fifty-three colleges for general education including university colleges of which 48 were for men and 5 for women. At the end of the Second Five Year Plan i.e., 1960-61 the number of these colleges rose to 61 of which 52 were for men and 9 for women. At the end of the Third Five Year Plan i.e. 1965-66, the number further rose to 85 of which 68 were for men and 17 for women. All these institutions are day colleges. Every district in the State now has at least one College for general education. Eight out of the eleven districts in the Andhra region and 4 out of 9 in Telangana region have colleges for women. However, the districts that do not have separate collegiate educational facilities for women are Srikakulam, Cuddapah, Anantapur, Adilabad, Karimnagar, Medak, Mahbubnagar and Nalgonda. Almost all the Men's Colleges in the State admit women also. During the first year of the Fourth Five Year Plan i.e. 1966-67, six colleges under the Government management are located at 1. Tadepalligudem in West Godavari Dt. 2. Macherla in Guntur Dist. 3. Kandukur in Nellore Dt. 4. Chirala in Guntur Dt. (for women) 5. Proddatur in Cuddapah Dt. and 6. Kalahasti in Chittoor Dt. The four privately managed colleges are located at 1) Ramachandrapuram in East Godavari Dt. 2. Nuzvid in Krishna Dt. 3. Machilipatnam in Krishna Dt. and 4. Armoor in Nizamabd Dt. By 1966-67 under the University management there were 12 colleges, under the Government management 35 colleges and under the Private management 72 colleges. During 1965-66, under the Department of Higher Education there were 86 colleges for general education for men, 13 for women, 8 non-Basic training Colleges for men, one for women, 1 college for Physical education. 24 Oriental Colleges for men and two for women. To sum up, there are four universities in the State of which one caters specially to Agricultural education (Andhra Pradesh Agricultural University) with 8 colleges affiliated to it. Veterinary colleges, Home science colleges are also affiliated to the Agricultural University. Number of colleges affiliated to the other three universities are 103 of which 17 are

for women with annual enrolment of 63,000 of which women are 11,000.

ORIENTAL COLLEGES: The Oriental Colleges in Andhra Pradesh provide for Oriental Title Courses in Oriental languages of the State. The Colleges are recognised by the University. During 1956-57 there were 14 Oriental Colleges of which 12 were for men and two for women. At the end of the Second Five Year Plan period, the number of Oriental Colleges rose to 22 i.e. 20 for men and 2 for women. At the end of the Third Five Year Plan period the number further rose to 26. 24 for Men and 2 for women with total intake capacity of 2000. The Colleges for men admit Women also.

TEACHER TRAINING COLLEGES (B.ED.): During the Second Five Year Plan a new Government Training College was established at Hyderabad. The intake capacity of the existing colleges was increased from 150 to 200. During the first year of the Fourth Plan i.e. 1966-67, a new training college was established under an aided management at Secunderabad with an intake capacity of 100. There are now 10 Teachers Training Colleges in Andhra Pradesh, eight for men and two exclusively for women. The training colleges for men also admit women.

STATE INSTITUTES OF EDUCATION: With a view to improve the quality of school education, four State Institutes of Education are functioning in Andhra Pradesh. They are *The State Bureau of Educational and Vocational Guidance*, Hyderabad established during the Second Plan; 2. *The State Institute of Education* Hyderabad; *The State Science Education Unit* and *The State Evaluation Unit*, Hyderabad were established during the Third Plan period. The primary function of the State Bureau of Educational and Vocational Guidance, Hyderabad is to conduct training courses for Career Masters while Orientation Courses and in-service training for teachers are conducted by the State Institute of Education, Hyderabad. Special courses of science training for the benefit of teachers of Secondary Schools are imparted by the State Science Education Unit of Hyderabad, while studies

regarding high percentage of failures, research in examination reform etc. are done by the State Evaluation Unit.

EVENING COLLEGES: Before 1956 there were two Evening Colleges in Hyderabad City managed by the Osmania University. At the end of the Second Five Year Plan- the number of Evening Colleges rose to 4; i.e., 2 under the university management and two under private management. At the end of the Third Five Year Plan i.e. 1965-66, the number rose to 18. During the first year of the Fourth Plan, six more Evening Colleges have been established at the following centres: Government Arts and Science College, Chittoor, S. V. E. S. Telugu Kalasala Hyderabad, Hindi Arts Evening College, Hyderabad; D. N. R. Evening College, Bhimavaram; Mrs. A. V. N. Evening College, Visakhapatnam and S. V. Evening College, Tirupati.

PHYSICAL EDUCATION COLLEGE: During the Second Five Year Plan period a college of Physical Education was established at Hyderabad. The college provides for the Certificate Course for P. U. C. passed or Secondary Grade trained candidates and the Diploma Course for graduates. Both the courses are of one year duration. The college is a co-educational Institution. The intake capacity for each of the courses in the college has been increased from 40 to 80 in respect of the Diploma Course and 80 to 200 in respect of the certificate course.

SCHOLARSHIP SCHEMES: With a view to fostering the spread of higher education, the Government of India and the Government of Andhra Pradesh have instituted a number of scholarships. Among the Union Government Scholarship Schemes, the following deserve special mention: (a) The National Scholarship Scheme; (b) The National Loan Scholarship Scheme and (c) The Teachers, Children Merit Scholarship Scheme. The State Government are also awarding scholarships to the Telangana political sufferers' children. Andhra Pradesh State Merit Scholarship, Rivathi Scholarship, Government Collegiate Scholarship, Orphan and destitutes scholarship. During 1965-66, the State Government have instituted a special merit scholarship scheme under which 100 top ranking boys and girls in S. S. L. C., H. S. C., Higher Secondary

and Multi-purpose examination were granted. This scholarship is meant to enable talented scholars to prosecute higher studies anywhere in India.

HIGHER EDUCATION IN ANDHRA PRADESH

COLLEGES OF GENERAL EDUCATION—1966-67.

	Andhra University	S. V. University	Osmania University	Total
<i>University Management</i>				
Day College for Men	1*	1@	6	8
Evening Colleges for Men	—	—	3	3
Day Colleges for women	—	—	1	1
Evening Colleges for women	—	—	—	—
<i>Government Managements:</i>				
Day Colleges for Men	6	8	8	22
Evening Colleges for Men	2	2	4	8
Day Colleges for women	2	2	1	1
Evening Colleges for women	—	—	—	—
<i>Private Management:</i>				
Day Colleges for Men	24	8	15	47
Evening Colleges for Men	2	3	8	13
Day Colleges for women	6	1	5	12
Evening Colleges for women	—	—	—	—
TOTAL ...	43	25	51	119

(*) Andhra University Colleges, Waltair.
 (@) S. V. University College, Tirupati.
 SOURCE: The Director of Higher Education.

COLLEGIATE EDUCATION 1965-66

Types of Colleges	Teachers 1961		Number of Colleges		Scholars on rolls		Teachers 1966	
	Men	Women	Boys	Girls	Boys	Girls	Men	Women
College for General Education P.U.C.	46	4						
Arts Colleges	249	16						
Science Colleges	355	23						
Arts & Science Colleges	2268	402	86	17	52781	11157	3779	792
Total	2918	445						
Colleges for Professional Education								
Agriculture	95	6	3	—	3101	24	145	6
Commerce	16	1	1	—	704	3	16	2
Training basic	5	—	—	—	—	—	—	—
Training nonbasic	90	—	8	1	1124	371	110	30
Engineering	238	1	5	—	3639	28	334	2
Law	36	2	2	—	1135	18	31	3
Medicine	538	97	14	—	5528	1682	117	191
Physical Education	7	1	1	—	208	32	12	1
Terrestrial Science	78	1	2	—	558	1	119	4
Others	—	—	—	2	6	221	—	19
Total	1103	137	36	2	14063	2380	1783	258
Colleges for special vocational Oriental studies	150	8	24	2	1619	285	178	8

:: Director of Higher Education, Andhra Pradesh.

EDUCATION

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TECHNICAL EDUCATION

In the Andhra area the history of technical education started in 1948 with the establishment of the two engineering colleges—at Kakinada and Anantapur with a total intake capacity of 110 and 85 respectively in civil, electrical and mechanical engineering branches. In the same year, two polytechnics—one at Kakinada—known as the Andhra Polytechnic—and the other at Vuyyuru with a total intake capacity of 120 and 60 respectively in the three Basic courses of Engineering were also started. At the certificate level of instruction an industrial section was opened in the Andhra Polytechnic, Kakinada with nine trades with a total admission of 120 students. During the Second World War, both in Telangana and Andhra areas, Industrial Training Institutes—one at Hyderabad and three in Andhra were established to serve the need for the training of technicians.

In Telangana: In the Telangana area the first Industrial School was established in 1890. Quarter of a Century later in 1913, six industrial schools came into existence. For the benefit of Mint apprentices, a Central technical institute was established in 1922 which later developed with what came to be known as the Hyderabad Polytechnic. The later events gave an impetus to the growth of technical education. The Meckanzie Committee constituted by the then Hyderabad Government recommended vocational and technical bias to the instruction imparted to pupils at the end of the Middle and high school stages. To implement this recommendation, a separate department of technical and vocational education was incepted in May 1937. The same year, Mr. Abbott of the Board of Education, England was also invited to give his expert advice on the future lines of development of technical education. In keeping with the recommendations of the Abbott Report some more courses were added to the Government Technical College and four post-primary schools for boys and girls were established. In addition, a Central School of Arts and Crafts (now known as the Government College of Fine Arts and Architecture) was also brought into being in Hyderabad. By the end of 1951, there were fifteen technical institutions in existence. Besides, there were twelve aided institutions recognised by the Government. The Osmania University Engineering College was established in 1922 with 12 students in the Civil Engineering Course.

Trained Personnel: During the Second Plan period the full fledged development of the Government Colleges at Kakinada and Anantapur reached a final stage with the provision of permanent buildings and laboratories, while the intake capacity was also stepped up to 150 and 120 respectively. Two new engineering colleges were started, during the Plan period at Waltair and Tirupati under the auspices of the Andhra and Sri Venkateswara Universities respectively. A regional

engineering college—the joint enterprise of the State and Central Government—was established at Warangal during 1959-60 with an annual intake capacity of 250 students. At the diploma level the three polytechnics in the State—one in Hyderabad in the Telangana region and two at Kakinada and Vuyyuru in the Andhra region were expanded by stepping up their intake capacity and providing them with permanent buildings, well equipped laboratories and workshops. In addition, 8 new polytechnics were established in Andhra region that included one Polytechnic in the Private Sector and five Polytechnics in Telangana region, two being private institutions. In addition to the conventional type of polytechnics offering 3-year diploma courses in civil, electrical and mechanical engineering, two more institutions at Kothagudem and Gudur were started offering diploma courses in Mining Engineering. Thus at the end of the Second Plan, there were in Andhra Pradesh nineteen diploma institutions in all, including two mining and one ceramic institutions with a total annual admission capacity of 2433 pupils, three Junior Technical Schools imparting instruction in certificate courses were also launched. The Government College of Fine Arts and Architecture, Hyderabad was expanded with the introduction of a Five-Year National Diploma Course in Architecture.

The main emphasis on the expansion of technical education during the Third Plan was on the consolidation of the institutions started during the Second Plan by completing and bringing the developmental programmes on a par with the standards prescribed by the All-India Council for Technical Education. The original Third Plan outlay of Rs. 305 lakhs was subsequently raised to Rs. 309.67 lakhs. During the Third Plan period, one Polytechnic for boys was established at Srikakulam in 1961-62. In addition, two Girl's Polytechnic—one in the Public sector at Kakinada and the other in the Private Sector at Hyderabad under the management of the Industrial Exhibition Society—were launched. A diploma course in Textile technology in Guntur Government Polytechnic, and a post-matric diploma course in Metallurgy in Vijayawada Government Polytechnic were also started. Part-time courses in Engineering both at diploma and degree levels were started. The Engineering College, Osmania University Hyderabad started part-time degree courses for diploma-holders with an annual intake capacity of 80 seats. To benefit industrial workers part-time diploma courses were started in the Government Polytechnics at Hyderabad, Vijayawada, Kakinada and Visakhapatnam. Three Junior Technical Schools offering instruction in certificate courses were also brought into being at Warangal, Vijayawada and Mahboobnagar. In addition, a college for the training of technical teachers for diploma institutions was launched at Hyderabad that functioned from 1965-66. The intake capacity in the 5-year courses of the Kakinada and Anantapur was increased in stages by 90 seats. Facilities in chemical engineering courses at first degree level were stepped up by enhancing the intake capacity in the Osmania

TECHNICAL EDUCATION

Item	1951	1956	1961	1966
<i>Degree Course:</i>				
(A) Institutions (Colleges No.)	3	3	6	7
(B) Intake (Seats No.)	290	540	1075	1755
<i>Diploma Course:</i>				
(A) Institutions (Polytechnics) No.	3	4	19	22
(B) Intake (Seats No.)	240	470	2463	3463
<i>Certificate Level:</i>				
(A) Institutions No.	—	—	3	6
(B) Intake (Seats No.)	—	—	180	360

Source: The Department of Technical Education.

and Andhra University Colleges from 30 to 60. A new engineering college with 120 seats was established in 1965-66, temporarily located in Hyderabad pending provision of better accommodation facilities at the Nagarjunasagar dam site. A two-year technician's course for PUC boys, leading to a diploma in engineering was launched in the Government Polytechnic, Hyderabad and the Andhra Polytechnic, Kakinada. The Government Mining Institute at Gudur was converted into a polytechnic from 1965-66. All the institutions—both engineering colleges and polytechnics—are now provided with permanent buildings, except the polytechnics at Guntur, Nellore, Nandyal and Srikakulam, where the construction of buildings is now in progress. In addition, all the institutions are now provided with hostel facilities, except a few where construction of hostels is making progress. The number of institutions (colleges) imparting degree courses rose to 7 at the end of the Third Plan from 3 at the end of the First Plan, the number of seats for the corresponding period being 1755 and 540 respectively. The number of institutions (polytechnics) imparting diploma courses rose to 22 at the end of the Third Plan from 4 at the end of the First Plan, the number of seats for the corresponding periods being 3463 and 470 respectively. Again, the number of institutions imparting instruction in certificate level courses, rose to six and the number of seats to 360

at the end of the Third Plan period. There are 19 Craft and Trade Schools in Andhra Pradesh.

AGRICULTURAL EDUCATION

The Andhra Pradesh Agricultural University was constituted by an Act of Andhra Pradesh State Legislature, passed in 1963. The University came into existence from 12th June 1964. A common campus for all the colleges and the establishment of the College of Basic Sciences and Humanities are significant features of this University. The course system, modelled on the US Land Grant colleges pattern has been adopted which besides permitting specialisation, entails frequent examinations both during and at the end of each course, thus ensuring regular work by the students, throughout the period of their stay at the University.

The Andhra Pradesh Agricultural University is being developed under a collaboration agreement with Kansas State University, Manhattan (U.S.A.) thro' United States Agency for International Development (USAID).

The University has six constituent colleges, three in the faculty of Agriculture, two in the faculty of Veterinary Science and one in the faculty of Home Science. The 3 agricultural colleges are functioning at Rajendranagar (Hyderabad), Bapatla and Tirupati. The 3 colleges coach students for B.Sc. degree in agriculture. The one at Rajendranagar has also instituted courses leading to the M.Sc. degree in 9 different branches of agricultural science. Of the 2 veterinary colleges, one is located at Hyderabad and the other is at Tirupati. The Home Science college is located at Hyderabad.

The total no. of seats available in each faculty is as follows: (1) Agriculture 320; (2) Veterinary Science 140; (3) Home Science 60.

The duration of the integrated courses is as follows: (1) B.Sc.; 4 years; (2) B.V.Sc. 5 years and (3) Home Science 3 years.

The Medium of instruction and examination in the University is English. Chancellor: The Governor of Andhra Pradesh. Vice-Chancellor: O. Pullareddy, I.C.S. (Retd.). Registrar: G. Venkataratnam.

POST-GRADUATE RESEARCH

At the Andhra University: It has a number of departments engaged in post-graduate teaching and research. School of Oceanography was established and significant contributions have been made in the field of Marine Geology and Physical Oceanography. There is a flourishing department of Nuclear Physics. Besides the conventional area,

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EXPENDITURE ON EDUCATION IN ANDHRA PRADESH

Particulars	(Rs. in Crores)							
	Accounts				Revised Budget Estimate			
	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Primary	9.07	9.58	9.43	10.56	11.61	12.34	13.26	
Secondary	5.54	5.94	7.83	8.96	8.30	10.85	11.83	
University	3.94	3.29	2.35	2.38	2.79	3.25	3.57	
Special	1.94	2.20	2.47	1.40	1.63	1.74	1.64	
General	0.84	1.01	1.08	1.65	2.10	2.18	2.02	
Technical Education	*	*	*	1.18	1.26	1.76	1.74	
Gross Total	21.33	22.02	23.16	26.13	27.69	32.12	34.06	
Deduct-Recoveries	(-)0.10	(-)0.05	(-)0.05	(-)0.30	(-)0.11	(-)0.15	(-)0.15	
Net	21.23	21.97	23.11	25.83	27.58	31.97	33.91	

*The expenditure was accounted for under "Special" and "General".
Source: Andhra Pradesh Budget in Brief-1967-68.

there are now active groups of research workers in the fields of Spectroscopy, Ionospheric Studies, Meteorology, Mathematical Physics, Applied Physics, Geophysics, Chemical Technology, Inorganic, Physical Chemistry Nuclear Geology, Telugu and History.

At the Osmania University: A research tempo was brought in with the establishment of Physical Laboratories in the year 1949 under the Directorship of Dr. S. Bhagavantam. Research in Physics and Chemistry were rapidly developed thereafter. Today the Osmania University has full-fledged departments of Physics, Chemistry, Geology, Botany, Zoology, Chemical Technology, Astronomy, Linguistics and Telugu Literature engaged in post-graduate teaching and research. The University Grants Commission has recognized the Astronomy Department as an advanced centre for Astronomy and has given substantial aid for setting up the 48" telescope at Rangapur. One of the biggest observatories in South-East Asia. When fully developed it will be in line with the traditions already created by the Nizamia Observatory of Hyderabad, one of the oldest in this part of the world. The Nizamia Observatory has been making seismic and solar observations and mapping the skies for a very long time. UNESCO has established Advance Research centres in Geology and Geophysics and in Chemistry at the Osmania University. The University has also recently started courses in Biochemistry and Radiobiology.

At the Sri Venkateswara University: A number of scientists who were working at Waltair migrated to Tirupati and started establishing independent schools of research. It is just developing by equipping the laboratories progressively.

The Defence Research and Development Organisation: Ministry of Defence set up Defence Electronics Research Laboratory in Hyderabad, mainly devoted to the development of electronic techniques, rocket instrumentation and radar. The Defence Research and Development Laboratory, also located in Hyderabad, is another establishment of the same organisation, devoted to research work in special weapons such as guided missiles. Another laboratory in the Defence set-up is the Defence Metallurgical Research Laboratory, a very recent addition to the chain of Defence research laboratories. It is devoted to solving problems connected with Metallurgy in relation to Defence.

The Nutrition Research Laboratory: It is established in Hyderabad under the auspices of Indian Council of Medical Research. It is devoted to medical research and problems connected with nutrition. This institution was shifted from Conoor to Hyderabad and is located on the campus of the Osmania University.

The Regional Research Laboratory, Hyderabad: Developed out of an institution which existed in the former Hyderabad State. The principal fields of work are Coal, Coal based industries, Low Carbonisation,

Fattyacids, Castor, Cotton seed, Ceramic, inorganic Chemicals, bio-chemistry, vegetable oils, Surface Coatings, Entomology, X-ray, Crystallography. It caters for the needs of industrial development in Andhra Pradesh. It is now one of the major C.S.I.R. laboratories and is running several pilot plants and carrying on note-worthy industrial research in the State.

THE FOLLOWING CANDIDATES WERE AWARDED DURING
1955-68 POST-GRADUATE DEGREES FOR THEIR
RESEARCH AT REGIONAL RESEARCH
LABORATORY, HYDERABAD

1966-67	M. K. Govind Rao,	Ph.D. (Osmania) "Studies on keeping qualities of fats."
1966-67	Y. S. Sadanandam,	Ph.D. (Osmania) "Synthesis of benzylamine derivatives and the relationship between their structure and physiological activity."
1966-67	P. K. Saraswathy Amma,	Ph.D. (Kerala) "The preparation and evaluation of detergent and other products based on vegetable oils."
1966-67	M. Janardana Rao,	Ph.D. (Banaras) "Studies on cracking of low temperature tars."
1966-67	A. Jogi Pantulu,	Ph.D. (Banaras) "Fatty Acids, glycerides and derivatives."
1966-67	Sajid Husain,	Ph.D. (Aligarh) "Studies on chlorination of some xlenols and tar acids from low temperature tars."
1967-68	K. M. Ghouse,	Ph.D. (Osmania) "X-ray studies of Indian monazite."
1967-68	U. T. Bhalerao,	Ph.D. (Poona) "Studies in the Chemistry of 1-4-benzazepines and related investigations."

The National Geophysical Research Institute: Established in Hyderabad in 1962 by the C.S.I.R. it is devoted to problems relating to Physics and Geology of the solid earth. It is engaged in developing techniques in applied geophysics and using them for the exploration and exploitation of minerals. It has set up a seismic observatory, a magnetic observatory and an earth-current observatory. This institution was originally functioning as the Central Board of Geophysics, located in Calcutta and acting as a liaison body with the International Union of Geology and Geophysics.

The Geological Survey of India: The geologists here are mainly interested in locating the mineral deposits and groundwater resources in the whole of South India, including Andhra Pradesh.

There is also a **Railway Signal and Telecommunication Training Centre** in Hyderabad. Thus in Andhra Pradesh to-day, and in Hyderabad, in particular, we have several research organisations of an all-India character, fostering scientific research and contributing to scientific knowledge.

Besides these, there are **Oil Technological Research Station** at Anantapur, the **Fruit Research Station** at Kodur, **Central Tobacco Research Institute** at Rajahmundry. The Department of Mines and Geology, mainly charged with the responsibility of developing mineral industries in Andhra Pradesh, is one such organisation, which is conducting geological studies in the Telengana area before the Geological Survey of India established a regional office in Hyderabad. There is a unit of the **Archaeological Survey of India** in the State, which is again responsible for preserving the old monuments and for conducting research in archaeology. In fact, this was already a flourishing Study in the Old Hyderabad State and is now a recognised aspect of scientific work in Andhra Pradesh.

Government of Andhra Pradesh has recently sponsored The Andhra Pradesh Academy of Sciences, mainly to co-ordinate the activities of several institutions in the State for the promotion of cause of Science. The main objective of the Academy appears to be to popularise science and to bring the results of the researches carried to common man; also to help organise symposia, lectures and exhibitions at different centres and so on. Another organisation, Andhra Pradesh Academy of Medical Sciences, is entirely devoted to medical sciences.

MASS COMMUNICATIONS

PRESS* IN ANDHRA PRADESH

The total number of Newspapers and Periodicals published in the State was steady at 460 in 1964 and 1966 though there was a decline in 1965. The circulation of papers in the State however appears to have increased considerably according to Press Registrar. The total circulation commanded by 236 papers published from Andhra Pradesh in 1966 was 7.17 lakhs as against 7.43 lakhs of 316 papers in 1965. The number of newspapers published from Andhra Pradesh rose by 11.38% from 413 to 460 in comparison to the year 1965 and by nearly 23.0% if the base year is taken as 1961.

*Based on AINEC SOUVENIR—1967 published by Department of Public Relations & Informations Government of Andhra Pradesh, Hyderabad.

A tendency towards concentration of the Press in the State capital was noticeable during 1966 while in 1965 a larger part of the Press was located in the above one lakh population category cities. In 1966, papers appearing from the State capital had gained not only a numerical superiority over the Press established in other centres of publication but also obtained a lead in circulation. Telugu claimed the largest number of papers (260) followed by Urdu (77) among other papers published from the State. There were 21 dailies and 219 monthlies in addition to publications of different periodicities appearing from the State.

NUMBER OF PAPERS (1961-66)

Year	Dailies	Weeklies	Others	Total
1961 ..	37	110	228	375
1962 ..	33	126	268	427
1963 ..	32	116	287	425
1964 ..	35	124	301	460
1965 ..	25	92	296	413
1966 ..	25	110	325	460

Papers commenced and ceased: The number of papers started in 1966 was 46 (11 weeklies, 12 fortnightlies, 21 monthlies and two others) against 51 in 1965 while 11 papers (1 daily, 4 weeklies, 2 fortnightlies, 1 monthly and 3 quarterlies) ceased publication during 1966 against 89 in 1965. Besides, 28 papers which had started publication earlier were brought on record during 1966 while 16 papers which had gone out of existence previously but whose cessation was noticed during the year were removed from record in 1966.

Circulation: On the basis of data furnished by newspapers, the total circulation of 236 papers was 7.17 lakhs — dailies 2.59 lakhs (36%), weeklies 0.79 lakh (11%), and monthlies 3 lakhs (41.6%). The remaining circulation of 12% was shared among papers of other periodicities. Language-wise, Telugu papers commanded the largest share (71.5%) of the total circulation. English papers enjoyed 15.5% and the rest of the circulation was distributed among papers of other languages. The total circulation of papers in the State rose by 0.5% from 7.39 lakhs in 1961 to 7.43 lakhs in 1965. The circulation of

CIRCULATION OF PAPERS—1966 (Language and Periodicity-wise)
(Circulation in thousands)

Language	Dailies		Weeklies		Monthlys		Others		Total	
	No. of papers	Circulation	No. of papers	Circulation	No. of papers	Circulation	No. of papers	Circulation	No. of papers	Circulation
Telugu	..	8 1,59	23	53	73	2,46	30	55	1,39	5,13
English	..	3 73	2	3	11	21	14	14	30	1,11
Urdu	..	4 24	14	18	9	5	6	6	33	53
The Rest	..	1 3	7	5	21	28	5	4	34	40
Total	..	16 2,59	51	79	114	3,00	55	79	236	7,17

CIRCULATION OF IMPORTANT TELUGU PERIODICALS

	Language	Periodicity	Circulation in 1966
1. Andhra Jyothi Illustrated — Weekly, Vijayawada.	Telugu	Weekly	Recently started
2. Andhra Patrika — Illustrated Weekly, Madras.	Telugu	Weekly	85,000
3. Andhra Prabha — Illustrated Weekly, Madras.	Telugu	Weekly	1,35,000
4. Andhra Pradesh (DIPR), Hyderabad.	Telugu	Monthly	62,000
5. Jyothi, Vijayawada.	Telugu	Monthly	22,875
6. Kristu Agama Doota, Secunderabad.	Telugu	Monthly	15,000
7. Padi Pantalu, Hyderabad.	Telugu	Monthly	30,000
8. Panchayat, Hyderabad.	Telugu	Fortnightly	15,000
9. Pustaka Prapancham, Machilipatam.	Telugu	Monthly	20,000
10. Yuva, Hyderabad.	Telugu	Monthly	23,055

NUMBER OF NEWSPAPERS—1966
(LANGUAGE AND PERIODICITY-WISE)

Language	Dailies	Tri & bi- Weekly	Weeklies	Fortnightlies	Months	Quarters	Bi-monthlies	Half yearlies	Annals	Total 1966	Total 1965
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(11)
English	..	3	..	9	6	20	11	5	2	56	52
Hindi	..	1	..	2	..	8	1	1	..	13	13
Marathi	..	..	..	..	..	..	1	..	..	1	1
Sanskrit	..	..	..	..	1	..	..	..	..	1	1
Telugu	..	11	2	65	54	125	2	..	..	290	232
Urdu	..	6	..	25	11	34	1	..	..	77	67
Bilingual	..	..	2	8	4	22	2	2	..	40	31
Multilingual	..	..	..	..	1	8	1	1	..	11	12
Others	..	..	..	..	..	1	..	..	..	1	1
Total 1966	..	21	4	110	76	219	19	9	2	460	..
Total 1965	..	21	4	92	67	197	19	11	2	..	413

dailies after registering a continuous fall from 1961 to 1964 appears to have picked up again and on the basis of preliminary data for 1966 the figure was 4% higher than the relevant figure for 1965.

Centres of Publication: Out of a total of 460 papers in the State 37% newspapers (168) were located in the State capital. 165 papers (36%) appeared from cities with a population of one lakh and above. Towns with population less than a lakh had only 127 (27%) newspapers. As many as 12 dailies (48%) in the State were published from cities with population of one Lakh and above. Among the rest 11 were located in the State capital and 2 in the towns with population less than one lakh. Newspapers published from the State capital accounted for a circulation of 3.30 lakhs or 46% in the total circulation of all the papers in the State. Cities with population of one lakh and above claimed a circulation of 3.12 lakhs or 43.5% of the total circulation. The remaining 0.75 lakh or 10.5% of circulation was commanded by papers appearing from the smaller towns.

Among dailies published from the State, **Andhra Prabha** (Telugu) a daily published from Vijayawada maintained highest record in circulation in 1966; Circulation 70,173.

LEADING DAILIES 1966

	Circulation	
	1966	1965
Andhra Prabha, Telugu, Vijayawada.	70,173	69,241
Indian Express, English, Vijayawada.	49,087	48,031
Andhra Patrika, Telugu, Vijayawada.	37,711	—
Deccan Chronicle, English, Secunderabad.	21,778	21,146
Andhra Jyothi, Telugu, Vijayawada.	21,279	18,874
Andhra Janata, Telugu, Hyderabad.	12,475	10,272

Periodicals: 'Andhra Pradesh' published by the Dept. of Public Relations Dept. claimed highest circulation among the periodicals published in the State. While Andhra Prabha Illustrated Weekly issued from Madras recorded all time high among Telugu periodicals (circulation: 1,35,000); Andhra Patrika Illustrated Weekly which is also issued from Madras registered a circulation of 85,000.

Total Circulation in 1966: Telugu claims 9.4 lakhs out of 216.87 lakhs of all the News Papers and Periodicals published in India. English 55.6 lakhs (the largest), Hindi 39.1 lakh; Tamil 27.1 lakhs (the other language circulation figures are not given).

DIRECTORY OF NEWSPAPERS & PERIODICALS (Andhra Pradesh)

255 Newspapers are listed periodicity wise, language wise with Name of Periodical, Place Name and Editor respectively.

English Dailies :

Bezwada Commercial Daily Report, Vijayawada-1; M. Adinarayana Murthy.
Daily News, Hyderabad; G. F. Fernandes.
Deccan Chronicle Secunderabad; K. R. Pattabhiram.
Indian Express, Vijayawada-3; Frank Moraes.
Vijayawada Daily Market Report, Vijayawada; Sukhdeo Rathii.

Telugu Dailies :

Andhra Bhoomi, Secunderabad; Gora Sastri.
Andhra Janata Hyderabad; Sundara Rama Murthy.
Andhra Jyothi, Vijayawada; Narla Venkateswara Rao.
Andhra Patrika, Vijayawada; S. S. Prasad.
Andhra Prabha Vijayawada-2; N. Venkateseshaiah.
Aruna, Kakirada; Ch. K. Murthy.
Coleonda Patrika, Hyderabad; Ceased Publication.
Mundadugu, Kakirada; C. V. K. Rao.
Samacharam, Rajahmundry-1; G. Seetharamanjaneyulu.
Visalaandhra, Vijayawada-4; K. Rajagopal Rao.

Urdu Dailies :

Angarey, Hyderabad; Moin Farooqui.
Mushcer-e-Deccan, Hyderabad; Vasudev Rao.
Milap, Hyderabad; Yudhvair.
Nizam Gazette, Hyderabad; S. Farooq Ahmed Khalid.
Rehnuma-e-Deccan, Hyderabad; M. Manzoor Hussain.
Sharara, Warangal; Jalool Amrath.
Siasat, Hyderabad; Abid Ali Khan.
Subh-e-Zindagi, Hyderabad; Mir Ghulam Ali Khan.

Bilingual Dailies :

Andhra Daily Market Rate Bulletin, Hyderabad-12; Eswarlal Sankla.

Hindi Dailies :

Milap, Hyderabad, Yudhvicer.

Multilingual Dailies :

Jaya Prakash Daily Market Report, Hyderabad; K. Lingaiah.

Telugu Biweeklies :

Janasakti, Vijayawada; A. B. K. Prasad.
Nellore News, Nellore; M. Ismayeel.

Bilingual Biweeklies :

Gunturu Patrika, Guntur-1; Jamili Nammalwar.
Kayala Seema, Tirupati; K. Narasayya.

English Weeklies :

Andhra Reporter, Hyderabad; S. G. Sheorey.
Anti-Corruption, Nizamabad; M. Mujtahadi.
Reason of Hope, Hyderabad; P. Poly Carp.
Comet, Hyderabad; V. S. Shastri.
Deccan Times, Hyderabad; A. S. Bharathi.
Invoc, Secunderabad; Tarachand Sanghi.
Film Asia, Hyderabad-2; P. Hemraj.
Pedestrian, Hyderabad; P. M. Rao.
Sunday Standard, Vijayawada-3; Frank Moraes.

Hindi Weeklies :

Ajanta, Hyderabad; Rishi Mamchander Rushick.
Hindi Milap, Hyderabad; Yudhvir.
Hindu Vijaya, Hyderabad; Yashwant Rao Joshi.

Telugu Weeklies :

Akhand Bharat, Rajahmundry; B. V. J. D. Prasad Rao.
Bahujana, Hyderabad; G. Laichanna.
Bharata Jyothi, Cuddapan; V. R. Gopalakrishna.
Bharatamitram, Guntur-2; Rev. B. Maridas.
Bharata Vani, Nellore; G. A. Sharma.
Resa Bandhu, Narasapur; Attil Venkataramaiah.
Dharma Bhoomi, Warangal; K. C. Mouleshwar Rao.
Gandhi Jyothi, Anantapur; M. N. Charyulu.
Guntur Vani, Guntur-1; N. S. Rao.
Hithavadi, Pattikonda; Shankara Sharma.
Jagriti, Vijayawada-2; T. L. Narayana.
Janadharm, Warangal; Y. Narasimhacharya.
Jana Vakyam, Palakol; J. N. Rao.
Jana Vani, Nellore-2; Ganga Ramanaiah.
Jaya Sree, Hanuman Junction; M. V. Krishna Rao.
Kalinga, Sompeta; D. Adinarayana.
Karma Sakshi, Kovvur; M. Satyanarayana.
Kranthi, Guntur-1; V. Satyanarayana.
Krishna Patrika, Hyderabad; M. Subrahmanya Sharma.
Mahodaya, Srikakulam; T. V. Sivarao.
Manju Vani, Eluru; N. V. Chalapati Rao.

MASS COMMUNICATIONS**Telugu Weeklies (contd.)**

Meher Jyothi, Hyderabad; Swami Satya Prakash Udaseen.
Palle Seema, Chittoor; M. R. Chandra.
Praja Mitra, Warangal; D. Hanumanth Rao.
Praja Mora, Rajampet; Aram Annaiah.
Praja Patrika, Rajahmundry; B. B. G. Tilak.
Praja Vani, Guntur; V. Rangayya.
Rama Dandu, Mahabubnagar; V. Sikkhamani.
Ratna Garbha, Eluru; P. V. Sancha Kumari Ratnam.
Remelu, Proddutur; V. Mysuriah.
Sabajeevan, Rozole; M. Visvanadham.
Sabakar Samacharam, Hyderabad; V. R. Shastri.
Samadarsini, Bhimavaram; A. Satyanarayana.
Samakorini, Narasapur; B. Suryanarayana.
Silpi, Machilipatnam; A. N. Rao.
Snehalatha, Eluru; A. Suryanarayana.
Sowjanya, Vijayawada-3; D. Ranga Rao.
Sri Sadhana Patrika, Anantapur; P. Rama Charlu.
Srivastya, Anantapur; S. Adinarayana Rao.
Telugu Prema Pracharika, Kakinada; S. L. Narasimham.
Telugu Ityhu, Bodhan; K. V. Krishnaiah.
Telugu Seema, Guntur-1; K. V. Punna Rao.
Tolikodi, Eluru; G. V. L. Narasimha Rao.
Udayani, Kakinada; T. Ramachandra Rao.
Vahini, Vijayawada-2; G. Umamaheswar Rao.
Vanija Prabha, Guntur-1; Pati Kesava Rao.
Vanita Vihar, Rajahmundry; C. Sotyaavathi Devi.
Vasundhara, Narasapur; V. Narasimha Rao.
Vijaya Bheri, Lakshmi Puram; M. Rama Murthy.
Vijay, Vizianagaram; G. Suryanarayana Murthy.
Virat, Hyderabad; Venkateshwara Sastri.
Viziavani, Vijayawada-2; M. Sreeramamurthy.
Youth Congress, Nellore; L. V. Krishna Reddi.
Yuva Raktam, Eluru; M. Bhupati Rao.
Zaminryoti, Nellore; N. Sree Ramamurthy.

Urdu Weeklies :

Andhra Panch, Hyderabad; Malik Mohd. Ali Khan.
Awami Eqtedar, Hyderabad; M. A. Jaleel.
Hamari Manzil, Hyderabad; Shah Iqbal.
Hyderabad Karnatak, Hyderabad; M. A. Hamid.
Eqdam, Hyderabad; Shakeel Anwar.
Khaksar, Hyderabad-2; Mirza Omar Baig.
Lalkar, Nizamabad; M. A. Rasheed.
Nov-ba-Nov, Hyderabad; K. N. Maqbool.
Panch Sheel, Hyderabad; Sreeram Chatwal.
Farwaz, Warangal; K. Naseeruddin Hasan.
Praja, Nizamabad; K. M. Abid Ansari.
Qaus-o-Qazah, Hyderabad; Masood Ansari.

Urdu Weeklies (contd.)

Rahber-e-Deccan Hyderabad; M. K. Ahmed Qureshi.
Ritz, Hyderabad; Hak. S. H. Nawaz.
Sanat, Hyderabad; J. A. Ansari.
Tameer, Mahbubnagar; M. A. Azeez.
Tameer-e-Deccan, Hyderabad; S. Faizuddin Fani.
Nizam Gazette, Hyderabad; S. Rarooq Ahmed Khalid.

Bilingual Weeklies :

Congress, Warangal; D. Sudharshan.

Multilingual :

Leader, Hyderabad; M. M. Jamal.

English Fortnightlies :

Andhra Republican, Hyderabad-20; E. V. Chinniah.
Bharat Ratna, Kakinada; S. S. Krishnaji.
Film Fountain, Hyderabad; M. Osman Khan.
Gunturian (Trimonthly), Guntur; T. P. Ramaswamy.
Hebron Messenger, Hyderabad-20; B. Singh.
India & The World, Kakinada; C. V. K. Rao.
Singareni News, Kothagudem; K. Sudharshan.

Telugu Fortnightlies :

Bala Bandhu, Hyderabad; Ch. Acharya.
Bhagya Nagar, Machilipatnam-1; G. N. Rao.
Bharatha Jyothi, Cuddapah; C. R. Krishna Bhagawan.
Bommala Basti, Vijayawada-4; V. Ramakotaiah.
Chukkani, Machilipatnam; K. Vasudeva Rao.
Cine Sudha, Nellore; R. S. Murthy.
Harijan Welfare, Manchili; K. Narasimha Murti.
Jaidandhora, Nellore; V. Nagaiah.
Kala Bhashini, Cuddapah; P. Venkatasubbaiah.
Kalpavalli, Narsaraopet; P. Ramakrishnaiah.
Kanchu Kagada, Nellore; V. S. Reddi.
Law Journal, Gudivada; B. Kanakaraju.
Law Reporter, Bapatla; P. V. Subrahmanyam.
Law Times, Bapatla; Garikipaty Veeraiah.
Meghamala, Kaikalur; Andugala Jeremiah.
Natana, Hyderabad; M. S. Ramacharya.
Navayugam, Nellore; G. R. Krishna Murthi.
Nellore Calling, Nellore; M. K. Ahmed.
Nellore Nagara, Nellore; T. V. Ramanaih.
Neta, Hyderabad; P. V. Ramanarsaiah.
Panchayati Rajyam, Nidamarru; C. Nagabhushanacharyulu.
Praja Bandhu, Nellore; Biradavolu Rajaram.
Praja Rajyam, Buchireddi Palem, Kovur; J. S. Rao.
Praja Saradhi, Eluru; P. V. Ramana Reddy.

Telugu Fortnightlies (contd.)

Praja Seva, Jaggannapeta Tatipaka; Y. G. Krishnamurthy.
Praja Vani, Eluru; K. Subaiah.
Prajayuga, Hyderabad; P. A. Chari.
Ramana Vani, Gudivada; M. R. Nageshwara Rao.
Sakshi, Kakinada; Ch. V. Satyanarayana.
Samskruti, Rajahmundry; A. Nageshwara Rao.
Samya Yugamu, Tenali; K. V. N. Appa Rao.
Sangham, Proddatur; Lavanam.
Simhapuri, Nellore; A. Subramanyam.
Singareni Vartalu, Kothagudem; K. Sudharshan.
Socialism, Warangal; Fareed Khaiser.
Sudarsini, Razole D. Suryachandra Raju.
Telugu Velugu, Vijayawada-2; N. B. Rao.
Theerpu Patrika, Nellore; I. Sreenivasulu.
Tuftan, Vijayawada-2; P. L. Narayan.
Tushar, Machilipatnam; K. Sreeramalu.
Vennela, Amalapuram; R. V. Nayadu.
Vidya Vahini, Eluru; G. S. R. Krishna Sharma.
Vijaya Jyothi, Kovvur; A. Kameshwari.
Vijaya Saradhi, Rajam; P. L. Rao.
Vishnu Chakram, Bhimavaram; D. V. N. Murthy.
Viswasanthi, Kavali; O. V. R. Rao.
Yuva Jwala, Kothapeta, Kurnool; B. K. Murthy.

Urdu Fortnightlies :

Andhra Industries Journal, Hyderabad; Md. Arifuddin.
Aziz, Peta, Kurnool; M. A. A. Rahmani.
Filmi Duniya, Hyderabad; Md. Osman.
Film Yug, Hyderabad; A. A. Mirza.
Kakul, Hyderabad; M. Ansari.
Maoju, Hyderabad; M. F. R. Fazal.
Munsif, Hyderabad; Jafery.
Nagma-e-Hayat, Hyderabad; A. K. Kundmiri.
Naya Adam, Hyderabad-20; Amjad Baghi.
Nizamabad Bulletin, Nizamabad; Ibrahim Aziz.

Bilingual Fortnightlies :

Bharata Desam, Guntur-2; S. V. Rao.
Maheswari, Hyderabad; Ramkishna Dhoot.
Praja Darsini, Madanapalle; K. Venkataramanappa.
Sahakari, Vijayawada-3; D. V. Subba Rao.
Samskrutavani, Rajahmundry; N. C. Jagannadham.

English Monthlies :

Andhra Chronicle, Hyderabad; J. A. Ansari.
Andhra Pradesh Labour Bulletin, Hyderabad; Commissioner of Labour.

English Monthlies (contd.)

Andhra Pradesh, Hyderabad; Director of Public Relations and Information.

A. P. Small Industries Association Bulletin, Vijayawada; Y. N. Aristotle, Hyderabad; S. K. Ahmed.

Businessman, Hyderabad; K. Subrahmanyam.

Divya Vani, Hyderabad; Swami Satya Prakash Udaseen.

Educational India, Machilipatnam; M. Venkatarangalah.

Field News, Visakhapatnam-3; Jessi E. Wolfe.

Global Link, Hyderabad; G. T. Roberts.

Goshthi, Amalapuram; G. V. Subba Rao.

Hyderabad Film Journal, Secunderabad; T. C. Saughi.

Osmania Courier, Hyderabad; P. C. Thomas.

Peace, Sri Santhi Ashram P.O. (Via), Annavaram; M. Jagdish.

Sanathana Sarathi, Prasanthi Nilayam; N. Kasthuri.

Science News Letter, Hyderabad; S. V. Subba Rayadu.

Viduth Shakti, Hyderabad; K. Keshava Rao.

White Collar Voice, Hyderabad; K. V. Subba Rao.

Hindi Monthlies :

Agarwal Samaj, Hyderabad; D. A. Shashi.

Andhra Veena, Hyderabad; Ved Bhushan.

Kalpana, Hyderabad; Aryendra Sharma.

Madhuvanti, Hyderabad; R. M. Kaushik.

Telugu Monthlies :

Ajantha, Rajahmundry; N. S. P. Rao.

Amaravani, Vijayawada; T. V. L. N. Rao.

Andhra Lutheran, Guntur; Rev. D. V. Daniel.

Andhra Pradesh, Hyderabad; Director of Public Relations and Information.

Andhra Scout and Guide, Machilipatnam; S. Ramanujacharyulu.

Avatar Meher, Rajahmundry; Swami Satyaprakash Udaseen.

Balanandam, Guntur; M. Rama Rao.

Bala Patrika, Chagallu; E. J. Harding.

Bangaru Pandlu, Rajahmundry; B. J. Paul.

Communist, Vijayawada-4; T. Satyanarayana.

Dharmasandesamu, Hyderabad; G. Gunavati.

Divyagnana Deepika, Hyderabad; P. G. K. Rao.

Divyajeevanamu, Rajahmundry; Sri Karunyananda Swamy.

Geeta Vani, Allagadda; Swamy Ramakrishnananda.

Gramodyogi, Tenali; P. S. P. Rao.

Gupta, Hyderabad; K. G. Gupta.

Jaya Shree, Vijayawada-2; M. V. Krishna Rao.

Jyothi, Vijayawada-2; V. V. Raghavayya.

Kala Jyothi, Hyderabad; G. N. Ashok.

Mahilodaya, Vijayawada; R. Manoharam.

Telugu Monthlies (contd.)

Medhavi, Hyderabad; V. P. Raghavachari.

Padi Pantalu, Hyderabad; Director of Public Relations and Information.

Panchayat, Hyderabad; J. Raghothama Reddi.

Penkipilla, Vijayawada-3; A. B. S. Menyam.

Prakrit, Hyderabad; A. P. Venkatramayya.

Prarambha Vidya, Eluru; N. Rama Sharma.

Sahakaramu, Rajahmundry; P. Ramacharlu.

Silpa Prabha, Cuddapah; V. Pullachary.

Sravanthi, Hyderabad-4; Ch. Lakshminarayana Sharma.

Subhashini, Hyderabad-4; A. Shyamala Devi.

Telugu Vidhyarthi, Machilipatnam; K. Kotiswararao.

Yuva, Hyderabad; A. V. Subba Rao alias 'Chakrapani'.

Urdu Monthlies :

Al-Mehdi, Hyderabad; Mohammed Ali.

Al-Qadeer, Hyderabad; A. M. A. Ahmed Quadri.

Andhra Pradesh, Hyderabad; Director of Public Relation & Information.

Arya Veer, Hyderabad; Gianchand Verma.

Bang-e-Saber, Hyderabad; Choudhri Syed Abdur Rahman.

Bedari, Hyderabad; M. S. Ahmed Khan.

Darsul Quran, Hyderabad; Mirza Zabih Ullah Baig.

Irshad, Hyderabad; S. S. G. M. Qadri Jaweed.

Jastaju, Hyderabad; Syed Abdullah.

Khatoon-e-Deccan, Hyderabad-6; Saleha Altaf.

Poonam, Hyderabad; N. Kurnooli.

Qauni Zaban, Hyderabad; Chander Srivastav.

Raftar-e-Zamana, Hyderabad; Qamar Khalid.

Saba, Hyderabad-1; Sukaiman Areeb.

Bilingual Monthlies :

Andhra Film Chamber Journal, Vijayawada-2; M. S. Rao.

Atapatalu, Hyderabad; T. Subrahmanyam.

English Monthlies (contd.)

Andhra Pradesh, Hyderabad; Director of Public Relations and Information.

A. P. Small Industries Association Bulletin, Vijayawada; Y. N. P. Aristotle, Hyderabad; S. K. Ahmed.

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Kala Jyothi, Hyderabad; G. N. Ashok.

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Prakrit, Hyderabad; A. P. Venkatramayya.

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Bedari, Hyderabad; M. S. Ahmed Khan.

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Irshad, Hyderabad; S. S. G. M. Qadri Jaweed.

Jastaji, Hyderabad; Syed Abdullah.

Khatoon-e-Deccan, Hyderabad-6; Saleha Altaf.

Poonam, Hyderabad; N. Kurnooli.

Qauni Zaban, Hyderabad; Chander Srivastav.

Raftar-e-Zamana, Hyderabad; Qamar Khaleel.

Saba, Hyderabad-1; Sulaiman Areeb.

Bilingual Monthlies :

Andhra Film Chamber Journal, Vijayawada-3; M. S. Raju.

Atapatalu, Hyderabad; T. Subrahmanyam.

TELUGU NEWSPAPERS & PERIODICALS PUBLISHED

FROM OUTSIDE ANDHRA PRADESH

Andhra Patrika—Daily, Madras; S. Sambhu Prasad.
 Andhra Prabha—Daily, Bangalore; N. V. Seshayya.
 Andhra Patrika—Weekly, Madras; S. Radhakrishna.
 Andhra Prabha—Weekly, Bangalore; N. V. Seshayya.
 Praja Mata—Weekly, Bangalore; G. Venkatappa.
 Cinema Rangam—Monthly, Madras; G. V. G. Krishna.
 Samika Samachar—Monthly, New Delhi; K. V. Gopalaratnam.
 Pogaku—Quarterly, Madras; K. C. Chetti.
 Marga Darsi—Monthly, Poona; J. S. Dason.
 Kathanjali,* Madras; A. Raghavachar.
 Vani—Fortnightly, Madras; Station Director, AIR.
 Roopavani—Monthly, Madras; P. Mangayamma.
 Jatiya Samskriti,* Bombay; P. Nageswara Rao.
 Chandamama—Monthly, Madras; 'Chakrapani'.
 Jagati—Monthly, Madras; N. R. Chendur.
 Asso Raraju,* Bombay; A. V. Rao.
 Andhra Mahila—Monthly, Madras; Malati Chandur.
 Balamitra—Monthly, Madras; B. V. Radhakrishna.
 Satya Doota,* Madras; G. E. David.
 Andhra Holywood,* Madras; Prasanna.
 Chitragupta—Fortnightly, Madras; N. Muniswamy Mudaliar.

*Periodicity not known.

FILMS

By and large, Films exhibited in Andhra Pradesh are either made at Madras if they are Telugu, or at Bombay in case of Hindi. Film industry in Andhra Pradesh is just taking a shape in the neighbourhood of Hyderabad city. Already two studios are located there. 1. Southern Movietone Limited, Hyderabad; and 2. Sri Sarathi Studios (P) Limited, Hyderabad-16. Efforts are under way to expand this activity

Film Distribution: Two major circuits one at Vijayawada and the other at Secunderabad cover the entire Andhra Pradesh. Another smaller circuit with headquarters at Guntakal cover neighbouring areas. Anantapur, Cuddapah, Chittoor have one distributor each while there are two distributors at Timmencherla.

There are 832 cinema theatres in Andhra Pradesh as shown in the district-wise table.

MASS COMMUNICATIONS

CINEMA THEATRES IN ANDHRA PRADESH

	Permanent	Touring
Srikakulam	31	8
Visakhapatnam	43	10
East Godavari	64	20
West Godavari	53	12
Krishna	50	13
Guntur	82	15
Nellore	46	8
Chittoor	25	43
Cuddapah	22	20
Anantapur	21	19
Kurnool	22	31
Mahaboobnagar	21	..
Hyderabad	51	..
Medak	9	..
Nizamabad	20	..
Adilabad	13	..
Karimnagar	17	..
Khammam	14	..
Warangal	12	..
Nalgonda	17	..
Total	633	199

Sound Film Production: Earlier than 1930 silent films were produced and exhibited in Telugu speaking area. The first sound film in Telugu Prahaldia was produced in 1931. 16 films were produced in 1941. In 1961 the number went upto 25 while in 1965 it reached 50. Between 1941 and 1950 the total number of Telugu Films produced were only 140. The phenomenal growth in Telugu Films production is evident from the number of pictures that were produced in 15 years between 1951 and 1965 which stood at 550. According to one authority, Malleswari, Pelli Chesi Choodu, Devadasu, Na Illu, Bangaru Papa, Pedda Manushulu, Thodu Dongalu, Rojulumarayi, Tenali Ramakrishna, Edinijam, Bhagya Rekha, M.L.A., Maa Inti Mahalakshmi, Nammina Bantu, Iddaru Mitrulu, Padandi Munduku, Nartana Sala, Pooja Phalam, Amara Silpi, Jakkana, Mooga Manusulu and Doctor Chakravarti produced after 1951 stand as meritorious productions. Of these Nammina Bantu, Nartanasala and Keehu Bommalu were selected for participation in International Film Festival held abroad.

TELUGU FILMS RELEASED DURING 1966—STRAIGHT TAKES

Picture	Length in Meter	Banner	Month & Year
1. Aasti Parulu	4301.32	Jagapathi Pictures	Oct. 1966
2. Aata Bommali	4710.98	Suvarna Films	Jan. "
3. Adugujadalu	4953.73	Navajyothi Films	Sepr. "
4. Aggi Barata	4651.24	Sri Vittal Prodns., & Co.	Apr. "
5. Ame Yevuru	4259.58	Hariharan Films	Oct. "
6. Bhakta Pothana	5128.88	Bharath Films	June "
7. Bhimanjaneya Yuddham	3834.82	Mahalakshmi Movies	Apr. "
8. Bhoolokam Lo Yamalokam	4615.02	Gowri Productions	Oct. "
9. Chilaka Gorinka	4874.96	Aatma Arts	May "
10. Doctor Anand	4654.38	Ravindra Art Prodns.	Oct. "
11. Goodachari 116	4447.64	Rajalakshmi Prodns.	Aug. "
12. Gopaludu			
Bhoopaludu	4905.17	Gowri Art Films	Dec. "
13. Hantakulostunnaru Jagartha	4630.60	P. S. R. Pictures	Aug. "
14. Kanne Manasulu	5094.79	Babu Movies	July "
15. Leta Manasulu	5110.00	A. V. M. Prodns.	Aug. "
16. Loguttu Perumallu Keruka	4502.51	Gowri Prodns.	Jan. "
17. Manase Mandiram	4561.33	Sri Krishna Sai Films	Sepr. "
18. Mangala Sutram	4281.51	Arunachalam Studios	May "
19. Mohini Bhasmasura	3967.58	B. A. S. Prodns.	Nov. "
20. Navaratri	4729.00	Vijayachamundeswari Picture	March "
21. Paduka Pattabhishekam	4954.00	Smt. R. Radha Reddy (Proprietrix, Amaravati Chitra)	May "
22. Paramanandayya Sishyulu Katha	5154.76	Sri Devi Prodns.	Mar. "
23. Pidugu Ramudu	4687.51	D. V. S. Prodns.	Sepr. "
24. Potti Pleader	5078.26	Rekha & Murali Arts	Apr. "
25. Rangula Raatnam	4946.72	Vaithini Prodns.	Dec. 1966
26. Sakuntala	5313.57	Rajyam Prodns.	Mar. "
27. Sangeethalakshmi	5167.33	Seetaramanjaneya Pictures	July "
28. Sreemati	4435.45	Sri Nilayam Pictures	Nov. "
29. Srikakula Andhra Mahavishnu Katha	4852.72	Sri Sambhu Films	Apr. 1966
30. Sri Krishna Tulabaram	5033.15	Suresh Prodns.	Aug. "
31. Vijaya Sankham	3504.58	Sujata Chitra	May "

TELUGU (DUBBED PICTURES) IN 1966

1. Adavi Yodhudu	3773.42	Neela Prodns.	Dec. 1966
2. Amma Nanna	4145.28	Mohan Pictures	Oct. "
3. Dongalaku Donga	4252.00	Bhanu Films	July "
4. Kanne Pilla	4246.59	Kowmudi Pictures	Oct. "
5. Katti Potu	3981.00	Mansula Cine Syndicate	Aug. "
6. Ma Annaiah	4438.00	Sha Films	Aug. "
7. Naga Jyoti	3867.91	S.V.S. Pictures	Apr. "
8. Pelli Pandiri	3793.23	Sembi Traders	Mar. "
9. Server Sundaram	4534.80	N. Kantha Rao	Apr. "
10. Yevaraa Stree	3995.92	Viswa Santi Pics.	Mar. "

FILM IN ANDHRA PRADESH—STATE AWARDS

In Andhra Pradesh, in order to encourage the film industry in the State, the Government of Andhra Pradesh have formulated a scheme to award prizes for best films produced in Telugu every year in the following categories: (1) Feature Films; (2) Documentary Films; (3) Children's Films and (4) Educational Films. As per rules, Feature Films in Telugu language produced anywhere in India and Documentaries, Educational and Children's films produced within the State of Andhra Pradesh are eligible for awards.

The following awards are given for the Best Feature Films:

- Andhra Pradesh State Golden Nandi for the first best film and a cash prize of Rs. 10,000/- to its producer, Rs. 4,000/- to its Director;
- Andhra Pradesh State Silver Nandi for the second best film and a cash prize of Rs. 3,000/- to its Producer and Rs. 1,000/- to its Director;
- Andhra Pradesh State Bronze Nandi for the third best film and a cash prize of Rs. 1,000/- to its producer and Rs. 500/- and a memento to its Director.

Apart from the above, an award of cash prize of Rs. 1,000/- to the best story writer and Rs. 500/- to the second best story writer in respect of films recommended by the Andhra Pradesh State Awards Films Committee is also given.

Similarly, Golden, Silver and Bronze Nandis are given to the three films in the category of Documentary Films and Children's Films. In the case of Educational Films, Golden Nandi and Silver Nandi are given.

STATE AWARDS FOR BEST FILMS IN 1965

1. Antastulu
2. Sri Krishna Pandaveeyamu
3. Atma Gowravam

Presented on March 1, 1966.

SUBSIDIES

In addition, the Government of Andhra Pradesh have also offered subsidy of Rs. 50,000/- for films produced in studios in Andhra Pradesh and they have also framed rules thereof.

ALL INDIA AWARD PICTURES—TELUGU

REGIONAL LANGUAGE AWARDS

1. President's Gold Medal

Nil.

2. Certificate of Merit

- | | | |
|-----------------------|---|------|
| 1. Tenali Ramakrishna | — | 1956 |
| 2. Nartanasala | — | 1963 |

3. President's Silver Medal

- | | | |
|--------------------------|---|------|
| 1. Peddamanushulu | — | 1954 |
| 2. Bangaru Papa | — | 1955 |
| 3. Tenali Ramakrishna | — | 1956 |
| 4. Pellinati Pramanalu | — | 1958 |
| 5. Nammuna Bantu | — | 1959 |
| 6. Mahakavi Kalidasu | — | 1960 |
| 7. Bharya Bartulu | — | 1961 |
| 8. Mahamantri Thimmarasu | — | 1962 |
| 9. Doctor Chakravarti | — | 1965 |
| 10. Antastulu | — | 1965 |
| 11. Rangula Ratnamu | — | 1966 |

BROADCASTING IN ANDHRA PRADESH

There are four Broadcasting Stations in Andhra Pradesh in addition to Regional Station, Madras which broadcasts Telugu programmes on Madras 'B' Transmitter. Those at Hyderabad and Vijayawada have a variety of programme schedule on Rural farm programmes; for industrial workers; for women; children etc. All India News Bulletins as well as other National Programmes are relayed by the Stations.

Rural Radio Forums provide listening cum discussion cum action group programme are being operated from Farm Radio Unit, Vijayawada. Such programmes establish two way contact between the broadcaster and listener. Two auxiliary low powered stations located at Cuddapah and Visakhapatnam serve the needs of immediate neighbourhood.

Community Listening: The State Broadcasting Unit under the administrative control of Director of Public Relations and Information maintains a net work of Community listening Receiver Units in Villages. By 1965-66 the number of such sets reached 14,900 including 3,500 transistorised community radio sets made available by the Government of India.

TRANSMITTERS IN ANDHRA PRADESH

	Wave length	Frequency	Timings
Hyderabad A.	405.4 m	740 Kc/S	6.00 to 9.00
			12.30 to 14.30
	42.02 m	7140 Kc/S	9.45 to 17.15
	89.42 m	3355 Kc/S	6.00 to 7.45
	49.02 m	6120 Kc/S	8.00 to 9.30
Hyderabad B.	62.50 m	4800 Kc/S	17.30 onwards
	283 m	1060 Kc/S	14.00 to 15.00
			20.00 to 22.00
			17.30 to 20.40
			-do-
Cuddapah	333.3 m	900 Kc/S	
Visakhapatnam	322.6 m	930 Kc/S	6.00 to 9.00
Vijayawada	357.1 m	840 Kc/S	12.30 to 14.00
			17.30 to 22.35

BROADCAST RECEIVER LICENCES IN ANDHRA PRADESH

(Dec. 31, 1965)

Domestic	2,86,594
Cheap Radio Sets	19,398
Community Sets	11,476
School	2,709
Commercial	5,854
Dealers	1,247
Demonstration	221
Misc.	49
Total:	3,27,548

SOURCE: Ministry of Information & Broadcastings, Government of India

—:(0):—

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| 3. A. P. Zilla Parishad and Panchayati Samitis Act | 1-50 |
| 4. Rules Under A. P. Gram Panchayati Act. | 1-50 |
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PANCHAYATI RAJ IN ANDHRA PRADESH (ENG)
By Professor M. Venkatarangiaya and G. Ram Reddy
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ANDHRA PRADESH ALMANAC ADVT

GOVERNMENT ORGANIZATION

Andhra Pradesh is one of the 17 States in the Federal Structure of India.

Preamble: India is a sovereign Democratic Republic with parliamentary form of Government based on universal adult franchise. The executive authority is responsible for all its decisions and actions to the people through their elected representatives in the legislature.

India has a written CONSTITUTION which came into force on JANUARY 26, 1950. It embodied in its preamble the resolve of the people of India to secure for all citizens 'Justice, social, economic and political; Liberty of thought, expression, belief, faith and worship; Equality of status and of opportunity; and to promote among them all Fraternity assuring the dignity of the individual and the unity of Nation.'

Citizenship: The Constitution provides for a single and uniform citizenship for the whole of India. Birth within the territory of the Indian Union, descent from Indian parents or residence for a period of five years at the commencement of the Constitution entitle one to be a citizen of India. Displaced persons from Pakistan are also enabled to become citizens after fulfilling certain conditions. Persons of Indian origin residing abroad can also become citizens by registering themselves as such with Indian diplomatic or consular agencies in the countries of their residence. No such person who voluntarily acquires the citizenship of any foreign state is entitled to this right.

Franchise: The Constitution confers the right of vote on every person who is a citizen of India and who is not less than 21 years of age on a fixed date and is not otherwise disqualified under the Constitution or any law of the appropriate legislation on the ground of non-residence, unsoundness of mind, crime or corrupt or illegal practice.

Citizens Have Certain Fundamental Rights: Right to Equality, Right to Freedom, Right against Exploitation, Right to Freedom of Religion, Cultural and Educational Rights, Right to Property and Right to Constitutional Remedies. The Fundamental rights are justiciable and any citizen can move the Supreme Court for their enforcement.

Directive Principles of State Policy: The Constitution lays down certain Directive Principles of State Policy. These Principles, though not enforceable through courts of law are regarded as "fundamental in the governance of the country." They seek to ensure that the State shall strive "to promote the welfare of the people by securing and protecting as effectively as it may, a social order in which justice—social, economic and political shall inform all the institutions of the national life."

The Union: India is a Union of 17 federative States and 9 centrally administered Union Territories, with the President as the Head of the Union and the Governors as the Heads of the States. The PRESIDENT (RASHTRAPATI) is elected by the elected members of both Houses of Parliament and Legislative Assemblies of the States for a term of five years. All executive authority of the Union, including the Supreme Command of the Defence Forces, formally vests in the President and all executive actions of the Government are taken in his name. In the exercise of his functions, the President is aided and advised by a COUNCIL OF MINISTERS (i.e. the CABINET) with the Prime Minister at the head. The Cabinet finally determines and lays down the policy of the Government. The Cabinet is collectively responsible to the Union Parliament.

The Indian Parliament Consists Two Houses. The Upper House called the RAJYA SABHA (COUNCIL OF STATES) consists of not more than 238 elected representatives of States and Union Territories and 12 members nominated for their special knowledge and social services. The Lower House called the LOK SABHA (HOUSE OF PEOPLE) consists of 520 members (ELECTED IN A QUINQUENNIAL GENERAL ELECTION) representing the States and the Union Territories. All laws are enacted by Parliament, whose consent is also necessary for the levying of taxes and sanctioning of Government expenditure. 41 members (by General Election) to LOK SABHA, 18 members (by indirect election) to RAJYA SABHA represent Andhra Pradesh in the Union Parliament.

State Legislature

The State: The State of Andhra Pradesh like the Centre, has a Parliamentary system of Government. The GOVERNOR of a State is appointed by the President and is aided and advised by a COUNCIL OF MINISTERS (STATE CABINET) headed by the CHIEF MINISTER. The Council of Ministers

works on the principle of collective responsibility, and is accountable to the Legislature of the State. Many State Legislatures like the Union Parliament, have, two houses: the LEGISLATIVE ASSEMBLY and the LEGISLATIVE COUNCIL. Andhra Pradesh too has these two houses. Assembly has 28* members and Council has 90 members. General elections are held every five years to the Assembly. Council members are elected from different electoral colleges. The Legislative Council shall not be subject to dissolution but nearly one third of the members thereof shall retire in turns on the expiration of every second year.

Judiciary

The SUPREME COURT OF INDIA (New Delhi) consists of a CHIEF JUSTICE and ten judges appointed by the President. HIGH COURT (Hyderabad) in the State of Andhra Pradesh which stands at the head of the State's judicial administration. Andhra Pradesh High Court consists of a CHIEF JUSTICE and 19 JUDGES appointed by the President. The judiciary is independent of the executive and the legislature. The other courts at district and Tahsil level are subject to supervision of the High Court.

The ADVOCATE-GENERAL for the State is appointed by the Governor to give legal advice to the State Government.

Public Administration

Day to Day administrative affairs are conducted through an organised wing of Public Services. SECRETARIAT is the nerve centre for Government administration. Government policy decisions are concluded at the Cabinet level. BOARD OF REVENUE is a special body consisting of seniormost officers and it has supervisory function over State revenues. Heads of Departments such as DIRECTOR OF PUBLIC INSTRUCTION, DIRECTOR OF MEDICAL SERVICES, CHIEF ENGINEER, INSPECTOR GENERAL OF POLICE ETC., execute the Government policy resolutions issued by the Government Secretariat from time to time. Officers of the Heads of the Department are located in the capital with subordinate offices located at Regional, District, Tahsil levels. Recruitment to services is done thro' an independent, body 'THE ANDHRA PRADESH PUBLIC SERVICE COMMISSION' consisting of a Chairman and a fixed number of members.

* Including one nominated Anglo-Indian member.

As already observed, Andhra Pradesh is one of the States of India which follows federal system of Government. Hence, some branches of administration in the State are handled directly by the Central Government. For instance, Defence, Foreign Affairs, Radio, Railways, Post & Telegraphs, Excise Tax, Income Tax, and a number of other things are handled by Central Government Offices. Some of these Central Government offices for administrative convenience are stationed at suitable places within the State of Andhra Pradesh.

District Administration

The principal unit of administration in the State is the DISTRICT under a COLLECTOR and DISTRICT MAGISTRATE. As COLLECTOR, he is responsible for the proper collection of revenues and for administration of all matters connected with land except certain technical aspects of irrigation, agriculture and forestry. As DISTRICT MAGISTRATE, he is responsible for the maintenance of law and order. The Collector is also the CHIEF DEVELOPMENT OFFICER of the District and is assisted generally by Additional Collectors and District Development or Planning Committee, on which all the members of the State Legislature and Parliament from the District, representatives of ZILLA PARISHAD and Municipal Councils and leading non-official workers are represented to ensure popular association with the formulation and implementation of development programmes.

Local Administration

Local self-governing institutions in India are broadly classified into two categories—Urban & Rural. In Urban areas—in medium and small towns—Municipal Councils function and look after civic needs. The institutions looking after the civic needs of the rural areas, hitherto known as the District Boards, have undergone significant change in the recent past. With the introduction of democratic decentralisation in the States, there have been set-up the GRAM PANCHAYAT at the village level, the PANCHAYAT SAMITI at the Development Block level and the ZILLA PARISHAD at the district level. This three-tier machinery not only looks after the civic activities at the local level but is also associated with the preparation and execution of local development plans. (See *Panchayat Raj in Andhra Pradesh*)

OFFICERS OF THE ANDHRA PRADESH LEGISLATIVE ASSEMBLY

SPEAKER B.V. Subba Reddi
DEPUTY SPEAKER Vasudev Krishnaji Naik
SECRETARY G. V. Chowdary

MEMBERS OF THE ASSEMBLY

Sl. No.	Name	Constituency	Address	Party affiliation	GOVERNMENT ORGANIZATION
1	Abraham, Boddu	Cheriyal	Dharmasagar, via Madikonda, Warangal	C.P.I.	Cong.
2	Achuta Reddi K.	Kodangal	1-9-312/3, Vidyannagar Hyderabad-7	Cong.	Ind.
3	Ahmed Hussain	Sitarambagh	20-7-685, Fathe Darwaza, Hyderabad-2.	Cong.	Cong.
4	Anasuyamma, T.N.	Thamballapalle	A/2, Co-operative Colony, Dt. Madanapalle, Chittoor Dt.	Cong.	Cong.
5	Anjaneyulu Naidu, D.	Chittoor	14-8-36, Tulasiram Mudali St, Chittoor	Cong.	Cong.
6	Anjiah, T.	Musheerabad	12/3, R.T. 3-4-512/60, Barkatpura, Hyderabad.	Ind.	Cong.
7	Anjana Reddi, Katnagante	Hindupur	Basavanapalli, Kirikera Post, Anantapur Dt.	Ind.	Cong.
8	Ankamma, Sanakkayala	Guntur-1	Nehrunagar, Guntur	Cong.	Cong.

* Party affiliation as on June 15, 1967

NO.	NAME	RESIDENCE	GOVERNMENT ORGANIZATION	
9.	Ankineeda Prasada- rao, Pamulapati.	Ponnur ...	Nidubrolu via Ponnur, Guntur District.	Cong.
10.	Appadu Dora, Kommuru	Bhogapuram ...	Bhogapuram	Cong.
11.	Appala Naidu Koila	Strungavarapukota	Lakkavarapu Kota, Visakha- patnam Dt.	P.D.P. Cong.
12.	Appala Naidu, S. R. A. S.	Paravada	Pendurthi, P.O.	
13.	Appala Narsu Naidu Nadiminti.	Etcherla	Adapaka, via Murapaka, Srikakulam Dt.	Cong.
14.	Appa Rao, M. R.	Nuzvid	Nuzvid	Cong.
15.	Badrivishalpetti	Maharajgunj	6-3-648, Somajiguda, Hyderabad	S.S.P.
16.	Baga Reddi, M.	Zahirabad	Zahirabad, Medak Dt.	Cong.
17.	Basi Reddi, Penchikala	Pulivendla	Advocate, 4/232, Dr. Ayyaswamy Pillai St. Cuddapah.	Cong.
18.	Bhagavantharao, Anagani,	Kuchinapudi	Manji Nivas, 258/3 R T, Vijaya- nagar Colony, Hyderabad	Cong.
19.	Bhaskara Rao, Akineni	Kankipadu	Kolavennu P. O., Krishna Dt.,	Cong.
20.	Bheem Reddi, Myada	Dommat	Post Rayappol via Makkarajpet Village, Mubrispur, Medak Dt.	Ind.
21.	Bhim Rao, K.	Asifabad	Bambara, Asifabad Tq., Adilabad Dt.	Cong.
22.	Bhoom Rao, R.	Bodhan	Potlurangal via Navipet, Nizamabad Tq.	J.C.
23.	Bhoopathi, Gotte	Nerella	Kishandaspet, Sircilla Tq. Kadapa Dt.	
24.	Brahmananda Reddi, Kasu (Chief Minister)	Narasaraopet	Begumpet, Hyderabad	Cong
25.	Buchi Krishnam Raju, Chintalapati.	Cheyyeru	I. Polavaram, via Yanam, East Godavari Dt.	J.C.
26.	Buchi Rama Seshayya	Jaggayyapet	Bendipalem, Krishna Dt.	Cong.
27.	Sresti, Repala.	Chilakaluripeta	Swatantra Party Office, Chilaka- luripeta, Guntur Dt.	Swat.
28.	Kandamalla	Jami	Vijinigiri, Srungavarapukota Tq. Visakhapatnam Dt.	Swat.
29.	Butchi Apparao, Gorrepati	Kovvur	Malakapalli (Post) Kovvur Tq. W.G. Dt.	S.S.P. Cong.
30.	Butchi Rayudu Kuntamuskala	Vijayawada	Hanumampet, Vijayawada-3	
31.	T. V. S., Chandrasekara V.	Pileru	Kotapalle Village, Pileru Post, Chittoor Dt.	Cong.
32.	Reddi Gurram	Kandukur	Chintalapalem, Kandukur Tq. Nellore District.	Cong.
33.	Chenchurama Naidu, N. (Minister)	Alampur	Alampur, Mahabubnagar Dt.	Cong.
34.	Chendra Sekhara Reddi, T.	Repalle	Karumuri, Repalle Tq. Guntur Dt.	Cong.
35.	Chennalaiah, Yadam			
35.	Vacant	Tandur	Congress Office, Miryalguda, Nalgonda Dt.	Cong.
36.	China Krishna Reddi, F.	Miryalguda	Vatticheruku P. O. Guntur Tq.	Swat.
37.	China Nagiah, M.	Prathipadu	Sheiksanipalli, Chinnamustoor Post, Anantapur Dt.	Cong.
38.	China Venkanna, Gurram	Uravakonda		

Sl. No.	Name	Constituency	Address	Party & affiliation
39.	Chitti alias Appala-swamy, Marupilla	Vijayavada	9-3-14, Brahmam Street, Kothapet Vijayavada-I.	Cong.
40.	Chitti Naidu, Tamarabha	Paderu	Dokuluru (Via) Paderu	Cong.
41.	Chokka Rao, J.	Karimnagar	Visakhapatnam	Cong.
42.	Devshah, S. A.	Boath	C/o. District Congress Committee, Karimnagar Dt.	Cong.
43.	Easwarareddi, Agarala	Tirupati	P.O. Utnoor, Adilabad Dt.	Cong.
44.	Eshwari Bai, J.	Yellareddy	273, Netaji Road, Triupati, Chittoor Dt.	Swat.
45.	Easwara Reddi, K.	Pathikonda	10-3-63, East Maredepalli, Secunderabad.	Rep.
46.	Gaddanna	Mudhol	G. Yerragudi Post, Pathikonda Tq. Kurnool Dt.	C.P.I.(M)
47.	Gangadhar, K. V.	Nizamabad	Dehagama P.O. Mudhole Tq. Adilabad Dt.	P.D.P.
48.	Ganga Subbarami Reddi, Bojjala,	Kalahasti	Kumargalli, Nizamabad Dt. Urundur Village. Kalahasti, Chittoor Dt.	J.C.
49.	Ganeswara Rao, Nayinala	Razole	Mamidikuduru, Nrgaram P.O. Razole Tq.	P.D.P.
50.	Gopalakrishnayya, Vavilala	Sattenapalli	Sattenapalli, Guntur Dt.	Cong. Ind.
51.	Gopal Reddi	Kalwakuri	C/o. Panchayat Samithi, Kalwakurti, Mahabubnagar Dt.	P.D.P.
52.	Gopal Reddi	Gadwal	Serpanch, Uppal, Gadwal Tq., Mahabubnagar Dt.	P.D.P.

GOVERNMENT ORGANIZATION

53.	Gopal Naidu, Kilari	Nagari	President Panchayat Samithi, Pichatur, Satyavedu Tq., Chittoor Dt.	Cong.
54.	Goud, V. N.	Nagarkurnool	2-69, Yendabattla, Tq. Mahabubnagar Dt.	P.D.P.
55.	Goverdhan Reddi, Palvai.	Mungode	Idukuda Nalgonda Tq. Nalgonda Dt.	Cong. Swat.
56.	Govinda Doss, D.	Alur	Alur, Kurnool Dt.	C.P.I.
57.	Govinda Rao, K.	Anakapalli	Gandhinagar, Anakapalli	Cong.
58.	Gunnayya, Pothula	Patapatnam	Gunnayya Street, Parvatipuram, Srikakulam Dt.	Cong.
59.	Gurumurthy, B. V. (Minister)	Khairatabad	New Building, Block No. 3, Begumpet, Hyderabad-16.	Cong.
60.	Hanumaiah, C.	Guntur-2	Stambalagarvu, Guntur-3	Cong.
61.	Hashim, M. M.	Asifnagar	11-3-835, Mallapally, Hyderabad	Cong.
62.	Iudira, Doddapaneni	Tenali	Kothapet, Tenali-1.	Cong.
63.	Jagannadham, Simma	Narasannapeta	Advocate, New Colony, Srikakulam	Swat.
64.	Jagannath Rao, C.	Narsapur	Post Narsapur, Medak Dt.	Cong.
65.	Janga Reddy, Chandupatla	Parkal	Parkal Post Parkal Tq., Warangal Dt.	Jan. Cong.
66.	J. yaprada, Bhavanam...	Vinukonda	Advocate, Guntur.	Cong.
67.	Joji Jammana	Palakonda	Advocate, Parvatipuram, Srikakulam Dt.	Swat.
68.	Kamaraju, Pantam	Jaggampeta	Geddannapalli, Peddapuram Tk. P D.P.	Cong.
69.	Kannaiah Dora, Karam	Bhadrachalam	Venkatayapalem Kunavaram, Bhadrachalam Tq., Khammam Dt.	Cong.

ANDHRA PRADESH ALMANAC

Sl. No.	Name	Constituency	Address	Party affiliation
70.	Karaiah Reddy, Landa	Ichapuram	Bddaokali, Ichapuram Tq.	Swat.
71.	Kasi Ram, Vaddapalli	Ramannapet	Jammullaguda Street, Nalgonda Dt.	Cong.
72.	Kasturi Devi, Musunuri	Gudivada	Club Road, Gudivada, Krishna Dt.	Cong.
73.	Kesava Rao, V. C.	Santhanuthalapad	"Nagaratna Nilayam" Ananda Rao Road, Ongole.	Cong.
74.	Khaja Nizamuddin	Yakutpura	20-3-1108, Masjid Qub. Alam, Hyderabad.	Ind.
75.	Kondala Rao, Depuru	Chintapalli	Lammasingi (B.P.O.), via Narasipatnam, Visakapatnam Dt.	Cong.
76.	Kotaiah, Pragada	Chirala	Nidubrolu, Guntur Dt.	Cong.
77.	Krishnamnaidu, Gorle	Gompa	Komaravolu, Narasipatnam Tq.	Cong.
78.	Krishnamurthy, Kinjarapu	Harischandrapuram	Advocate, New Colony, Srikakulam.	Swat.
79.	Krishna Rao, Alluri...	Tadepalligudem	Chodavaram (East), Candepalli Post, Tadepalligudem Tq. W. G. Dt.	Cong.
80.	Krishna Reddi, M.	Rayachoty	Yerramanenipalem, Bhagampalle P.O., Cuddapah Dt.	Cong.
81.	Kumudini Devi, J.	Wanaparthy	Sivanand Griha, 77-Begumpet, Secunderabad-A. P.	Cong.
82.	Kurmayya, Vemula.	Tiruvur	Arandal Peta, Vijayawada	Cong.
83.	Kusumeswa Rao,	Undi	Bhimavaram, W.G. Dt.	P.D.P.

GOVERNMENT ORGANIZATION

84.	Lakshman Bapuji, Konda (Minister)	Bhongir	Jaladrushyam, 6-1-211, Hyderabad-22	Cong.
85.	Lakshmana Rao, Pedasingu	Bandar	Ramanadupet, Machilipatnam, Cong.	
86.	Lakshma Reddi, Thokala	Ghanpur	Ranganna Darwaza, Hanumkonda P. O. Warangal Dt.	Ind.
87.	Lakshmayya, Javvadi	Penugonda	Penugonda. W.G.Dt.	Cong.
88.	Lakshnikantha Rao, B.	Indurthi	Husanabad, Karimnagar Dt.	Cong.
89.	Lakshmi Narasimha Rao, Kasuganti.	Jagtial	Advocate, Jagtial, Karimnagar Dt	Cong.
90.	Latchanna, Gouthu	Sompeta	6-2-656, Sevadan Chintalabatti, Hyderabad	Swat.
91.	Lakshmi Narasiah, M. N.	Ibrahimpattam	Alwal P.O. Bolarum, Secunderabad	Cong.
92.	Laxminarasimha Reddi	Jadcherla	Polkampalli Via Musapet P.O. Mahbubnagar Dt	P.D.P.
93.	Linga Reddi, Venna	Macherla	Kakirala, Durgi P.O. Palnadu Tq. Guntur Dt	Cong.
94.	Madanna, K. E.	Kurnool	35-69, Venkobarao St., Kurnool Dt.	Cong.
95.	Madhava Rao, Annadana	Nellore	Advocate, Ramamurthy-nagar, Nellore	Jan.
96.	Madhusudhan Reddi, Paidi	Kamareddy	Yellareddy Post (Adloor), Kamareddy, Tq.	J.C.
97.	Mahalakshmi, Gad-dam	Nagaram	Tekisetivariapalem, Antarvedi-palem post, Razole Tq	Cong.

ANDHRA PRADESH ALMANAC

Sl. No.	Name	Constituency	Address	Party affiliation
98.	Mahananda, Ravi-pati	Darsi	West Veerayya Palem Post, Via Kurichedu, Darsi Tq Nellore Dt.	J.C.
99.	Mahendra Nath, P.	Achampet	Nagarkurnool, Mahabubnagar Dt.	Cong.
100.	Malla Reddi, Jinna	Peddapalli	Gangaram (Via) Kolanoor Karimnagar, Dt	P.D.P.
101.	Malikharjuna, Chodi	Yellavaram	Lagarai, Yellavaram Tq. East Godavari Dt.	Cong.
102.	Mareppa, T.C.	Kalayandrug	Thimmapuram Post, Kalyan-durg Tq. Anantapur Dt.	Cong.
103.	Mohammad Rahma-tulla	Cuddapah	13/304, Tulugunta, Rachaiah St, Cuddapah, Dt.	Cong.
104.	Md. Kama-luddin Ahmed	Jangaon	Jangaon, Warangal Dt.	Cong.
105.	Mohan Reddi, Y.	Buggaram	Rachypalli Jaqtial	Cong.
106.	Mohd. Ibrahim Ali (Minister)	Mahbubnagar	1-6-146/3, Mahobubnagar Dt.	Cong.
107.	Mohd. Rajab Ali	Khammam	C/o Communist Party Office (M) Gandhi Chowk, Khammam	C.P.I. (M)
108.	Mudile Babu, Parankusam	Vunukuru	Lathanapuram P.O. Par-vathipuram Tq	Ind.
109.	Muniswamappa, V.	Vepanjeri	1-5-37. Kattamanchi Harijanwada, Kattamanchi P.O. Chittoor Dt.	Cong.
110.	Munuswamy, Katari	Satyavedu	Swatantra Party Office, Kare-pekam post, (via) Tada, Swat.	Swat.
GOVERNMENT ORGANIZATION				
111.	Munuswamy, M.	Bangaripalem	Santha Pale, Kanipakam Chittoor Cong.	Cong.
112.	Murthy, T. S.	Warangal	8/11013, Hanumakonda, Warangal	P.D.P.
113.	Nabi Saheb, S. B.	Nandyal	3/167, Nandyal, Kurnool Dt.	Cong.
114.	Naganna, K.	Shadnagar	Lingarvai P.O. Alampurq, Mahabubnagar Dt	Cong
115.	Nageswara Rao, Tulabandula	Mangalagiri	Vaddeswaram Post Guntur Dt.	Cong.
116.	Nagireddi, S. P.	Mydukur	Nekkeldinne Post, Cuddapah Dt.	Cong.
117.	Nagireddi, T.	Anantapur	4-B Special Old M.L.A. Quarters, Hyderabad	C.P.I.(M)
118.	Narasimham, Dha-nenkula	Udayagiri	Kakarlaripalle Village Post, Udayagiri Tq. Nellore Dt.	Swat.
119.	Narasimha Rao, P. V. (Minister)	Mantheni	Dilaram's Bungalow, Himayat-nagar, Hyderabad	Cong
120.	Narasimha Reddi	Sangareddy	Post Pattancheru, Sangareddy Tq. Medak Dt.	P.D.P.
121.	Narasimha Reddi, Bekkam	Kollapur	Veltoor, Chinnamaroor P.O. Mahbubnagar Dt.	P.D.P.
122.	Narasimha Reddi, Bhoomireddi.	Thungaturthi	Karvirala Village, Gunugabanda Tq. Nalagonda Dt.	C.P.I.(M)
123.	Narasimha Rao, Alluri	Madanapalle	Chattu Village, Madanapalle Tq., Chittoor Dt.	Cong.
124.	Narasimha Rao, J. V. (Minister)	Luxettipet	Dwaraka Post, Luxettipet Tq. Adilabad Dt	Cong.
125.	Narasimha Rao, P.	Huzurabad	Tank Bund Road, P.O. Hanum-konda (Via) Kaziput	Cong.
126.	Narayana Applanaidu Vanagapandu	Pedamanapuram	Gobhyam Post, (Via) Peda-manapuram.	J.C.

Sl. No.	Name	Constituency	Address	Party affiliation
127.	Narayana, K. S.	Secunderabad	H. No. 2-3-157, Ramgopalapet, Secunderabad.	Cong.
128.	Narayana Murthy, Vundavalli	Peddapuram	E. Godavari Dt.	C.P.I.
129.	Narayana Reddi	Penukonda	Maddulachervu, Dharmavaram Tq. Anantapur Dt.	Cong.
130.	Narayana Reddi, G.	Devarakonda	Deverakonda, Nalgonda Dt.	Cong.
131.	Narayana Reddi, K. V. (Minister)	Kamalapur	124, New M.L.A. Quarters, Hill Fort, Hyderabad	Cong.
132.	Narayanawamy, Katuri	Podili	Katurivaripalem, Podili Post, Nellore Dt.	Cong.
133.	Narasa Reddi, P.	Nirmal	Advocate, Nirmal, Adilabad Dt.	Cong.
134.	Narshimaramiah,	Hasanparthy	C/o. Venkataswamy, Kumarapally Post, Hanumkonda.	Cong.
135.	Niranjana Rao, B.	Malleswaram	Advocate, Rajupeta, Machilipatnam	J.C.
136.	Padma, Bhaskara Reddi	Gorantla	C/o. P. Bhaskara Reddi, Hindupur, Anantapur Dt.	Cong.
137.	Palavelli, Vechalapu	Chodavaram	Advocate, Chodavaram	Swat.
138.	Panduranga Rao, Chonnamsetti	Kaikalur	S/o. Narayya, Korukollu P.O. Krishna Dt.	Cong.
139.	Panduranga Reddi, D.	Giddalur	Giddalur, Kurnool dt	J.C.
140.	Papa Rao, Thammineni	Nagarikatakam	Thogaram. (Via) Amadalavalasa, Srikakulam Tq.	Cong.
141.	Papireddi, Bezwada	Allur	Buchireddipalem, Kovur Tq, Nellore Dt.	P.D.P.

GOVERNMENT ORGANIZATION

142.	Penchalaiah	Kodur	Nidiganta Bazar Street, Kodur Post, Cuddapah Dt.	Swat.
143.	Perumallu, Dasari	Achanta	Pulapalli Palkol, West Godavari Dt.	Cong.
144.	Pichaiah, Panuganti	Palwancha	Palwancha, Khammam Dt.	C.P.I.
145.	Prabhakara Chowdary, Chittoori	Rajahmundry	Communist Party Office, Rajahmundry-I.	Cong.
146.	Prabhakar Rao, Kona	Bapatla	S/o. Venkata Rao, Bapatla.	P.D.P.
147.	Prabhakara Rao, K.	Amalapuram	Amalapuram, E. G. Dt.	Cong.
148.	Prakasam, Dasri	Addanki	Nidubrolu, Guntur Dt.	Swat.
149.	Pratapa Rudra Raju	Nagur	Chinamerangi, Parvatipuram Tq.	P.D.P.
150.	Sethrucharila Pullah Reddy, N.	Kamalapuram	Kamalapuram Cuddapah Dt.	Cong.
151.	Punna Reddy, A.	Alair	Alair, Bhongir Tq. Nalgonda Dt.	J.C.
152.	Purshothama Rao,	Wardhanapet	Konkapaka Post Gopanpalli (via) Rangashaipet,	C.P.I.(M)
153.	Takkalipalli Raghava Reddy, Narra	Nakrekal	Vattimurti (via) Narketpalli, Nalgonda Dt.	Cong.
154.	Rajagopala Reddy, R.	Lakkireddipalli	Lakkireddipalli Post. Rayachoty Cud tapah Dt.	Cong.
155.	Rajamallu, Kodati	Chinnur	Chinnur, Adilabad Dt	Swat.
156.	Rajan, T.C.	Palamaner	Palamaner, Chittoor Dt.	Cong.
157.	Rajanarasimha, C.	Andole	2-4-887, Ramagopalpet, Secunderabad	Cong.
158.	Rajaram. Butti	Nustulapur	Fatehpura, Ka. innagar Dt.	Cong.
159.	Rajaram G.	Balkonda	Argul. Armoor Tk, Nizamabad Dt.	Cong.
160.	Raja Rao, M.B.	Madakasira	10-5-1/2, Masab Tank, Hydera- bad.	P.D.P.

ANDHRA PRADESH ALMANAC

Sl. No.	Name	Constituency	Address	Party affiliation
161.	Rajaratna Rao, P.	Kodumur	Talligokulapadu, Dhone Tq, Kurnool Dt.	P.D.P
162.	Rajayya, Boina,	Salur	Jannivalso Kottakki Pt, Salur Tq	P.D.P. C.P.I.
163.	Rajeswar Rao, Chennameni	Sircilla	Advocate, Karimnagar Dt.	
164.	Raju, V. B. (Minister)	Siddipet	3-6-643. Himayatnagar, Hyderabad-29	Cong.
165.	Ramachandra Rao, Kalyani	Makthal	1-1-36, Narayanpet, Mahbub-nagar Dt.	Cong.
166.	Ramachandra Goud.R.	Gooty	9/100, Guntakal, Anantapur Dt.	P.D.P.
167.	Ramachandra Reddy M.A.	Medak	Sri Lakshmi Nilayam, 6-3-871, Begumpet, Hyderabad.	Cong.
168.	Ramachandra Reddy Chinta	Ongole	Edugundlapadu Post. Ongole Tq.	Cong.
169.	Ramachandra Reddy K.	Nallamade	Advocate, Kadiri, Anantapur Dt.	Cong.
170.	Ramachandra Reddy N.	Dornakal	Jamallapally, Mahbubebad Tq. Warangal Dt.	Cong.
171.	Ramachandra Reddy Pellakurn	Atmakur	Ramanapalem, Kovur Taluk, Nellore Dt.	Cong.
172.	Ramachandra Reddy Vemareddy.	Gudur	Momidi, Gudur Tq, Nellore Dt.	Cong.
173.	Ramaiah, Kunda	Jammalamadugu	2/207, Edigapeta, Jammala-madugu, Cuddapah Dt.	Cong.
174.	Ramakrishna Chowdary. Valluri	Anaparti	Mandapete, East Godavari Dt.	Cong.

GOVERNMENT ORGANIZATION

175.	Rama Kumari Devi	Madugula	... "Ruby House" Opposite Z.P. Office, Visakhapatnam Dt.	Cong.
176.	Ramamohan Rao, Motaparthi	Dendulur	... Dendulur, Eluru Tq, W. G. Dt	Cong.
177.	Ramanatham, Kaza	Mudinepalli	... S/o. Lakshminarayana, Pedago-nnuru, Kaikalur Tq, KrishnaDt. J.C.	
178.	Ramanayya, B. V.	Allavaram	... Amalapuram, E. G. Dt.	Rep.
179.	Rama Rao, Tadde	Cheepurupalli	... Garbham P.O.Cheipurupalli Tq. P.D.P.	
180.	Rama Rao, Vobbili-setti.	Vizianagaram	... Bondada Street, Vizianagaram-2 Jan.	
181.	Rama Rao, V.	Secunderabad Cantonment	Arundathi Vilas Laxminagar, Secunderabad Cantonment.	Cong.
182.	Rama Reddi	Pargi	... Mahmmadabadu, Pargi Tq. Hyderabad Dt.	P.D.P
183.	RamasubbaReddy, Rajulapalle	Proddatur	... Advocate, 2/304, B.J.N.F. Road, Proddatur, Cuddapah Dt.	Cong.
184.	Ramaswamy, Arige (Minister)	Vikarabad	... 8-2-314, Kommarguda. Secun-derabad	Cong.
185.	Ramaswamy Reddi, Ganapa	Peddakurapadu	... Brodie pet 14th Cross road Guntur-2.	Cong.
186.	Ramaswamy Reddi, Varanasi	Punganur	... Sandam PunganurTk. Chittoor Dt.	Cong.
187.	Vacant.	Burgampad	... 40/582, "Challa House", Kurnool Dt	Cong.
188.	Rambhupal Reddi, Challe	Nandikotkur.	... Kolipara, Tenali Taluk	Cong.
189.	Ramireddy, Avuthu	Duggirala	... Samithi President, Rampachoda-varam Pt, East Godavari Dt.	Cong.
190.	Rami-Reddy, Konda modali	Polavaram	...	

ANDHRA PRADESH ALMANAC

Sl. No.	Name	Constituency	Address	Party affiliation
90.	Ramakistoo, Kastal	...	...	...
91.	Ramakistoo, Kastal	Adilabad	Communist Party Office, Adilabad Dt.	C.P.I.
92.	Ramulu, Gadpalli	Mydaram	Mantheni P. O. Karimnagar Dt.	Cong.
93.	Ramulu, Niharla	Tekkali	Palasa P. O. Tekkali Tq.	Swat.
94.	Ramulu, Nimmala	Chalakurthi	P. O. Chalakurthi, Miryalguda Tq. Nalgonda Dt.	P.D.P.
95.	Ranga Reddy, Tummalu	Armoor	Ankusapur (Via) Velpur, Nizamabad Dt.	Cong.
96.	Rao, C. V. K.	Kakinada	Tilak Street, Kakinada. E.G. Dt.	Ind.
97.	Rathnamma, Reddigari	Ramayanpeta	3-1-49, Medak, P.O.	Cong.
98.	Ratnasabhapathy, B.	Rajam Peta	Ellampet P.O. Rajampet Tq. Cuddapah Dt.	J.C.
99.	Rosayya Naidu, Changanti	Kondapi	Kamepalli, Kandukur Tq. Nellore Dt.	Cong.
100.	Saidiah, Gajwelli	Gajwel	Kodakandla, Gajwel Tq. Medak Dt.	Cong. J.C.
101.	Sambasiva Raju, Penumatcha	Gajapatinagaram	Moida, (via) Nellimarla	...
102.	Sanjiva Reddy, G.	Sirpur	6-B/3 R T, L.I.G.H., Barkatpura, Hyderabad.	Cong.
103.	Santhaiah, Kathula	Palair	Mamillagudem, 9-L.I. G.H., Khammam	Cong.
104.	Santosh	Mulug	Ramanajapur Post, Mulug Tq.	Cong.

GOVERNMENT ORGANIZATION

...	Satyana Rayana, Gannamani Alias,	...	...	...	...
206.	Sarojini Pulla Reddy, B.	Malakpet	visakhapatnam-2	maikapuram, visakha-5	C.P.I.(M).
207.	Satyana Rayana, Chowdary	Ponduru	...	Bungalow No. 1, Bowenpalli, Secunderabad.	Cong.
208.	Satya Narayana, Didge,	Chevella	...	Shermohammedpuram (via) Gujaraathipeta, Srikakulam Dt.	Swat
209.	Satyana Rayana, Gannamani Alias,	Tanuku	...	Maharajpet, Chevella Tq. Hyderabad Dt.	J.C.
210.	Satyana Rayana, murthy Nagireddi	Flamanchilli	...	Undrajavaram, Tanuku Tq.	P.D.P.
211.	Satyana Rayana, Teegala	Mahbubabad	...	Dimili, Elamanchili Tq	Ind
212.	Satyana Rayana, Thangi	Srikakulam	...	Kankar Road 5-4-99, Mahbubabad, Warangal Dt.	C.P.I.
213.	Satyana Rayana Rao, ... Chennamaneni.	Metpalli	...	Advocate, Main Road, Srikakulam Swat.	Swat.
214.	Satyana Rayana Rao, ... Gogineni	Yellandu	...	Itkyal, Jagtial Tq, Karimnagar Dt.	Ind.
215.	Satyana Rayana Raju, P. S.	Yemmiganur	...	S/O. Papaiah, Jublipura, Khammam Dt.	Cong.
216.	Satyana Rayana Raju, ... Rudraraju.	Narasapur	...	Kosigi, Adoni, Kurnool Dt.	Cong.
217.	Seetharamachandra- ... Vara Prasaba Murthy Raju, Ch.	Ungutur	...	Chinchinada, Natsapur Tq. West Godavari Dt.	C.P.I. (M)
			...	Chinnanindrakolanu, Tadepalligudem, West Godavari Dt.	Cong.

No.	Name	Constituency	Address	Party affiliation
47.	Uppala Malsoor	... Suryapet	... Sirkonda P.O. Suryapet Tq. Nalgonda Dt.	C.P.I. (M)
48.	Vadapalli, Ealy	... Tallarevu	... Ramachandrapuram, East Gobavari Dt.	Cong.
49.	Vasudevarao, Akkiraju	... Huzurnagar	... Congress Office, Huzurnagar, Nalgonda Dt.	Cong.
50.	Vasudev Krishnaji Naik (Jy. Speaker)	... Gagan Mahal	... 15-3-5, Gowliguda, Hyderabad.	Cong.
51.	Veeranna, Kandru	... Burugupudi	... Chinakondepudi P.O. Rajahmundry Tq.	Cong.
52.	Veeraraghava-rao, Mudragada	... Prathipadu	... Kirlampudi (via) Samalkota, East Godavari Dt.	J.C.
53.	Veera Raghavulu, Taneti (Minister)	... Gopalapuram	... Narayanapuram, Tadepalligudem Tq. W. G. Dt.	Cong.
254.	Veera Redji, Bijivemula	... Badvel	... Chennampalle (via) Badvel, Cuddapah Dt.	Cong.
255.	Veeraraju, Nunna	... Ramachandrapuram	... Draksarama, Ramachandrapuram, Tq. E. G. Dt.	P.D.P.
256.	Vema Reddi K. V.	... Kadiri	... Advocate, Anantapur Dt.	Cong.
257.	Vemayya, S	... Sarvepalli	... W-1-72, Nawabpet, Nellore-2	C.P.I.
258.	Vengaiiah, Chappidi	... Markapur	... Pedda Nallakalva, Giddalur Tq. Kurnool Dt.	Ind.
259.	Vengala Rao, Jalagam	... Vemsoor	... Mamillagudem P.O. Khammam Dt.	Cong.
260.	Venkataiah, Dandimarani	... Madhira	... Madhira Khammam Dt.	Cong.

261.	Venkatakrishnam Raju, Vatchavi	... Tuni	... Tuni, East Godavari Dt.	Cong.
262.	Venkata Krishnamurthy, Kotrika	... Dhone	... Oil Mill Owner, Dhone, Kurnool Dt.	P.D.P. Cong.
263.	Venkatanarayana, Maley	... Eluru	... Western Street, Eluru.	Cong.
264.	Venkata Rao, Channamolu	... Mylavaram	... Velageru P.O. Vijaywada Tq. Krishna Dt.	Cong.
265.	Venkata Rami Naidu Alias Venkata Naidu Maricherla	... Parvathipuram	... Ravivalasa (B.O.) (Via) Parvathipuram, Srikakulam Dt.	Swat.
266.	Venkataratnam, Chetukuvada	... Sampara	... Kondivaram, (Via) Pithapuram, East Godavari Dt.	Cong.
267.	Venkata Rattaiah, Gadde	... Tadikonda	... Post Box. 122, Mangalagiri Road, Guntur	Cong.
268.	Venkata Reddi	... Panyam	... 63/3 Advocate, Nandyal, P. O. Kurnool Dt.	Cong.
269.	Venkata Reddi, Gade...	... Parchur	... Pavuluru P.O. (Via) Eimokollu, Guntur Dt.	P.D.P.
270.	Venkata Reddi, Pulli	... Kanigiri	... Musunur, Kothapalli, Kanigiri Tq. Nellore Dt.	Cong.
271.	Venkatareddi, Sangitha	... Pamarru	... Pinapalla, Ramachandrapuram Tq. East Godavari Dt.	Cong.
272.	Venkatasubbaiah, Orepailli	... Venkatagiri	... 260, Bheemavaram (Via) Naidupet, Venkatagiri Tq. Nellore Dt.	P.D.P.
273.	Venkatasubbaiah, Pittla	... Sullurpet	... Mannarpollur P.O. (via) Sullurpet, Nellore Dt.	P.D.P.

Sr. No.	Name	Constituency	Address	Party affiliation
274.	Venkataswarya ... Subbaraju, Mantena	Kothapeta ...	Kothapeta, E.G. District.	Cong.
275.	Venkatesam, D. ...	Kuppam ...	2-3-163. Kuppam, Chittoor Dt. P.D.P.	
276.	Venkatesan, Pallem ...	Dharmavaram ...	Sale Street, Dharmavaram P.O.	
277.	Venkateswarlu, ... Kotta	Gurajala ...	Anantapur District.	Swat.
278.	Venkateswara Rao, ...	Vuyyuru ...	Muthyalampadu P.O. Gurazala Tq. Guntur Dt.	Cong.
279.	Kadiyala ... Venkata Rao,	Vemur ...	Mulakalapalli Madhurapuram, Gannavaram Tq. Krishna Dt.	J.C.
280.	Yadlapati ... Venkareddi	Kovur ...	Advocate, Gandhinagar, Tenali	Swat.
281.	Vemareddi ... Vijayakumar Raju,	Bhimavaram ...	Papireddipalem, Nellore Dt	Cong
282.	Bhupatiraju. ... Vijaya Narasimha	Attili ...	Venura, Bhimavaram Tq. West Godavari Dt.	Ind.
283.	Raju, Kalidindi ... Vijayarama Gajapathi	Bhimunipatnam...	Srungavaruksham, Bhimavaram Tq. West Godavari Dt.	Cong.
284.	Raju Pusapati. ... Vimala Devi, Nema...	Chennur ...	Fort (17-11-13) Vizianagaram	Cong.
285.	Gommula. ... Vishnumurthy, Gaddi.	Chintalapudi ...	Veddekothapalli via Torur, Warangal Dt.	Cong.
286.	Vithal Reddy ...	Jukkal ...	Chintalapudi, West Godavari Dt. Cong. Santapoor Village Madnoor Tq.	
287.	Bhanoji Rao. A. V. ...	Visakhapatnam-1	Nizamabad Dt.	Ind.
288.	M. Godfrey ...	Nominated ...	Daba Gardens, Visakhapatnam-4	Cong.
		(Anglo-Indian)	4-3-471, Bank Street. Hyderabad.	

Vacant : Tandur, Burgampad and Rapur

Sl. No.	Name	Constituency	Address	Party affiliation
274.	Venkataswarya Subbaraju, Mantena	Kothapeta	Kothapeta, E.G. District.	Cong.
275.	Venkatesam, D.	Kuppam	2-3-163. Kuppam, Chittoor Dt.	P.D.P.
276.	Venkatesan, Pallem	Dharmavaram	Sale Street, Dharmavaram P.O. Anantapur District.	P.O.
277.	Venkateswarlu, Kotta	Gurajala	Muthyalampadu P.O. Gurazala Tq. Guntur Dt.	Swat. Cong.
278.	Venkateswara Rao, Kadiyala	Vuyyuru	Mulakalapalli Madhurapuram, Gannavaram Tq. Krishna Dt.	J.C.
279.	Venkata Rao, Yadiapati	Vemur	Advocate, Gandhinagar, Tenali	Swat.
280.	Venkareddi Vemareddi	Kovur	Papireddipalem, Nellore Dt	Cong
281.	Vijayakumar Raju, Bhupatiraju.	Bhimavaram	Venura, Bhimavaram Tq. West Godavari Dt.	Ind.
282.	Vijaya Narasimha Raju, Kalidindi	Attili	Srungavaruksham, Bhimavaram Tq. West Godavari Dt.	Cong.
283.	Vijayarama Gajapathi Raju Pusapati.	Bhimunipatnam	Fort (17-11-13) Vizianagaram	Cong.
284.	Vinola Devi, Namar. Gonnula.	Chennur	Veddekothapalli via Torru, Warangal Dt.	Ind.
285.	Vishnumurthy, Gaddi.	Chintalapudi	Chintalapudi, West Godavari Dt.	Cong.
286.	Vithal Reddy	Jukkal	Santapoor Village Madnoor Tq. Nizamabad Dt.	Ind.
287.	Bhanoji Rao. A. V.	Visakhapatnam-1	Daba Gardens, Visakhapatnam-4	Cong.
288.	M. Godfrey	Nominated (Anglo-Indian)	4-3-471, Bank Street. Hyderabad.	

Vacant : Tandur, Burgampad and Rapur

Officers of the Andhra Pradesh Legislative Council

Chairman ... Gottipati Brahmayya
Deputy Chairman ... M. Anandam.

Members of the Legislative Council

30 Members whose term of office shall expire on 30th June, 1968

Sl. No.	Name of the Member	Constituency	Address
1.	Abu Yusuf, (Cong.)	Assembly	Bazaar Noor-ul omra, C.I.B. Quarter No. 9, Hyderabad.
2.	Ahmadullah Qadri, Sayyed, (Cong.)	Nominated	3-3-116, Chappal Bazaar, Kachiguda, Hyderabad.
3.	Appanna Dora, Appasani (Cong.)	Visakhapatnam Local Authorities.	Khamma Street, Vizianagaram, Visakhapatnam Dt.
4.	Brahmayya, Gottipati (Cong) (Chairman.)	Assembly.	"Raghava Sadan" Somajiguda, Raja Bhavan Road, Hyderabad.

Abbreviations Used

1. Cong. Congress.
2. N. D. National Democrat.
3. Com. Marx Communist Marxists.
4. Ind. Independents.
5. C.P.I. Communist Party of India
6. C.U.C. Communist Unity Committee
7. Swat Swatantra.
8. J.S. Jana Sangh.

Sl. No.	NAME OF THE MEMBER	CONSTITUENCY		ADDRESS
		Local Authorities	Local Authorities	
5.	Chenna Kesava Reddi Madadi (Cong.)	Karimnagar Local Authorities.	...	Gudur P.O. (Via) Kamalapur, Huzurabad Tq. Karim nagar Dt.
6.	Ganga Raju, N.V. (Cong)	Visakhapatnam Local Authorities.	...	Gajapatinagar, Vizianagaram Tq. Visakhapatnam Dt.
7.	Gautam, M.B. (Cong). ...	Assembly.	...	Adi-Hindu Bhavan, Victory Playground, Hyderabad.
8.	Govinda Rajulu, Darapu (C.U.C.)	Assembly.	...	Kothur, Srikakulam Dt.
9.	Hanumantha Reddi Ch. (Cong.)	Nizamabad Local Authorities...	...	Chowpalli Post, Armur Tq. Nizamabad Dt.
10.	Jagannatham, N.V. (Cong)	Assembly	...	23-4-227, Sultan Shahi, Hyderabad.
11.	Kanakaraju, Toleti, (Cong.)	Circars Central Graduates.	...	Danavapur, Rajahmundry, E. G. Dt.
12.	Kurmacharyulu, T.P.V. (N.D.)	Circars North Teachers.	...	Z.P.H. School, Srikurmam, Srikakulam Dt.
13.	Lakshmaiah, Chennupati ... Com. M.	Guntur Teachers	...	Suryaraopet. Vijayawada-2.
14.	K. Kanakaratnamma (Cong)	Warangal Local Authorities.	...	3/405, Kumarpalli Village, Hanumakonda, warangal-Dt.
15.	Lazarus, H. M. (Cong.)	Nominated Assembly	...	'Sunny Side' Waltair.
16.	Malakonda Reddi, S. (Cong.)	...	...	Owner, Slate Mines, Kotha kudipi podili Tq. Nellore.
17.	Mohd. Arif Khan (Cong)	Adilabad Local Authorities.	...	Pleader, District Congress Committee, Adilabad.
18.	Narayana Murthy, Boddipalli (N.D.)	Srikakulam Local Authorities	...	Post Amadalavalasa, Srikakulam Dt
19.	Narsing Rao, Mandumula (Cong.)	Nominated Local Authorities	...	Hyderguda, Hyderabad.
20.	Ramachandraiah, Neelam (Com. M.)	Assembly.	...	Communist Party Office, Fort Kurnool.
21.	Rama Murthy, Turumalla (Cong.)	Srikakulam Local Authorities.	...	Chairman, Municipal Council, Parvathipuram, SrikakulamDt.
22.	Ramaiah, Paladi (Cong.)...	Assembly.	...	Gandhinagar, Kurnool.
23.	Ramaswamy, Thota (Cong.)	Assembly	...	Minister for Co-operation, Hyderabad.
24.	Shankar Rao, Ch. (Cong.)	Nalgonda Local Authorities.	...	C/o District Congress Office, Nalgonda.
25.	Somayajulu, Nishtala (N.D.)	Circars North Graduates.	...	27-3-29, Dykes Tank Road. Maharanipet P.O. Visakhapatnam.
26.	Sreeram Murthy, P. (C.U.C.)	Krishna Teachers	...	'Vinaya Vihar', Kasturibapet, Vijayawada-2.
27.	Subrahmanyam, D.S. (Ind.)	Circars Central Teachers.	...	Principal, Sir C. R. Reddi. College, Eluru, W. G. Dt.
28.	Sudhakar Rao, G.V. (Cong)	Assembly	...	Shobhakruth, Cheekotigardens Begumpet, Secunderabad.
29.	Swatna Rama Rao, Tadepalli (N.D.)	Circars South Graduates.	...	Advocate, 'Vijayadhwaja', Vijayawada-2.
30.	Sri Venkata Sesha Sastry, Gadiyaram, (Cong)	Nominated	...	D-23 Co-operative Colony, Proddatur, Cuddapah Dt.

30 Members whose term of office shall expire on 30th June 1970

Sl. No.	Name of the Member	Constituency	Address
1.	Adinarayana Rao, Bojja (Cong.)	Guntur Local Authorities Assembly	Gurazala, Palnad Tq, Guntur Dt
2.	Appalaswamy, Gudivada (Cong.)	Assembly	Krishnanagar, Maharanipeta P.O. Visakhapatnam-2.
3.	Chithambara Reddi A. (Cong.)	Assembly	Anantapur, Anantapur Dt.
4.	Durgamallikarjuna Prasada Rao, Nandury (Com, M.)	Assembly	64-A, old M.L.A. Qs., Hyd-1
5.	Heeralal Moria (Cong.) ...	Khammam Local Authorities.	Mohan Road. Khammam.
6.	Jashua, Gurram (Cong.)	Nominated	Gopalakrishnayya Thota, Guntur
7.	Kamalakumari, Vallabhaneni (Cong.)	Krishna Local Authorities.	Zamigolvepalli, Gudivada, Tq. Krishna Dt.
8.	Kotaiiah, Akkala (Cong.)	Assembly	Perala, Chirala P.O. Guntur Dt.
9.	Koti Reddi, K. (Cong.)	Nominated	Barrister, Cuddapah.
10.	Krishnamurthi, Ghanta (Cong.)	Krishna Local Authorities.	Motur, Gudivada Tq. Krishna Dt.
11.	Lakshma Reddi, S. (Cong.)	Medak Local Authorities.	Jogipet Post Andole Tq. Medak Dt.
12.	Makhdoom Mohiuddin (C.P.I.)	Assembly	39/A old M.L.A.'s quarters, Hyderguda, Hyderabad.
13.	Manik Rao, M. (Cong.) ...	Hyderabad Local Authorities.	5-2-442, Risala Abdulla's, Hyderabad.
14.	Pratap Reddi, K. V. (Cong.)	Assembly	New Town, Mahbubnagar.

ANDHRA PRADESH ALMANAC

15.	Ramachandra Reddi, K. (Cong.)	Mahabubnagar Local Authorities.	Mammayipalli Village, Shainpalli Post (via) Gopalpet, Mahbubnagar. Dt
16.	Ramakrishnaiah, S. (Com. Marx)	Ryalaseema East Teachers.	16/506, Kasturidevinagar, Nellore.
17.	Ranga Reddi, Y.C. (J.S.)	Ryalaseema East Graduates.	Gudur, Nellore Dt.
18.	Satyanarayana, Erram (Cong.)	Hyderabad Local Authorities.	16-10-27/93 Near Kaman, Municipal Colony Malakpet Hyd-24.
19.	Satyanarayana Rao Venigalla (Cong.)	Guntur Local Authorities.	Duggirala, Tenali T.Q. Guntur Dt.
20.	Siddha Reddi Seelam (Cong.) (Minister)	Assembly	Eruvaka Somajiguda Hyderabad.
21.	Subbaraju, B.V. (Cong) ...	Ryalaseema West Graduates.	1/40 Second Road, Anantapur.
22.	Subbaiah, Meda (Cong.) ...	Assembly	Anantapur.
23.	Subramanyam, K. (Cong.)	Mahabubnagar Local Authorities.	Kollapur (P.O.) Mahbubnagar Dt.
24.	Veeraraghava Reddi, Ponnalur (Cong.)	Nellore Local Authorities.	Ward No.12, Gudur Nellore Dt.
25.	Venkatakrishna Reddi, Siddareddy (Cong)	Nellore Local Authorities.	Main Street, Gudur Nellore Dt.
26.	Venkatanarayana, Pydah (Swa.)	Assembly	Jawahar Street, Kakinada E.G. Dt.
27.	Venkatasubbarao, Alur alias Chakrapani (Ind.)	Nominated	No. 2 & 3, Arcot Road, Vadalani, Madras-26.

Sl. No.	Name of the Member	Constituency	Address
28.	Venkataswamy Reddi, Padileti (Cong.)	Assembly	Palagodu, Venkatagiri Tq. Nellore Dt.
29.	Vijayarana Raju, V. (C.P.I.)	Raylaseema West Teachers	Editor, "Upadhyaya" Seven Roads, Cuddapah.
30.	Zubeda Begum (Cong.)	Nominated	Begumpet, Hyderabad.

30 Members whose term of office shall expire on 30th June 1972

Sl. No.	Name of the Member	Constituency	Address
1.	Anandam, M. (Cong.)	Telangana Graduates	10-2-96 Marredpalli, Secundera bad-26.
2.	Dy. Chairman Annapurnaamma, Alluri (Cong.)	Assembly	'Rockdale' Compound, Somaji guda, Hyderabad 4.
3.	Azamuddin, M. (Cong.)	Nominated	4-1-576, Troop Bazaar, Hyderabad.
4.	Chengal Reddi, Akepati (Cong.)	Cuddapah Local Authorities.	Advocate, Rajampet, Cuddapah
5.	Joseph, Appikatla (Cong.)	Assembly	Dandayudhapuram, Nellore.

6.	Kondiah Chowdary Divi (Swat.)	Assembly	Advocate, Kandukur, Nellore Dt.
7.	Krishna Rao, Y.V. (C.P.I.)	Assembly	154, New M.L.A. Quarters, Hyderabad-22.
8.	K. Vijayabhaskara Reddi (Minister) (Cong.)	Assembly	D.G.P. Bungalow Begumpet, Hyderabad
9.	Lingayya, I (Cong.)	Assembly	Barkathpura, Lingampalli Chow-rastha, 3-4-526/1, Hyderabad.
10.	Mutha Reddi. (Ind)	Telangana East Teachers.	5/640, Lashkar Bazar, Hanum konda, Warangal Dt.
11.	Nagabhushanam, G. (Cong)	Anantapur Local Authorities.	Advocate, Rayadurg, Anantapur Dt.
12.	Narapa Reddi, Ronda (Cong)	Assembly	Ongole, Guntur Dt.
13.	Narasimha Reddi P. (Cong)	Chittoor Local Authorities	Vice-Chairman, Zilla Parishad, Chittoor
14.	Nathaniel Milari Williams (Cong)	Assembly	Renigunta, Chittoor Dt.
15.	Panchajanyam, T. (Ind)	Hyderabad Graduates	3-4-854, Barakatpura, Hyderabad.
16.	Reghavachari, V. P. (N.D)	Telangana West Teachers	Family, Quarter No. 169, New M.L.As. Quarters, Hill Fort, Hyderabad.
17.	Rama Rao V. (J.S.)	Hyderabad Graduates	25. A, old M.L.A. Q.S, Hyd.
18.	Raghotham Reddy, J. (Cong)	Assembly	173, Fateh Maidan North Road, Hyderabad-4.

Sl. No.	Name of the Member	Constituency	Address
19.	Ranga Reddi, Pidathala (Cong) ...	Kurnool	Giddalur Kurnool Dt.
20.	Rudraraju Ramalinga Raju (Minister) (Cong.)	Local Authorities. East Godavari	C. J. Bunglow, Begumpet, Hyderabad
21.	Sambhu Prasad, S. (Ind.) ...	Local Authorities. Nominated	Editor, Andhra Patrika, Madras.
22.	Satyanarayana Murthy Vundavalli (Cong.)	East Godavari Local Authorities. Assembly	Rayavaram, Ramachandrapuram Tq. E.G. Dt.
23.	Shamsheer Baig, M. (Cong.) ...	Assembly	45/169, Narasimhareddi Nagar, Kurnool.
24.	Shyamala Devi, A. (Cong.) ...	Nominated	Chairman, State Social Welfare Board, Hyderabad.
25.	Subbarma Katta (Cong.) ...	Chittoor Local Authorities.	Balaji Colony, Tirupati, Chittoor Dt.
26.	Subba Rao, Chowdary, Chitturi (Ind.) ...	West Godavari Local Authorities.	Tanuku, West Godavari Dt
27.	Subba Reddi Madduri (Cong) ...	Kurnool Local Authorities.	Brahmanakotkur, Nandikotkur Tq. Kurnool Dt.
28.	Suryachandra Rao. P. (Cong.) ...	Nominated	President, Sangeet Natak Academy, A.P. Hyderabad.
29.	Vani Ramana Rao, Peeraka (Cong.)	Assembly	Bhadrachalam, Khammam Dt.
30.	Veerabhadra Rao, Tummalapalli (Cong) ...	West Godavari Local Authorities	Pippara, (via) Pentapadu, W.G. Dt.



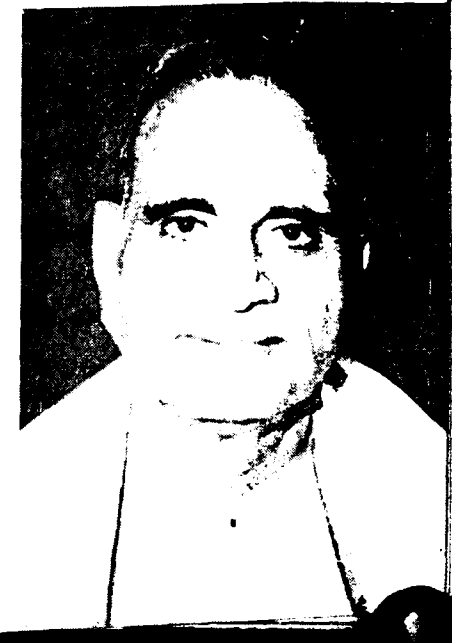
PATTAM A. THANU PILLAI
Governor

B. V. SUBBA REDDI
Speaker, Assembly



K. BRAHMANANDA REDDI
Chief Minister

G. BRAHMAYYA
Chairman, Council

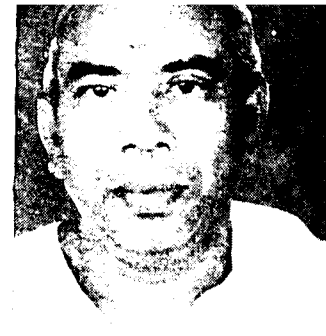


GOVERNMENT OF ANDHRA PRADESH

(See page 180)

CABINET MINISTERS

(Chief Minister on the previous page)



T. V. Raghavulu



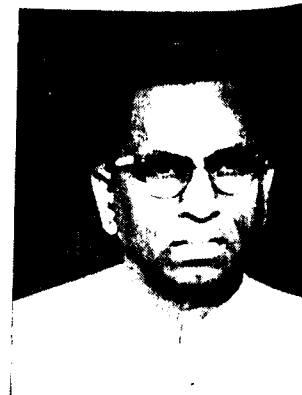
K. Laxman Babuji



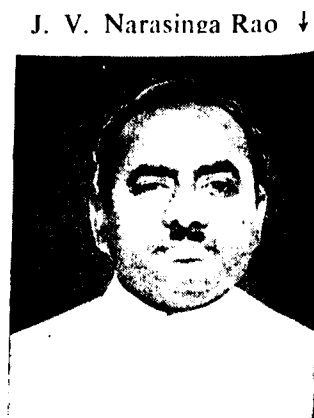
P. Thimma Reddi ↑



T. Ramaswamy ↓



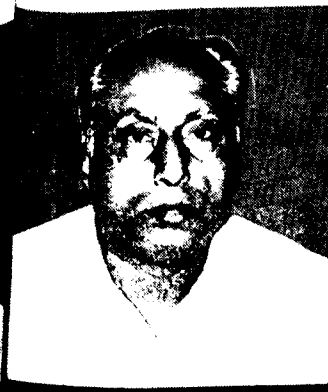
V. B. Raju ↑



J. V. Narasinga Rao ↓



P. V. Narasimha Rao ↑



N. Chenchurama Naidu ↓



B. V. Gurumurti ↑



K. Vitiya Bhaskara Reddi ↓

(Contd.
Next Page)



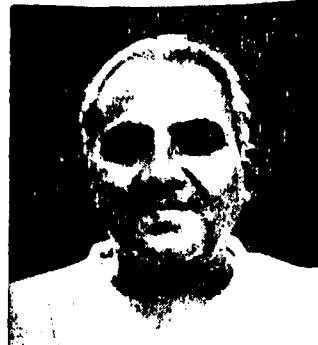
Arigey Ramaswamy ↓



K. V. Narayana Reddi ↑



R. Ramalinga Raju



V. Satyanarayana Rao ↓



Md. Ibrahim Ali ↑



S. Siddha Reddi

Members of the Lok Sabha From Andhra Pradesh

S. No.	Name of Member	Name of Constituency	Address
1.	N. G. Ranga	Srikakulam	Sompeta, P.O. Srikakulam, District.
2.	Visweswara Narasimha Rao	Parvathipuram	Vanduvu Thudi Post, (Via) Veeraghattam Srikakulam District.
3.	Karri Narayana Rao.	Bobbili	Santha Narasipuram Veeraghattam Post
4.	Tenneti Viswanatham	Visakhapatnam	27-4-49, Main Road, Visakhapatnam-2.
5.	B. K. Radhabai	Bhadrachalam	Ramavaram, Kothagudem.
6.	M. Suryanarayana Murthy	Anakapalli	Kondakarla Post, (via) Anakapalli.
7.	Tirumala Rao, M.	Kakinada	Gandhinagar, Kakinada
8.	D. Satyanarayana Raju	Rajahmundry	Bommur, Rajahmundry.
9.	Murthy, B. S.	Amalapuram	Nagaram, Razole Taluk.
10.	Darla Balaramaraju	Narasapur	Kavitam, Poduru (P.O.) Narasapur
11.	K. Suryanarayana	Eluru	Asoknagar, Eluru.
12.	Maganti Ankineedu	Gudivada	13/446-A, Gudivada.
13.	K. L. Rao	Vijayawada	9, Janpath, New Delhi.
14.	Y. Ankineed Prasad	Machilipatnam	Challapalli, Divi Taluk.
15.	Kongara Jaggaiah	Ongole	First Main Rd., G. Nagar, Madras-20.
16.	Kotha Raghuramaiah	Guntur	Chandramouli Nagar, Guntur.
17.	Maddi Sudarsanam	Narasaraopet	Door No. 12-35-88, Kothapet, Guntur-1.
18.	Rebala Dasaratha Rama Reddy	Kavali	Advocate, Wahabpet, Nellore.
19.	Bhajanra Anjanappa	Nellore	C/o. E. Pattabhirami Reddy, B.A., B.L., Pathekhanpet, Nellore.
20.	C. Dasappa	Tirupathi	3-92, T. N. V. Reddy St., Madanapalli,

S. No.	Name of Member	Name of Constituency	Address
21.	N. P. Chengalraya Naidu	Chittoor	Naidu Buildings, Chittoor.
22.	P. Parthasarathy	Rajampet	Kodur Post & Railway Station.
23.	Y. Eswara Reddy	Cuddapah	Homespet, Proddatur.
24.	Neelam Sanjiva Reddi (Speaker)	Hindupur	Illur, Anantapur Taluk.
25.	Ponnappati Antony Reddy	Anantapur	Padmatyaleru, Anantapur Taluk.
26.	Y. Gadilingana Gowd	Kurnool	Devi Nivas, Yemmiganur Post.
27.	Pendekanti Venkata Subbaiah	Nandyal	Sanjamala (P.O.) Koilkuntla Taluk.
28.	J. B. Muthyal Rao	Nagarkurnool	1-11-243, Shamlal Buildings, Hyderabad.
29.	J. Rameshwar Rao	Mahbubnagar	Rajanagaram Village, Wanaparthy Post,
30.	G. S. Melkote	Hyderabad	3-5-1105/1, Gopal Clinic, Narayanaguda, Hyderabad.
31.	Bakar Ali Mirza	Secunderabad	10-2-331, Maredpalli, Secunderabad.
32.	G. Venkata Swamy	Siddipet	H. No. 1-8-75, Chikkadpalli, Hyderabad.
33.	Sangam Laxmi Bai	Medak	H. No. 17-1-209, Hyderabad City,
34.	M. Narayana Reddy	Nizamabad	Advocate, Khaleelwadi, Nizamabad.
35.	P. Ganga Reddy	Adilabad	P. O. Nirmal, Adilabad Dt.
36.	M. R. Krishna	Peddapalli	6-60, Alwal Bollaram.
37.	Javadi Ramapathi Rao	Karimnagar	Sarveyareddipalli P. O. Thirmalapur.
38.	Surendar Reddy	Warangal	Post Maripeda, (via) Torur.
39.	T. Lakshmi Kantamma	Khammam	Member of Parliament, Khammamet.
40.	Mohd Younus Salim	Nalgonda	525, Troop Bazaar, Hyderabad.
41.	G. S. Reddy	Miryalguda	Panchayati Samiti Office, Huzurnagar.

Members of Rajya Sabha from Andhra Pradesh

1. M. V. Bhadram
2. J. C. Nagi Reddy
3. P. K. Kumaran
4. Akbar Ali Khan
5. Seeta Yudhvir
6. Kota Punnaiah
7. Mary Naidu
8. Chenna Reddy M.
9. Yashoda Reddy
10. K. Vengala Reddy
11. Yerrapureddi Adinara-
yana Reddy
12. N. Narotham Reddy
13. K.P. Mallikarjunudu
14. Narla Venkateswara
Rao
15. Yella Reddy
16. K. V. Raghunatha
Reddy
17. D. Sanjivayya
18. C. Ammana Raja,

Municipal Colony, Visakhapatnam-1.
Tadpatri, Anantapur District.
17-6-10, Ramalayam Street, Sitampet,
Rajahmundry (A. P.)
Stone House, Sifabad, (A.P.) Hyderabad.
Daily Milap, 55-5-475, Mukaraamjahi
Road, Hyderabad.
Khammameth, Khammam Dist.
Arogya Nilayam, Nellore (A.P.)
Lalguda, Hyderabad-17.
3-6-767, Himayatnagar, Hyderabad.
Narasaraopet, Guntur District.
Rayachoti, Cuddapah District (A.P.)
3-5-697, Hyderguda, Hyderabad.
Buttayyapet, Machilipatnam.
Editor "Andhra Jyoti" Post Box No. 334
Vijayawada-2.
336-43, Viveknagar, Chikkadpalli,
Hyderabad.
Virur, Nellore District (A.P.)
2, Jantar Mantar Road, New Delhi.
3-6-733, Himayatnagar, Hyderabad-1.

HIGH COURT OF JUDICATURE OF ANDHRA PRADESH

Justice	P. Jaganmohan Reddi	Justice	S. Obula Reddi
	(CHIEF JUSTICE)		Avula Sambasiva Rao
"	P. Basireddi	"	V. K. Vaidya
"	N. Kumarayya	"	C. Kondiah
"	H. Anantasayana Iyer	"	Alladi Kuppuswami
"	K. V. L. Narasimham	"	O. Chinnappa Reddi
"	Sherfuddin Ahmed	"	Y. Venkateswara Rao
"	E. Venkatesam	"	A. D. V. Reddi
"	Gopala Rao Ekbote	"	P. Satyanarayana Rao
"	Mohammed Mirza	"	M. Seshachalapati
"	M. Krishna Rao		
Registrar	M. Ramachandra Raju		
Advocate General	B. V. Subrahmanyam		
Public Prosecutor	Vacant		

GOVERNMENT OF ANDHRA PRADESH Governor Pattom A. Thanu Pillai

CABINET MINISTERS

1. K. Brahmananda Reddi, Chief Minister (General Administration, Services, Elections, Major Industries Police, & Commercial Taxes, Power, Transport, Finance & Tribal Welfare, Home)
2. P. Thimma Reddi, Minister (Agriculture & Animal Husbandry)
3. V.B. Raju, Minister (Revenue, Civil Supplies & Rationing)
4. T. Ramaswamy, Minister (Panchayati Raj, Fisheries and Small Savings.)
5. J.V. Narsinga Rao, Minister (Public Works, R and B, Communications, Ports, Public Gardens & City Water Works)
6. T. V. Raghavulu, Minister (Education)
7. Konda Laxman Bapuji, Minister (Labour, Information and Public Relations & Tourism)
8. P. V. Narasimha Rao, Minister (Health & Medical and Legislature)
9. B. V. Gurumurthy, Minister (Industries)
10. N. Chenchurama Naidu, Minister (Municipal Administration, Forests & Accommodation Control.)

Cabinet Ministers (Contd.)

11. K. Vijaya Bhaskhara Reddi, Minister (Co-operation)
12. R. Ramalinga Raju, Minister (Endowments)
13. S. Siddha Reddi, Minister (Med & Minor Irrigation)
14. K. V. Narayana Reddy, Minister (Planning & Law)
15. Md. Ibrahim Ali, Minister (Prisons)
16. Arige Ramaswamy, Minister (Social Welfare)
17. V. Satyanarayana Rao, Minister (Excise & Prohibition)

Principal Officers: Government of Andhra Pradesh

SECRETARIAT*

General Administration Department

Chief Secretary	M. T. Raju, I.C.S.
Jt. Secretary	N. K. Seth, I.A.S.
Jt. Secretary	J. Jayarama Rao
Dy. Secretary	S. Satyanarayana
Dy. Secretary	S. A. Abbas
Dy. Secretary	Syed Hashim Ali, I.A.S.
Addl. Dy. Secretary	V. Chandramouli.

Board of Revenue

First Member	V. K. Rao, I.C.S.
Second Member	V. Rajeswara Rao, I.A.S.
Third Member	Syed Ali, I.A.S.
Fourth Member	Bhagawan Das.
Fifth Member	S. R. Vittal Rao

Education Department

Secretary	S. R. Ramamurti, I.A.S.
Dy. Secretary	T. Lakshma Reddi, I.A.S.
Dy. Secretary	Baqar Mahmood, B.A.

Finance Department

Secretary	N. Ramesan, I.A.S.
Jt. Secretary	P. L. Shivaram, I.A.S.
Jt. Secretary	Mir Sajjad Ali, H.C.S.
Dy. Secretary	K. V. S. Suryanarayana, I.A.S.
Special Officer	Mohamood Ali Khan
Dy. Secretary	B. V. Gopala Rao
Dy. Secretary	G. Jacob

*As on Oct. 29, 1967

Food & Agriculture Department	
Secretary	S. A. Quader, I.A.S.
Jt. Secretary	C. N. Sastry, I.A.S.
Dy. Secretary	Syed Ghulam Rasool
Dy. Secretary	M. Sreeramulu
Dy. Secretary	Gulam Ahmed
Health, Housing & Municipal Administration Department	
Secretary	K. B. Lal, I.A.S.
Jt. Secretary	Hashim Ali Khan, I.A.S.
Dy. Secretary	Abadullah Sayeed, I.A.S.
Dy. Secretary	D. Kamayya, B.Sc.
Home Department	
Second Secretary to Government & Home Secretary	Vaccant
Jt. Secretary	G. M. Ahmed.
Dy. Secretary	P. Jayarama Reddi
Industries Department	
Secretary	M. A. Abbasi, I.A.S.
Addl Secretary	B. L. Oates
Technical Officer	D. K. Brahma.
Law Department	
Secretary-in-charge	J. Veeraswami
Jt. Secretary	A. Shankara Reddi
Draftsman	S. V. Subba Rao.
Dy. Secretary	G. Ramachandra Naidu.
Dy. Secretary	V. V. V. Satyanarayana
Dy. Secretary	L. V. A. Dikshitulu
Legislature Secretariat	
Secretary	G. V. Chowdary, Bar-at-Law.
Panchayati Raj Department	
Secretary	A. Krishnaswamy Iyengar, I.A.S.
Dy. Secretary	M. M. Haq, I.A.S.
Dy. Secretary	Kanya Pershad
Planning Department	
Jt. Secretary	B. P. R. Vithal, I.A.S.
Dy. Secretary	S. K. M. Hussain, I.A.S.
Dy. Secretary	K. V. Natarajan, I.A.S.

Planning Department (Contd.)

Addl Dy. Secretary	M. V. S. Prasada Rao, I.A.S.
Dy. Director (Econ)	V. Ramana Rao.
Dy. Director (Eval)	M. P. Damodaram.
Dy. Director	N. Lakshmiprasad.

Public Works Department

Special Secretary	A. Krishnaswami, I.A.S.
Additional Secretary (Projects Admn)	G. A. Narasimha Rao
Jt. Secretary	V. Madhusudana Rao, I.A.S.
Jt. Secretary	Gangopadhyaya
Dy. Secretary	P. Gopala Rao.

Revenue Department

Secretary	M. R. Pai, I.A.S.
Dy Secretary	Nurul Hasan Jaffari, B.Sc.
Under Secretary	D. M. Satur, I A.S.

Commerce Department

Secretary	S. K. Sinha
-----------	-------------

STATE ADMINISTRATION: PRINCIPAL OFFICERS / STATE LEVEL

Chairman/Salestax	J. N. Waghrey
Appellate Tribunal	P. S. Rao
Chief Conservator of Forests	
Chief Engineer (ELECTRICITY, KOTHAGUDAM & RAMAGUNDAM)	C. Lakshmipathy
Chief Engineer (ELECTRICITY, PROJECTS & BOARD)	V. Parvateesam.
Chief Engineer (CIVIL)	V. Srinivasa Rao
Chief Engineer (LOCAL ADMN)	M. Basheeruddin Khan
Chief Engineer (MAJOR IRRIGATION)	P. T. Malla Reddi
Chief Engineer (MINOR IRRIGN.)	B. N. Reddi.
Chief Engineer (N.S. DAM)	A. P. Ranganathaswamy.
Chief Engineer (NAGARJUNASAGAR CANALS)	V. Suryanarayana
Chief Engineer (ROADS & BUILDINGS)	A.R. Satyanarayana
Chief Inspector of Establishments	C. J. Reddi
Chief Inspector of Factories	K. Narasimha Raju
Commissioner of Wakfs	Mahomood Hussain
Director of Agriculture	T. V. Reddi
Director of Animal Husbandry	C. Krishna Rao,

Director Anti-Corruption	Mahendra Reddi (incharge)
Director of Archaeology & Museums	Md. Abdul Waheed Khan
Director of Atiyat Nizam	Humayun Yar Khan
Director of Bureau of Econ. & Stats.	D. Rangaramanujam
Director of Civil Supplies	M. Gopalakrishnan
Director of Commerce & Export Promotion	B. F. Dittia
Director of Employment & Training	B. R. K. Sastry
Director of Endowments	G. Narayanachetty
Director of Fisheries	I. Ramamohana Rao
Director of Gardens	T. Chellappa
Director of Handlooms & Textiles	V. K. Dhar
Director of Health & Medical Services	I. Booshana Rao
Director of Institute of Preventive Medicine	K. V. Subba Rao
Director of Industries	B. Pratapa Reddi
Director of Libraries	K. Raghava Reddi
Director of Marketing	K. Subba Rao
Director of Mines & Geology	M. N. Dikshitulu
Director of Municipal Administration	M. Lokanadham
Director of Printing & Stationary	Vacant
Director of Public Instruction	L. Bullayya
Director of Public Relations & Infrm.	B. N. Raman
Director of Rationing	Alliah Yar Khan
Director of State Archives	V. K. Bawa
Director of Social Welfare	L. Subbaiah
Director of Technical Education	T. R. Doss
Director of Text Book Press	N. Narayana Rao
Director of Town Planing	G. Venkatraman Reddy
Director of Tribal Welfare	P. Makalamanohara Rao
Director of Treasuries and Accounts	P. I. Prabhakar
Director of Women Welfare	Rajyam Sinha
Inspector-General of Police	P. Shivakumar Lal
Inspector-General of Prisons	C. B. Patil
Inspector-General of Registration	S. Raghavan
Special officer Indian Medicine	C. Hanumanta Reddi
Vigilance Commissioner	K. Anantaraman, I.C.S.

Public Service Commission

Chairman	...	K. Subba Rao
Member	...	H. Ramlinga Reddi
Member	...	Shankarji
Member	...	G. Bangara Raju
Secretary	...	G. Satyanarayana

Principal Officers of Central Government in the State

R. P. Ranga	...	Accountant General
V. Balasundaram	...	Station Director All India Radio, Hyderabad
K. V. N. Gowd	...	Deputy Census Superintendent
M. R. Routh	...	Collector, Central Excise.
M. Balasundaram	...	Director, Geological Survey of India, Southern Region.
H. A. Shah	...	Commissioner of Income Tax.
V. Narayana Rao	...	Defence Electronics Research Laboratory
R. V. Thamhankar	...	Director, Defence Metallurgical Labs.
V. Ganesan	...	Director, Defence Research and Development Laboratory.
K. Chand	...	Director, National Cadets Corps.
Dr. C. Gopalan	...	Director, Nutrition research Labs.
C. L. Gupta	...	Principal, Administrative Staff College Postmaster-General
K. L. Reddy	...	District Manager, Telephones.
D. N. Chopra	...	General Manager, South Central Railway.

Misc. Organisations

J. Vengala Rao	...	President. A. P. State Chamber of Panchayat Raj.
O. Swaminatha Reddi	...	Managing Director, A. P. Mining Corporation.
S. A. Iyengar I.C.S.	...	Chairman, State Road Transport Corporation
A. Raghava Reddi	...	Chairman, Andhra Pradesh Housing Board.
Bhattam Sreeramamurthi	...	Chairman, Andhra Pradesh Khadi Board.

Finances of the State

The State Budget, presented in the State Legislature on June 22nd, 1967 for the year 1967-68 opened with a deficit balance of 62 lakhs and closed with an overall deficit of 16.39 crores. Thus there was a net deficit of 15.76 crores in the Total receipts (208.81 crores) and expenditure (224.57 crores) of the State for year (see overall position of Budget statement). Major Revenue Receipts from, 1. State's share in Central taxes; 2. State Excise; 3. Salestax accounted for 171.66 crores. Major heads under expenditure on 1. Nation Building Services; 3. Administrative Services; 3. Debt services and 4. Others amounted to 184.42 crores.

Overall-Position of Budget 1967-68.

	(Rs. in crores).
Revenue Receipts ...	171.66
Public Debt (Net) ...	30.04
Loans and Advances, Deposits etc. (Net)	7.11
Total :	208.81
Revenue Expenditure ...	184.42
Capital Expenditure ...	40.15
Total :	224.57
Nett Deficit ... (-)	15.76

Source: Andhra Pradesh Budget in Brief - 1967-68,

The expenditure on Nation Building services include Education, Medical, Public Health, Agriculture, Animal Husbandry, Co-operation, Industries, Community Development, Amelioration of Scheduled Tribes etc. During the decade between 1958-59 and 1967-68, the total expenditure on Nation Building services have recorded progressive growth. The statement below shows, at a glance, the expenditure on revenue account on Nation Building services between 1965-66 and 1967-68.

Nation Building Services.	(Rs. in lakhs)		
	1965-66 (Accounts)	1966-67 (Revised Estimates)	1967-68 (Budget Estimates)
Education	2758.22	3196.50	3391.26
Medical	898.88	1037.44	1162.63
Public Health	350.93	435.16	517.29
Agriculture	725.38	907.48	651.66
Animal Husbandry	315.54	367.86	354.86
Co-operation	200.05	208.01	203.37
Industries	155.18	147.44	166.15
Public Works	1363.04	1033.74	954.27
Com. Dev. Works	562.41	452.88	468.78
Amelioration of Scheduled Tribes etc.	450.62	492.40	462.82
Total	7780.25	8279.11	8333.06

Education & Health: As the advancement of education is 'BASIC TO THE PROGRESS OF A NATION', expenditure on education has registered progressively an upward trend. The expenditure debited to this under the control of the Education Department is intended for General and Technical Education and Public Libraries. The major head *Education* is sub-divided into several sub-major heads namely, UNIVERSITY, SECONDARY, PRIMARY, SPECIAL, TECHNICAL EDUCATION etc. The expenditure on *Medical Health* mostly centres on Medical establishments hospitals and dispensaries, grants for MEDICAL PURPOSES, MEDICAL COLLEGES and SCHOOLS, MENTAL HOSPITALS etc. *Public Health* Schemes expenditure includes establishment charges on PUBLIC HEALTH INSTITUTIONS, grant for PUBLIC HEALTH PURPOSES, expenses in connection with EPIDEMIC DISEASES CONTROL, PROTECTED WATER etc.

Agriculture: Expenditure on revenue account under the head *Agriculture* mainly centres on EXPERIMENTAL FARMS, AGRICULTURAL ENGINEERING, AGRICULTURAL EDUCATION, AGRICULTURAL DEMONSTRATION & PROPAGANDA etc. This comes to Rs. 651.66 lakhs in the 1967-68 budget estimates as against Rs. 907.68 lakhs in 1966-67 revised estimates. Under the heads '*Animal Husbandry*', '*Cooperation*' and '*Industries*' the expenditure on Revenue account stands at Rs. 354.83, 203.37 and Rs. 1660.1 lakhs in the 1967-68 estimates as against Rs. 367.86, Rs. 208.15 and Rs. 147.44 lakhs respectively in the 1966-67 revised estimates.

Community Development: Expenditure on *Public Works, Community Development* and *Melioration of Scheduled Tribes, Backward Classes* etc. stands at Rs. 954.27, Rs. 468.78 and Rs. 462.82 lakhs respectively in the 1967-68 estimates as against Rs. 1031.74, Rs. 452.88 and Rs. 492.40 lakhs respectively in the 1966-67 revised estimates. It may be added here that there are 321 Panchayati Samitis in the State and they have been classified as advanced, ordinary, backward and Tribal according to the criteria laid down like per capita revenue, literacy etc. The community development funds are released to the Blocks on a varying per capita basis depending on the level of development after excluding the establishment charges. The expenditure under the Community Development Programme is being provided in lumpsum. In respect of all recurring expenditure, the State Government and the Central share in equal proportion and the non-recurring expenditure will be shared in the ratio of 75:25.

CAPITAL EXPENDITURE

Capital expenditure outside revenue account is proposed to be incurred on:

- a. new productive projects and extensions and improvements of existing projects which are treated as separate works and are productive;
- b. work connected with existing productive systems and treated as part of the systems;
- c. new unproductive projects; and
- d. works connected with existing unproductive systems.

Capital expenditure on (a) is proposed to be met from sources other than current revenues, such as accumulated balance and loans, as also that on (b) provided an individual work is by itself productive and its estimated cost is not less than Rs. 10,000. Capital expenditure on (c) and (d) is ordinarily financed from current revenue subject to certain exceptions. It is also proposed to cover a major portion of the overall deficit disclosed in the 1967-68 estimates. A bill for increasing the rates of Stamp Duties has already been introduced in the Assembly by the State Revenue Minister. Certain concessions are proposed to be extended to small farmers in the scheme of new legislation on land revenue. A bill is already under preparation on these lines and will be introduced in due course. It is expected that these measures would yield sufficient revenues during

1967-68 to cover a major portion of the overall gap of Rs. 16.39 crores in the estimates.

Economic Situation In The State

The constant failure of monsoons and frequent damage to crops due to floods have contributed to great strain on the exchequer of the State. Being an Agricultural State, lacking in an organised net work of Banking system and under-developed Industrial Sector, the State's sources of Revenue are very much limited. Over and above, unprecedented worsening of the economic situation in the past two years in the State was due to 1. failure of rains often with consequential expenditure on drought relief measures and suspension and remission of land revenue and loan collection; 2. Shortfall in the Public loans; 3. Frequent increase in the administration expenditures due to revision of pay scales and D.A.; 4. Substantial diversion of funds on projects like Nagarjunasagar project, Pochampad project and other power schemes etc. It is expected that with the completion of the projects now undertaken, there will be a remarkable change in the financial situation of the State due to increased return in the agricultural sector and the simultaneous growth of Industry in the State. The Special Assessment Act which was passed by the Legislature in 1962 was struck down by the Supreme Court as a consequence of which the Government had to suspend collections of land revenue resulting in a shortfall of Rs. 14.41 crores. However, this loss was made good by increased share of the Central Taxes and Sales Tax etc.

ANNUAL PLAN FOR 1967-68: The plan outlay for the year was fixed at Rs. 74.87 crores. Though this fell short by about Rs. 20 crores compared to the outlay for the year 1966-67 (94.38 crores) the Government had to fix the ceiling at this level in view of the limited assistance of Rs. 57.50 crores expected from the Central Government. Being an Agricultural State, a major portion of the plan concentrates on Agricultural programme (14.45 crores), Irrigation (15.65 crores) and Power (32 crores). Since there was a very heavy burden on the State in the year 1966-67 due to the revision of the budget from 79.25 crores to 94.38 crores to meet the working funds of Nagarjunasagar Project, Pochampad project and other power schemes, the State had to limit its plan in spite of the full requirements of the annual plan including the spill over and related work of the

previous year being around Rs. 100 crores. It is necessary here to note the abnormal raise in the Public Debt outstanding and Loans from Central Government to be repaid which stood at Rs. 538.29 crores and Rs. 437.07 crores respectively (including the year 1967-68).

Resources for Annual Plans: As regards to the financial resources for the Annual Plan of Rs. 74.87 crores, the central assistance indicated as above is of the order of Rs. 57.50 crores and the balance of Rs. 17.37 crores is to be raised by the State Government.

POSITION OF THE PROBABLE RESOURCES

1. Balance from Current Revenue	Rs. in crores.
at 1966-67 rates of taxation	(—) 4.80
2. Market borrowings:	
(1) By State Government (after providing for repayment of Rs. 5 crores)	5.00
(2) By State Electricity Board:	
(a) Open Market Loan	2.00
(b) Loans from Financial Institutions	5.50
3. Share in Small Savings	2.00
4. Miscellaneous Capital receipts	(—) 22.46
5. Internal resources of Public Enterprises and Local Bodies	10.86
6. Revision of Electricity Tariffs	2.00
7. State's share in additional taxation by the Centre in 1967-68	1.51
8. Total resources for the Plan	1.61
9. Central Assistance:	
(a) Loan	53.19
(b) Grant	4.31
10. Aggregate resources for the Plan	59.11
11. Plan Outlay:	
(a) Revenue Account	13.78
(b) Capital Account	61.09
12. Gap in Resources	
(a) Revenue account	12.76
(b) Capital Account	3.00
(c) Total	15.76
13. Opening Balance	(—) 0.63
14. Closing Balance	(—) 16.39

Thus the financial position of the State remains strained yet maintains a cautious and well developed expenditure pattern with much hope in the future when the State will be reaping the fruits of all its undertakings of longer gestation periods.

Public Debt Position in Andhra Pradesh

The pre-partition debt of the Composite State of Madras and the Public debt of the former Hyderabad State have to be allocated among the successor State in accordance with the provisions of the Andhra State Act (1953) and the States Reorganisation Act (1955) is yet to be done. Pending final allocation, it has been provisionally agreed that Andhra and Madras after formation of Andhra in 1953 and subsequently Andhra Pradesh, Mysore and Bombay (now Maharashtra) after the States Reorganisation of 1956 under S.R. Act bear the liability according to the population ratio. On this basis, the public debt liability of Andhra Pradesh as on the 31st March, 1967 works out to about Rs. 560.51 crores. The unfunded debt of the State as on the 31st March, 1967 amounted to Rs. 13.88 crores. The Debt charges on the above loans amount to Rs. 28.78 crores per annum.

Government Guarantee: The Government have guaranteed the principal and interest in respect of the debentures of the Andhra Pradesh Co-operative Central Land Mortgage Bank Limited, Hyderabad, upto a maximum of Rs. 50 crores. The amount guaranteed on this account and actually outstanding on the 1st January, 1967 was about Rs. 31.99 crores. The Government have also guaranteed the repayment of the cash credit and demand loan account aggregating to Rs. 36.30 crores on behalf of the Andhra Pradesh State Co-operative Bank Limited, Hyderabad. The amount outstanding on this account on the 1st January, 1967 was about Rs. 7.26 crores.

Under Section 66 of the Electricity (Supply) Act, 1948, the Government have guaranteed the payment of principal of Rs. 21.90 crores and the interest on the loans raised by the Andhra Pradesh State Electricity Board in 1960, 1963, 1964, 1965 and 1966. The amount outstanding on this account on 1st January, 1967 was Rs. 21.59 crores. Guarantees have also been given by the Government on behalf of certain other Co-operative Banks and Societies and Companies. The

total amount so guaranteed was Rs. 21.19 crores of which about Rs. 12.52 crores was outstanding on the 1st January, 1967.

Extensive Assets: Against the total outstanding debt, there are assets in the form of investments in securities of the Central and State Governments, shares in Banking and Industrial Concerns (both within and outside the State), and loans to co-operative societies, banks and industries. Godavari Valley Development Scheme, and Nagarjunasagar Project, Tungabhadra Project, Machkund and Tungabhadra Hydro-Electric Schemes, State Road Transport Corporation, State Electricity Board and other development schemes. A sum of about Rs. 171.36 crores was also due to Government as on 31st March, 1967 on account of the principal of loans given to local bodies, agriculturists, etc. Besides these assets, all of which produce a regular income, the Government also own other extensive and valuable assets in the form of buildings, lands, communications, forests, etc., the value of which cannot be assessed precisely. On the whole, the public debt and other liabilities are covered by productive and other tangible assets.

PANCHAYATI RAJ IN ANDHRA PRADESH

Scope: Andhra Pradesh was the first State in India to implement democratic decentralization to usher in Panchayat Raj, in keeping with one of the main recommendations of the Balawantrai Team Report on the future of the community development and the N. E. S. programmes. Accordingly, twenty adhoc Panchayat Samitis, one in each district were constituted in Andhra Pradesh in July 1958. On Nov. 1, 1959, after the enactment of the Andhra Pradesh Samitis and Zilla Parishad Act, statutory Panchayat Samitis were constituted. The community development programme has been in operation since Oct. 2, 1952. By Oct. 2, 1963, the entire State of Andhra Pradesh has been covered with community development block and by July 1, 1964, the entire rural area in Andhra Pradesh has been covered with Panchayat Samitis.

The Three Tier: In the wake of the community development programme, the Block emerged as a compact unit suitable for the purpose of planning. With the decision not to revive the District Boards and Taluk Boards, the need to bring into being and strengthen a single statutory and elective democratic body that can function as the sole agency of Government

ANDHRA PRADESH BUDGET 1967-68

AT A GLANCE (Rs. in Lakhs.)

Particulars	Accounts 1965-66	Budget Estimate 1966-67	Revised Estimate 1966-67	Budget Estimate 1967-68
A. Opening Balance ...	613.39	(—) 2,302.00	161.35	(—) 62.77
B. Revenue and Expenditure on Revenue Account				
1) Revenue ...	15,178.83	17,423.68	17,743.02	17,165.73
2) Expenditure ...	15,956.58	17,322.98	18,583.74	18,441.86
3) Surplus (+) or Deficit (—) ...	(—) 777.75	(+) 30.70	(—) 840.72	(—) 1,276.13
C. Transactions outside the Revenue Account				
1) Receipts:				
(a) Open Market Loans ...	933.23	950.00	822.90	1,000.00
(b) Floating Debt ...	5,649.27	1,500.00	12,471.64	1,500.00
(c) Loans from the Government of India ...	9,082.67	4,889.49	11,158.58	5,694.03
(d) Other Loans ...	320.46	185.00	449.00	...
(e) Deposit Transactions etc. ...	(—) 683.42	1,880.04	3,265.22	237.62
(f) Loans & Advances ...	1,886.65	1,793.52	1,534.29	1,110.42
(g) Contingency Fund (Net) ...	(—) 9.68	...	...	...
Total Receipts ...	17,179.18	11,198.05	29,701.63	9,542.07
2) Disbursements:				
(a) Capital Expenditure ...	6,867.07	3,998.37	4,920.60	4,014.50
(b) (i) Public Debt Repayment ...	...	...	...	500.16
(ii) Floating Debt ...	1,760.91	1,500.00	16,360.00	1,848.01
(iii) Loans from the Government of India ...	4,056.61	1,684.02	3,738.81	2,760.55
(iv) Other Loans ...	60.06	459.98	268.35	81.31
(v) Inter-State Settlement (Net) ...	0.12	19.21	...	...
(c) Loans Advances ...	4,108.70	2,433.17	3,797.27	637.88
Total Disbursements ...	16,853.47	10,094.75	29,085.03	9,842.41
3) Surplus (+) or Deficit (—) (outside Revenue Account) ...	(+) 325.71	(+) 1,103.30	(+) 616.60	(—) 300.34
D. Closing Balance ...	161.35	(—) 1,168.00	(—) 62.77	(—) 1,639.24

* Based on preliminary estimates

AN ANALYSIS OF REVENUE AND A.

Description of items	1957-58	1958-59	1959-60	1960-61
(1)	(2)	(3)	(4)	(5)
I. Share of Central Revenue (from Income-tax, Union Excise Duties, Additional Duties of Excise, Estate Duty and Taxes on Rail- way Fares) ...	1,007.81	1,327.34	1,424.97	1,666.94
	1,007.81	1,327.34	1,424.97	1,666.94
II. Principal Heads of Revenue— Land Revenue (including portion due to Irrigation)	1,058.63	1,038.95	1,130.05	929.68
late Excise Duties ...	633.05	659.42	762.15	809.79
tamps ...	272.90	251.34	321.13	377.12
orest ...	246.66	274.08	305.69	355.13
egistration ...	57.69	69.06	93.23	98.58
axes on Vehicles ...	234.66	257.65	253.99	255.69
eneral Sales Tax ...	893.40	845.52	1,080.41	1,189.23
Receipts under the Sales of Motor Spirit Taxation	69.22	75.18	85.44	92.83
Other Taxes and Duties...	133.98	105.41	204.76	262.20
Total ...	3,600.19	3,576.61	4,236.85	4,370.25
I. Receipts from Electricity Schemes— Gross Receipts ...	202.44	442.25	344.33	447.88
Working Expenses ...	...	(—)382.40	(—)181.25	(—)236.28
Net Receipts ...	202.44	59.85	163.08	211.60
V. Receipts under other Heads ...	1,422.19	1,788.43	2,369.50	2,280.10
Grand Total ...	6,232.63	6,752.23	8,194.40	8,578.80

EXPENDITURE ON REVENUE ACCOUNT.

Revenue,

(Rs. in lakhs)

Accounts	1961-62	1962-63	1963-64	1964-65	1965-66	Revised Estimate 1966-67	Budget Estimate 1967-68
	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	1,742.27	1,873.03	2,145.46	2,129.36	2,275.25	2,977.93	3,199.67
	1,742.27	1,873.03	2,145.46	2,129.36	2,275.25	2,977.93	3,199.67
	1,020.94	1,651.85	2,017.67	1,805.32	1,412.15	1,117.52	...
	872.66	903.67	1,186.31	1,242.02	1,374.33	1,494.77	1,500.00
	235.11	244.50	335.94	416.13	460.86	480.00	500.00
	411.12	437.67	422.98	333.99	555.36	540.00	560.00
	105.78	131.30	121.45	130.81	159.72	175.00	180.00
	275.86	332.14	681.17	647.29	832.88	890.00	930.00
	1,336.87	1,397.29	1,743.01	2,203.59	2,231.93	2,835.72	3,033.57
	143.77	138.70	160.39	96.99	226.72	280.00	280.00
	203.53	232.00	144.81	155.44	213.73	274.94	283.95
	4,605.64	5,469.12	6,813.73	7,031.58	7,467.68	8,087.95	7,267.52
	484.02	254.56	164.73	200.19	179.13	223.06	189.41
(—) 274.77	...	...	...	...	...	...	...
	209.25	254.56	164.73	200.19	179.13	223.06	189.41
	2,019.67	3,690.92	4,511.84	4,908.01	5,256.77	6,454.08	6,509.74
	8,576.83	11,287.63	13,635.76	14,269.14	15,178.83	17,743.02	17,165.74

AN ANALYSIS OF REVENUE AND

B. Expenditure

Description of items.	Accounts			
	1957-58	1958-59	1959-60	1960-61
(1)	(2)	(3)	(4)	(5)
I. Nation Building				
Services:				
Education ...	1,036.92	1,256.47	1,530.16	1,737.85
Medical ...	298.88	349.24	405.85	548.79
Public Health ...	125.50	116.76	141.77	206.82
Agriculture ...	174.52	211.30	263.85	315.70
Animal Husbandry ...	66.31	90.82	108.02	139.72
Co-operation ...	36.86	138.53	145.86	172.81
Industries ...	91.13	136.16	154.09	185.17
Public Works ...	320.27	445.22	590.26	604.33
Community Development				
Project National Extension Service and Local Development Works ...	292.56	311.16	394.27	466.77
Amelioration of Scheduled Tribes, Castes and other Backward Classes ...	197.45	250.88	283.01	363.65
Total ...	2,640.40	3,306.54	4,017.14	4,741.61
II. Direct Demands on Revenue (or charges of administration relating to principal heads of Revenue)	419.97*	452.77*	592.14*	646.36
III. Debt Services (Gross)	583.88	561.95	618.11	693.18
(Net)	(-) 541.42	(-) 680.69	(-) 779.39	(-) 878.33
IV. Pensions ...	42.46	(-) 118.74	(-) 161.28	(-) 185.15
V. Administrative Services (Parliament and State Legislatures, General Admin., Admin. of Justice, Jails, Police, Supplies and Disposals and Miscellaneous Departments)	200.85	195.52	207.23	177.10
VI. Other Heads**	1,132.97	1,212.50	1,333.64	1,496.16
	1,074.27	1,293.38	1,473.94	1,622.31
Grand Total	5,510.92	6,341.97	7,462.81	8,498.39

*Includes the expenditure on "Forest" also.

**Includes the expenditure on:—
Scientific Deptts., Labour & Employment, Other Miscellaneous Social Developmental Organizations, Irrigation, Electricity Schemes, Famine Relief, Privy Purses, Stationery and Printing, Forest, Miscellaneous and Miscellaneous compensations and Assignments.

EXPENDITURE ON REVENUE ACCOUNT.

					(Rs. in lakhs)	
on Revenue Account.					Revised Estimate	Budget Estimate
1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68
(6)	(7)	(8)	(9)	(10)	(11)	(12)
2,122.93	2,196.95	2,311.25	2,582.98	2,758.22	3,196.50	3,391.26
571.24	626.15	705.82	798.71	898.88	1,037.44	1,162.63
162.24	252.92	376.57	305.77	350.93	435.16	517.29
328.88	369.85	434.82	687.22	725.38	907.68	651.66
149.64	154.83	171.95	234.11	315.54	367.86	354.83
155.15	170.21	179.91	209.87	200.05	208.01	203.37
207.62	149.63	162.83	141.75	155.18	147.44	166.15
616.76	701.03	711.15	1,103.40	1,363.04	1,033.74	954.27
460.08	555.94	584.90	643.16	562.41	452.88	468.78
295.09	306.25	329.73	405.88	450.62	492.40	462.82
5,069.63	5,483.76	5,968.93	7,112.85	7,780.25	8,279.11	8,333.06
563.01	417.17	302.04	331.27	349.96	358.40	387.08
763.09	892.45 @	1,536.75	1,158.34	1,749.56	3,021.79	2,830.46
(-) 676.85						
86.24	...	...	1,489.61	2,099.52	3,380.19	3,217.54
224.44	235.21	250.80	266.83	322.75	369.11	393.13
1,541.25	1,723.48	1,728.00	1,914.77	2,242.78	2,381.28	2,510.07
1,579.29	2,080.82	2,784.66	3,040.87	3,511.28	4,174.06	3,988.06
9,063.86	10,833.59	12,571.18	13,824.93	15,956.58	18,583.75	18,441.86

@ The figures represent gross expenditure as the interest charges on commercial departments which were hitherto taken in reduction of expenditure under M.H. 16 are exhibited under the Receipt Head XVI Interest with effect from 1962-63 as a result of the rationalisation of accounting classification of Government transactions.

C. Capital Expenditure

Description of items	Accounts				
	1957-58	1958-59	1959-60	1960-61	1961-62
(1)	(2)	(3)	(4)	(5)	(6)
I. Nation Building Services :					
Irrigation ...	1,177.74	1,356.26	1,487.13	1,802.97	1,710.59
Electricity ...	798.15	578.60	158.09	283.78	435.29
Industrial Development ...	204.74	235.87	264.78	315.14	235.31
Agricultural Improvements and Research.	26.03	34.14	38.49	62.09	8.06
Public Works ...	249.07	345.11	473.63	601.33	519.42
Improvement of Public Health ...	(-) 6.93	1.09	51.09	102.47	92.08
Total ...	2,448.80	2,551.07	2,473.21	3,167.78	3,000.75
II. Other Services ...	78.84	(-) 79.90	140.17	42.07	319.65
Grand Total ...	2,527.64	2,471.17	2,613.38	3,209.85	3,320.40

outside the Revenue Account.

(Rs. in Lakhs.)					
				Revised Estimate 1966-67	Budget Estimate 1967-68
1962-63	1963-64	1964-65	1965-66		
(7)	(8)	(9)	(10)	(11)	(12)
1,745.96	2,056.56	2,467.88	3,373.02	2,762.48	1,875.05
340.79	482.20	646.86	1,132.51	837.00	950.00
349.65	264.71	414.45	646.10	691.66	413.83
5.78	13.74	19.99	23.99	128.05	138.26
413.66	379.45	480.58	813.46	484.21	437.55
75.22	88.11	166.25	138.45	115.70	111.98
2,931.06	3,284.77	4,196.01	6,127.53	5,019.10	3,926.67
483.59	93.38	145.51	739.54	(-) 98.50	87.83
3,414.65	3,378.15	4,341.52	6,867.07	4,920.60	4,014.50

REVENUE ACCOUNT.

Particulars	Accounts										(Rs. in Crores)	
	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	Budget Estimate	1967-68	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
Receipts	67.52	81.94	85.29	85.77	112.88	136.36	142.69	151.79	177.43	171.66		
Expenditure	63.42	74.63	84.98	90.64	108.34	125.71	138.25	159.57	185.84	184.42		
Surplus (+) Deficit (-)	(+)	7.31	(+)	0.31	(-) 4.87	(+) 4.54	(+) 10.65	(-) 4.44	(-) 7.78	(-) 8.41	(-) 12.76	

EXPENDITURE ON CAPITAL ACCOUNT.

Description of items	Accounts										(Rs. in Crores)	
	1961-62	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
Investment in public works and buildings	17.11	17.46	20.57	24.68	33.73	27.62	18.75					
	4.35	3.41	4.82	6.47	11.32	8.37	9.50					
	2.35	3.50	2.65	4.14	6.46	6.92	4.14					
	5.19	4.14	3.79	4.81	8.13	4.84	4.38					
	4.20	5.64	1.95	3.32	9.03	1.46	3.38					
Total	33.20	34.15	33.78	43.42	68.67	49.21	40.51					

Source : ANDHRA PRADESH BUDGET IN BRIEF 1967-68.

at the Block level was keenly felt. The Panchayati Samitis ideally suited for this purpose were constituted. Co-ordination of their activities was no less important and the Zilla Parishad was assigned with this task. As such under Panchayati Raj, the Panchayatis at the village level, the Samitis at the Block and the Parishads at the district level, became the principal agencies of formulating and executing the Plan Schemes. Thus Panchayati Raj translated into reality the concept of democratic decentralization of power as stressed by the Balwantrai Mehta Team. Decentralization, in other words, is but a dispersal of central authority among local units close to the areas served. Where authority devolves by this process on people's institutions it came to be known as 'Democratic decentralization'.

Zilla Parishad : Each of the 20 districts in the State has a ZILLA PARISHAD, replacing former DISTRICT BOARD. Presidents of Panchayati Samitis in the district are members of the Zilla Parishad. In addition, Collector, MLAs, Members of Lok Sabha elected from the district constitute members of Zilla Parishad. From among MLCs and Members of Rajya Sabha in the Dt. a few persons are nominated by the State Government. Non Panchayati Samiti areas also have due representation thro' election by the Gram Panchayatis. Zilla Parishad Chairman and Vice-Chairman are elected from among the members.

The powers and functions of Zilla Parishads are specified in Section 47 of THE ANDHRA PRADESH PANCHAYATI SAMITIS AND ZILLA PARISHADS ACT. The Act envisages the Zilla Parishad to function as an advisory and supervisory body over the Panchayati Samitis with power to approve their budgets, to co-ordinate their plans and to distribute funds given by the Government among the blocks. Only funds allocated district-wise will have to pass through the Zilla Parishad. The Zilla Parishad will prepare plans for all items of development activities in the district including municipal areas in Andhra area and city Municipal areas in Telangana area. Thus, the Zilla Parishads will be closely associated with one of the most important functions of Government, viz., rural development and raising the standard of living of rural people.

Panchayati Samiti : The powers and functions of the Panchayati Samitis have been specified in section 18 of THE ANDHRA PRADESH PANCHAYAT SAMITIS AND ZILLA PARISHADS

ACT 1959. The Presidents and members of the Panchayati Samitis have to endeavour to instil among the people, within their jurisdiction, a spirit of self-help and initiative. They have also to enlist the whole-hearted support and co-operation of the people for the implementation of the development programmes, not only those that relate to the community for which Government assistance is forthcoming, but also that which relate to individuals and which are mainly based on self-help. They have to exercise all the powers conferred on and perform the functions entrusted to the Panchayati Samiti by the Government, in particular, all the activities of Community Development Programme have been taken over by Panchayati Samitis. The powers and functions of the District Boards, staff and assets and liabilities have since been transferred to the Panchayati Samitis with effect from Dec. 1959. The Samitis can borrow funds for carrying out the purposes of the Act, subject to the conditions laid down in the Andhra Pradesh Panchayati Samitis and Zilla Parishads Loans Rules 1959.

The following important amendments to the principal Act namely the Panchayati Samitis and Zilla Parishad Act came into force from July 1, 1964. (a) No legislator will be eligible to continue as an office bearer of Panchayati Samiti or Zilla Parishad unless within 15 days from the date of election to such office he ceases to be a member of either House, of the State Legislature, or of Parliament, by resignation or otherwise; (b) Under Section 36 (3) (viii) two more persons interested in rural development will be coopted to Zilla Parishad; (c) Elections to Standing Committees of Panchayati Samitis and Zilla Parishads will be in accordance with the system of proportional representation by means of a single non-transferable vote; (d) Legislators representing constituencies, the whole of which form part of the Municipal Corporation of Hyderabad, will not be entitled to be members of the Zilla Parishad, Hyderabad.

All the Sarpanches of the gram panchayats constitute Panchayati Samiti at block level. There are 321 such panchayati samitis today (1967) in Andhra Pradesh. Some members of the Samiti are nominated by the Collector. Villages with non-panchayati areas have also representation on the Samiti by indirect election. President, Vice President of the Samiti are elected

Some Opinions & Press Reviews

on

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ACT 1959. The Presidents and members of the Panchayati Samitis have to endeavour to instil among the people, within their jurisdiction, a spirit of self-help and initiative. They have also to enlist the whole-hearted support and co-operation of the people for the implementation of the development programmes, not only those that relate to the community for which Government assistance is forthcoming, but also that which relate to individuals and which are mainly based on self-help. They have to exercise all the powers conferred on and perform the functions entrusted to the Panchayati Samiti by the Government, in particular, all the activities of Community Development Programme have been taken over by Panchayati Samitis. The powers and functions of the District Boards, staff and assets and liabilities have since been transferred to the Panchayati Samitis with effect from Dec. 1959. The Samitis can borrow funds for carrying out the purposes of the Act, subject to the conditions laid down in the Andhra Pradesh Panchayati Samitis and Zilla Parishads Loans Rules 1959.

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All the Sarpanches of the gram panchayats constitute Panchayati Samiti at block level. There are 321 such panchayati samitis today (1967) in Andhra Pradesh. Some members of the Samiti are nominated by the Collector. Villages with non-panchayati areas have also representation on the Samiti by indirect election. President, Vice President of the Samiti are elected

from among the members. The Samiti is constituted for every three years when election is held for the election of President and Vice President. The members form into Standing Committees on different subjects—Finance, Library, Agriculture etc. At block Panchayati Samiti level—Medical and Social education, Agricultural extension are handled with the aid of technical staff.

Gram Panchayati: With increasing responsibilities, the Panchayati at the base of the edifice needed revitalization and re-orientation. The following are the salient features of THE ANDHRA PRADESH GRAM PANCHAYATI ACT 1964. There are 15271 Gram Panchayatis in the State of Andhra Pradesh, of these 613 are notified panchayatis. A gram panchayati is a body of elected representatives. Besides sarpanch there will be a Upa-sarpanch and a few members. The number of members of a panchayati varies between 5 to 17 according to population. Sarpanch, elected by the members of the Panchayati, is the non-official administrator at the village level. Panchayati, provides for the inhabitants of the village, civic amenities, social welfare, development work. NYAYA PANCHAYATI SYSTEM is a recent introduction to exercise civil and criminal jurisdiction in petty cases.

Gram Panchayati can be constituted for any revenue village or part thereof or any part of a revenue taluk. Provision has been made for the constitution of township in any local area, if it is an industrial or institutional colony, a labour colony, a health resort or a place of religious importance. There will be a Grama Sabha for every village, consisting of all voters of the village. It will meet at least twice in a year to consider matters like administration report, audit report, fresh taxation proposals, programme of works etc. The following taxes may be levied by the Panchayatis. House Tax, Profession Tax, and such other Taxes as the Government may direct. A duty on transfer of property will also be lived in the village. A Panchayati may also levy vehicle tax, *Kolagaram* or *Katarusum*, that is to say a tax on the village produce sold in the village by weight measurement number and a tax on agricultural land for a specific purpose etc. A Gram Panchayati may levy a special tax on houses to provide for expenses connected with water or drainage works or the lighting of public streets and public places and other similar works.

To streamline the administration of Panchayati Raj, a high power Committee was constituted under the Chairmanship of

M. P. Pai, the then Chief Secretary to examine *inter alia* the reorganization of the Panchayati Samithi Blocks. Following the recommendations of the Committee in 1964-65 the State Government reconstituted the total number of 448 Blocks into 321, the Tribal blocks (28 in number) having been left untouched.

It may be added in this context that prior to this reorganization different blocks were in different stages of community development programme—209 in Stage I, 175 in Stage II and 64 in Post-Stage II as on July 1, 1964. Consequent on the reorganization, the distinction between Stage I, Stage II and Poststage II had disappeared because the enlarged blocks comprise of area and populations drawn from pre-existing blocks in different stages. However, the community development funds coming from the Government of India will continue to be on the basis of 448 national pattern Blocks without any change.

It was decided to distribute the community development funds and other *per capita* grants sanctioned to the Panchayati Samithis year after year as grants on a *per capita* basis so that blocks which are more backward and which are more populous will get more funds depending upon the level of development and the population in the block. Accordingly, during 1965-66, the State Government have classified all the 321 reorganised blocks (Except the 28 Tribal Blocks) and categorised them as 'Advanced', 'Ordinary' and 'Backward'. The funds after excluding establishment charges have been released on a varying per capita basis in inverse proportion to the level of development of each block so that blocks which are less developed will get liberal funds as compared to blocks that are better off.

State Chamber: A State Chamber of Panchayati Raj was constituted in Andhra Pradesh in 1963 with a view to having a non-official organization at the State level to guide the Gram Panchayatis, Panchayati Samithis and the Zilla Parishads in their duties and functions and to act as a liaison between the Panchayati Raj institutions and the Government. To assist the Chamber in the more effective discharge of its responsibilities, the District Chamber of Panchayati Raj in each of the 20 districts in Andhra Pradesh have also been constituted. During the third Plan Period (1961-66) as many as eight Panchayati Raj Training Centres have been set up by the Chamber for training non-officials. Among the more important schemes to be taken up for implementation by the

Chamber is the construction of a 'PANCHAYATI BHAVAN' at Hyderabad on the pattern of the one at Chandigarh in the Punjab at an estimated cost of Rs. 11/- lakhs. The Bhavan is proposed to serve many purposes, such as to house a research and study wing, training centres for non-officials a central library etc. The State Chamber Publishes a fortnightly PANCHAYAT.

Elections: During the year 1964-65, elections have been conducted on the basis of universal adult franchise in all the Panchayatis in the State. There were about 1.5 lakhs constituencies. Out of the then existing 15,223 panchayatis in the State, as many as 6,810 returned their Sarpanches and Upa Sarpanches unanimously, while 57 Panchayati Samithis out of 321 have elected their members and office bearers unanimously. To discourage village factions the State Government have introduced the prize scheme for achieving unanimity in elections for Panchayatis, and Panchayati Samitis. The results, on the whole may be said to be satisfactory.

Incentives for proper administration: In order to encourage Panchayati not only in the matter of collection of the taxes but also generally to develop a spirit of competition among them in discharging the functions under the Gram Panchayatis Act, the State Government have instituted a Prize competition scheme not only for Gram Panchayatis but also for Panchayati Samitis. The basic norms that were prescribed during 1964-65 for assessment in awarding the prizes to Panchayatis are as follows:

- (i) Taxation measures and collection of taxes in full;
- (ii) Conduct of Gram Panchayati affairs and transaction of business;
- (iii) Women welfare activities undertaken by the Gram Panchayatis;
- (iv) Poultry, cattle breeding, dairy farming and other avocations encouraged by Gram Panchayatis to provide supplementary income to the people and
- (v) Agricultural production efforts made by the Gram Panchayatis to make the people improve their agricultural production.

The norms for judging competition among Samitis for 1964-1965 were briefly as follows:

- (i) Establishment of woman's welfare centres in each block for propagating woman welfare programmes with reference to the prescribed activities;

- (ii) Literacy campaigning, education programmes, improvement in attendance in schools, amelioration of teachers' conditions, including their transfers, development of educational institutions i.e. provision of buildings, amenities etc.
- (iii) Economic programmes sponsored and taken up by the Panchayati Samitis to increase both individual and community assets ;
- (vi) Working of youth organisations, mobilization of youth for developmental activities ;
- (v) Agricultural production efforts made by the Panchayati Samiti to make the gram panchayati improve their agricultural production in their areas.

The best Panchayati in a block is awarded a prize of Rs. 1,000/-. Rs. 5,000/- are given to the best Panchayati in a district, while the best Panchayati in the Andhra and Telangana areas are given Rs. 15,000/- each.

The prize money for the best Samiti in a district is Rs. 10,000/- while Rs. 20,000/- each is awarded to the Best Panchayati Samiti in the Andhra and Telangana areas respectively.

Training: A training programme is being imparted to various categories of the Block personnel connected with the C.D. programmes in the institutions run by the Government of India and the State Government. There are now as many as eight full fledged Gramsevak Training Centres one each at Anakapalli, Samalkot, Gopannapalem, Bapatla, Kalahasti, Nandyal and two training centres at Rajendranagar. Upto March 1965, a total number of 5,504 candidates were trained in these training centres. Five Home Science Wings are attached to each of the Gram sevaks training Centres at 1. Samalkot, 2. Rajendranagar, 3. Gopannapalem, 4. Kalahasti, 5. Bapatla. Upto March 1965, a total number of 846 candidates were trained in these training centres. In order to increase the professional competence of the VLWs a scheme was drawn up by the Government of India to provide higher training to select VLWs for one year at the rate of 50 VLWs in each training centre. This scheme has been implemented by the State Government in the GTCs Bapatla and

VLW- Village Level Worker;
GTC- Gramsevak Training Centre

Rajendranagar. For this purpose the above two centres have been upgraded by sanctioning necessary staff and expenditure. The course commenced at the centres with effect from January 1965.

Grants & Funds: In view of the pressing need to provide the rural areas with safe and adequate drinking water, the State Government have decided that all the villages in the State should be provided with drinking water facilities immediately. With this objective in view the funds under local development works, equalisation grant, social welfare, and C. D. programme are pooled and utilised by the Panchayati Samitis for the purpose. According to a preliminary *ad hoc* survey conducted in 1964 for providing satisfactory drinking water facilities to the villages where there is scarcity of drinking water, an amount of Rs. 2-50 crores is required during the Fourth Plan period in addition to funds that will be required for providing additional drinking water facilities to villages. During the Third Plan the Government of India have allotted Rs. 2-5 crores under the local development works programmes as against an anticipated allotment of Rs. 4-50 crores. With a view to providing panchayatis which are not in a position to finance costly piped water supply schemes the government have decided to extend financial assistance to them on the following basis :

	Grant	Loan
(a) East Godavari, West Godavari, Krishna, Districts	75%	25%
(b) All the other 16 districts	87½%	12½%

In addition to the above minor irrigation schemes, special works programme for utilisation of rural manpower, communications, Primary Health Centres, Expanded Nutrition and Applied Nutrition programmes are under the Panchayati Raj institutions, so that the felt needs of the area may be better appreciated and the remedies expeditiously formulated and implemented. The special works programme for utilisation of rural man power has been implemented in 106 blocks during 1966-67. Communications in rural areas continue to receive special attention. More and more interior areas are being opened up by increasing the mileage of village roads. At the beginning of the the Third Five Year Plan

period the total mileage of roads surfaced and unsurfaced under the control of the Panchayati Raj-bodies was of the order of 1,360 Km. which figure was increased to 18,560 Km. 360 Primary Health Centres were established by the year 1965-66. The Expanded Nutrition Programme was introduced in 1960-61. One Panchayati Samiti in each of the 20 districts in Andhra Pradesh.

One of the fundamental pre-requisites for an efficient administration is the provision of adequate finances. In the past five years and more in the functioning of the Panchayati Raj institutions it can be seen that more and more developmental programmes are being implemented through these agencies. The figures furnished below show the quantum of assistance given annually to these institutions by the Government:

1960-61	Rs. 13.12 crores	1964-65	Rs. 36.01 crores
1961-62	Rs. 18.28 ..	1965-66	Rs. 52.96 ..
1962-63	Rs. 25.30 ..	1966-67	Rs. 73.22 ..
1963-64	Rs. 30.15 ..		

PANCHAYATIS IN ANDHRA PRADESH

Districts	Number of Panchayatis	Districts	Number of Panchayatis
Srikakulam ...	1,453	14. Medak ...	615
Visakhapatnam..	1,145	15. Nizamabad ...	407
East Godavari...	846	16. Adilabad ...	476
West Godavari..	661	17. Karimnagar ...	600
Krishna ...	837	18. Khamnam ...	388
Guntur ...	1,022	19. Warangal ...	564
Nellore ...	1,056	20. Nalgonda ...	653
Chittoor ...	1,065	(a) Andhra Region	
Cuddapah ...	612	Total : ...	10,340
Anantapur ...	734	(b) Telangana	
Kurnool ...	909	Region Total : ...	4,931
Mahbubnagar...	747		
Hyderabad ...	401	Andhra Pradesh Total	15,271

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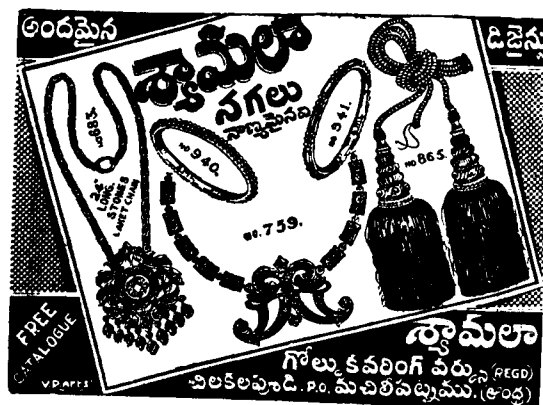
Today he is eighty. Sixty seasons have gone by and it is all a very pleasant memory to him how he began using Parry's Fertilisers all alone and how each bumper harvest has followed, bringing his wisdom to his neighbours and the whole village next about doing things the Parry way. Truly a credit to Parry's Comprehensive Advisory Service.

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TOURIST ATTRACTIONS

[Sources for the information given in this section: 1. 'Places of Interest in Andhra Pradesh', Information & Public Relations Department, Hyderabad; and 2. 'India — Madras and Andhra Pradesh', Department of Tourism, Ministry of Transport & Communications, Government of India, New Delhi].

YOUR ATTENTION

While presenting material in this section, it is presumed that the tourist to Andhra Pradesh first reaches Hyderabad by Air, Rail or Road and decides his itinerary plans. He may choose from a number of alternatives according to his taste and interest. Suggested itinerary plans (given below) may be considered according to choice and practical convenience. Instead, the tourist may choose to visit certain important places from Madras city or Bombay. He may get into touch with: 1. Government of India Tourist Officer, stationed at 123, Queen's Road, Church Gate, Bombay (TF 24-2144; 24-2145); 2. Government of India Tourist Officer, 35, Mount Road, Madras-2 (TF 86999). After setting his foot in Andhra Pradesh, however, he may obtain useful information and guidance from the following:

Hyderabad—(TF43281 & 43282) Grams: **INFORMATION**; State Tourist Information Officer, Mukarram Jahi Road, very near to Nampally Station, Hyderabad.

Warangal—Grams: **INFORMATION**; Regional Tourist Information Office, Surya Bhavan, Hanamakonda, Warangal.

Tirupati—(TF 87) Grams: **INFORMATION**; Regional Tourist Information Office, Second New Choultry, Tirupati.

Visakhapatnam—Regional Tourist Information Office, D. K. Choultry, Main Road, Visakhapatnam.

SUGGESTED ITINERARY PLANS

LAP I: Hyderabad, Nagarjunakonda, Amaravati, Ettipotla, Kotappakonda, Undavalli caves, Mangalagiri and Chezerla.

LAP II: Vijayawada, Kondapalli, Chilakalapudi, Srikakulam, Ghantasala, Rajahmundry, Papikondalu and Antarvedi.

LAP III: Visakhapatnam, Simhachalam, Bhimuniapatnam, Gudem Agency, Arakuvalley, and Machkund.

LAP IV: Udayagiri, Tirupati, Horsley Hills, Penukonda, Lepakshi, Srisailem, Mahanandi, Ahobalam; Pushpagiri and Vontimitta.

LAP V: Yadagirigutta, Alampur, Nizamsagar, Warangal, Ramappa Temple & Lake and Laknavaram Lake.

LAP VI: Pakhal Lake, Kondapur and Medak.

HYDERABAD

Hyderabad*, the fifth largest city in India, is the Capital of the State of Andhra Pradesh. Secunderabad is a part of the greater Hyderabad which together has a population of about 13 lakhs. The City reflects a blend of sub-cultural groups of India, with population architectural composition, linguistic pattern representing different types. Hussain Sagar Lake, Tank Bund, Naubat Pahad, Salarjung Museum, Public gardens and many other places of interest attract the attention of the tourist [Before planning city sightseeing itinerary the section at the end of this topic (Page 215-223) may be consulted].

Golkonda Fort

Golkonda fort, is about 10 km. west of the Hyderabad city. The legendary fort was the capital of the Qutub Shahi kings who ruled over the territory around between 1518 & 1687. Built on the summit of a picturesque granite hill with its tiers of loopholes and battlemented ramparts it dominates the landscape for a considerable distance. The fort has a perimeter of about 11 km. The granite wall which encircles the fort has eight gates and 70 bastions. The lofty citadel on top, occupied by the rulers, is reached by intricate stairways. The most remarkable feature of the fort is its system of acoustics whereby a sound or a clap of hands made below the dome of the entry gate can be heard at the top of the fort some 61 m. high. It is believed that very sensitive crystals are pressed into service for the acoustic transmission. Equally ingenious is the system of water supply through laminated clay-pipes and Persian wheels to reach the top gardens and palaces giving an 'air conditioning' effect inside the fort. The fort, which was built to be impregnable, was attacked twice by the Moghal Emperor, Aurangazeb who succeeded in taking it in 1687 after a siege of eight months.

Qutb Shahi Tombs—The tombs of the Qutb Shahi kings are near the fort. Their architecture, though in line with that of all Muslim mausolea, has a characteristic style. The general plan of the tombs is a dome built on a square base, surrounded by a gallery of pointed arches. The admixture of Hindu motifs, like lotus friezes, lotus leaves and buds, the chain and pendant designs, the projecting eaves, cruciform capitals, pillar and lintel devices bring about a sense of harmony in decoration.

* For a brief historical background see Hyderabad District.

Diamond Market—Golkonda had long been famous as a market for diamonds from the neighbouring mines. Precious stones from these mines were prized by the royalty in Britain, Czarist Russia, France and other European countries. The famous Kohinoor, which has the pride of place among the jewels of the British Crown, is believed to have come from Golkonda.

Son et Lumiere at Golkonda Fort—A sound and light spectacle is proposed (1967) for Golkonda Fort by the Department of Tourism, Government of India, with accommodation for 2000 persons. Cost of this project is estimated at Rs. 10 lakhs. Son et Lumiere is a popular device and designed to cause dramatic effect to make people conscious of their historic past and national culture. It is achieved by ingeniously synchronising the dynamic light with sound by means of an electronic equipment accompanied by a tape recorded dialogue suitable to the situation. Son et Lumiere, a French invention, will be mounted on ramparts of the fort.

Osman Sagar—This is a large lake formed by damming the river Musi, which flows right through the city. This beautiful lake, named after the previous Nizam, covers an area of 45 sq. km. and supplies drinking water to the city. A beautiful garden projects right into the bed of the reservoir. The lake is a popular place for picnics.

Himayat Sagar—Himayat Sagar lies 10 km. from Osman Sagar linked by road. It is also formed by impounding the Musi river. The lake is spread over 85 sq. km. and it attracts picnic parties and holiday makers in large numbers. The roadway on top of the dam provides a fine drive. Both the Osman Sagar and Himayat Sagar have rest houses and bungalows offering accommodation to tourists. Accommodation may be booked in advance.

House Boats on Hussain Sagar

Like in Kashmir, House Boat facilities are introduced as a new attraction in Hyderabad. Boats well equipped with all modern amenities with Board and Lodge as well as servant are made available to tourist. State Tourist Department may be contacted for reservation. (TF. 42281) Charges around Rs. 20/- per head.

Charminar—It lies in the heart of Hyderabad city. Charminar is sometimes styled as the *Arc de Triomphe* of the East. Its four minarets, each rising to 55 m. spring from the abutments of the open arches facing north, south, east and west. Visitors can climb the minarets by internal stairways. Each side of the Charminar, symmetrically built, measures 30 m. while the pitch of the arches measures 15 m. from the ground. The architecture of the structure is Indo-Saracenic. The monument was erected by Mohammad Quli Qutub Shah in 1591.

to mark the cessation of plague which had taken a heavy toll of life in his kingdom.

Jami Masjid—It lies to the north-east of Charminar and is the oldest mosque in Hyderabad, erected in 1598 by the ruler, Quli Qutub Shah.

Mecca Masjid—The Mecca Masjid stands about 100 m. south of Charminar. It is one of the largest mosques in Southern India. Started by Mohammed Qutub Shah in 1614, it was completed by Emperor Aurangzeb after he annexed the Golkonda Kingdom. Its unique feature is that its lofty pillars supporting the arches and the prayer niche are fashioned out of single slabs of granite. The mosque has a seating capacity of 10,000 persons. It is the principal place of Muslim worship in Hyderabad. Built entirely of stone, the building offers a fine example of stucco decoration in exquisite Indian polished plaster adorned by fresco or gesso enrichment.

Falaknuma Palace—A winding ghat road leads to the Falaknuma Palace, built on a hill, which commands an extensive view of the surrounding country side. Its library contains a rare collection of illuminated manuscripts and printed books. A picture gallery and luxurious reception room with cabinets containing crystals, diamonds and emerald objects are some of its distinctions. Falaknuma is a private palace of the Nizam. Admission into palace is only by permission.

Osmania University—The university was established in 1918. The new township, built about 10 km. from the city to house the University with different colleges and faculties, the research laboratories, the hostels and the extensive playgrounds, deserves a visit. The imposing Arts College building is a fine piece of architecture combining judiciously Hindu and Muslim styles. The University Campus has a picturesque landscape and a botanical garden.

The High Court—It lies on the right bank of the Musi River. It is a majestic edifice built of red and white stones in Saracenic style, with stately domes tapering upwards into delicate minarets. Its interior decoration is done in plaster of various hues and the designs are drawn from Muslim art traditions.

PUBLIC GARDENS

The Public Gardens are a major attraction. One of the best laid-out gardens in India, it has plants drawn from all over the world. A number of small lakes filled with lotus flowers in different hues add to the beauty of the garden, which has besides a rose garden, a cypress garden, large green patches, children's playground and some very old venerable trees. The Gardens house a number of important public

buildings like the Legislative Assembly, the State Archaeological Museum, the Health Museum, and the Ajanta Pavilion (qqv).

Legislative Assembly—It is located in the public gardens.

State Archaeological Museum—It has well stocked sections of pre-historic implements, sculptures, paintings, inscriptions, illustrated manuscripts, coins, old arms, bidriware, old China and textiles. The Museum is open to visitors every day except Friday.

Health Museum—It has large number of models, pictures, diagrams, books and journals.

Ajanta Pavilion—This displays full size copies of Ajanta frescoes and wall paintings.

Ravindra Bharati—A National Theatre, one of the chain of auditoriums in India built to commemorate poet Tagore in the centenary year (1961).

Nehru Zoological Park

It is situated near Mir Alam Tank 10 km. from Nampally Railway Station. A variety of wild animals are found enclosed in their natural habitat. Special attractions like boating and swimming for adults are provided. Many attractions for children are provided. Giant wheel, at a little extra cost, is an added attraction. Guest houses, cottages attached to the park provide lodging facilities. No food is served. For reservation of cottages contact Director of Nehru Zoological Park (TF. 41408).

SALARJUNG MUSEUM

Salar Jung Museum has a unique collection of antiquarian interest. In its variety and richness, it is without a parallel in the East. By an Act of Parliament, it is declared as one of the three national museums in India (others are at Calcutta and New Delhi). Salar Jung III, a former Prime Minister of the Nizam, spent his whole life and wealth on collecting unique curios and rare objects from all over the World. The exhibits are arranged in 77 rooms and verandahs in Nawab Salar Jung's palace. A casual visitor will require half a day merely to look at these objects. The exhibits range through a magnificent collection of jade and jewellery, paintings, statues, wood carvings, tinted glass, cut glass and Dresden China and furniture from West Asia, Japan, China, France, Italy, Britain and other countries. Chinese porcelain and embroidery on screens, miniature Korans, curios of Mughal times, carpets, manuscripts and mass of historical and other antiquities. Embroidered silk pictures look like water colours.

Jade Room—The jade room is a speciality. The exhibits here include, among others, Queen Nurjahan's dagger, Tippu Sultan's chairs and Emperor Aurangzeb's sword.

Veiled Rachael—Among the statues, there is a magnificent one of veiled Rachael; double faced statue in wood showing Mephistopheles from the front and Margeretta from the rear.

The museum remains open on all days except Friday between 10 a.m. and 5 p.m. The admission fee is nominal Re. 1/- and an extra fee of 50 paise for the Jade room.

SECUNDERABAD

Secunderabad is about 10 km. east of Hyderabad. It is a well planned, modern city connected with Hyderabad by a road on the bank of the Hussainsagar. The lake 18 km. in circumference, was built during the Qutb Shahi times. Facilities for boating, yachting, fishing and duck shooting on the lake are available, while the road on it serves as a magnificent promenade for the citizens and visitors. Secunderabad was one of the largest military bases in India during the British rule. The city with its parade race course and polo grounds and fine residential localities reminds the visitor of by gone days. To the west of Hussainsagar lies the Observatory and the Seifabad Palace. Among the prominent buildings in the Cantonment area are the King Edward VII Memorial Hospital and the United Services Club. The building where the Scientist, Ronald Ross lived and discovered the source and agent of malaria stands on the outskirts of Secunderabad. The *Rashtrapati Nilayam*, used for the residence of the President of India during his sojourn in the South, is at Bolaram. It was once the country seat of the British Resident.

SHOPPING

Hyderabad offers a variety of souvenirs for the tourist. The Government Cottage Industries Emporium which stocks choice handicrafts from all parts of Andhra Pradesh is an ideal place for shopping. The Nirmal work and Bidriware are typical of Hyderabad. The creation of these lovely articles may be seen with interest at their production centres, which are accessible to the visitor. Himroo cloth which though originally done in Aurangabad is now made in Hyderabad. Narsapur crochet lace for doilies and tea clothes; Warangal and Eluru wool carpets, cotton durries, sarees, Pochampalli, Siddipet, Uppada and Venkatagiri cottons, Dharmavaram silks, silver filigree work of Karimnagar, straw mats, ivory and horn articles, and the highly prized Kondapalle toys are available at the emporium. In the old city there are bangle shops which manufacture the Hyderabad bangles made of semiprecious stones and coloured wax on glass base.

Real jewellery boasting of exclusive and traditional Hyderabad designs are also available. Antiquities of interest may be located in the shops of the old city.

USEFUL INFORMATION FOR TOURIST IN HYDERABAD CITY

GENERAL INFORMATION

Area :	254 sq. km.
Rainfall :	990 mm. (June-Sept.)
Temperature:	Min. Max.
Winter	13.5° C 31.7° C
Summer	20° C 39.5° C
Altitude :	528 ft. above sea level.
Population :	12,52,337.
Season for visit:	June to February.
Languages spoken:	Telugu, Urdu, Hindi Marathi & English.

Distances & Connections

	By Air	By Rail	By Road
Warangal	.. Nil	140 km.	155 km. via Jangoan
Vijayawada	.. Bi-weekly	359 km.	264 km. via Narkatpally, Suryapet.
Visakhapatnam	.. do	710 km.	635 km. via Vijayawada, Eluru & Rajahmundry
Bangalore	.. Daily	640 km.	744 km. via Mahbubnagar, Raichur, Siddur, Hospet, Bellary, Anantapur.
Madras	.. do	788 km.	724 km. via Vijayawada.
Bombay	.. do	790 km.	712 km. via Zaheerabad, Sholapur & Poona.
Delhi	.. do	1679 km.	1752 km. via Nizamabad, Nanded, Basim, Amaravati, Nagpur, Jabalpur, Damoh, Jhansi, Agra.

	By Air	By Rail	By Road
Calcutta	.. Not directly connected	1590 km.	1745 km. via Vijayawada, Visakhapatnam, Cuttack, Jaipur, Jamshedpur, Purlia, Dhanbad, Asansol, Burdwan.
Aurangabad	.. -do-	1507 km.	55 km. via Naldrug, Osmanabad, Bir.

Local Transport

All types of transport are available in the city.

Taxis:

Station Wagons	.. 6 persons	50 ps. per km.	Minimum fare Re. 1/-
Big Taxis	.. 5 persons	40 ps.	Re. 1/-
Baby Taxis	.. 4 persons	35 ps.	63 ps.
Auto-Rickshaws	.. 2 persons	25 ps.	50 ps.

Buses: A city bus service links all important points of the city.

For large groups; they can be hired from the following:

(a) RTC Bus Depot, Gowliguda (Hyderabad T.F. 43366)	36 seater	Rs. 0.85 per km.
	50 seater	Rs. 1.25 per km.
	31 seater	Rs. 1.00 per km. (Deluxe)
	26 seater	Rs. 1.35 per km. (Luxury)

Note: 10% rebate is given to student parties.

(b) Private bus owners Union, Afzalgunj:	40 seater	Rs. 0.90 per km.
	30 seater	Rs. 0.65 per km.

Cycle Rickshaws: Available everywhere. No fixed charges but minimum 25 ps.

The rates, indicated are only approximate and are valid for within Municipal limits. These are subject to revision from time to time.

Accommodation**WESTERN STYLE HOTELS:**

	Grams & Phone	Single Room Suite	Double Room Suite
Ritz Hotel, Hill Fort, Hyderabad	Ritz 33571	Rs. 25 to 40 Rs. 40 to 65 with AC	Rs. 55 to 70 Rs. 70 to 110 with AC

	Grams & Phone	Single Room Suite	Double Room Suite
Percy's Hotel, Sardar Patel Road, Secunderabad.	Percys 72106 72108	Rs. 20 to 30 Rs. 30 to 40 with AC	Rs. 40 to 50 Rs. 70 to 110 with AC
Rock Castle, Jubilee Hills, Hyderabad-34.	Rock Castle 33541	Rs. 20 Rs. 32 with AC (Bed & Breakfast system at Rs. 15 per head)	Rs. 45 Rs. 50 with AC
International Guest House	34800	Rs. 30 upwards	

INDIAN STYLE HOTELS:

* Taj Mahal Hotel, King Kothi, Road, Hyderabad.	Courtesy 38451	Rs. 7 to 12	Rs. 12 to 20
* Brindavan Hotel, Station Road, Hyderabad.	Brindavan 44581	Rs. 6 to 8	Rs. 10 to 12
* Taj Mahal Hotel, Sarojini Devi Road, Secunderabad.	Courtesy 70105	Rs. 4 to 8	Rs. 8 to 12
* Neo Mysore Cafe, Station Road, Hyderabad	Mycafe 42541-2	Rs. 3.50 to 7	Rs. 7 to 16
Taj Mahal Cafe, Himayatnagar, Hyderabad.	Taj Cafe 32136	Rs. 6	Rs. 10 to 12
Hotel Dwaraka, Khairatabad, Hyderabad-4.	30101	Rs. 6 upwards	Rs. 30
† * Montgomery's Hotel, Sarojini Devi Road, Secunderabad.	74998	Rs. 15 to 18	Rs. 30 to 35
† * Royal Hotel, Nampally, Hyderabad	Passenger 35330	Rs. 4 to 7	Rs. 7 to 16
New Taj Mahal Hotel, Sultan Bazar, Hyderabad.	New Taj 44164 41311	Rs. 4 to 6	Rs. 10 to 15
Hotel Palace, Station Road, Hyderabad.	Aram 42492	Rs. 5 to 6	Rs. 10
Garden Restaurant, 38, Sarojini Devi Road, Secunderabad-3.	72905	Rs. 4	Rs. 6

* A.C. Facilities available.

† Non-vegetarian meals available.

Metro Lodge, B-2-864, Tilak Road, 42196 Hyderabad-1.	Rs. 5	Rs. 10
Tourist Hotel Kachiguda 44491	Rs. 5 upwards.	

NOTE: All these hotels, except Montgomery, have attached bath rooms with Indian style sanitary fittings. Charges indicated above are for lodging only. They are only approximate.

A few more Indian style hotels in the city

Gopi Hotel, Saifabad,	New Vasant Vihar, Jawaharlal
Bombay Lodge, Sultan Bazar,	Nehru Road,
John's Hotel, M. G. Road,	Orient Hotel, M. G. Road,
Green Hotel, Putli Bowli,	New Peking Hotel, M. G. Road,
National Hotel, Afzal Gunj,	Everest Lodge, Tilak Road,
Venkateswara Lunch Home	Gujarat Lodge, Sultan Bazar,
(opp. Secretariat)	Alpha Hotel, opp. Railway
Laxmi Bhavan, Rashtrapati Road,	Station, Secunderabad.
Secunderabad.	Hotel Ambassador.

NOTE: All these have attached as well as common bath rooms and their charges range from Rs. 2.50 to Rs. 5/- single and from Rs. 3.50 to Rs. 12/- double, exclusive meals & tiffin.

Other Accommodation

Railway Retiring Rooms: Available at Secunderabad Railway Station (Nampally and Kachiguda do not have retiring rooms).

One common room with four beds	Rs. 4/- per bed.
Two small rooms	Rs. 5/- per bed.

Reservation of Accommodation: Write to the Station Superintendent, Secunderabad Railway Station, 48 hours in advance.

Y.M.C.A. Secunderabad: Lodging charges Re. 1 per day. There is a canteen attached; Indian style food. Both Vegetarian & Non-Vegetarian food is served.

Y.M.C.A. Hyderabad: Lodging charges: Re. 1/- per day. No canteen. Two days advance notice is necessary for reservation in both the hostels.

Sarais & Dharmashalas:

Peace Memorial Sarai, Nampally, Hyderabad.

49 rooms	Rs. 3.50	A class
	Rs. 2.30	B class
	Rs. 1.00	C class

Jubilee Sarai, Kachiguda, HYD.	12 rooms	Rs. 2.00	Ground floor
		Rs. 2.50	First floor

Rampratap Dharmashala, Nampally, Hyderabad.	14 rooms	Free. 37 ps. towards electricity.
Grain Bazar Dharmasala, Secunderabad	14 rooms	Free — only 0.25 ps. charged towards water & Electricity
Sajjan Lal Sarai, opp. Railway Station.	Secunderabad, 20 rooms	Rs. 1.50 A class Rs. 1.12 B class Rs. 0.75 C class Rs. 0.75 ps.
Youth Hostel: 891/1-2-377, Gagan Mahal Road, Hyderabad.	10 beds	to Re. 1/- per head

Guest Houses: Lake View Guest House, Somajiguda, Hyderabad, Greenlands, Begumpet. These guest houses are meant for VIPs. Government Guests & Officials.

CONDUCTED SIGHT-SEEING TOURS

The State Tourist Information Bureau, Information and Public Relations Department, conducts daily, except Fridays, 'Manorama' tour of the city in a 26 seater Luxury Coach.

MANORAMA ITINERARY

MORNING TOUR 9 A.M. to 12-30 P.M.	Public Gardens, Qutb Shahi Tombs Golconda Fort & Osmansagar	Rs. 3.00
AFTERNOON TOUR 2-30 P.M. to 5-45 P.M.	Salar Jung Museum, Charminar, Mecca Masjid & Osmania University	Rs. 2.50*
* Inclusive of entrance fee to Salar Jung Museum.		

Note: (i) Charge for full day tour is Rs. 5 inclusive of entrance fee to Salar Jung Museum; (ii) Tour timings are advanced by one hour between March and May, (iii) Special arrangements are available for larger parties also.

GUIDE SERVICE

Trained guides are available from the State Tourist Information Bureau, Department of Information and Public Relations (Phone No. 43281 & 43282) at the scheduled rates: Rs. 12 full day sight-seeing, Rs. 8/- half day sightseeing. A list of these guides is also available with Travel Agents and important hotels of Hyderabad city.

PICNIC SPOTS AROUND HYDERABAD

NAME	ACCOMMODATION	RESERVATION AUTHORITY
Osman Sagar	Guest House	Superintending Engineer, H.Q. Circle Banjara Hills Road, Hyderabad.
	Inspection Bungalow	Executive Engineer, PWD, Water Works, Goshamahal, Hyderabad.
	Tourist Bungalow	-do-
Himayat Sagar	Inspection Bungalow	Superintending Engineer, H.Q. Circle Banjara Hill Road, Hyderabad.
	Kidwai cottage	Director of Agriculture, Hyderabad.
Mir Alam Tank	Salar Jung Guest House	Salar Jung Estate, Dewan Devdi, Hyderabad.
	Dak Bungalow	Executive Engineer, Water Works, Gosha Mahal, Hyderabad.
Umda Sagar	Guest House	Paigah, Bashirbag, Hyderabad.
Hussain Sagar	House Boat	State Tourist Dept.

PLACES OF INTEREST

PLACE	TIMINGS	ENTRANCE FEE	DISTANCE FROM NAMPALLY
Ajanta Pavilion	9 a.m. to 12 noon 2 p.m. to 5 p.m. (except Friday)	Free	1 km.
State Museum	-do-	Free	1 km.
Health Museum	9 a.m. to 12-30 p.m. 3-30 p.m. to 6-30 p.m. (except Thursday)	Free	1 km.
Salar Jung Museum	10-30 a.m. to 5-30 p.m. (except Friday)	Re. 1/- & 50 ps. for Jade room	
Qutb Shahi Tombs	Dawn to Dusk	Free	10½ km.
Golkonda Fort	-do-	Free	11½ km.
Osman Sagar	Day & Night	Free	22½ km.

TOURIST ATTRACTIONS

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Himayat Sagar	Day & Night	Free	22½ km.
Charminar	9-30 a.m. to 5-30 p.m.	20 ps. for going up Charminar	5 km.
Mecca Masjid	Dawn to Dusk	Free	5 km.
Osmania University	Dawn to Dusk	Free	8 km.
Raymond's Tomb	Day & Night	Free	12.8 km.
Naubat Pahad	-do-	Free	1 km.
Nehru Zoological Park	9 a.m. to 5-00 p.m.	25 ps.	10 km.

BANKS

State Bank of India, State Bank of Hyderabad, Punjab National Bank, Bank of Baroda, Andhra Bank, Canara Bank etc.

TRAVEL AGENTS

Trade Wings (P) Ltd. 4-1-825, J' Nehru Road, Hyderabad.	TF 43741
Mercury Travels, 4-1-969/4, Abid Road, Hyderabad-1.	TF 33325
Canara Bank (Travel Department), Abid Road, HYD-1.	TF 34393
Princely Travel India, 4 & 5, Green Gates, Hyderabad-1.	TF 32887
Harrison's Tours & Travels (Excursion Agents) Mahatma Gandhi Road (Abid Road), Hyderabad.	TF 39469

AUTOMOBILE ASSOCIATION OF SOUTH INDIA
Branch is at Rani Gunj, Secunderabad,

TF 73170

Prohibition: Not in force.

RESTAURANTS

WESTERN STYLE	INDIAN STYLE
Ashiana, Hill Fort.	Ajanta Restaurant, Rastrapati Road,
Berrys, Abids, Hyderabad.	Ananda Bhavan
Capri, Secunderabad.	Ashok Restaurant
Kwality Espresso, Abids	Brindavan, Abids
Kwality, Park Lane, Secunderabad.	Dwaraka, Khairatabad
Lido, James Street, Secunderabad.	New Taj Mahal
Manju, Tilak Road.	Orient
Nanking -- Chinese.	Royal
Savoy, Gun foundry.	Sukha Nivas, Rastrapathi Road, Hyderabad.
Three Aces, Abids.	Taj Mahal, Abids.



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also at Bombay, Baroda, Calcutta, New Delhi & Poona.

Some Cinema Theatres

- (a) Plaza, Dreamland, Tivoli, Embassy for English pictures.
- (b) Liberty, Zamarrud Mahal, Navrang, Basant, Royal, Paradise, Dilshad, Ashok, Alankar, Prabhat, Natraj for Hindi and Telugu pictures.

Information Centres & Libraries

State Tourist Information Bureau, Department of Information & Public Relations, Mukarram Jahi Road, near Railway Station, opp. Gandhi Bhavan, Hyderabad, TF 43281 or 43282.

State Information Centre, Dept. of Information & Public Relations, Mukarram Jahi Road, opp. Gandhi Bhavan, Hyderabad, Phone: 43281 or 43282.

State Central Library, Afzal Gunj, Hyderabad.

American Cultural Centre, Saifabad, Hyderabad. TF 43221.

Max Mueller Bhavan, 3-5-43, Edenbach, Ramkote, TF 43938.

Press Information Bureau, Government of India, Hyderabad TF 24725.

NAGARJUNAKONDA

Nagarjunakonda lies on the south bank of the river Krishna. It is reached by road from Guntur (152 km) or from Hyderabad city (149 km.). The nearest rail head is Macherla, 24 km. away, which can be reached direct from Vijayawada. The Buddhist site, identified as such some 30 years ago, takes its name from the Buddhist savant, Acharya Nagarjuna of Madhyamik school of Mahayana Buddhism, who lived here two thousand years ago. Excavations at this site, scattered over hills and valleys have revealed extensive ruins of Buddhist stupas, monasteries, a University and numerous inscriptions belonging to the 3rd century A.D. Like Amaravati (q.v.) Nagarjunakonda also had a mahastupa, enshrining the remains of the Buddha. The relic found in the mahachaitya is now worshipped in the Moolagan-dhakuti vihara at Sarnath where the Buddha delivered his first sermon.

Antiquities: The ruins at Nagarjunakonda are more numerous than at Amaravati and these include sculptures executed in Amaravati style. The inscriptions on the *ayaka* (motive) pillars show that the ancient city of Vijayapuri was a great centre of Buddhism which then enjoyed worldwide fame. For, here stood several monasteries (like the Sinhala Vihara) for the residence of Buddhist monks coming from

different countries, like Ceylon, Kashmir, Gandhara and China. Recent excavations (1954) have revealed, among other things, an intricate drainage system, an acoustically perfect open air theatre, a magnificent bathing ghat and a site for the *aswamedha* (horse sacrifice) of the Ikshvakus, and the grand fortification wall of their citadel. A number of structures have been conjecturally restored out of the ruins. These include the amphitheatre, the university, the *mahastupa*, the bathing ghat and the Aswamedha site. The finds at Nagarjunakonda are housed in a museum on one of the hills, specially designed on the model of a Buddhist Vihara. After the formation of the reservoir in 1966, the Museum is now reached by a special ferry.

NAGARJUNA SAGAR

A gigantic dam is now being built at this ancient site of Nagarjunakonda and the reservoir submerges the entire area. But all the structural remains have been dug up and restored on top of a hill which will form a picturesque island and a tourist attraction. The lake, Nagarjuna Sagar, named after Acharya Nagarjuna, will spread over 285 sq. km. Its water irrigates 14 lakh hectares around nine districts and will ultimately produce 400,000 kw of electricity to power Andhra's industries. The dam site and the new township of Vijayapuri, north and south, built on the surrounding hills, when lit at night look like a fairy land.

The Vijayapuri township has a number of rest houses for tourists. The Public Relation Officer, Nagarjunasagar Project, Hill Colony, Nalgonda District, and the State Tourist Information Bureau, Hyderabad will render assistance to tourists.

AMARAVATI

It is 26 km. to the west of Guntur. It is of absorbing interest to the student of Indian culture. This ancient Buddhist site belong to the pre-Christian era. Amaravati lies on the extensive level ground on the right bank of the Krishna river. It adjoins the ruins of Dhanyakataka, ancient capital of the Satavahanas and the chief centre of Mahayana Buddhism in the South. The mahachaitya or Great Stupa, which stood here was larger than the Stupa at Sanchi and equally famous. The stupa was built in the 2nd century B.C. The outline of its foundations is still seen. According to a conjectural restoration, its dome measured 49 m. wide and stood 29 m. high; the railing surrounding it 4.20 m. high. (the Sanchi stupa measures 37 m. wide and 17 m. high). There used to be a monastery adjoining the stupa. The Buddhist institutions here attracted students and pilgrims from other centres. The Chinese traveller, Hsuan-tsang visited Amaravati (640 A.D.).

The sculptures and other archaeological finds at Amaravati are preserved in a museum built on the site. The visitor is struck by the elegance and exquisite beauty and delicacy of the Amaravati sculptures. These precious creations include huge lotus medallions, lotus-carved cross bars of railings, panels depicting the Jataka tales from the life of Buddha, the bodhi tree and devotees in the act of worship, Buddha padas, wheels and numerous other figures. The Buddha images, all nearly 2 m. tall and draped in flowing robes, with an expression of tranquil dignity, are remarkable for their finish. The relief medallions beautifully balanced in composition are among the greatest works of art in India. The sculptures range in point of time from 200 B.C. to 250 A.D. Like the Mathura and the Gandhara schools of sculpture, the Amaravati school exercised great influence on other works of art in South-East Asia.

The surface-finds kept in the museum include monolithic implements, arrow-heads, black polished ware, terracotta figures and coins of the Satavahanas. On the bank of the Krishna, there is an ancient temple dedicated to *Amaralingeswara* (Siva) which was once a popular shrine of worship. The temple has impressive proportions.

At Amaravati 1. Tourist Bungalow; 2. P.W.D. Travellers Bungalow are available for tourists stay. Re. 1/- per day is charged. Reservation authority: District Collector, Guntur; Executive Engineer, PWD, Guntur, respectively.

ETTIPOTALA

This is a water-fall in a beautiful valley situated near Tallapalli in Palnad tq of Guntur nr. It is at a distance of about 8 km. from Macherla railway station. The Chandravanka stream falls from a height of about 21 m. into a beautiful lagoon at this place, and although the quantum of water is not very much it is very picturesque. Beyond the lagoon the stream flows through a green valley much frequented by tourists and reaches the Krishna about 1 km. away.

KOTAPPAKONDA

Kotappakonda hill in Narsaraopet tq is a very important place of pilgrimage. The *Sivaratri* festival here is known for the famous procession of *prabha* vehicles from all parts of the district.

GUTTIKONDA BILAM

Guttikohda Bilam (cave) in Palnad tq is another famous pilgrim

UNDAVALLI CAVES

Undavalli Caves are still another feature of attraction in Guntur. The *mantapa* at Undavalli is unique with a pyramid construction of four types.

MANGALAGIRI

Mangalagiri or the auspicious hill is a little neatly planned township on the Vijayawada-Guntur line, 10 km. from the right bank of the Krishna on the Grand Trunk Road. It has a Government rest house and many choultries. The presiding deity of the place, is known as *Panakala Lakshmi Narasimha Swami*. It is the abode of Lord Vishnu in the shape of Lakshmi Narasimha Swami. The offering, jaggery water, is made by pouring it into the mouth of the deity with a conch. It is now said that the hill was a volcano. Sugar or jaggery water, it is said, neutralise sulphur compounds found in a volcano and stop its eruption. A stupendous tower (*Gopuram*), the only one of its type in this part of India, was constructed over 170 years ago. The *gopuram* is the highest standing column with such proportions in this State.

CHEZERLA

One of the very earliest Hindu temples in Andhra is *Kapoteswaralaya* of Chezerla (Guntur dt.) which is perhaps of the third or fourth century A.D. It has a very peculiar and distinctive pattern of its own, and the apsidal plan and barrel vaulted structures, is termed as *Hashti Prastha* in the *Vastu Sastra*. It is perhaps an ancient Buddhist *Jhaitya*, converted into Hindu worship, later. Chezerla is situated 20 km. east-north-east of Narsaraopet. This is said to be the spot, according to the *Sthalapurana* where king Sibi (of Mahabharata) sacrificed his own flesh which he cut off from his body, as an offering to a vulture which was pursuing a pigeon or a *Kapotha* and which had taken refuge under the king. The deity is, therefore called *Kapoteswara*. This story is not only renowned in Hindu mythology but also in the Buddhist Jataka tales. This is probably the only temple in the whole of India dedicated to *Kapoteswara*. The temple is of the greatest importance not only from the architectural point of view as it reflects a peculiar and uncommon style but also from the epigraphical point of view.

VIJAYAWADA

Vijayawada, lying on the bank of the Krishna river, is 429 km. from Madras. The name is derived from the ancient *Vijayavatika*. The town is ringed by many hillocks, the most important being the Kanakadurga and Sitanagraram, on opposite sides of the river. Legend

TOURIST ATTRACTIONS

says that Arjuna performed penance on one of these hills, *Indrakila*, and secured from Siva the divine weapon *pasupata*. The temple has events of the Mahabharatam commemorated in sculpture. Apart from this shrine, a popular place of worship is the temple of *Kanakadurga*, situated on the slope of the hill of that name, reached by tiers of steps. The impressive landmarks of the town are the mighty bridges on the river Krishna, Prakasam Barrage (1957) and Gandhi Hills. Vijayawada is a major commercial centre. PWD inspection Bungalow, Vijayawada is available for tourists at Rs. 1.56 per day. District Collector, Chilakalapudi, Krishna dt. may be addressed. State Guests and visiting dignitaries may stay in State Guest House, Vijayawada. Railway retiring rooms at Rs. 3 to 4 are also available.

Kondapalli—Kondapalli is 20 km. from Vijayawada. It will be a delight to watch the skilled craftsmen making Kondapalli toys with light wood. The craft is confined to a few families who are believed to have migrated here from Rajasthan during the Moghul invasions. These brightly coloured products cover a wide range of creations: figurines of gods, Dasavatara, elephant, human and animal models, birds, plants and fruits, temples, houses, carts. There is a whole procession of the tribes of India, musicians and priests. Dancers in the royal court, cow and calf, toddy-tapper going up the palmyra tree with prohibition constable (now) are fascinating creations. Kondapalli the 'Hill fortress' (14th cent.) was the scene of numerous campaigns and struggles. The outerworks, some kilometres in circumference, are now in ruins, but the citadel on the rock overhanging them is still a striking object.

CHILAKALAPUDI

Chilakalapudi, 5 km. from Machilipatnam has a popular temple of Panduranga, built attractively on a grand scale. It is said that this temple is on par with the one at Pandaripuram. A great festival is held on *Ekadasi* of *Ashadha* every year.

Srikakulam (Near Challapalli): Now a common place was once a flourishing seat of Andhra Kingdom and has a temple of the Andhra Vishnu, a noble royal sage. It is said that Krishnadevaraya worshipped at this temple in 1509 and was told in a dream by the deity to compose a poem on himself. Later, the Emperor wrote the book which has since been one of the literary classics.

Ghantasala—Ghantasala contains both Hindu and Buddhist structures. The artistic images of *Kalabhairava*, *Saraswati* and *Lord Narasimha* are said to be superbly carved ones. The image of *Saraswati* reveals the artistic workmanship of Andhra artists. The Buddhist stupas also bear a similar stamp of artistic genius. Ghantasala was once an important port town. Diamonds and textiles were exported from this port to Egypt, Rome and other foreign trade centres.

RAJAHMUNDRY

Rajahmundry, 581 km. from Madras on the Madras-Calcutta railway line, is a place of historic and religious significance. Markandeya and Kotilingeswara temples stand on the bank of the Godavari. Once in 12 years Pushkaram is held which attracts pilgrims from all over the country. The long rail bridge here on the Godavari, in 56 spans, is an impressive sight. Nearby, there is a historic *Sarangadhara metta* Dowleswaram Anicut 4 km. down the Godavari presents a picturesque sight. Municipal travellers Bungalow (Class I & II) is available at Rs. 2 per day. Commissioner, Municipal Council, Rajahmundry may be addressed. In addition there are (1) Nalam Choultry and (2) Nagarapu Buchiabbayi Choultry at Rajahmundry.

PAPIKONDALU (BISON RANGE)

There is a magnificent gorge at Papikondalu or Bison Range through which the Godavari flows. Papikondalu lies in the East Godavari dt. The Gorge reaches an elevation of 1,280 m. The scenery is picturesque and arresting. The sides of the mountains which overhang the river, are filled with luxuriant forest vegetation of teak and bamboo. The mountains close upto the water's edge the precipitous banks appearing near enough even to be touched. They open out and again approach each other forming successively beautiful little lakes. Charles Trevelyan compared the Papikondalu scenery to that of the Rhine between Coblenz and Bingen.

BHADRACHALAM

Bhadrachalam, on the Godavari, is about 161 km. from Rajahmundry and reached by motor launch. It is well known for its shrine of Srirama. On Ramanavami day (Mar.-Apr.) a great festival is held. The temple, built on a hill surmounted by a lofty gopuram, is surrounded by 24 lesser shrines.

ANNAVARAM

Annavaram lies on the Madras-Calcutta rail line and is located in East Godavari dt. Sri Satyanarayana Swami temple is built on the eastern side of the hill called Ratnagiri situated about 3 km. from the railway station. Its easy accessibility, its picturesque set-up and its sanctity attract large number of devotees. *Satyanarayana Vratam* is celebrated by devotees. Good choultry accommodation is available.

BIKKAVOLU

It is a village situated midway between Rajahmundry and Kakinada. The village can be reached by train and a railway station of that name is situated about 1.5 km. away from the village on the Vijayawada-Waltair section of the South Central Railway. The village

can also be reached direct by bus from either Rajahmundry or Kakinada. The modern name of the village is an obvious corruption of Bikkanevrolu or Birudankanavrolu named after the title Birudanka Bhima, borne by a famous Chalukyan King of Vengi, Gunaga Vijayaditya. There are six fine temples in this village and they are ascribed to this monarch. These temples are the earliest known examples of Vengi Chalukyan architecture and sculpture which are of particular significance, for a study of the evolution of art and architecture in South India.

Antarvedi—It is situated at the confluence of the Vasista a branch of the Godavari with the sea. This is said to be one of the Nava Narasimhas. It is nearly 10 km. by boat to the temple from the Narsapur railway station. Temple festival falls in Jan.-Feb. every year.

VISAKHAPATNAM

Visakhapatnam lies 780 km. from Madras on the Madras-Calcutta main railway line. It is linked with Waltair by rail (3 km.). Waltair is noted for its beautiful landscape, equable climate and fine sea coast. The Andhra University campus is situated here. With a natural harbour, Visakhapatnam port is next to Madras in importance on the east coast in the south. The Hindustan Shipyard at Visakhapatnam is India's only ship building centre. The Caltex Oil Refinery is located here. A splendid view of the Bay and the town can be had from the Dolphin's Nose, some 457 m. high.

Simhachalam—About 10 km. north of Visakhapatnam lies the beautiful hill, Simhachalam, 244 m. above sea level, with a temple dedicated to Varaha-Narasimha Swami. It has inscriptions recording historical events. Architecture of Simhachalam Temple is of a high order.

Bhimunipatnam—It is 33 km. from Visakhapatnam. The town itself is picturesquely placed at the mouth of Chittivatsala river. The Dutch built a fort and a factory in the 17th century. The chief attraction of the place is, however, its beach, perhaps unrivalled for its beauty all along the East Coast. The waters, safe from dangerous depths and from sharks are ideal for sea-bathing. The St. Ann's Home run by the sisters of the Indian Order have rooms to let and they also look after the boarding arrangements of the patrons. Near the sea is a bungalow, with modern amenities, available on rent on advance request. Seen from the bungalow the sea looks most colourful and variegated. Bhimunipatnam is a pleasure resort for a short holiday.

GUDEM AGENCY

Chintapalli to HQ of the Gudem is about 150 km. from Visakhapatnam. By far the most wild and intractable area in the Visakhapatnam.

patnam district is the Gudum Agency, which has 460 sq. km. of rugged country. The terrain is covered with dense forest with its varied flora and fauna. Wild animals like bears and panthers are quite common and even tigers are known to abound in the heart of the jungle Chintapalli. There is a travellers' bungalow at Chintapalli but the tourist has to make his own arrangements for food.

ARAKU VALLEY

The valley lies 127 km. from Visakhapatnam and is reached by a fine road. Part of it is a ghat road which climbs to a height of 1,169 m. and then passes through picturesque scenery down to the Araku Valley which lies about 975 m. above sea level. There are two travellers' bungalows on the way. The valley is being colonized and developed rapidly into an attractive tourist centre. It is the home of a number of interesting tribes, Savara, Gadaba. The Inspection Bungalow in the valley provides limited accommodation.

ARASAVALLI

Sri Suryanarayana Swamy Temple located here is the only Sun-God temple in the whole of the Andhra Desa. It is situated at a distance of 3 km. from Srikakulam. It is an important pilgrim centre and large crowds visit the temple during Sundays.

MACHKUND

The road from Visakhapatnam to Araku Valley leads on to Machkund (85 km.) Hydel project. On the way, there is a travellers' bungalow atop a hill at Padwa, which is an ideal stop for a picnic holiday. Further along, at Duduma a mighty water-course falling 168 m. on the Machkund river is harnessed for generating electricity. The waterfall is very beautiful, especially in the rainy season.

UDAYAGIRI

Udayagiri, in Nellore or was formerly a fortified town. Nellore town, lies 177 km. from Madras on Madras-Calcutta railway line. The fort which originally consisted of thirteen separate strongholds, is in ruins now. Part of the hill is so precipitous as to be inaccessible, the cliffs being in places nearly 305 m. high. Udayagiri was the capital of a Kingdom founded by Langula Gujapati (14th cent.). It fell to Vijayanagar empire, and was later held by the Golkonda Nawab. On the top of the hill stands a mosque with two Persian inscriptions referred to its construction in 1660.

TIRUPATI

Tirupati a shrine on seven hills is dedicated to Lord Venkateswara (God: Vishnu). Tirupati is about 370 km. from Vijayawada via Gudur

and Renigunta junctions. It lies on the Gudur-Katpadi section 11 km. from Renigunta. The shrine is located on the top of Tirumalai, a cluster of seven hills known as Seshachala or Venkatachala, at an elevation of 853 m. The buses run by the Tirupati-Tirumalai Devasthanam starting from Tirupati-East Railway station carry the passengers up the hills from early morning till night fall. The journey is exciting. As the bus climbs via ghat road (25 km.) in low gear, zigzagging thro a number of hair-pin bends along the hill-sides, the elevation unfolds a magnificent view of the town below. Pilgrims may prefer to walk by foot along the pedestrian steps cut in the rock. It takes over three hours to reach the top by walk. The temple of Tirupati is believed to have existed from ancient times. The royal dynasties, the Pallavas of Kanchipuram, the Cholas of Tanjore, the Pandyas of Madurai and the kings and Chiefs of Vijayanagar vied with one another in endowing the shrine with rich offerings and benefactions. The temple is one of the richest in Southern India. The temple, with its gopuram, is a fine piece of Dravidian architecture. The Vimana of cupola over the *sanctum sanctorum* is covered entirely with gold plate and is known as *ananda nilayam*. The shrine consists of three *prakarams*. The outermost enclosure contains the *dhwaja-stamba*, and among others the statues of the Vijayanagar King Krishna Devaraya and his consorts, and of Todarmal, minister of Emperor Akbar. The idol of the deity, a full figure of Lord Venkateswara, has the attributes of both Lord Vishnu and Lord Siva, the preserving and destroying aspects of the Hindu Trinity. The elaborate rituals and mode of worship in the temple were prescribed by the saint Ramanujacharya (11th century) and are being followed even today. Near the temple lies the Swami Pushkarini, the holy tank where the pilgrims take a dip before entering the shrine. Daily 6,000 devotees visit the temple, making every day a festive occasion. The annual festival, *brahmotsava*, of the Lord is celebrated in Sep.-Oct. There are paid *darsanas* and free *darsanas* vary according to seasons and practices. Particulars are daily announced by temple authority. Enquiry official gives details. *Talaneelalu* (hair offerings) and other votive offerings are offered by the devotees. Foreigners may see the temple from outside. They must, however, follow the local usages such as going bare-foot, abstaining from smoking, etc. In the case of Tirumalai-Tirupati Devasthanams, foreign visitors can now go up the hills where the sacred shrine is situated and see the temples provided (1) their stay on the hill does not exceed three days; (2) they conform to the customs and usages observed on the hills as notified by the Devasthanam from time to time; and (3) and they obtain previous permission of the Executive Officer Tirumalai-Tirupati Devasthanams.

Akasaganga, Gogarbhram and Papanasanam which are closeby are other places of pilgrim interest while at Tirumalai.

ANDHRA PRADESH ALMANAC

In the lower Tirupati there are a number of temples, the most important being the Govindaraja temple, with its imposing tower. Alamelu Manga temple at Tiruchanur (3 km.) attracts many devotees in large number.

Accommodation—Dharmasalas are available to all devotees free of charge at Tirupati (down) and Tirumalai (up hills). At Tirumalai special cottages are made available on payment of charges ranging from 3.50 upwards per day. Stay in Tirumalai is normally limited. Drinking water is available at Tirupati and Tirumalai.

The State tourists bureau and the Enquiry Office at the Tirumalaipati Devasthanam located in the New Choultry at the Tirupati Railway station help pilgrims and tourists with information.

CHANDRAGIRI

Chandragiri (11 km.) is near Tirupati on the Swarnamukhi river. It served as the last capital of the Vijayanagar rulers after their defeat in the battle of Tallikota (1565). It has a fort built on a huge granite rising about 182 m. above the surrounding country. Travellers bungalow is available to stay at 0.75 ps. per day. Secretary, Zilla Shad, Chittoor, may be addressed.

KALAHASTI

About 40 km. from Tirupati the sacred shrine centre of Sri Kalahastiswara, is situated between two steep hills. The temple has imposing towers, and is reputed for sculptural work.

HORSLEY HILLS

It is a summer resort in the hills of the Eastern Ghats. It is about 10 km. from Tirupati by road, via Madanapalle. The last stretch is a steep climb up a road along the folds of hills, which in 10 km. climbs a height of 746 m. from the point of the base. The hills reaching 1,000 m. above sea level from the most elevated table land in South Andhra Pradesh. This was discovered in 1870 by W. D. Horsley, I.C.S. who made it his summer resort. The houses which he constructed still stand. It is locally known as Yenugamallamma Konda. Perfect calm is over the rugged hills. The wind is refreshing and cool even in the afternoon. The hills are thick with groves of teak, red sanders, lyptus, gulmohur and mango. Large rocks lie interspersed with vegetation. With nice landscape one never tires of watching the hills in their changing hues, with fantastically large boulders lying precariously on their sides. The summit gives a grand view of the low countryside around. The climate is delightful. The temperature being 18°C., is cooler than on the plains below. The evenings are cool; the tourists are well advised to equip themselves with warm clothing for the night. There are about 30 suites available for the

tourists. The Tourist Home and the Rest House have kitchens for the preparation of food if provisions are supplied. The amenities at present are limited, and tourists may therefore carry provisions from Madanapalle on their way.

Madanapalle—About 27 km. lower down, with its salubrious climate, is a famous health resort, Madanapalle. It has a Tuberculosis Sanatorium which attracts patients from all parts of India. Madanapalle is accessible by train or bus. P.W.D. Inspection Bungalow at Madanapalle provides lodging at 75 ps. per day. Dt. Collector, Chittoor may be addressed for accommodation.

PENUKONDA

Penukonda which lies in the Anantapur Dt. is situated at the foot of a steep rugged hill at an elevation of 914 m. on the edge of an uneven plain. Massive fortifications stretch out from the hill. The town has remains of ancient buildings and towers and mandapams on the hill slopes. The ruins are numerous. Penukonda was one of the last strongholds of the Vijayanagar empire (which was crushed by the Muslims at the battle of Tallikota (1565)). The King fled to Penukonda carrying the treasures of his palace and lived there for 20 years after which he moved to Chandragiri. Of the many buildings here, the most handsome is the Sher Khan mosque, constructed of dark green granite with black hornblende mouldings and excellent carvings.

LEPAKSHI

A small village in Hindupur Tq. of Anantapur Dt., about 16 km. from the Hindupur railway station Lepakshi is famed for its beautiful temple, fashioned in the Vijayanagar style. Its walls and ceilings have a large number of frescoes of 16th century. The temple is dedicated to Siva, and the paintings depict the diverse forms of the God and episodes from the lives of famous devotees. The temple has a surprise for the visitor in its hanging tower supported from top. The monolithic Nandi (the bull mount of Siva) is perhaps the largest sculpture of its kind. Travellers Bungalow at Hindupur and P.W.D. Travellers Bungalow (Demakepalli) 5 km. from Lepakshi provide lodging facilities at Rs. 1.50 and 0.50 per day. Dt. Collector, Anantapur may be addressed for accommodation.

SRISAILEM

Srisailem, 457 m. above sea level, lies on the Nallamalai plateau in Kurnool Dt. overlooking a deep gorge through which the Krishna river passes. Srisailem can be reached by rail, upto Nandyal from where the visitor may proceed by road. The Mallikarjuna shrine here

is of great antiquity, and is justly famous for its elaborate sculptured narratives from the *Mahabharata* and the *Ramayana*. The temple stands on the top of the hill enclosed by high fort walls. On the Sivaratri day, which usually falls in Feb.-Mar. thousands of pilgrims visit the shrine.

MAHANANDI

A Siva shrine, 16 km. from the Nandyal Railway station. The Mahanandi temple has a spire which is of the Buddhist type. Water from springs under the *lingam* flows into a tank in front of the shrine. The temple is attractive for its architectural beauty.

AHOBALAM

49 km. from the Nandyal Railway station, Ahobalam has Narasimha shrine. There are three shrines, the lower one at the foot of the hills, another 6 km. up and a third at the summit of the hill. The lower Ahobalam is noted for its sculptures illustrating stories from the epics.

PUSHPAGIRI

Pushpagiri on the river Penna is 16 km. to the north-east of Cuddapah. It means the Hill of Flowers, and is sacred to the devotees of Vishnu and Siva, as well. The vaishnavites say that it is the *Tirumala Madhra Kailasam*. There are eight temples on the hill dedicated to Kasi, Viswanatha, Baghavaswami, Vaidyanatha, Trikotiswara, Bhimeswara, Indranatheswara, Kamalasambhaveswara and last but the most important, Siva and Kesavaswami in one court usually referred to as the main Pushpagiri temple. A Chola king is believed to have built it. The inscriptions in the temple of Santhana Malleswara mention the existence of five shrines dedicated to Vejanatha (Vaidyanatha), Kamalasankara, Durga Devi and Rudrapadma Rameswara. The Chenna Kesava temple has a lofty gopuram. The carvings therein are fine works of art. One depicts the story of the gift of *Pasupatastra* by Siva to Arjuna and one other shows *Parthasarathi* teaching the *Gita* to Arjuna. Some scenes from *Ramayana* and the *Mahabharata* are also depicted. The Bhimeswara shrine, close to that of Vaidyanatha, too has several mythological scenes carved in it.

VONTIMITTA

It is situated 13 km. south-west of Sidhavattam on the main road to Cuddapah. The place is famous for its temple of Sri Kodandaramaswami. The annual festival is celebrated during April.

YADAGIRIGUTTA

There is a temple of Sri *Laxminarasimhaswamy* at Yadagirigutta in Bohnagir tq. (Nalgonda dt). It is situated at a distance of 5 km.

from Raigir Railway station which is on the Hyderabad-Kazipet line. This is one of the most ancient and famous temples in the south. The temple is situated on a hillock. About 140 dharmashalas have been built for the convenience of pilgrims. The *Rathotsava* ceremony is performed in the month of Phalgun (Jan.-Feb.).

ALAMPUR

Alampur is in Mahbubnagar dt adjoining Hyderabad. It is situated on the banks of the Tungabhadra river. It can be reached by bus transport. It abounds in antiquities of the Chalukyan times. These include a cluster of temples with *sikhara*s in curvilinear form, and decked with miniature architectural devices such as pillars, niche, windows and *amlakas*. Plan, architecture and carvings are strikingly similar to those of the Buddhist and Brahmanical caves of Western India.

NIZAMSAGAR

Nizamsagar (Nizamabad dt) is reached by a pleasant drive of 161 km. by road. The nearest railway station is Kamareddi on the Hyderabad-Manmad Railway, from which there is a road link of 41 km. to the site. The reservoir built on the Manjira river, a tributary of the Godavari, makes a lake spread over 129 sq km. The bungalow, the Dilkusha, located in a beautiful garden projecting into the bed of the reservoir, and the rest houses on the flanks of the dam provide excellent arrangements for the lodging and boarding of the visitors. These offer a panoramic view of the reservoir and its surroundings. It is a fine excursion place with picturesque countryside.

WARANGAL

Warangal lies north-east of Hyderabad, about 140 km. by rail or road. Tourists from Madras or Vijayawada can reach Warangal from Kazipet railway junction (about 6 km.) on the Madras-Delhi main railway line. Warangal has historical interest as the seat of the Kakatiya rulers (12th cent.).

Thousand Pillar Temple—Chief tourist attraction is the thousand pillar temple at Hanamakonda lying on the road connecting Warangal and Kazipet. Built by King Rudra Deva in the 12th century, the temple is one of the finest specimens of the architecture and sculpture of the Kakatiya period. The temple stands on a built terrace about one metre high and like earlier Chalukyan temples, it is star shaped and triple shrined, dedicated to Siva, Vishnu and Surya. The shrines have no deities, but the beautiful sculptures on the perforated and ornamented stone screens on the doors enable this identification. The shrines are arranged round a spacious central hall. The most notable features of the temples are the rich carvings on the pillars, lintels

and doorways, the delicately pierced screens, and the very elegant open work by which the bracket shafts are attached to the pillars.

Nandi and Sculptures—In the large pavilion in front of the temple, there is a massive figure of Nandi (bull-mount of Siva) done in black basalt and placed on a platform, which is a splendid specimen of sculpture in monolith. The entrance to the western shrine is decorated with sculptured figures of dancing girls, while a large black basalt slab, fixed near the eastern entrance, bears an inscription indicating the date (1163 A.D.) of the construction of the temple.

Fort—Warangal fort is another masterpiece of the Kakatiya rulers built in the 12th and 13th centuries. The fort has two walls, the inner one built of stone, and the outer one built of mud, and is surrounded by a moat 22 m. wide and 17 m. deep. Traces of a third earthen wall are seen in a few villages, south of Hanamakonda. It is believed that this wall had a circumference of 49 km. the largest of its kind in India. Inside the fort stand four gateways known as *kirtistambas* or towers of fame. Patterned alike with arches of grey granite, these face one another. The carvings on the arches are elegant and elaborate, richly interspersed with figures and emblems, the chief of them being the *hamsa* or swan at each end of the arch. They bear a striking similarity to the gateways of Sanchi.

Other Antiquities—Trial excavations inside the fort have brought to light remains of a large temple in the Chalukyan style of architecture whose boundary is marked by the *Kirtistambas* or gateways facing the four cardinal points. The exquisite pieces of sculpture are found in the ruins. Several minor temples, a durbar hall, store houses are other notable structures inside the fort. The fort has a collection of minor antiquities such as images, carvings and inscription slabs of archaeological and artistic significance.

RAMAPPA TEMPLE

The Ramappa temple lies 70 km. from Warangal, near Palampet, in Mulugu rd. Built in the 13th century, it has been described as one of the best among mediaeval temples of the Deccan. The temple is similar in style and design to the Thousand pillared temple, but is more ornamental. The pillars and ceilings are decorated with scenes from the *Ramayana* and the *Mahabharata* depicted in sculpture. Long panels of figures of gods, goddesses, warriors, acrobats, musicians and dancing girls decorate the outer walls. Large dancing figures in different poses have been utilised as brackets springing from the pillars and supporting the overhanging caves. The figures are carved in black basalt with brilliant polish; their fine anatomy, vigour and rhythm of the dance poses make them extremely pretty looking.

Ramappa Lake—The magnificent lake near the Ramappa temple covers an area nearly 21 sq km. and is formed by a ring of hills on three sides and a colossal bund on the other. Constructed during the reign of the Kakatiya ruler Ganapatideva it is an example of tank irrigation on a large organised scale. With lush green scenery all round, it is an excellent place for picnics. Buses from Hanamakonda ply to Palampet.

LAKNAVARAM LAKE

It is reached from the Hanamakonda over 70 km. by road. It dates from the same period as the Ramappa lake, and was created by shutting up three narrow valleys with short bunds. The lakes of Ramappa, Pakhal and Laknavaram (qqv) are set in such natural surroundings that they look more like natural ponds than man-made tanks. There is scope for big game in the vicinity of these lakes. Prior permission for shooting should be obtained from the Forest department.

PAKHAL LAKE

Pakhal lake lies 50 km. from Hanamakonda. It is 30 sq km. and is enclosed on 3 sides by low densely wooded hills and by a bund on the fourth. The lake has been made by throwing a bund across a river cutting its way over an outcrop. The lake abounds in fish, and contains otters and alligators. The hills are rich in varied game.

KONDAPUR

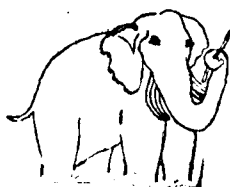
Kondapur in Medak rd is 70 km. away from Hyderabad. It has several ancient mounds and a large number of structures have come to light recently. Of these a *dagoba* with a few cells all round, two small *chaitya* halls, a *stupa* 4.5 m. in diameter in the middle of a courtyard paved with bricks and concrete, six underground chambers and furnaces may be mentioned. There is nothing striking about the architecture here but these structures are quite well planned and executed and prove that Kondapur must have been a very important Andhra centre—perhaps one of the 30 towns of the Andhra referred to by Roman writers. A gold coin of the Roman emperor Augustus (37 B.C.-A.D. 14) about a dozen silver coins, 50 copper, 100 potin and a large number of lead coins totalling in all 1835 coins have been discovered at this place. A few moulds of coins, some of them identified as moulds of punchmarked coins have also been discovered. The pottery discovered consists of plain saucers and *chatties* of ordinary domestic use, ornamented pots, urns, incense burners, and vases exhibiting potters skill of a very high order. Some are very large and a few have symbols like the *tri ratna*, lotus design, *dharmachakra* etc. A few are extremely thin and delicate and have a red colour with lustrous polish. Broken bits of bangles, terra-cotta, shell, ivory, copper and glass with embossed and incised designs on clay and ivory bangles

and anklets have been found in large numbers as also terra-cotta beads and necklaces. Iron implements and weapons discovered include sickles, spearheads, knives, chisels, forks etc. Ivory pieces with figures beautifully carved on it testify to the ancient skill in ivory work. Hollow figurines of Kaolin made in moulds (in two or more parts joined and fixed) have been found in considerable numbers. Some of them show traces of green, red and yellow paint on them. A second variety of terra-cotta figurines, solid and made of soft clay mixed with sand, is found with a coat of light red slip applied before firing. Some of these figures have been identified tentatively. One of them is probably Yaksha (Kubera) and another a woman with a child on her knee might be Hariti with a fan or an incense burner in her hand. One of the most beautiful figures is identified as a Bodhisatva with an expression of internal calm and repose worthy of a votary of the Buddhist faith. A large number of beads made of lapis-lazuli, amelian, jade, rock, crystal, amethyst, glass, shell, and clay of a great variety of shapes and sizes have been found. The Deccan was noted for its bead industry in ancient times and Kondapur confirms this fact. Kondapur has shown great promise and future excavations might throw a great deal of light on the ancient history of Andhra Pradesh, particularly of the Satavahana and earlier ages.

MEDAK CHURCH

Medak is probably the largest Bishopric in India and is widely known throughout Southern India for nearly half a century for the missionary activities of the English Wesleyan Mission. There is a beautiful cathedral in the town. Its foundation was laid in 1914 and it was completed in 1924. From the point of view of architecture the cathedral is considered to be one of the best in India. Besides conducting schools for boys and girls, many of them being residential, the Mission authorities also maintain a Theological College and a school for training nurses.

Medak Fort—Apart from its Cathedral, Medak has a fort built on a hillock 90 m. high. Here the Mubarak Mahal Palace has a double-headed eagle having elephants in its beaks and talons, a symbol well-known to Hindu mythology, carved on a gateway.



DISTRICT INFORMATION

SRIKAKULAM DISTRICT

Location & Size : It lies on the northern most point of the State of Andhra Pradesh between 18° 20' & 19° 10' N and 83° 5' & 84° 50' E. **Boundaries :** N & W by Orissa State; E. Bay of Bengal and S Visakhapatnam. **Area:** 10,100 sq km. **Taluku:** (11) Bobbili; Chipurupalli; Ichapuram; Narasannapet; Palakonda; Parvatipuram; Pathapatnam; Salur; Sompeta; Srikakulam and Tekkali. No Srikakulam.

Historical Background : The Eastern Ganga kings of Kalinga ruled for 1000 years from 5th century A.D. to 15th century till the time of Bhanu Deva IV (1414-1434) giving way to the Gajapathis. 'Kalinga' extended from the Vaitarani river of Orissa to Varahanadi of Visakhapatnam and included the modern Srikakulam and Visakhapatnam district upto Berhampur with their capital at 'Kalinganagara' (Mukhalingam) in Srikakulam or Prataparudra Gajapathi of the Gajapathi dynasty was defeated by Krishna Devaraya as a consequence of which the former gave his daughter in marriage to the Vijayanagar Emperor to improve relations. The region came under the authority of the Nawabs of Golkonda in 1571 A.D. The French General, Bussy, occupied the Visakhapatnam and Ganjam areas after the historic battle of Bobbili (1757). The English at the invitation of Vizianagar zamindar fought with the French at Chandurti (East Godavari or.) in 1758 and defeated them. The district was a part of the Visakhapatnam or. till July 1950, when Srikakulam with the present taluku was constituted as a separate district.

Physiography : *Natural Regions:* 1) Hill region and 2) Plains. Palakonda, Parvatipuram and Salur or. parts of Pathapatnam, Sompeta and Tekkali or. are hilly regions. The rest of the region is plain with sandy coastal belt. Eastern ghats are spread parallel to coastline. The drainage pattern is from ghats towards sea.

Climate : The hottest months are Apr. to June. The climate is moderate in the coastal or. particularly Sompeta, Ichapuram and Srikakulam. In the rest of the or. the summers are too hot and winters are too cool. or. has a daily average temp. of max. 31°C min. 23.3°C. The highest Temp. in the year will be 38.3°C and the lowest temp. 14°C.

Rainfall : The or. receives the benefit from both the N.W. & S.W. monsoons. There are about 70 rainy days on average with annual rainfall totalling to 1116 mm. Pathapatnam receives highest rainfall 1270 mm. of all or. Narasannapet lowest rainfall 1016 mm.

Natural Resources: *Forests:* Forest area in the dt. is about 751 sq. km. of which major portion lies in Palakonda tq. Salur and to some extent Bobbili have forests, yielding good timber.

Water Resources: Nagavali & Vamsadhara (Langulya) are chief rivers. Having its source in Orissa State Vamsadhara enters the dt. in Patapatnam tq to traverse Narasannapet and Srikakulam tq and join sea at Kalingapatnam. Nagavali also has its source in Orissa State, entering the dt. in Parvatipuram it flows thro' Palakonda tq forming as a boundary to Chipurupalli and Srikakulam tq. In the lower reaches Nagavali takes a different name 'Langulya'; Suvarnamukhi from Bobbili joins this as a tributary. A net work of open headchannels on these and Garibulagedda rivers to serve an ayacut of about 28702 ha. The smaller rivers in the dt. are Bahuda (Ichapuram), Mahendratana (Sompeta and Patapatnam), Vegavati (Salur). There is a major irrigation project (Rs. 14 crores) contemplated on Vamsadhara, the dam site being at Neradi. The medium projects that completed were Nagavali right channel, Vegavati anicut, Paidgam project. Surapadu anicut, Kintal channel, Desavalli channel, Vonigedda anicut, Mandagedda anicut are minor projects that give water for irrigation in the dt. The Totapalli regulator is an old water source across Nagavali with 33 km. canal to serve an ayacut of 11,160 ha for Palakonda, Parvatipuram and Srikakulam tq. A large number of tanks sources are restored under Tank Restoration Scheme. (See Development of Water Resources).

Agriculture: *Soil Types:* Though soils are agriculturally classified as black and red the mixed soils are common. South east to North west: 1. Coastal belt 24 km. wide coastal alluvium; 2. Further inward patch of a alluvial soil; 3. Further inward Red soil. In hill regions the soil is red gradually changing to black as they are away. The soil in the valley is black and very fertile. Rice forms the major food crop while the groundnut and gingely are commercial crops grown extensively. There are mango orchards in several places particularly around Rajam.

Land Utilization: Total Geographical area 995594 ha.; Forest 15.1%; Barren and uncultivable land: 16.5%; Land put to non-agricultural use: 6.1%; Cultivable waste: 4.1%; Permanent pastures: 2%; Land under misc. Tree crops: 1.4%; Current fallows: 6.5%; Other fallow lands: 4.3%; Net Sown Area: 44%; Area sown more than once: 10%; Total Cropped Area: 54%.

Irrigation: 55.9% of Net sown area is irrigated; 522 wells have independent ayacuts while 400 wells supplement recognised sources of irrigation. (See Water Resources above).

Cropping Pattern: (Net sown area: 4,42,101 ha). **CEREALS:** Rice: 52%; Ragi: 10%; Sajja: 2.5%; Janna: 1.3%. **PULSES:** Greengram: 7.5%; Horsegram: 6%; Blackgram: 1.5%; Misc. Pulses: 4%. **COMMERCIAL CROPS:** Groundnut: 8%; Misc. Oilseeds: 5%; Sugarcane: 2.4%; Misc. Crops: 3.1%. Cashewnut is a dollar earning crop localised in this district of Andhra Pradesh.

Farm Research: There is an agricultural Research-cum-Demonstration Farm at Ragolu. New improved strain of rice and ragi are being tried for suitability in the tract to develop suitable cultural practices. The three State Seed Farms at Bendi, Poddapeta and Vennelavalasa produce improved seed for supply to farmers. The Mesta Research Station at Amadalavalasa is evolving suitable strains and improved practices in jute cultivation. Sugarcane Hason farm, Bobbili is engaged in the propagation of improved strains of sugarcane among cane growers.

Animal Husbandry: The district is famous for a breed of cows which is short and known for strength. There are Veterinary hospitals at Bobbili, Parvatipuram, Tekkali and Srikakulam (16 minor veterinary dispensaries and 9 rural veterinary dispensaries).

Fisheries: Coastal villages along this nearly 200 km long district engaged in fishing. Barua and Kalingapatnam are major centres for fishing.

Mineral Resources: The district has manganese ore deposits particularly in Garbham, Garividi, Peripi, Sirivaram villages of Cheepurupalli tq. It is believed that Salur tq too has manganese deposits and it is under exploration. Mining activity is at present limited to Cheepurupalli tq.

Population: Total: 23,42,291; Men: 11,50,372; Women: 11,91,419; Urban 3.34%.

POPULATION DENSITY: 232 per sq km

INCREASE IN THE DECADE 1951-1961: 10.32%.

RELIGION: Hindu: 98.7%; Muslims: 0.3%; Christians: 1.0%.

LANGUAGE: Telugu: 21,11,453; Urdu: 450; Lambadi: Nil; Tamil: 660; Kannada: 28.

TOWNS & POPULATION: Srikakulam (M) 35,071; Chipurupalle 9,540; Bobbili (M) 25,592; Salur (M) 26,111; Parvatipuram (M) 25,281; Palakonda 13,780; Rajam 7,729; Veeraghattam 8,951; Narasannapet 11,167; Tekkali 11,636; Sompeta 10,588; Mandasa 6,233; Ichapuram 12,961.

OCCUPATIONAL PATTERN: Farming 70%; Trading: 5%; Manufacturing Industry: 10% and other Services 15%.

Industry: Mining of manganese ore is one of the earliest industrial occupations in the district. There is one ferro-manganese factory at Garividi with an annual capacity of 30,000 tonnes together with 18,000 tonnes of complementaries of ferro-manganese. From the low grade ore, ferro-manganese is produced and exported to U.S.A. and the

continent. There are three sugar factories one at Amadalavalasa in the co-operative sector and one each at Seethanagaram and Bobbili. The Bobbili plant has a power alcohol unit.

Utilising the available clay deposits, mangalore tiles are manufactured. There are 13 cashewnut processing units at Palasa, 6 Salt extraction units along the coast and light engineering and agricultural implement units at Srikakulam and Palasa. Rice mills, Oil mills and Saw mills and dispersed in the important centres of the district. Brass and copper utensils are made in Srikakulam. Barua is known for coil making.

Electric Power: Power is obtained from Machkund Hydel. By Mar. 1966, 296 villages are electrified.

Transport: Railways: The district has 235 km of broadgauge and 33 km of narrow gauge route belonging to S.E. railway. Madras-Calcutta trunk route passes thro' Cheepurupalli, Srikakulam, Narasannapet, Tekkali, Somapet, Ichapuram rō. The narrow gauge line starting from Naupada in Tekkali rō passes thro' Patapatnam to reach Parlakimidi and Gunupur in Orissa. A broad-gauge line from Vijayanagaram to Raipur passes thro' Salur, Bobbili and Parvatipuram rō. There is also a broad-gauge line from Bobbili to Salur town. **Roads:** Of the total road length 1,618 km about 215 km belong to National Highways, the rest come under the control of State, Zilla Parishad and village Panchayats.

Education: Literacy: Total 15.7%; Men: 24.25%; Women: 6.07%. There are two colleges—Srikakulam and Bobbili; a Govt. Polytechnic at Srikakulam and an Industrial Training Institute at Bobbili to cater technical education in the department. Two teachers Training Schools are situated at Srikakulam and Parvatipuram. There is a 'Vijnana Mandir' at Amadalavalasa for dissemination of science among villagers. There are 108 high schools, 2 multi-purpose schools and 8 higher secondary schools. At lower levels, there are 18 middle schools and 3,445 elementary schools.

Health: There are 8 modern hospitals and 19 dispensaries with bed capacity of 148, besides 21 ayurvedic clinics. A Leprosy clinic is located at Salur.

Places of Interest: Srikrman (Temple), Arasavalli (Suryanarayana Temple) one of the two Sun God Temples in India, Salihundam (Buddhist Stupas); Kalingapatnam, Mukhalingam, Pandava Temples in Mahendragiri (1,500 m) Bobbili (War Memorial Pillar). See: *Tourist Attractions* (Page 286)

Panchayat Samities

Badangi; Bhadrugiri; Bobbili; Cheepurupalli; Gara; Ichapuram; Kasibugga; Kotabommali; Kothuru; Kurupam; Mandasa; Narasannapet; Pachipenta; Palakonda; Parvatipuram; Pathapatnam; Rajam; Ranastalam; Salur; Saribujili; Seethampeta; Shermahammadapuram; Tekkali; Veeraghattam.

VISAKHAPATNAM DISTRICT

Location & Size: It lies between 17° 10' and 18° 25' N and 81° 50' and 83° 55' E; **Boundaries:** N. Orissa State & Srikakulam rō, E. Bay of Bengal, S by East Godavari rō, W by Orissa; **Area:** 13,468 sq km; **Taluks** (10) Anakapalli Bhimunipatnam, Chintapalli, Chodavaram, Elamanchilli, Narsipatnam, Paderu, Singavarapukota, Visakhapatnam, and Vizianagaram Hq. VISAKHAPATNAM.

Historical Background: Once the District formed part of the Kalinga kingdom (see Srikakulam rō). Later after being split up among petty rulers for a time the area was conquered by the Eastern Ganga dynasty in the late 5th cent. During the early 7th cent. the district came under the authority of Kubja Vishnuvardhana the founder of the Eastern Chalukya Dynasty. In 1213, the Kakatiya Ganapatideva conquered the area. After the fall of Kakatiya Empire, in the 4th cent. Kumaragirireddi and Kataya Vemareddi occupied it and the district became a part of the Kondaveedu kingdom. After the fall of Kondaveedu the area went into the fold of the Gajapatis. Krishnadevaraya after his historic conquest of the Kalingadesa in 1515 erected a Jayastambha (Victory Tower) at Potnuru in Bhimunipatnam rō. The Nawabs of Golkonda made the district a part of their domain in 1568. It was during the reign of the Golkonda rulers, that the Dutch, English and French merchants established commercial depots on the coast of the district. Later the Circars came under the authority of the Nizam from whom they passed into the hands of the English. History records the struggle for freedom in this district against the tyranny of the British in the agency tract around 1845 and at Rampa later in 1879. Visakhapatnam was the largest district in India till July 1950 when it was divided into Visakhapatnam and Srikakulam districts.

Physiography: Natural Regions: 1. The hilly agency region and 2. Plains. The Eastern Ghats in the agency tract run parallel to the coast from the N.E. to S.W. and are situated in the interior of the rō. Chintapalli, parts of Narasapatnam, Sringavarapukota and Chodavaram taluks. Certain parts of Vizianagaram, Visakhapatnam taluks the northern part of Elamanchilli rō are also hill regions. In other parts of district the terrain is plane. The shore line of the district is interspersed with salt or sandy swamps. Eastern ghats in the rō have an average height of 1,220 m. The highest peak in the ranges Sinkaram, 1,615 m lie in Sringavarapukota rō.

Climate Average daily temp Max 36.5°C Min 24°C. The highest temp in the year will be 44°C and the lowest 14.4°C. **Rainfall** S.W. & N.W. monsoons bring rains in the district. S.W. monsoon benefits mostly agency tract. On average, there are 65 rainy days giving 1,016 mm of rain. With 1,143 mm Srirangavarapukota records max precipitation, while Elamanchilli records 889 mm the lowest in the district. Generally Apr. May. and June are the hottest. Hill regions are cooler than plains. Waltair is preferred by tourists as hill resort during summer.

Natural Resources: Forest: The district has 1975 sq km forest area. Of this 85% lies in Gudum to which yield good timber and bamboo. Narasipatnam too has similar forests. Wild animals bears chitalab predominate in these forests. The rest of the forest area is scrub jungle providing fuel wood.

Water Resources: River Machkund with its source in Madugula in Gudum to flows north and takes a turn to west to enter Orissa. In its course, the river has waterfalls at Duduma. The River is tamed for generation of hydro electric power. Champavati (Gostani) with its source in Galkonda flows thro' Srirangavarapukota, Vizianagaram and Bhimunipatnam taluks. Sarada from Madugula flows thro' Chodavaram, Anakapalli, Elamanchilli taluks to fall in Bay of Bengal at Vitada. The smaller streams are Meghadrigedda (Visakhapatnam taluk), Varaha, Sahagudgedda & Tandava (Narasipatnam taluk). See Development of Water resources.

Agriculture: Soil Types: 1. Red; 2. Black. Hill regions predominate with Red soils while the soils in the valleys are Black regur which are very fertile. Some soil types as in Srikakulam (q.v.) occur in Visakhapatnam.

Land Utilisation: Total geographical Area: 13,25,825 ha. Forest: 44.8% Barren and Uncultivable Lands: 6.9%; Land put to Non-Agricultural Uses: 9.6%; Cultivable Waste: 2.5%; Permanent Pastures: 0.7%; Land under Misc. Tree Crops: 1.7%; Current Fallows: 3.6%; Other Fallow Lands: 1.8%; Net Sown Area: 28.4%; Area sown more than once: 5.5%; Total Cropped area: 33.9%.

Irrigation: 30% of Net Sown area is irrigated; 979 wells have independent supply while 511 wells in the district supplement recognised sources of irrigation (See water resources above).

Cropping Pattern: (Net sown area: 3,88,804 ha). Cereals: Rice 36.5%, Sorghum: 17%; Ragi: 10.5%; Misc. Cereals: 6%; Pulses: Horsegram: 7% Commercial Crops: Groundnut: 10%; Misc. Oilseeds: 10%; Misc. Crops: 8%; Farm research: The Agriculture Research Station established fifty years ago at Anakapalli, is one of the pioneering stations in Sugarcane and Rice Research. Now this station is transferred to Andhra Pradesh Agri. University. There is a basic Agricultural school to train the gram-sevaks at Anakapalli. Recently with the aid from Australia, a programme to train young farmers is being implemented (1967), thro' the Freedom from Hunger Campaign of U.N. Food & Agricultural Organisation. Government Dairy Farm is located at Hanumanthayaka about 10 km from Visakhapatnam. There is also Veterinary Livestock Inspector's Training School at Hanumanthayaka.

Population: Total: 22,88,976; Men: 11,41,752; Women: 11,47,224. Population Density: 170 sq km. Increase in the decade (1951-61) 10.43%; Urban Population: 18.03%.

RELIGION: Hindu: 98.0%; Muslim: 1.2%; Christians: 0.6%.

LANGUAGE: Telugu: 21,77,430; Urdu: 25,209; Tamil: 3,736; Kannada: 453.

TOWNS & POPULATION: Visakhapatnam (M) 1,82,004; Malkapuram 29,186; Anakapalli (M) 46,402; Elamanchilli 13,558; Narasipatnam 22,788; Chodavaram 14,848; Madugula 7,688; Srirangavarapukota 9,907; Vizianagaram (M) 76,808; Bhimunipatnam 9,808.

Industry: The district is on the threshold of large-scale industrialisation. It has 17 large scale units in the field of jute, sugar, textile, rolling steel mill, manufacture of oxygen and heavy transformers and switch gears. The Hindustan shipyard was established at Visakhapatnam in 1952 and the Caltex Oil Refinery in 1957.

An oil refinery is the nucleus for the development of a petrochemical complex. The refinery at Visakhapatnam turns out about 95,000 tonnes of naphtha yearly, of which 80,000 tonnes become surplus, after the manufacture of other products such as petrol, diesel oil, kerosene etc. from the crude. Part of this goes to Madras and the rest is exported to New Zealand. Emerging new large units at Visakhapatnam such as Coromandel Fertilisers, the Hindustan Polymers and the Soda Ash Plant will consume huge quantities of naphtha coming from the refinery.

Coromandel Fertilisers is licensed to produce 3.75 lakhs tonnes of ammonium phosphate and 16,500 tonnes of urea per annum with a total investment of Rs. 34 crores. Hindustan Polymers is licensed to produce 68 lakh litres of Ethyl Alcohol, 10,000 tonnes of styrene Monomer and 7,500 tonnes of polystyrene per annum with a total investment of Rs. 6 crores. East Anglia Plastics is licensed to produce 2,400 tonnes of cellulose Acetate flakes per annum with a total investment of Rs. 6 crores.

The other large industries licensed are—

(1) Zinc Smelting plant (investment Rs. 30 crores); (2) Caustic Soda; (3) Cement plant; and (4) Heavy Plates and vessels plant.

The Government of India is considering setting up of (a) Marine Diesel Engines Manufacturing unit and (b) The Chemical Machinery Equipment project. The existing large factories account for a total investment of over Rs. 50 crores and the proposed ones will approximate Rs. 10 crores.

In the development of small industries, next to Visakhapatnam, stand Vizianagaram and Anakapalle. Anakapalle is the third largest jaggery centre in the country. Household industry is significant in Narasipatnam, Elamanchilli and Bhimuniapatnam. Mining and Quarrying activities are in Chodavaram and Madugula.

Light engineering and agricultural implements units are concentrated in the three main centres of the district. Scientific instruments, optical lenses, ready-made garments, hosiery products, leather footwear, automobile parts, paper products, electrical accessories, leather goods, and cosmetics, paint, spun pipes, radios receivers, beverages, pharmaceuticals, soaps and matches are manufactured in Visakhapatnam. There are 7 tanneries in Vizianagaram and 6 salt factories along with the coast. Power alcohol is manufactured at Anakapalle. Ivory products are an important handicraft item produced in 2 units in Visakhapatnam. Rice Mills and Saw Mills are dispersed in the district.

There is one Industrial Estate at Visakhapatnam with 28 units. A strip of industrial belt stretching from Visakhapatnam to Anakapalle is growing fast. About 600 ha have been earmarked for large scale industries in this area.

Hindustan Shipyard Limited, Visakhapatnam: This only ship building unit in the country originally in private sector became a public sector undertaking with effect from Mar. 1952, when the Government of India acquired major controlling interest in it and began operating it in partnership with the Scindia Steam Navigation Company. At the beginning of the first plan, the shipyard had only

2 building berths, each equipped to build ships ranging from 96 m to 165 m in length and from about 5,500 tonnes to about 15,000 tonnes dead weight capacity. It also had a development programme in collaboration with a French shipbuilding firm at an estimated cost of Rs. 2 crores to increase its capacity to build from two ships of 8,000 D.W.T per annum to 6 ships of the same capacity as well as the construction of new building berths besides other related works. During this plan, actually only an amount of Rs. 1.5 crores was spent on the expansion programme besides a prior investment of Rs. 432 lakhs. During the Second Plan, the Shipyard completed its programme of development under first phase started in the First Plan, of increasing its capacity from two ships to six ships of 8,000 D.W.T. and undertook the second phase of development of increasing the capacity to construct about eight ships per year at an estimated cost of Rs.

OCEAN GOING VESSELS BUILT AT SHIP YARD

Ships Built.	Capacity DWT.	Completed Year.	Ships Built.	Capacity DWT.	Completed Year.
1. Jalausha	8000	1948	24. Jagmitra	6000	1951
2. Jalalaprabha	8000	1949	25. Dhruvak	500 GRT	1951
3. Kutubtari	245	1949	26. Indian Industry	6000	1951
4. Jalaprakash	8000	1949	27. Jayalakshmi	5000	1951
5. Jalapankhi	8000	1950	28. State of Uttar Pradesh	9500	1951
6. Jalapadma	8000	1951	29. R.S.V. Haldia	360	1951
7. Jalapalaka	8000	1951	30. State of Rajasthan	9500	1951
8. Bharatmitra	8000	1952	31. Vishvanidhi	9500	1951
9. Jagrani	8000	1952	32. State of Punjab	12300	1951
10. Jalapratap	8000	1952	33. Vishva Shanti	12300	1951
11. Jalapushpa	8000	1953	34. Vishva Prem	12300	1951
12. Bharatratna	8000	1954	35. Vishva Maya	12300	1951
13. Jalaputra	7000	1955	36. Vishva Mangal	12300	1951
14. Jalavihar	7000	1955	37. Jala Kala	12709	1951
15. Jalavijaya	—	1958	38. Darshak	611	1951
16. Vidut	7000	1956	39. State of Madhya Pradesh	12669	1951
17. Jalavishnu	8000	1956	40. Jala Kendra	12743	1951
18. State of Cutch	—	1957	41. State of West Bengal	12915	1951
19. Adyar	4000	1957	42. Jala Kanta	12912	1951
20. Andamans	8000	1958	43. State of Mysore	12923	1951
21. State of Orissa	7000				
22. Jalavikram	7000				
23. Jalaveera	7000				

Rs. 1.25 crores. Thus the total investment on this project has increased to Rs. 6.75 crores. In addition to the above, Wet Basin Project estimated to cost about Rs. 180 lakhs was also programmed during 1966. The total cost of production of the shipyard inclusive of ship construction, ship repairs amounted Rs. 540.17 lakhs during 1965-66.

Dry Dock: The Hindustan Shipyard inaugurated (1967) the driving of first pile for the construction of a graving dry dock, estimated to cost 408.50 lakhs. When completed it would be the second largest dry dock in the country. The dry dock would place the Hindustan Shipyard on a sound basis.

Heavy Plates & Vessels Project: Government of India established a project for the manufacture of Fertilisers and Chemical Equipment in the Fourth Plan to meet the anticipated demand for such equipment from fertiliser factories and chemical industries likely to be set up in the coming years within the country. This project is estimated to cost Rs. 5 crores and is expected to employ over 1,200 persons. This project would manufacture heavy equipment of the dimension of four meters in diameter and 30 meters in length and it is essential that the project is located in a coastal place, which would facilitate the transport of such equipment by part to other parts in the country wherever possible. In view of the facilities available, the Government of India have located the plant at Industrial Development Area, Visakhapatnam.

Power Resources: The Machkund Hydro-electric scheme in the or harnesses the Machkund river, a sub-tributary of river Godavari for production of electricity. The hydel was built at the Duduma falls in the eastern ghats of Jeypore in the Koraput or of Orissa State nearly 200 km away from Visakhapatnam where a drop of 255 m is available. It is a joint venture of Andhra Pradesh and Orissa State with 70:30 interest. There are six generating units three of which have capacity of 17,000 kw each and the other three have 21,250 kw each. These were installed in 1959. Andhra Pradesh gets a share of 70% of the total generating capacity of 1,14,750 kw. This power is now being supplied to coastal or Visakhapatnam, Srikakulam, East and West Godavari, Krishna, Guntur and Nellore. A scheme for further development of Machkund basin is underway. This harnesses the Upperileru about 80 km down stream of Machkund (Machkund river in its lower reaches is known as Sileru). Sileru power house will have two generating sets of 60,000 kw each when completed. This scheme will meet the increased demand for power in the district.

Transport: Airways: Passenger airlines between Madras and Calcutta and Hyderabad-Calcutta touch Visakhapatnam airport. Hyderabad, Vijayawada, Visakhapatnam are connected by a five-times-a-week

air service. **Railways:** The district has 204 route km of railways of which 116 km belong to South-eastern and 84 km to South Central. Madras-Calcutta trunk route passes thro' Elamanchili, Anakapalli, Sringavarapuko'a, Visakhapatnam and Bheemunipatnam taluks. A branch line from Vijayanagaram goes to Raipur via Bobbili in Srikakulam or. **Port & Harbour.** The harbour at Visakhapatnam is one of the major ports on the east coast of India. (See Transport in Andhra Pradesh). It can receive even vessels of large capacity. It is a major exporting port with berths for ironore and manganese. **Roads:** Road coverage totals to 1853 km of which 240 km belong to National Highway. The State Highways control 710 km. The rest is controlled by local bodies.

Education: Literacy: Total: 16.35%; Men 24.73%; Women 9.01%. There are 4 Arts & Science Colleges, one in Anakapalli, Visakhapatnam and two in Vizianagaram, one of which is for women. In addition Vizianagaram is a centre of cultural activities with a Music college, Sanskrit college, a college of education. Waltair is a town as a seat of Andhra University (Est. 1926). College of Engineering, College of Science & Technology and Colleges of Arts & Commerce are constituent units of the University. With entrance capacity for 250 candidates every year Andhra Medical College is managed by the State

Government. Government Polytechnic, Industrial Technical Institute cater to the needs of Technical Education in the district. A medium wave low-powered Radio transmission station is located at Visakhapatnam to serve the region.

Health: Agency tract is infested with endemic malaria. King George Hospital, a teaching hospital for Andhra Medical College is the biggest Hospital in the coastal region. There is a mental hospital and a lunatic asylum in Waltair.

Places of Interest: Visakhapatnam, Simbachalam (Varahanarasimhaswamy Shrine), Bojjannakonda, (Buddhist), Bheemunipatnam (Old Port), Araku Valley (Landscape sceneries) Chintapalli (Shikari). (See Tourist Attractions' pp. 229).

Panchayat Samitis:

Anantagiri; Araku; Bheemunipatnam; Bhogapuram; Chintapalli; Elamanchili; G. mparai; Gantayada; Kasimkota; Kilaguda; K. Kotapadu; Koyyuru; Kotawarla; Madugula; G. Madugula; Nakkapalli; Narsipatnam; Nelluneria; Paderu, Pendurthi, Ravikamatam; Subbavaram; Srungavarapukota; Viyyampeta.

*This figure as of adult population is 18.66%.

EAST GODAVARI DISTRICT

Location & Size: It lies on the E coast between 16° 30' & 18° 30' N and 81° 30' & 83° 35' E. **Boundaries** N Madhya Pradesh & Visakhapatnam or E & S Bay of Bengal and W Khammam and West Godavari or. **Area:** 10,829 sq km. **Taluk (12):** Amalapur, Kakinada, Kothapeta, Peddapur, Pithapur, Prattipadu, Rajahmundry, Ramachandrapur, Rampachodavaram, Razole, Tuni and Yellavaram. **Hq KAKINADA.**

Historical Background: Prior to 7th century AD. the history of the district merges with that of the region Visakhapatnam or. From 7th century AD. The eastern Chalukyas ruled the Kingdom of Vengi with Vengi (near Eluru) as their capital which was later shifted to Rajamahendravaram (Rajahmundry). Rajarajanarendra was the most illustrious monarch (See *Brief Political History* pp. 17). Vikramaditya VI of the Western Chalukyan line conquered and occupied the land between 1,120 & 1,125. Later Anantavarma Chodaganga, the King of Kalinga, extended his power upto the Godavari. Part of the Vengi country continued to be ruled by the Velanti Cholas the Chieftain who succeeded the Chalukyas which later on passed to the Kakatiya rule at the close of the 12th century. With the invasion of the Kakatiya territory by Muhammad-bin-Tughlaq, Andhra Desa came under the Delhi Sultans, who kept their representative at Rajahmundry to rule the area. But a rebellion led by Musunuri Prolaya Nayaka put an end to the authority of the Sultans (1327). With the end of the Nayak's rule, the Kondaveeti Reddis occupied it (1330) for nearly four decades. The Orissa ruler Kapileswara Gajapati conquered Rajamahendravaram area about 1370 and was ruled by his successors till Evaraya's conquest (1515). But Krishnadevaraya by a treaty, gave it back to Gajapatis. The Nawabs of Golkonda brought the area under their sway (1543). The Golkonda Kingdom was taken over by the Moghuls in the 17th cent. and later it came under the influence of the Marathas. In 1766 Asaf Jahi Nizam gave Rajahmundry Circar to the English. The historic Rampa and agency revolts against the British regime took place in 1879 and 1922 respectively.

For a time the region was a part of Rajahmundry Zilla which was constituted in 1802. In 1859, with some changes, it came to be known as Godavari or. Nizam gave Bhadrachalam or to British (1860) and it was added to Godavari or. Then as the district became usually, it was divided into West and East Godavari districts in 1925 with the region East of Godavari along with Polavaram division forming the East Godavari or. But later Polavaram was transferred to West Godavari in 1942 and Bhadrachalam and Nugur Taluks were transferred to Khammam or in 1960.

Physiography: Natural Regions: 1. Hilly Agency Tract; 2. Plateau and 3. Deltaic. Half of the district is plains. Agency filled with hills of Eastern Ghats, is intensified as we go interior from the coast. Tuni, Pithapur taluks and parts of Rajahmundry, Kakinada, Ramachandrapur taluks constitute plateau, Amalapur, Razole, Kottapet and parts of Kakinada, Ramachandrapur and Rajahmundry form deltaic plains in the district.

CLIMATE: Apr. & May are sultry sunny months. The daily average temp. in the year max. 32°C min. 24°C. The highest temp. in the year will be 40°C while the lowest 16°C. **Rainfall:** There are 72 rainy days with about 1,143 mm of rainfall in a year. Scorched earth, between Jan. & Apr. during which time there will not be any rains, receives fresh showers in May. S.W. monsoon gives rain for three months from June onwards particularly in the western agency tracts. Eastern coastal delta region will have rains due to N.E. monsoon.

Natural Resources: Forests: Nearly half the or is filled with forests. Forest area 5,052 sq km. Rajahmundry, Rampachodavaram, Yellavaram taluks have forests yielding good quality timber. Peddapur, Tuni, Kakinada taluks have mediocre forests yielding bamboo mainly. Agency forests yield teak in large quantity. Soapnut, Honey, Beewax, Lombarice, Tamirind are chief economic products from the forests in addition to Timber and Fuel. Godavari is used for the transport of timber and bamboo to consuming centres. **Water Resources:** Ground water sources are found near Draksharama, Dwarpudi with artesian and sub-artesian veins. Tapping is done for agricultural purposes by boring tube wells and filter points. Systematic studies may yield good veins of ground water. The chief river in the or is Godavari. Tanks in Peddapur are filled by vagus. Peravaram pumping scheme (Razole or) and Polavaram project are other sources of water for irrigation. Sub-terranean water is tapped by digging shallow wells to lift water for irrigating coconut and banana plantations in Razole, Amalapur and Kothapet. The other important river in the district is Yeluru which is formed by the confluence of three smaller streams in Yellavaram village in Yellavaram or. It flows south and enters Peddapur or to form three vagus at Veeravaram. One of them further flows on western boundary to Pithapur or entering Kakinada or to join with Bikkavol drain. The other two streams form Gorika river to fall in the Bay of Bengal at Uppada.

The Godavari Delta System: The Godavari river rises in the Western Ghats within 80 km of the Arabian sea, flows across the Peninsula for 1,440 km, enters the plains thro' a gorge Papikondalu (pp. 228) up Rajahmundry and divides into two sections in its lower reaches at Dowleswaram; the eastern part Gowtami flows between Ramachandrapuram, Kakinada on one side and Amalapur and Kothapet on the other, before it falls into the Bay of Bengal at Godavari.

point. Vasistha, the western section of the Godavari flowing on the western border of Razole, with branches into a separate Vynataya section; thus isolating Razole with water around it, as an inlet. The Godavari with frequent floods every year brings fertile silt to enrich the crop lands.

The Godavari anicut system conceived and executed by Arthur Cotton (1857) consists of an anicut at Dowleswaram and three main canals irrigating the three delta sections. The anicut is in four sections linking the islands in the broad river. The Dowleswaram section is 1,452 m long, the Ryali section is 858 m long, the Maddur section is 465 m long and the Vijjeswaram section is 780 m long. It was subsequently found necessary to raise the anicut slightly by fixing up with 0.60 m high falling shutters on the crest. In 1935 the 0.6 m shutters were replaced by 0.90 shutters. The shutters which fall automatically during floods are lifted by means of power operated ploughs as the floods recede so as to maintain the requisite water level in the river. The headworks of the canal consists of a head sluice and under sluice and head lock for each of the three main canals. The eastern delta is about 1,165 sq km in extent, the central delta 1,036 sq km and the western delta about 2,589 sq km in extent stretching down to the Kolleru lake. In the western and eastern deltas, the Samalkot and Eluru canals define the limits of irrigation i.e. the areas enclosed between them and river Godavari. They also form the link between Kakinada port and Eluru town where the Krishna canal meets the E.uru canal from the Godavari. The central delta, particularly the Nagaram island is the garden of the Godavari delta. It is noted for the Gannavaram aqueduct which was completed in about eight months' time in the fifties of last century, a remarkable feat due to Captain Orr. The Polavaram aqueduct at Annampalli in eastern delta is a recent construction to irrigate Polavaram island. The Tallarevu channel has now been extended across the Koringa arm of the Godavari river to irrigate over 4,000 ha in Koringa island. The canals irrigate about 3.7 lakh ha during Sarva (first crop) season and about 1.44 lakh ha during dalwa (second crop) season, besides supplying water to dry crops such as groundnut and gingelly. The total area under irrigation in this delta system is about 5.15 lakh ha. The value of crops is Rs. 22 crores. The capital outlay of the system is Rs. 2.90 crores and the return is 5.36%. Now the construction of a barrage on the upstream side of the existing anicut is under way to increase the second crop area and to relieve the strain on the century old anicut. (See Development of Water Resources)

Agriculture; Soil Types: South East to North West: 1. Coastal alluvium (24 km); 2. Alluvial soil with Laterite soil; 3. Red soil.

Of these alluvial soil predominates particularly in the deltaic plains of Ramachandrapur, Razole, Amalapur and Kakinada r. Red soil is found in Peddapur and Rajahmundry taluks. Dowleswaram anicut and its canal network supplies assured irrigation as described above.

Land Utilization: Total Geographical Area: 9,59,468 ha; Forest: 19.4%; Barren and Uncultivable Lands: 7.7%; Land put to Non-Agricultural Uses: 7.9%; Cultivable Waste: 15.4%; Permanent Pastures: 4%; Land under Misc. Tree Crops: 2.1%; Current Fallows: 4.9%; Other Fallow Lands: 3.5%; Net Sown Area: 35.1%; Area sown more than once: 13.8%; Total Cropped Area: 48.9%.

Irrigation: 61.2% of Net Sown area is irrigated 232 wells have independent ayacut while 892 wells in the district supplement recognised sources of irrigation (See water resources above).

Rice is the chief crop in wet land cultivation while sajja with jonna following close to it predominate among upland food crops. Gingelly, Tobacco and Pulses are grown extensively in the district. The uplands are rich with mango plantations yielding export quality fruits. Rajahmundry's juicy mango rasalu varieties are delicacies and have a big export potentials to other parts of the country. Tella-chekkarakali, a variety of Banana is a rare delicacy grown extensively in the Konaseema and is exported to North India. Florists around Kakinada raise rose gardens and those around Kadiam raise Chrysanthemum (Chamanthi) for the market. **Cropping Pattern:** Net sown area 3,78,765 ha: Cereals: Rice 67%; Sajja 3.5%; Jonna 2%. Pulses: Horsegram 3.7%, Greengram 2%, Blackgram 1.9%. Commercial Crops: Coconut 5%, Banana 4%, Mango 2.4%; Misc: Fruits 1%, Tobacco 2.10%, Sugarcane 1% and Misc. Crops 0.7%.

Farm Research: There is an agricultural research station at Samalkot (now under APAU). It has a programme on rice breeding, sugarcane varietal trials. Under the auspices of central government, a national laboratory on tobacco, Central Tobacco Research Institute is situated at Rajahmundry. A Regional Coconut Research Station run by Central Government is situated at Ambajipet in Amalapur r. In Razole there is an Entomological Laboratory to breed and supply insects that control biologically certain pests on coconuts. A pathological unit for disease investigation on coconuts particularly on 'Tatipaka Disease' is also situated at Razole. There is a Soil Testing Laboratory at Rajahmundry attached to Vijnana Mandir.

Animal Husbandry: The district has ten veterinary hospitals. To improve the local breeds, bulls are supplied to farmer. There is a school situated at Mandapeta to give training in modern aspects of animal farming. A Cattle cum Dairy Farm with sheep section is

located at Kakinada. Stud rams are supplied to sheep farmers in the district.

Fisheries: Amalapur and Kakinada centres for marine fishing. Developmental programme is underway. An inland fish farm is located at Bhalabhadrapuram. Central Delta Fishermen's Co-operative Societies, Amalapur has a trading service in fishing for the catchers around Amalapur.

Mineral Resources: China Clay (1,00,000 tonnes) Coal deposits in South Godavari (1,200 lakh tonnes), Manganese Lime Stones, Graphite Lead (Jedvur), Corundum (Gollalamamidada) Natural Gas (Tatipaka) are chief Mineral Deposits.

Population: 13.36%; Total 28,09,311; Men 13,07,003; Women 13,02,308. Population Density 192 sq km. Increase in the decade (1951-61): Urban Population 18.53%; Koya, a hill tribe constitute nearly half a lakh in agency tracts. Religion: Hindu 2%, Muslims 1.4%, Christians 2.4%, LANGUAGE: Telugu 25,64,729; Urdu 28,040, Lambadi 49; Tamil 2,597; Kannada 622.

TOWNS & POPULATION

Kakinada (M) 122,865; Samalkot (M) 31,924; Amalapuram (M) 24,063; Machavaram 10,026; Razole 7,563; Ramachandrapuram (M) 18,778; Draksharama 16,333; Mandapeta 19,766; Anaparthi 12,802; Rajahmundry (M) 130,062; Dowleswaram 14,692; Peddapuram (M) 24,302; Tuni (M) 22,452; Pithapuram (M) 27,910.

Industry: There are ten large scale industrial units in the district. The Andhra Pradesh Paper Mills at Rajahmundry is transferred to private sector and is now managed by a Joint Stock Company. It was producing 10 tonnes of paper per day and the capacity has since been expanded to 70 tonnes per day (Based on bamboo). The three sugar factories are located at Samalkot, Pithapuram and Chelluru. Each has a crushing capacity of 1,000 tonnes per day. The unit at Samalkot which is the oldest in the region is also manufacturing power alcohol and carbon-di-oxide. In addition, there are a few Khandasari sugar units. There are four spinning mills—one each at Kakinada and Rajahmundry and two in Pandalapa. Kakinada unit has a capacity of 17,600 spindles and the other three have only 5,000 to 7,000 spindles each. Peddapuram has six silk weaving units. Sri Ramadas Motor Company at Kakinada manufactures 150 automobile parts, motor bodies and also owns a fleet of lorry and passenger transport units. An integrated saw mill and timber seasoning plant is established at Dowleswaram by the forest department for encouraging the use of non-teak variety wood especially for building purposes. Rajahmundry and Anaparthi are major curing centres of Virginia Tobacco for the manufacture of cigarettes.

The central area of the district has a concentration of modern small industries. The white clay available about 8 km from Rajahmundry and the graphite deposits available in the East and West Godavari districts are utilised by the 15 units at Rajahmundry for the manufacture of graphite crucibles. 48 units are engaged in brass and aluminium ware manufacture mainly in five centres. The availability of special type of sand of the river used in the moulding process has aided this industry. Rajahmundry is important for its timber market and this has given rise to over 35 saw mills and about 15 furniture making units. Light engineering units number about 105. There is one unit at Kakinada manufacturing Khandasari sugar plants and supplying them to Orissa and other states.

Rice mills are spread over the deltaic part of the district. Manufacture of mangalore tiles, cement products, stoneware, pipes, refractory bricks, automobile servicing work, agricultural implements, leather goods and aerated waters is also carried on in the district. Fruit canning is done at Kadiyam and fish canning and extraction of shark liver oil from fish is just coming up at Kakinada. The boat yard at Kakinada established by the State Government supplies motor boats to fishermen and offers technical guidance in deep sea fishing. Skill based cashew kernel industry is flourishing in Mori (Razole). Cashew oil is also extracted at Mori in a number of units.

The Government has set up training and production centres for developing industries based on ceramics, palymrah, fibre, coir, graphite crucibles, stoneware pipes etc. Among them ceramic centre, crayons and plastic products unit, pottery training centre, graphite crucible centre and stoneware factory are located at Rajahmundry, brass manufacturing unit, general engineering workshop, pottery training centre and steel trunk manufacturing unit are located at Samalkot, coir training centre and photo frame, electrical casting and cart wheel manufacturing unit are located at Kakinada, bristle and mattress fibre unit at Machavaram and three coir production cum training centres at Komarigiripatnam, Antarvedi and Korangi.

There are two industrial estates. At Samalkot, the estate has a provision for 24 factory sheds and the assisted private estate at Dowleswaram provides for 48 factory sheds.

Transport; Railways: The total rail route in the district is 127 km. The trunk route between Madras-Calcutta passes thro' Rajahmundry, Ramachandrapur, Kakinada and Tuni taluks. A branch line from Samalkot goes to Kakinada which is about 15 km away. Chodavaram, Yellavaram, Peddapur, Prattipadu, Razole, Amalapur and Kottapet Taluks are not served by railways. However there are out agencies located at Razole and Amalapur to book cargo. A second bridge over Godavari, east of the existing Railway bridge is under construction. This bridge is designed to have road berth of 7.2 m wide of vehicular traffic between East & West Godavari. The Godavari bridge that can-

nects E.G. & W.G. Districts used for Railway traffic alone is an unusual structure with 56 spans with a length about 3 km. **Roads:** The total route length in the districts is 3,086 km. Recent road bridges at Bhadrachalam, Siddhantam, Alamur open new routes. Grand North Trunk Road National Highway No. 5 between Madras-Calcutta passes thro' Rajahmundry, Pithapur Taluks via Alamur bridge. All Taluk headquarters are connected by the bus routes. Konaseema is not well served by transport facilities. Though recently roadway parallel to canalway is constructed over the Gannavaram aqueduct connects the main land via Dowleswaram anicut with the Razole island. **Waterways:** A net work of Navigable canals thro' a lock system serve the district. Port: Kakinada is a minor port.

Education; Literacy: Literacy in the district is 25.80%; Men 33.8%; Women 18.41%. There are five colleges of Arts & Sciences; One Graduate Teaching Training College, one Medical College (Private), One Engineering College, Two Polytechnics (one for Women), Social Service Training is given at Seetanagaram near Rajahmundry.

Health: Agency tracts in the district are infested with endemic Malaria. The bed capacity in the hospital of the dt is 1304 Govt. manage 12 modern hospitals and 22 dispensaries. At Rajahmundry Christian Missionary organises a Ghesha hospital for women and a T. B. Sanatorium. In addition there are 12 ayurveda and one Unani clinic in the district.

Places of Interest: Pithapur (Fort & Kukuteswaraswamy Temple). Rajahmundry (Kotilingakshetra & Sarangadharametta), Dowleswaram (Anicut), Mummidiavaram (Balayogi), Ganavaram (Aqueduct) Annavaram (Satejanareyanaswamy), Kakinada, Draksharama (Bhimeswara Temple), Antarvedi (Lakshminarasimhaswami). Godavari Pushkaram, periodical Mela at Rajahmundry (12 years) attract pilgrims for a dip in Godavari. 1967 (Sep. 14-28) is Pushkaram year. The Pushkaram according to the Puranas is the most important of all the Thirthas. The Godavari Pushkaram commences with the entry of Jupiter in Simharasi and lasts till the exit into the next Kanyarasi, lasting over a period of one year. People bathe in the Godavari during this time and offer charity, perform religious rites and ceremonies for their forefathers to invoke the blessings of God, in the hope that they will be redeemed of their sins and become eligible to attain salvation. (See page 259).

Places of Interest

Adilpetegola; Amalapuram; Annavaram; P. Gannavaram; Kapileswarapuram; Kathapeta; Korukonda; Marredumilli; Mummidiavaram; Peddapuram; Pithapuram; Rajanagaram; Rajavommangi; Rampachodavaram; Rangampeta; Rayavaram; Razole; Semalkot; Sankhavaram and Tallareeru.

WEST GODAVARI DISTRICT

Location and Size: It lies between 80° 52' and 91° 52' E and 16° 17' and 17° 30' N. **Boundaries:** N. & E East Godavari dt. S by Krishna dt and Bay of Bengal. W Krishna and Khammam Districts. **Area:** 7,720 sq km. **Taluks:** (8) Bhimavaram, Chintalapudi, Eluru, Kovvur, Narasapuram, Polavaram, Tadepalligudem and Tanuku. **H.Q.:** ELURU.

Historical Background: The history of the dt to a good extent merges with the history of the East Godavari dt and Krishna dt upto 16th century, when Asafjahis conquered the region, and named it as 'Eluru Circar' which included a reputed port, Madhavayapalam near Narasapur where Dutch erected a iron workshop in 1628. The English established their factory in 1677 at Madhavayapalem. Ships were repaired here in those days. Along with other circars Eluru circar was granted to the East India Company in 1768, which later merged in Krishna dt till 1925 when separate West Godavari dt was carved out. Later Polavaram tq from East Godavari dt was added in 1942.

Physiography: Natural Regions: (1) Hill region; (2) Upland region; (3) Delta region. (1) *Hill region*—a part of eastern ghats—Agency area in Polavaram tq where Koya tribal people live. (2) *Upland region* constitute Eluru, Tadepalligudem, Chintalapudi Taluks and northern part of Kovvur tq. (3) *Delta region* is plains of Narasapur, Bhimavaram and Tanuku taluks which are irrigated by rivers Godavari and Krishna. In the south of Narasapur tq there are swamps and scrub jungles. In the upland tq Chintalapudi, the land is undulatory due to hillocks. However the terrain in delta region is plain and spiced with natural scenic beauty when irrigated crops are raised. **Climate:** The district is endowed with very favourable climate. Agency tract in Polavaram tq has very cold winters. **Rainfall:** There are 54 rainy days in a year with average rainfall at 1,028 mm. Average temp. Max 35°C; Min 17°C.

Natural Resources: Forests: Forests comprise an area of 992 sq km of which 461 sq km is reserve forests which entirely lie in Polavaram agency with bamboo and timber etc. exported on R. Godavari. Bushy scrub jungles are found in Kovvur, Eluru and Chintalapudi taluks. Farmers use forests as grazing grounds for their cattle. **Water Resources:** There is evidence of existence of ground water potential in the district with artesian and sub artesian veins in the upland taluks. Ground water is tapped by digging deep wells and boring filter points, lifting the water with centrifugal pumps run by electric motors or oil

engines. **Rivers:** Godavari flows from N.E. of Polavaram to the S.E. of Narasapur to covering Eastern boundary. Tammileru, Bineru, Kovvada, Errakkalava, Jalleru, Rallamadugu, Gunderu are other similar streams which feed irrigation tanks in the district. In the south of Eluru to there is Kolleru lake. Drain water from the neighbouring region is collected into this basin which ultimately flows into Bay of Bengal via salt creeks (Upputeru) during rainy season when the Kolleru region is flooded frequently. Submersion of cropped area is common. (See *Development of Water Resources*).

Agriculture: *Soil types:* South-east to North-west: (1) Coastal alluvium; (2) Alluvial soil; (3) Undifferentiated black soil; (4) Red soil; (5) North-west strip—deep black soil. Fertile alluvial soil predominates in Narasapur and Tanuku taluks while red soil in Chintalapudi to. Eluru has black regur soils.

Land Utilization: Total geographical area: 7,70,506 ha; Forest: 11.3%; Barren and Uncultivable lands: 7.9%; Land put to Non-agricultural uses: 11.6%; Cultivable waste: 6.4%; Permanent pastures: 2.7%; Land under Misc. Tree crops: 0.9%; Current fallows: 5%; Other fallow lands: 1.6%; Net sown area: 52.6%; Area sown more than once: 14.6%; Total cropped area: 67.2%

Irrigation: 73.8% of net sown area is irrigated. 718 wells have independent ayacut while 68 wells in the district supplement recognised sources of irrigation. (See *Water Resources* above).

Granary of the region, the district is agriculturally very important in the State of Andhra Pradesh. Major cropland (3,00,000 ha) is commanded by irrigation by canals from R. Godavari and Krishna. Uplands however have 796 tanks for irrigating about 16,000 ha. The rest of the cropland is rainfed.

Cropping Pattern: Rice forms the major crop in the district. Commercial crops like Sugarcane, Banana, Groundnut, Gingelly, Tobacco, Chillies, Cotton are common. Citrus plantation (Batavia and Lime) are common in Palakol and Chintalapudi. Coconuts are grown in Narasapur and Tanuku taluks. During floods of river Godavari small islets known as lankas are formed by silt deposits. They are rich soils suitable for Banana, country Tobacco etc. Intensive Agriculture District Programme (IADP) or package of practice is introduced in the farming of district since 1961 with the aid of Ford Foundation to develop agriculture with accent on scientific farming principles wherein use of improved seeds developed basing on modern genetics—fertilisers, pesticides, improved agronomical practice, crop credit, marketing facilities etc. are made available through systematic 'know-how' and 'show-how' for efficiency of farm production.

Net sown area: 4,09,140 ha. **Cereals:** Rice 77.7%, Jowar 4.9%, Sajja 0.6%. **Pulses:** Horsegram 5.8%, Redgram 0.5%. **Commercial crops:** Tobacco 3.8%, Sugarcane 1.7%, Groundnut 1.2%, Misc. Oil-seeds 3.8%

Farm Research: Seed processing on scientific lines is done at Maruteru. There is a Soil Testing Laboratory at Tadepalligudem. At Maruteru an Agricultural Research Station formerly under Department of Agriculture, Government of Andhra Pradesh is now working under the auspices of Andhra Pradesh Agricultural University, Hyderabad. Major research at the centre is concentrated on rice with accent on breeding work and varietal and agronomy. At Pulla there is another Farm Research Centre which has a programme to work on rice varieties for submersion areas. There is a Banana Research Station at Kovvur and Sugarcane Liaison Farm at Tanuku.

Animal Husbandry: Cattle population is abundant. Improved breeds are however scarce. Veterinary services are available in Eluru, Palakol, Tanuku, Tadepalligudem, Bhimavaram, Polavaram taluks. Artificial insemination centres are attached to some centres. Though poultry farming is common, duck farming is practised on commercial scale for egg export (Aividu and Tadepalligudem).

Fisheries: Kolleru lake is a centre for inland fishing activity. Marine fishing is done in and around Narasapur. Export of fish is practiced through government aided channels.

Mineral Resources: There are coal deposits in the district but there is practically no mining activity at present (1967).

Population: Total 19,78,434. Men 9,92,889 and Women 9,85,545. Population Density: 254 per sq km. Urban Population: 15.87%. Increase in population during the decade (1951-61): 16.53%. The district is noted for its high population density next to Hyderabad district. 85% of the people live in villages. **Religion:** Hindus 91.3%, Muslims 2.1%, Christians: 6.1%. **Language:** Telugu 19,62,794; Urdu 32,892; Lambadi 1,819; Tamil 2,126; Kannada 294.

Towns and Population: Eluru (M) 1,08,321; Kovvur 15,427; Nidadavolu 15,842; Tadepalligudem (M) 27,086; Tanuku 24,657; Penugonda 13,978; Maruteru 5,296; Narasapur (M) 30,064; Palakol (M) 28,481; Bhimavaram (M) 45,821.

Power: The district is connected to power grid from Machkund hydel. All the towns are covered with electricity. Rural electrification is in progress (1967).

Industry: In respect of agro-industrial development, the district has made a good beginning and is going ahead with further exploitation of agro-materials for industrial use. There are 4 sugar factories—2 at Tanuku, one each at Chagallu and Palakol. The Andhra Sugars, Tanuku have expanded their crushing capacity to 2,500 tonnes of sugarcane per day and started a power alcohol plant of 12,638 litres a day capacity and acetic acid (3 tonnes/day) and acetic anhydride (3 tonnes/day) from industrial alcohol have been recently started. Acetates are obtained as by products. There are two factories extracting oil from rice bran at Tadepalligudem (50 tonnes bran a day capacity) and Bhimavaram (25 tonnes bran a day capacity). The Tadepalligudem plant added a refinery, deacidification plant and fat splitting and glycerine recovery plants. It also manufactures 'Ovomalt', a beverage. There are two superphosphate factories at Nidadavolu and Kovvur. The Kovvur unit started a Caustic Soda plant. There are 3 spinning mills at Tanuku and one Jute mill at Eluru. One Japanese type 'modern rice mill' is started at Tadepalligudem. Small industries are dispersed over the deltaic region of the district. Utilising the graphite deposits available at Polavaram, there is one unit at Kovvur to refine the same. With the ball clay available at Dwaraka Tirumala, 3 units are making refractory bricks and pickle jars at Bhimadole. Andhra Pradesh Mining Corporation set up a clay washing plant at Dwaraka Tirumala. There are four units making R.C.C. spun pipes and other cement products at Kovvur, Nidadavolu, Tadepalligudem and Eluru. Pesticides are formulated by two units at Eluru and Tanuku. Mixed fertilisers are manufactured in Tanuku. Ropes from coir fibre are made near Tanuku. At Narsapur, there is a Government training centre to popularise improved method for utilisation of coir products. Palmyra fibre is used for ropes and brushes and sugar is made from Palm toddy at Nidadavolu. Nidadavolu has a foundry concentration. Fenugonda has fabricators and a unit making oil engines. Tractor trailers are made at Bhimavaram and agricultural implements at Tadepalligudem. Azzaram (near Tanuku) has a concentration of brass and copper workers and one rerolling mill nearby.

There are 2 tape weaving units and 3 hosiery units at Eluru, Palakol and Tanuku. Tanned hides and skins are made at Eluru in 8 tanneries for export. Other products made at Eluru are agarbathis, perfumery, essences, AAC and ACSR conductors, plastic cane and steel furniture. Radio receivers and bicycle assembling are done at Tanuku. A mechanised bakery and a steel furniture unit are located at Bhimavaram and a pickles making unit at Jaggareddigudem. There are 356 huller-cum-sheller rice mills and 424 huller rice mills and about 20 saw mills spread over the district.

Among the handicrafts, Eluru is noted for its renowned woollen carpets and Narsapur for the foreign exchange earning crochet laces.

There are two assisted private industrial estates at Eluru and Palakol. The former has provision for 39 sheds and the latter for 28 sheds.

Transport; Railways: Madras-Calcutta trunk route passes thro' Eluru, Tadepalligudem, Kovvur taluks. A branch line from Nidadavolu line passes thro' Tanuku, Bhimavaram and terminates at Narsapur. Other line from Bhimavaram passes thro' Aktividu to join at Gudivada in Krishna dt. All taluk headquarters lie on railway except Polavaram and Chintalapudi. **Roads:** Total route length 1,990 km. 64 km belong to National Highways, 825 km to State Highways, the balance belongs to Zilla Parishad and other local bodies. **Canals:** The Rivers Krishna and Godavari are navigable with lock facilities. The boats that ply in the canals carry cargo as well as passengers. Certain rural parts of Polavaram, Kovvur and Chintalapudi are inaccessible with scarce transport facilities.

Commerce: Though small in area crop production in this district is heavy. Rice (in the form of paddy and husked), coconuts, fruits, cashew form the chief trading commodities. Palakol and Tadepalligudem are big trading centres with weekly shandies on Saturdays and Wednesdays respectively. **Port:** Narsapur is a minor port.

Education; Literacy: Total 30.29%;* Men 37.51%; Women 22.99%. There are 6 colleges of Arts and Sciences affiliated to Andhra University at Narsapur (Two—one for women); One each at Bhimavaram, Tadepalligudem, Eluru (Two—one for women). A private polytechnic is located at Tanuku. UNICEF aided Applied Nutrition Programme is being implemented with the aid of American Peace Corps Volunteers in Bhimadole Panchayat Samiti.

Health: Polavaram and parts of Bhimavaram are endemic area for Filariasis. Modern medical aid is available at Government Hospitals and nine dispensaries with a bed capacity of 778, in addition, there are twenty government aided Unani and Ayurvedic clinics. Besides these, there is a Christian Mission Hospital for Women and a Leprosy Clinic at Narsapur.

Places of interest: Bhimavaram, Palakol, Dwaraka, Tirumalai are Hindu pilgrim centres. At Narsapur there are Vishnu (Embarmanar) and Siva shrines. Antarvedi (Razole rd, E.G. dt) attracts thro' Narsapur huge crowds during Antarvedi festival on Bhishma Ekadasi, Jan-Feb every year. Historic places like Lankalakoderu, Bondada are reputed for Jain vestiges. Pedavegi, Chinnavegi near Eluru are known.

*Among adults 34.73%

for Chalukyan remains. Jeelakarragudem is known for caves, structural stupas and ruined mandapams. At Tadikalapudi, there is a stone image of Lord Buddha.

Panchayati Samities: Akivedu; Bhimadole; Buttayagudem; Chin-talapudi; Ganapavaram; Gopalapuram; Koyyalagudem; Mogaltur; Nallajerla; Nidadavol; Peduru; Penumantra; Peravali; Peddapadu; Polavaram; Vissakoderu.

KRISHNA DISTRICT

Location and Size: It lies between 15° 43' and 17° 10' N and 80° & 81° 33' E. **Boundary:** N Khammam and West Godavari dr; E & S Bay of Bengal; W Krishna River, Guntur and Nalgonda dr. **Area:** 8,749 sq km. **Taluks (10):** Bandar, Divi, Gannavaram, Gudivada, Jaggayyapeta, Kaikalur, Nandigama, Nuzvid, Tiruvur and Vijayawada. **I. Q.: MACHILIPATNAM.**

Historical Background: The Andhras extended their hegemony to this tract at the beginning of the Christian era and built towns on the banks of the Krishna River. Being patrons of Buddhism, they set up also many Buddhist temples, stupas and chaityas. By 400 A.D. the district came under the sway of the Pallavas and later Salankayans and Vishnu Kundins were the rulers. The Eastern Chalukyas were in power from early 7th century A.D. to 1100 A.D. while the Velanati Cholas held power later upto later parts of 13th century. The Kakatiyas were in power for a short time and the sway of the Kondaviti Reddis extended from 1328 to 1424. Later the Gajapatirajas of Orissa marched their armies upto Nellore (1484). Krishnadevaraya conquered this region in 1515. Golkonda Nawabs occupied it in 1543. With the fall of Golkonda it came under Asaf Jahi's (Nizam) influence (1678). The English established their factory at Machilipatnam (1671). French obtained this region from Nizam. But later English conquered this area from them and established their rule (1765). Krishna dr was constituted in 1859, including some taluks south of Krishna. However in 1906, it was reconstituted separating southern taluks which were, along with Ongole re constituted as Guntur dr. Machilipatnam was once a military base. It was hit by a terrific cyclone on 1-11-1864 when it lost its earlier strategic importance. Some parts of Krishna were separated in 1925 to form part of the newly constituted West Godavari dr.

Physiography: **Natural Regions:** (1) Deltaic Plains; (2) Plateau: Bandar, Divi, Gudivada, Gannavaram, Kaikalur, Vijayawada Taluks are delta region. While the plateau cover the taluks of Jaggayyapeta, Nandigama, Tiruvur and Nuzvid. Since this plateau is part of Deccan plateau hills, hillocks, outcrops occur here and there and the ter-

rain is undulatory here. Kondapalli, west of Vijayawada rd and Jammulavaidurgam in Tiruvur are important hills in the district. To the north of Kaikalur, lies the great lake Kolleru (285 sq km), a part of which extends into West Godavari dr. The rain water in the delta region is drained into this lake. Except near the sea shore here and there where swamps and sands occur, the rest of the delta region is plain. During rainy season when rice crops are raised it is a feast to see the natural scenic beauty. Sandy hillocks raise upto 9 to 15 metres above sea level.

Climate: Hot summers between Apr & Jun and cold winters in Dec and Jan are a common feature. **Rainfall:** Starting in June, the average rainy days in a year will be about 50. Nandigama rd records lowest rainfall, 813 mm. Daily average: Temp max. 32° and min. 24°. The highest temp. in a year 40°C; the lowest 16.7°C. Sometimes when the summer is severe, the temp. rises upto 51°C as in 1967. The district gets rains from S.W. and N.W. monsoons between July to Nov. is the heaviest monsoon period in the district. Average rainfall in a year is 940 mm.

Natural Resources: **Forests:** The district has 752 sq km of reserve forests. Economically these forests are not very important. **Water Resources:** Krishna is the chief river in the district. Budameru, Muniveru and Tammaneru are other minor rivers in the district.

Krishna Delta System: Krishna river rises in the Western Ghats near Mahabaleswar, some 1,220 m above sea level, running southwards through Maharashtra State for some distance, it receives the Bhima before it turns eastward into Andhra Pradesh. Further down, the Tungabhadra joins it and the last important tributary to join is the Musi. The river, after flowing through a narrow gorge in the Nallamali hills enters the plains of the the Coromandal coast studded with hills. The last of the three hills is at Vijayawada, where the river flows between two of them about 1 km apart, where an anicut was built in 1855. Stretching away on both sides of the river beyond Vijayawada are the two sections of the deltas, the eastern delta lying on the left side and the western delta on the right. For 64 km below, the river runs as a single stream. It then throws out Puligedda branch. Between this and the main river lies the Divi island. The main river then flows for 24 km and divides into three branches before it empties into the sea. The river drains 2,51,000 sq km and its flood discharge is about 10 lakh cusecs in high floods. (See Nagarjunasagar Project, Pp. 38).

The eastern delta has an area of about 3,000 sq km and stretches as far as Kolleru lake in the north. The western delta is about 2,486 sq km and extends to the south as far as Pedaganjam. The

contour canals and the interior canals form a net work of irrigation and navigation systems affording means of irrigation and transport to the coast from Kakinada town to Madras City through the Buckingham Canal. Previously the Divi island was irrigated with water pumped from the river by diesel driven pumps. Pumping from the river was continued till 1935 when the Cano Bell aqueduct was built at Puligodda to carry the Krishna East Bank canal across the river to Divi island. This canal now irrigates by direct flow the entire ayacut in the Divi island. (See Development of Water Resources).

Agriculture: Soil types (South-east to North-west): (1) Coastal alluvium; (2) Alluvial soil; (3) Undifferentiated black soil; (4) Red soil (North-east patch). Alluvial soils occur in the delta regions particularly in Bandar, Gudivada, Divi, Kaikalur taluks. The rest of the region is red soil and mixed. Recently modified package programme is introduced as Intensive Agriculture Area Programme. In certain parts of the district, newly developed hybrid millets, known as CSH-1; CSH-2 of Jonna (Hybrid Jowar) and CB-1 of Sajja (Hybrid Bajra) are becoming popular with the farmers revolutionising the cropping pattern. Cotton is grown in rice fallows in summer around Pamaruru.

Land Utilisation: Total geographical area: 8,73,416 ha. Forest: 10.3%. Barren and Uncultivable lands: 7.7%. Land to put to Non-agricultural uses: 7.3%. Cultivable waste: 3.7%. Permanent pastures: 2.8%. Land under Misc. Tree crops: 1.2%. Current fallows: 5.2%. Other fallow lands: 3.2%. Net sown area: 55.1%. Area sown more than once: 15.9%. Total cropped area: 71%.

Irrigation: 63.5% of net sown area is irrigated. 891 wells have independent ayacut while 201 wells in the district supplement recognised sources of irrigation. (See Water Resources above).

Cropping Pattern: Net sown area: 4,83,572 ha. Cereals: Rice 60%; Jonna 20%; Sajja 0.8%. Pulses: Greengram 7%. Commercial crops: Groundnut 8%; Tobacco 2%; Chilli 1%; Misc. crops: 1.2%. Other crops are of minor importance. Modern scientific farming principles are being absorbed into already developed traditional methods.

Farm Research: There is an Agricultural Research Station at Machilipatnam which concentrates on varietal trials and improved agricultural practices for saline resistant rice varieties.

Animal Husbandry: The district is rich with cattle wealth. Ongole and other improved breeds are imported into the district and developed. Green fodder is extensively grown and used. Integrated Milk Project to supply milk from the district to distant cities like

Hyderabad is being implemented. Milk chilling centres are located at various places in the district for pooling the milk collection. Feed mixture plants on modern animal nutritional standards are erected at Gannavaram and Gudlavalleru. A Beacon factory to manufacture Pork is located near Vijayawada. A piggery with exotic breeds is attached to it. Carcase Utilisation Centre with foreign technical assistance is also coming up near Vijayawada.

Mineral Resources: Iron ore in the form of Kakirayi is available in Jaggayyapet (now exported to foreign countries). Limestone is also found in the district. Chromite is available in Kondapalli. Paritala was once reputed for diamond mining. The well known 'Pitt' diamond was found here.

Population: Total: 20,76,103. Men 10,58,113; Women 10,17,990. Population Density: 260 per sq km. The Vijayawada region is highly dense. Tiruvur region is sparsely populated. Increase in decade (1951-61): 19.56%. Urban Population: 23.51%. Religion: Hindus 84.27%; Muslims 5.6%; Christians 10.2%. Language: Telugu 19,35,077; Urdu 10,598; Lambadi 12,148; Tamil 6,635; Kannada 797. Towns and Population: Machilipatnam (M) 1,01,417; Pedana 15,023; Avanigadda 11,949; Gannavaram 6,702; Vuyyur 14,489. Vijayawada (M) 2,30,397; Mokhasa Mutyalampadu 3,963; Nandigama 10,244; Jaggayyapet 13,905; Tiruvur 9,299; Nuzvid 18,974; Gudivada (M) 44,801; and Kaikalur 7,051.

Power: The Thermal Power Station at Vijayawada generates power and is connected to the regional grid.

Industry: Agricultural forwardness has contributed in a significant measure to the industrial advancement of the district. The heart of industrial activity is in Vijayawada town, which is next only to Hyderabad in the development of small industries in the State. The industrial products in the small scale sector are by and large demand based manufacturing consumer items for supplying to the needs of coastal districts. Andhra Scientific Company at Machilipatnam is a long standing factory manufacturing precision scientific instruments and appliances, survey instruments, optical instruments, engineering, physical and chemical appliances and chemical balances. These are sold by the concern all over the country. Andhra Cement Company at Vijayawada has a capacity of two lakh tonnes of cement per annum. There are two sugar factories in the district at Vuyyur and Challapalli; the former has a crushing capacity of 2,500 tonnes a day and the latter 800 tonnes a day. The Vuyyur plant has installed a power alcohol unit with a capacity of 1,25,000 litres per annum. Solvent extraction plant to manufacture oil from rice bran at Vijaya-

wada has a capacity of 10 tonnes per day. South India Research Institute, Vijayawada has established itself as a manufacturer of pharmaceutical items such as injections, orals, tablets, tinctures and beverages.

There are 713 small scale units registered with the Department of Industries. Next in prominence to Vijayawada stand Machilipatnam and Gudur. Vijayawada has the highest concentration of general engineering and mechanical workshops, foundries and sheet metal and steel furniture making units in the coastal belt of the State. Out of the 354 units in these lines, nearly 270 are located in and around Vijayawada. Manikonda has 30 units engaged in sheet metal work making items like flour sieves, rice drums and other kitchenware. Machilipatnam has 30 units in general engineering and sheet metal work. Among the units at Vijayawada, 24 are engaged in steel furniture, 40 in sheet metal work, 5 in builders' hardware, the rest in foundry work and mechanical work both for servicing and manufacturing. Diesel oil engines, compression springs, hydraulic presses, machinery for hand made paper industry, structural fabrications, stainless steel utensils and surgical instruments and agricultural implements are manufactured in addition to some of the engineering items like bolts, nuts and rivets, hinges, wire nails, gem clips and paper pins, centrifugal pumps, musical instruments and bicycle parts. 74 units are engaged in chemicals and demand based plastics; acrylic sheets are manufactured by four units at Vijayawada besides polythene tubing, plastic buttons, paraffin wax, paints and varnishes, carbon gas, agar-bathis, phenyle, photographic materials, camphor etc. Aerated waters are manufactured at Vijayawada, Machilipatnam, Kakaluru and Chellapalli. Rasakarpuram is made at Kondapalli.

There are eight units manufacturing safety matches (only one at Machilipatnam and the rest in Vijayawada), 15 manufacturing pharmaceuticals (10 at Vijayawada), 8 making soap (4 at Vijayawada and 2 at Gudur), 5 making fountain pens at Vijayawada, two making opticals at Machilipatnam, four manufacturing mirrors at Vijayawada, four engaged in laboratory equipment at Vijayawada, two in scientific equipment at Machilipatnam. There are six ceramic units at Vijayawada and one at Gudur pulverising clays and other minerals. The units at Vijayawada make graphite crucibles in addition. There are three mosaic tile units, 13 leather and tyre retreading units, 7 wood based units engaged in furniture and 1 toy making unit at Vijayawada. There is one leather unit at Kakaluru and one bone meal unit at Gudur. Units making electrical goods number 14. Of them 13 are at Vijayawada. They are making radiators, batteries, conductors and thermoflux. At Vijayawada there are units making bituminised, water proof paper, art silk twisting and dyeing, sewing thread

and rexine hand bags. There is one unit in Nuzvid making thread balls. Gold covering works (14) are located in Machilipatnam.

Of the 59 units making cement products, 33 are at Vijayawada, 5 at Gudur and the rest scattered over the district. 2 are making R.C.C. spun pipes at Vijayawada. There are 19 units making brass and copper utensils (8 at Vijayawada). Of the 15 printing presses, 10 are at Vijayawada and there is one stationery unit, manufacturing envelopes at Machilipatnam.

Of the two fruit canning units, one is at Vijayawada and the other is at Nuzvid. There are two confectioneries at Vijayawada; Livestock feed units at Vijayawada, Gannavaram and Gudlavalluru and 8 units engaged in food products (6 at Vijayawada), 1 Khandasari sugar plant at Vijayawada, 6 coffee making units (5 at Vijayawada and 1 at Kakaluru). Rice and oil mills and saw mills which number over 450. Two livestock based industries are coming up around Vijayawada—one is beacon factory to manufacture tinned pork from piggery and the other to make powdered milk with UNICEF aid.

Toys of Kondapalli and Kalamkari fabrics of Machilipatnam are reputed. The industrial estate at Vijayawada has a provision for 34 factory sheds and the assisted private estate at Machilipatnam has a provision for 45 factory sheds. In the Vijayawada estate, the Department of Industries has three units—model leather goods manufacturing unit, production-cum-training centre for moulders and cottage and Small Scale Industries Research Institute. The Andhra Pradesh Small Scale Industrial Development Corporation has located its raw material servicing centre in the estate and the Small Industries Service Institute of the Government of India has set up an extension centre to service not only the industrial units in the estate but also in the Vijayawada region.

Jawahar Autonagar: In the Vijayawada estate beyond the originally planned 34 factory sheds, further construction of buildings has been given up and the vacant land is divided into 28 plots for the use of industrialists. Since the demand for plots is increasing 89 ha of land adjacent to the estate has been acquired for the Jawahar Autonagar. All the automobile workshops in the city are expected to move into the Autonagar. It is hoped that concentration of these automobile workshops in a single place will develop the skills of the personnel engaged in industry and will ultimately be the nucleus for the development of an automobile industry in the region.

Transport: Airways: Gannavaram Air Port is very near to Vijayawada. Five-times-a-week air service is operated by Indian Airlines between Hyderabad and Visakhapatnam touching Vijayawada. The 'Hindu' operates from Madras daily a private chartered route to make

their newspaper available quickly at Vijayawada and nearby towns. **Railways:** Vijayawada is one of the nerve centres of Indian Railways. It is on three trunk routes. Madras-Calcutta, Madras-Delhi, Machilipatnam-Goa. Vijayawada platform is one of the longest platforms in India. The total route length of the railways in the district is 212 km belonging to South Central Railway. A branch line from Gudivada on Machilipatnam-Vijayawada section goes to Bhimavaram in West Godavari dt. **Waterways:** Canals are navigable and serve as cargo movers. The canals are interconnected through a net work of locks. **Trading:** There is a regulated market in Vijayawada for exportable commodities like Chilli etc. Vijayawada is the commercial headquarters of Andhra Pradesh. Machilipatnam is a minor port. Chromites and iron ore are quarried around Kondapalli, Jaggayyapet and exported. Coastal trading is carried on to move iron ore. Gudivada is a major rice exporting centre. **Roads:** The total road length in the district is 2,638 km of which 150 km belong to National Highways forming part of Madras-Calcutta Grand Northern Trunk Road (National Highway No. 5). The State Highways measure 518 km. The rest of the roads are managed by Zilla Parishad and other local bodies. Passenger bus transport (now nationalised) is managed through State owned Corporation. A tunnel in Indrakuladri near Vijayawada is under construction to connect roadways. Passenger bus transport connects all major centres in the district with outside towns like Guntur, Eluru etc. and with Hyderabad. Vijayawada is a big junction for bus transport. Lorry transport move major cargo to various consuming centres within the State and outside the State.

Education: Literacy: Total 31.2%; Men 37.54%; Women 22.99%. There are 7 colleges of Arts & Sciences in the district (one for women). A Government Polytechnic is located at Vijayawada. Culturally too Vijayawada is an important place in Andhra Pradesh. There is a medium wave radio station located at Vijayawada. Four Telugu dailies and one English daily with wide circulation in the State are issued from Vijayawada. Kuchipudi is the birth place of a unique style of classical dance which goes under the name of 'Kuchipudi Bharatanatyam' (See Culture).

Places of Interest: Jaggayyapet and Ghantasala (Buddhist remains), Kondapalli (Fort), Kuchipudi (Dance), Vijayawada (Kanaka-durga) Prakasam Barrage, Gandhi Hill, Chilikalapudi (Panduranga-swami), Sriakulam (Andhra Vishnu). (See Tourist Attractions).

Panchayati Samities: Avanigadda; Bandar; Bantumilli; Gannavaram; Gudivada; Jaggayyapeta; Kaikahur; Kanchikacherla; Kanikipadu; Mandavalli; Movva; Mylavaram; Nandigrama; Nuzvid; Tiruvur; Vissannapeta; Vajjyur.

GUNTUR DISTRICT

Location and Size: It lies between 15° 18' and 16° 55' N and 79° 10' and 80° 55' E. **Boundaries:** N Nalgonda and Khammam dt. E Krishna and Bay of Bengal. S Nellore and W Nalgonda, Mahabubnagar and Kurnool dt. **Area:** 15,207 sq km. **Taluks (9):** Bapatla, Guntur, Narasaraopet, Ongole, Palnad, Repalle, Sattenapalli, Tenali and Vinukonda. **H.Q.:** GUNTUR

Historical Background: The Satavahana dynasty from Dhanyakataka 2nd century B.C. and Ikshvakus from Vijayapuri near Nagarjunakonda ruled this region (See Pp. 16 and 223). Later Pallavas held authority over the area between 3rd and 7th centuries A.D. Pulakesi II of Chalukyan authority came to power after Vishnukundin king. Later Kubjavishnu Vardhana (617-633), representative of Pulakesi II declared himself independent. Velanati Chola too reigned the region (12th century) with capital at Chandavolu in Tenali tq. Haihayas ruled the Palnad. The heroic battle, Palnati Yuddham of Palnad took place at Karempudi between 1176-1182. Later the reign was under Prataparudra I of Kakatiya (1186). Delhi Sultans defeated Kakatiyas when the Kondaveeti Reddis set up an independent kingdom, till 1424. During the reign of Proudhadevarayalu (1423-46) the Kondaveeti kingdom became part of the Vijayanagar Empire. After the battle of Tallikota (1525), along with other coastal districts the region came under the control of the Nawabs of Golkonda. Later it was conquered by Aurangzeb. Asafjahi was appointed as Subedar of Deccan who later declared independence over the region in the name of Nizam. Guntur was a separate circle in the Nizam's dominions and was called *Murtazanagar*. The English obtained the district in 1788. The present Guntur dt was constituted early this century. Guntur dt took a prominent part in the freedom struggle. Pedanandipadu was the first village in India where 'no tax campaign' was started in 1921.

Physiography: The shape of the district is roughly comparable to a picture of a umbrella. **Natural Regions:** 1. The Eastern Delta. 2. The Western Plateau with hills and 3. Black Cotton Plains. Tenali, Repalle taluks and parts of Guntur and Bapatla taluks form deltaic regions. Palnad covered by eastern ghats, western Sattenapalle, parts of Guntur, Narasaraopet with Kondaveedu hill range, Ongole with Cheenmakurti hills, Vinukonda comprise the plateau. The rest of the region is black cotton plains. Long stretches of sandy areas lie in the coastal belt.

Climate: Except in deltaic taluks, the climate invariably is hot in summer. Rentachintala of Palnad tq records 51° C the highest temp in Andhra Pradesh. Daily average Temp Max 35° C Min 23.3° C. The highest Temp is 44° C while the lowest 11.7° C. **Rainfall:** The

district receives Max rainfall from S. W. Monsoon Jan & Sep. During 52 rainy days on average, the dist receives 32" (812.8 mm) average rainfall. Repalle records Max rainfall 879.2 mm while Palnad Min 675.6 mm. The coastal areas are liable to be affected by cyclones during N.E. Monsoons (Oct. & Nov.). Vinukonda, Narasaraopet and Palnad, Ongole taluks in lean years are exposed to drought.

Natural Resources: Forests: About an area of 2020 sq km. is filled with forests half of which lie in Palanad tq. The forests in the dist are economically not at all important. There are grazing grounds for cattle here and there. **Water Resources** River Krishna enters the district at Ganikonda range and forms a northern boundary for about 128 km. for the district and joins sea in Divi tq (See Krishna dist for a description of *Krishna Delta System*). Gundlakamma from Cumbum tank in Kurnool dist traverses the district thro' Vinukonda and Ongole. Musi from Nellore flows in the South Ongole tq. Nagaleru from hills in Vinukonda tq traverses north Palanad to join Krishna. Chandra-wanka also flows in the south Palnad to fall in Krishna. Romperu project (Bapatla tq), Bhavanasi tank (Ongole tq), anicut on Nagaleru at Dachepalli (Palnad), Krishna High Level Canal, Krishna Canals (Tenali & Repatla tq) are some of the irrigation structures in the dist. (See Development of Water Resources).

Agriculture: Soil types (South-east to North-West): (1) Coastal alluvium; (2) Undifferentiated black soil; (3) Red soil, (4) Undifferentiated black soil. About 85% constitute fertile black soil. Red soil occurs on either sides of Guntur-Guntakal rail track. To some extent alluvial soil occurs on the banks of River Krishna. Tenali tq in the deltaic region supplies foodgrains to the district and it is the granary of the district. Rice in delta and Jonna, Sajja, Korra in upland are chief cereal crops grown in the district. Virginia Tobacco is the chief money crop though turmeric and chilli are also grown for export to foreign countries like U.K., U.S.A., China, Soviet Russia etc. Shallow wells in sandy tracts near sea coast supply water for fruit orchards, betel vine gardens. Pedavadlapudi for orange, Duggirala for turmeric, cashew plantations near Vetapalem are reputed.

Land Utilisation: Total geographical area: 15,00,165 ha. Forest: 11.5%. Barren and Uncultivable lands: 5.6%. Land put to Non-agricultural uses: 8.7%. Cultivable waste: 3.3%. Permanent pastures: 3.6%. Land under Misc. Tree crops: 2.1%. Current fallows: 4.7%. Other fallow lands: 2.4%. Net sown area: 58.2%. Area sown more than once: 7.3%. Total cropped area: 65.5%

Irrigation: 24.6% of net sown area is irrigated. 3,621 wells have independent ayacut while 307 wells in the district supplement recognised sources of irrigation. (See Water Resources above).

Cropping Pattern: Net sown area: 2,63,807 ha. Cereals: Rice 22%; Jonna 21.5%; Sajja 6.5%; Korra 3.0%; Misc. Cereals 15%. Pulses: Greengram 2.5%; Blackgram 2.5%; Redgram 1.5%; Horsegram 0.5%; Bengalgram 0.5%. Commercial Crops: Tobacco 11%; Groundnut 6.5%; Chilli 3.5%; Cotton 1%; Oilseeds 0.5%. Foodgrains are just sufficient to meet the demand in the district while cigarette tobacco, groundnut, chilli, turmeric, betel, cashew are farm surplusses available for export.

Farm Research: Agricultural Research Station at Lam, 8 km from Guntur, has an accent on chilli crop. New strains of economic importance are being developed with improved agronomical practices and are made available to the farmers. A Research Centre at Ongole concentrates on Jonna crop. An extension farm attached to Agricultural College, Bapatla is a teaching farm as well as a research farm built by the scientists of the College with a Farm Mechanisation Unit and Cashew Research Station attached to it. A Turmeric Research Unit is located in Pedapalem. An Indo-Japanese Farm Project is now (1967) under way with the collaboration of Japanese farm experts at Bapatla. At Budampata there is a centre for regional research for evolving suitable tobacco varieties and cultural practices in red soils.

Animal Husbandry: The district is known for Ongole breed of cattle from Ongole taluk. There is export demand for this variety of breeding bulls. Cattle show is organised every year at Ongole. Green fodder is raised extensively for livestock.

Mineral Resources: Diamond survey and exploitation is being undertaken in the district. The famous Kohinoor Diamond was reputed to have been found in Kodur Diamond Mine in Sattenapalli tq. There are iron ore deposits in Konjedu hills of Ongole tq. Agnigundala has copper deposits. (See Mineral Resources).

Population: Total: 30,09,997 (highly populated district in Andhra Pradesh). Men 15,22,881. Women 14,87,116. Population Density: 200 per sq km. Urban population 20.83%. Religion: Hindus 78.0%; Muslims 8.6%; Christians 13.4%. Language: Telugu 27,27,714; Urdu 2,33,285; Lambadi 13,390; Tamil 9,985; Kannada 764. Towns and Population: Guntur (M) 1,87,122; Tadepalle 12,994; Mangalagiri 22,182; Tenali (M) 78,525; Chebrolu 14,291; Repalle (M) 21,941; Bhattiprolu 16,617; Bapatla (M) 33,668; Chirala (M) 45,410; Vetapalem 15,803; Pon-nur (Nidubrolu) 22,872; Ongole (M) 35,804; Addanki 7,438; Narasaraopet (M) 29,744; Chilakaluripet 22,666; Vinukonda 11,374; Gurazala 8,009; Macherla 14,797; Sattenapalle 17,495; and Phirangipuram 8,175.

Industry: The district ranks high in respect of industrial development. Tobacco is the main stay of the economy of the district. Pro-

cessing tobacco for markets is the chief occupation of the non-agricultural workers. There are 266 establishments at Chirala and Guntur, Parchur, Chilakaluripet, Ongole and other places for tobacco flue curing with branches spread throughout the tobacco growing region in the district. More than 20,000 persons are engaged in this industry. Mangalagiri, Itamukkala, Bhattiprolu are centres for handloom. A Co-operative Spinning Mill has come up at Chirala.

Guntur and Tenali have sheet metal, steel furniture, domestic utensils, fountain pens, agricultural implements units and servicing workshops. Besides these, paints and varnishes, tin containers, mirrors, stay-wire, mosaic tiles, radio sets, phenyle and soap are manufactured in Guntur. Three units are coming up for the manufacture of waterproof wax paper for supplying to the tobacco processing factories. There are units in Tadepalli manufacturing insecticides and mixed fertilisers, R.C.C. pipes and jars. Cashew processing and agarbathi are concentrated in Vetapalem. Marble chips are made at Macherla and slates are made at Vinukonda. There are leather tanneries at Guntur and Vinukonda. In Sattenapalli one concern is processing the hog hair and exporting the brush bristles to the Continent. Bone meal is produced by six factories in the district. Coastal belt near Nizampatnam is a centre for marine fishing and salt extraction. More than 100 rice mills and a few oil mills are spread out in the deltaic region.

Apart from the tobacco processing units, large scale factories worth special mention are the two solvent extraction units extracting oil from rice bran (at Guntur) and from groundnut cake (at Tadepalli), wheat flour mill at Tadepalli, tin containers manufacturing unit at Guntur, and two textile mills (at Pedakakani and Chirala — the latter in the co-operative sector), a jute mill at Guntur, two Cement factories (at Tadepalli and Macherla) and one fertiliser factory (manufacturing superphosphate at Tadepalli).

Special efforts are being made to industrially develop the backward parts of the district through a Rural Industries Project sponsored by the Planning Commission with headquarters at Narasaraopet. An Assisted Private Industrial Estate is functioning at Guntur with 37 plots for factory sheds and provision for training facilities is available in industrial schools and the polytechnic.

Commerce: Guntur is a world market for virginia tobacco. A regulated market is organised with facilities of selling platforms for exhibiting graded farm produce. Chirala-Perala is a centre for Handloom market.

Transport; Railways: About 472 km route of railways is spread in the district. Madras-Calcutta trunk route passes through Ongole, Bapatla, Repalle, Tenali and Guntur Taluks. Guntur-Repalle branch line passes through Tenali junction. Machilipatnam-Goa trunk route passes thro' Guntur junction and traverses in Sattenapalle, Narasaraopet, Vinukonda taluks. Guntur-Macherla branch line traverses Sattenapalle and Palnad tq. All taluk headquarters in the district are connected by railways. **Roads:** The total road length in the district is 2,982 km. The Grand Trunk Northern Road (National Roadway No. 5) passes thro' the district with a route length of 158 km. The State Highways manage 1,122 km and the rest is managed by local bodies. Hyderabad, Vijayawada and other important towns in the State are connected with Guntur by bus. Regulator-cum-Road bridge over Prakasam Barrage (1957) on Krishna near Vijayawada is a landmark in the history of transport in the district. New bridges and causeways provide good road transport facilities between Guntur, Krishna and Nalgonda districts. Deltaic region is better served with roads than upland interiors. Bus transport in the district is nationalised. All important towns are connected by bus routes. Andhra Pradesh State Road Transport Corporation runs direct Express services between Guntur and Hyderabad and other important centres. **Waterways:** Through a net work of lock system, irrigation canals from Krishna river provide navigational facilities. Bank canal, Kommamur canal joins inter-State Buckingham Canal (going south to Madras State) at Pedaganjam. This provides a cheap transport for trading commodities between Vijayawada and Madras.

Education; Literacy: Total 21.38%; Men 37%. Women 17.52%. There are nine colleges of Arts & Sciences, 3 professional, one for Medicine and one for Agriculture, another for Graduate Teachers. There are 145 High Schools (including Higher Secondary), 18 Training Schools, 6 Industrial Schools, 15 Commercial Schools, 2 Arts & Crafts Schools, 94 Basic Schools, 342 Adult Schools and 4,178 Primary Schools. The district is noted for progressive outlook and advanced culture.

Health: Comparatively the district has good medical facilities provided by Government and Missionary enterprises. The teaching hospital at Guntur is well equipped. There are nine modern hospitals and 28 dispensaries with a total bed capacity of 774. There are 44 Ayurvedic and one Unani clinics in the district.

Places of Interest: Buddhist remains at Amaravati and Bhattiprolu, Guntur, Undavalli (Cave Temples), Kotappakonda (Jatara), Mangalagiri (Sri Panakalaswami Temple), Etthipotala (Waterfall). (See Tourist Attractions).

Panchayati Samities: Amaratalur; Bapatla; Emani; Gurazala; Ipur; Ajupalam; Korisapadu; Macherla; Maddipadu; Mangalagiri; Nadendla; Arasaraopet; Ongole; Pallapatla; Pathipadu; Phirangipuram; Pidugulla; Ponnur; Repalle; Santhamagalur; Tadikonda; Tenali; Tyullur; Tepalem; and Vinukonda.

NELLORE DISTRICT

Location and Size: It lies on the east coast between 13° 30' and 16° 0' N and 79° 5' and 80° 5' E. **Boundaries:** N Guntur; E Bay of Bengal; S Chittoor or Madras State; and W Cuddapah and Kurnool or Andhra Pradesh. **Area:** 20,653 sq km. **Taluks (13):** Atmakur, Darsi, Gudur, Kandukur, Kanigiri, Kavali, Kovur; Nellore, Podili, Rapur, Sullurpet, Venkatagiri and Udayagiri. **H.Q.:** NELLORE.

Historical Background: Nellore was a part of the Pallava Kingdom (3rd century AD). Satvasraya Pulakesi of Western Chalukyan Kingdom invaded the region in 611. Telugu Cholas ruled over the district between 11th and 13th centuries. Later Prataparudra of the Kakatiyas extended his authority to these parts. After the fall of the Kakatiyas (14th century) many petty principalities came into existence. Of these Prolaya Vemareddi conquered a major portion. Later (1427) the region was occupied by the Vijayanagar rulers and was constituted as Udayagiriseema. After the battle of Tallikota (1565), the region came under the authority of the Nawabs of Golkonda. English established their factory at Durgarajapattanam (1625) in Gudur taluk. The region came under the influence of English in 1781 who assumed full control in 1801. The district had many Zamindari. Of these Venkatagiri was an important Zamindari. Originally the district extended upto Gundlakamma river. But when Guntur or was formed in 1906, Ongole or was transferred from Nellore to Guntur.

Physiography: Natural Regions: (1) Rocky hills on stony plain; (2) Fertile plain region; and (3) Coastal sandy tracts. The western half with Veligonda hill range of eastern ghats running along the western boundary of the district from the S.W. corner of Venkatagiri or to the north of Kanigiri or is stony plain with interspersing hills. The highest point has an elevation of over 1,000 m—Udayagiri or (1,025 m). Udayagiri or is an isolated hill and do not belong to Veligonda range. Podili, Kanigiri, Darsi and Kandukur taluks have also isolated hills and ridges. The fertile plain is mostly limited to Nellore or. The rest of coastal tract is sandy with bushes scattered here and there. To the southeast of the district there is a sandy silt 'Srihari Kota' with a length of 56 km and breadth of 25 km. There are numerous back waters along the coast. Pulicat lake is one among them.

Climate: Generally dry and salubrious during summer months. Apr, May and June are hot months. Daily average temp: Max 34.4°C; Min 24°C. The highest temp in a year 47°C while the lowest 16.7°C. Precipitation in the district is uncertain. Though S.W. monsoon sets in the district in the middle of June, it is with scarce rainfall and heavy winds. However the northern region is generally benefitted by this. N.E. monsoon gives rain between Oct and Jan. **Rainfall:** There are 41.5 rainy days which bring 990 mm of average rainfall. Sullurpet records highest rainfall 1,135 mm, while Darsi or the lowest 637 mm.

Natural Resources: Forests: The total forest area in the district is 3,805 sq km. Udayagiri and Rapur or are bushy without any economic value. A part of Kanigiri or and those in Veligonda are economically important. Good grazing grounds are also found in those parts. The coastal Kavali and Kovur taluks are full of Casuarina topes. Atmakur and Venkatagiri taluks have scrub jungles, while Sullurpet has ever green bushes. **Water Resources:** Penna is the chief river with anicuts at Sangam and Nellore. The other rivers are Kandleru, Suvarnamukhi, Musi, Palleru, Manneru. Rivers of minor importance are Gundlakamma, Kotamanneru, Venkatagiri, Kolleru, Boggeru and Biraperu. Penna flowing from the west from Mysore State thro' Anantapur and Cuddapah or enters this district at Somasila in Veligonda range and flows east traversing 112 km in the district thro' Atmakur and forming boundary to Kovur and Nellore taluks, it falls in Bay of Bengal at Utukuru, 25 km down Nellore town. Boggeru, a small stream from Veligonda joins Penna at Kolaguntla in Atmakur or. Biraperu joins Penna at Sangam in Kovur or. Suvarnamukhi from Chandragiri hills in Chittoor or flows thro' this district in Venkatagiri, Sullurpet and Gudur taluks and falls in Bay of Bengal at Siddavaram. Upputuru river, Lower Anicut, Panduva Gandhi Reservoir, Nakkala Gandhi Reservoir, Rallapadu Reservoir, Nellore Tank, Sarvapalli Reservoir, Kanigiri Reservoir are some of the sources of irrigation water. 309 major irrigation sources command 1,10,579 ha and 1,507 minor irrigation sources supply water to 33,981 ha.

Agriculture: Soil types: (1) Coastal alluvium; (2) Laterite soil; (3) Alluvium soil; (4) Red soil; (5) Small patches of undifferentiated black soil. Nellore or is black soil, Udayagiri and Kovur taluks are mixed soils. Atmakur and Kavali or are red soils and Sullurpet and Kanigiri or are sandy. Rice is chief crop. Jonna is extensively grown in interior uplands. Horse gram and Chilli are commercial crops. Podili, Kanigiri, Rapur, Venkatagiri and Sullurpet taluks as well as uplands of Atmakur are exposed to famine conditions during drought period.

Land Utilization: Total Geographical Area: 20,37,708 ha. Forest: 12.5%, Barren and Un-cultivable lands: 10.7%, Land put to non-

Agricultural uses 13.4%; **Cultivable waste**: 8.6%; **Permanent Pastures**: 9.5%; **Land under Misc. Tree Crops**: 1.3%; **Current Fallows**: 7.2%; **Other Fallow Lands**: 5.4%; **net sown area**: 31.4%; **Area sown more than once** 2.4%; **Total cropped Area**: 33.8%.

Irrigation: 39.5% of Net sown area is irrigated; 16,781 wells have independent ayacut while 989 wells in the district supplement recognised sources of irrigation (see: Water resources above).

Cropping Pattern: Net sown area: 6,46,228 ha. **Cereals**: **Rice**: 28.5%; **Jonna**: 27.5%; **Variga**: 8.5%; **Sajja**: 7.5%; **Ragi**: 5.0%; **Korra**: 4.5%; **Samai**: 1%; **Misc. Cereals**: 2.5%. **Pulses**: **Horsegram**: 5%; **Greengram**: 1.5%; **Cotton**: 2.5%; **Groundnut**: 1%; **Fruits**: 1%; **Chilli**: 1%; and other oilseeds 3%. **Farm Research**: There is an **Agricultural Research Station** at **Buchireddipalem**. Research is carried on cotton, pulses, oilseeds, in addition to rice as to their performance and improved cultural practice. **Animal Husbandry**: There is a local breed of cattle available in the northern region. There are veterinary hospitals at **Venkatagiri**, **Kavali** and **Nellore**. Exotic breeds of Poultry are also introduced extensively. A sheep breeding station is located at **Kavali**. Stud rams are produced here and supplied to the farmers. A meat technology unit is attached to it for studying comparative meat production.

Mineral Resources: Mica from this District has world reputation. **Gudur**, **Rapur** taluks, **Dundigam**, **Gudaladona** of **Kavali** talukas are Mica mining centres. Slate quarrying is carried on at **Rayavaram** in **Podili** taluk, while limestone quarrying in **Ketagudi** & **Agraharam**. According to Geological Survey, there are iron ore deposits in **Venumbaka** hills near **Rosanur** of **Sullurpet** and aluminium deposits in **Chundi** region of **Kandukur** taluk. Gypsum is available in coastal villages of **Sullurpet**.

Population: Total 20,33,963. Men: 10,18,504. Women: 10,15,459. **Population Density**: 99 per square km. **Urban population** 11%. Increase in the decade (1951-61): 13.34%. There are tribal people 'Yenadi' in **Sariharikota** island. **Religion**: **Hindus**: 87.4%; **Muslims**: 7.6%; **Christians**: 5.0%. **Language**: **Telugu**: 18,40,541; **Urdu**: 1,38,791; **Lambadi**: 132; **Tamil**: 41,033; **Kannada**: 1,123. **Towns & Population**: **Nellore (M)**: 1,06,776; **Gudur (M)**: 25,618; **Sullurpet**: 9,807; **Naidupet**: 7,273; **Venkatagiri**: 17,114; **Kanigiri**: 9,529; **Kandukur**: 12,436; **Kavali**: 20,544; and **Kovur**: 14,580. **Occupational Pattern**: **Farming** 75%; **Industry** 11%, **Trading** 5%, **Misc.** 9%.

Power: Thermal Power is generated at **Nellore** and connected to State Grid. All the taluks are covered with electricity.

Industry: Cottage Industries. **Handlooms**, **Venkatagiri Sarees** are prized throughout the state. **Beedi** manufacture, 85 Mica mining units (**Gudur & Rapur**), **Road Roller**, **Building Stoe** quarrying in **Kanigiri** and **Podili** Taluks. **Gudur**, **Nellore**, **Kavali**, **Kovur** and are coming up in industrial activities. **Straw board** from paddy straw is made in **Nellore** in two factories and one solvent extraction unit for extracting oil from rice bran is coming up. Small industry units in **Nellore** are producing polyethylene tubings, bags and corrugated paper board, enamel wares, paints and varnishes, water meters and cement and ceramic products. **Gudur** assumes prominence for mica processing units, ceramic factories and light engineering industries. A Government Ceramic Factory and Glass factory are located at **Gudur**. On an average, mica worth Rs. 2 crores is exported every year from **Gudur** mostly to the U.K., U.S.A. and Japan. There is one spinning mill at **Sullurpet** and another is proposed in the Cooperative sector at **Nellore**. **Stainless steel** units are concentrated in three or four centres. One unit manufactures bone meal and pesticides and insecticides at **Kavali** and **Kandukur**. Two **Mangalore** tile units are functioning at **Kavali** and **Kandukur**. At **Tada** in **Sullurpet** taluk there is one marine based unit processing prawns and frog legs for export to the United States. **Kanigiri** and **Kandukur** have a concentration of traditional fabricators. **Rice** and oil mills are situated in the agricultural rich taluks. **Thunga** **Matings** of **Podili** and **Kanigiri** areas, wood articles and decoratives of **Udayagiri** are well known for their designs and craftsmanship. There is one Assisted Private Industrial Estate at **Nellore** with Provision for 59 sheds on the National Highway leading to **Madras**.

Transport: **Railways**: Railways have a route length of 290 km. The **Madras—Calcutta** trunk route passes thro' **Sullurpet**, **Gudur**, **Nellore**, **Kovur**, **Kavali** and **Kandukur** taluks. A branch line from **Gudur** reaches **Renigunta**. Another railway link **Machilipatnam—Hubli** (via) **Venkatagiri** taluk passes thro' the district in the northwest thro' **Darsi** and **Podili** taluks. **Roads**: The total road length in the District is 2645 km. The **Madras—Calcutta** Grand Northern Trunk Road (National Highway No. 5) passes thro' the district for about 218 km. All taluk HQ are connected with the district head quarters. But transport in the district is private managed. Direct bus facilities are available to **Madras**, **Hyderabad**, **Chittoor**, **Tirupati**, **Cuddapah** and other important towns. **Waterways**: Inter state **Buckingham Canal** with navigation facilities traverses thro' the district providing cheap cargo and passenger movement.

Education: **Literacy**: Total 20.63%; Men: 29.44%; Women: 11.79%. There are five Arts & Science Colleges, a Graduate Teacher Training College. **Nellore** is a cultural centre. A weekly 'Zamin Ryot' is published to cater to the local needs. **Nellore** is a film journalists headquarters. There are 49 high schools, 9 middle schools, 1921 primary

schools, besides 67 adult literacy centres and 12 vocational training centres.

Health: There are 9 modern hospitals, 14 dispensaries with bed capacity of 826. Clinics catering indigenous medicine 35. There is a T. B. Hospital in Nellore. Welfare efforts in the region of Mica Mines is being carried out. Protected water supply systems exist in Nellore and Gudur.

Places of Interest: Udayagiri (Fort). Temples at Nellore, Jannavada, Mannarprolu, Buchireddipalem, Vedagiri, Singaraya Konda, Sangam.

Panchayat Samities: Atmakur; Buchireddipalem; Gudur; Indukurpet; Kanigiri; Kavali; Kondapi; Kota; Kovur; Podalakur; Podili; Rapur; Sullurpet; Tallur; Tarlapadu; Udayagiri; Ulavapadu; Velligandla; Venkatachalam; Venkatagiri; Vinjamur.

CHITTOOR DISTRICT

Location & Size: It lies between 12° 37' & 14° 0' N and 78° 3' & 79° 35' E. **Boundaries:** N. Nellore, Cuddappah & Anantapur districts. E. Nellore district & Madras State. S. Madras State and W. Mysore. **Area:** 15,160 sq.km.; **Taluks (11)** Bangarupalem, Chandragiri, Chittoor, Kalahasti, Kuppam, Madanapalle, Palamaner, Punganur, Puttur, Satyavedu, Vadalpadi. **HQ:** CHITTOOR.

Historical Background: First Pallavas (3rd cent. AD) and later Cholas ruled over the areas. Inscriptions reveal that the famous Sri Kalahasteswara temple was built by (12th cent.) Rajendrachola, a Chola King. With the fall of Cholas (13th cent.), the Saluvas and the Yadavas ruled the area. Alluddin Khilji conquered the territory (1324). But the Delhi Sultan's reign did not last long. Soon it was brought under the control of Vijayanagar Empire (1366). From 1656 the district was under Nawabs of Golkonda. The Nawab of Cuddappah as a subordinate to Golkonda Nawabs ruled over Madanapalle, Vayalpad and Punganur taluks, while the rest of the region was under the Nawab of Arcot. After the fall of the Golkonda Kingdom the Carnatic Nawabs exercised authority over the region. Maharashtrians and later the ruler of Mysore, Hyder Ali occupied the area for some time. In the Mysore wars, Hyder Ali was defeated by the English and according to the treaty concluded at Srirangapatnam, the English gave away the taluks of Madanapalli, Vayalpad and Chandragiri to the Nizam (1792) and the remaining taluks of the district to the Nawab of Arcot. Later the entire region came under the control of English 1801. Then there were many Zamindars in the area. Prominent among these were Kalahasti and Karvetinagar. Chittoor was constituted in 1911 from out of the erstwhile Arcot, Kadapa, Chingleput districts. After the formation of Andhra Pradesh, boundary dispute with Madras State

was settled thro' Pataskar Award (1959) when Tiruttani was transferred to Madras while some villages from Ponneri & Tiruvellore taluks of Madras were transferred to Chittoor. Satyavedu and Puttur taluks were also reconstituted for administrative convenience.

Physiography: **Natural Regions:** 1. Hill Plateau; 2. Plains. Eastern Ghats traverse the district from S.W. to N.E. direction. This range starts in Karigundi in S.W. They run in a N. & N.E. direction across Palamaner taluk and the eastern part of Punganur taluk and then turning towards the east cut Chittoor and Chandragiri taluks upto Tirupati. Beyond Tirupati, the range divides itself by a broad valley, known as Mamundur valley, the hill range follow a N.E. course touching Kalahasti taluk to enter Nellore district. The region, west of the hill range in Punganur, Madanapalle, Vayalpad taluks forms a plateau of 600 m to 750 m in elevation. The Horseliey hill in Madanapalle taluk has an elevation 1250 m. There are numerous hills and hillocks in Punganur, Madanapalli and Vayalpad. Of these, Nagari hills in Puttur taluk are prominent. **Climate:** The summers are comparatively hot in Chandragiri, Satyavedu, Kalahasti, Puttur taluks. The plateau taluk Madanapalle, Vayalpad, Punganur and Palamaner are relatively cooler. The temp. will never rise beyond 35°C. Chittoor taluk has moderate climate. Daily average Max. temp. 31°C, Min. Temp. 20°C, Highest Temp. 37.8°C and Lowest Temp. 11.7°C. **Rainfall:** The district receives rains from S.W. & N.E. monsoons. S.W. gives rain between June & Sept., particularly in plateau taluk. As the district lies in the interior, the rain bearing winds by the time they reach they lose water vapour. There are on average 52 rainy days with an annual rainfall of 832 mm. Kalahasti has Max. rainfall while Madanapalle the minimum. The climate of the district is dry and generally healthy.

Natural Resources: Forests comprise about one third of the geographical area of the district. Forests in Madanapalle taluk belong to quality group and they are economically productive yielding good timber. Palamaner taluk and predominantly Horsely hills are rich in Sandal wood trees which are prized for their oil. The forests in Punganur, Chandragiri, Kalahasti, Chittoor and Satyavedu taluk are scrub jungles with no economic value. **Water Resources:** There is no perennial river in the district. The district is drained by some rivers flowing north in the northern part of the district and others flowing south and east in the southern part of the district. Some important rivers that flow in the district are the Papagni, Pincha, Koundinya, Bahuda, Chinneru and Pedderu, Palar, Poyney, Godduvanka, Suvarnamukhi. All these rivers are dry for the most part of the year. During the rainy season however they are filled with water.

Agriculture: **Soil Types:** Red Soil (lal) undifferentiated black (regur), soil patch centre (masab). The Black is again subdivided into Clay and Loamy. Red Soils predominate in the district. There is no proper

dependable irrigation sources even sufficient for an ayacut of a major part of a taluk. And the soils being red lack moisture holding capacity. If there is no rain during June—Sept., the people will have to surely face to famine. Madanapalle, Vayapad, Satyaveedu and Punganur are exposed to famine during drought years. Palamner, Kalahasti and Chittoor are particularly exposed. Dry farming is practised in the wet lands during drought. Among foodgrains Rice predominates. Among pulse crops, horsegram tops, among commercial crops groundnut is important.

Land Utilisation: Total Geographical Area: 15,13,869 ha. Forest: 30.5%; Barren and Uncultivable Lands: 14.0%; Land put to Non-Agricultural Uses: 7.2%; Cultivable Waste: 5.9%; Permanent Pastures: 2.9%; Land under Misc. Tree Crops: 1.5%; Current Fallows: 5.8%; Other Fallow Lands: 3.5%; Net Sown Area: 28.7%; Area sown more than once: 2.5%; Total Cropped Area: 31.2%.

Cropping Pattern: Net sown area (434306 ha), Cereals-Rice: 21%; Ragi: 11.5%; Sajja: 11.5%; Jonna: 36%; Samai: 2%. Pulse: Horsegram: 3.5%. Commercial Crops: Groundnuts: 18.5%; Mango Gardens: 2.5%; Tamarind and Mango orchards are found in Chittoor district. Groundnut, Mango, Jaggery, Tamarind are exported to outside the district, while rice is imported into the district from other parts of the State. **Farm Research:** There is an agricultural research station at Kalahasti. There is a sericulture farm in Palamaner. **Animal Husbandry:** Punganur breed once well known is now extinct in the district. Other breeds are not very important. There are three Veterinary Hospitals in the district. At Tirupati there is a Dairy. A goat breeding farm is located in goat and lamb Farm. Jompuri bucks, Mandyanams are raised at Palamnar.

Irrigation: 32.0% of Net Sown Area is irrigated; 8,490 wells have independent ayacut while 9,334 wells in the district supplement recognised sources of irrigation (See water resources above).

Mineral Resources: Iron ore is mined in Sivasambadu of Kalahasti tq. Gold Mica, Steatite and Building Stone materials are also available in the district. At Narayana Nagar goldmines are being exploited economically.

Population: Total: 19,13,169; Men: 9,77,809; Women: 9,35,360. Population Density: 126 per sq.km. Urban Population: 11.47%. Increase in the decade (1951-61): 14.82%. Religion: Hindus: 91.6%; Muslims: 7.2%; Christians: 1.2%. Language: Telugu: 14,60,438; Urdu: 1,30,226; Lambadi: 8,286; Tamil: 2,89,447; Kannadi: 15,834. Occupational Pattern: Farming: 73%; Industries: 7%; Trading: 5%; Misc. Services: 15%.

Towns & Population: Chittoor (M) 47,876; Palamner 9,865; Kuppam 9,272; Punganur 13,806; Madanapalle (M) 24,386; Vayalpad 8,016; Tirupati (M) 35,845; Tirumalai 5,561; Renigunta 5,942; Pakala 14,482; Kalahasti 26,460; Puttur 10,078; and Nagari 8,012.

Industry: Handloom sustains livelihood for many in the district. Kalahasti is known for Kalamkari dying. Chandragiri is a centre for metal industry. Toys are made from Red Sanders wood around Tirupati. Datemats (Sanga Samudram) Comb making (Nerablu), Leather goods (Gurramkonda) are other industries in the Dt. Straw board unit is located at Tirupati. There are four textile mills at Renigunta, Tirupati, Madanapalle and Bangarupalem. Chittoor has a cooperative Sugar factory and an industrial alcohol plant utilising the molasses of the sugar factory. Renigunta has a surgical cotton unit utilising the waste cotton of the textile mills. Mopeds are manufactured near Renigunta with French collaboration. Small scale industries are concentrated in Kuppam, Chittoor, Tirupati, Kalahasti and Papanaidupet. Rice and oil mills are spread out in the district. There are five units at Kuppam extracting oil from Sandalwood and about ten granite stone polishing units. These two items are exported and earn foreign exchange of Rs. 80 lakhs a year. Slates are manufactured in Chittoor by procuring slate slabs from Markapur of Kurnool district. In addition, truck and bus body building, tyre-retreading, confectionary, match and sewing thread units are located at Chittoor. Starch from tamarind seed is done at Kuppam. Tiles are manufactured at Palamner. Bone meal is prepared from raw bones at Renigunta and Kuppam. A fruit preservation unit is coming up in Chandragiri taluk and another is proposed at Chittoor. Wigs are made from the human hair in Tirupati on a cottage scale. A Wig factory is proposed to be established by the State Trading Corporation in Tirupati. Tirupati and Kalahasti are noted for the brass metal and gun-metal articles. Papanaidupet has a concentration of glass bead workers, and there are two small scale units making block glass and supplying the artisans. There is extension centre of the Govt. of India at Papanaidupet to popularise improved methods of making glass beads. Chittoor and Tirupati have assisted private Industrial Estates with provision for 42 and 35 factory sheds respectively. Gold mines are working in Narayan Nagar. Khandasari unit, Confectionery unit, glass beads unit are other industries in the district.

Transport: Railways: The total route length of railways in the district is 375 km. The Madras—Bombay trunk route traverses in Satyaveedu, Puttur and Chandragiri taluks. The Madras—Bangalore route passes thro' Palamaner taluk in the southern part of the district. Puttur, Kalahasti, Chandragiri and Vayalpad. Tirupati the sacred hill pilgrim centre which attracts devotees in large number throughout the year lies 10 km. away from Renigunta on a branch line. Roads: The total length of roads is 2765 km. The general condition of the roads in the district is good. There is a ghat road of 25 km. leading to Tirumalai (from downhill to uphill) the holy shrine of Lord Venkateswara.

Education: Literacy: 20.58%; Men: 31.1%; Women: 9.57%. Tirupati is a University Town with the seat of Sri Venkateswara University (Estd. 1954) with teaching faculties in Arts, Sciences, Medicine and Engineering. Professional colleges in Medicine, Engineering, Veterinary Science, Agricultural, Home Science are located in Tirupati. Music College, a Nadaswaram School and Sculpture School are located at Tirupati. Tirupati is a seat of Sanskrit learning. Kendriya Sanskrit Parishad (of the two centres organised by Union Ministry of Education, the other located at Varanasi, U.P.) is located at Tirupati. Oriental College to teach degree classes in Indology and Sanskrit Studies, Veda Patasala, agamasastra are being organised in Tirupati—Tirumalai. There is a Government Polytechnic in Tirupati. The literacy level in Tirupati town reached 55.32% topping the list in the State.

Health: The district is reputed in the State for good health. Madanapalle and Horseley hills are health resorts. The western region being a plateau, it commands very moderate and salubrious climate, even in hot summer months. There is well equipped private Hospital (Ruia Hospital) with capacity of 200 beds attached to the Medical College for clinical teaching. Chittoor headquarter Hospital is also well equipped. The T.B. Sanatorium at Madanapalle is a reputed hospital. A Leprosy Clinic is managed by Devastanam. Puttur is a centre for Bone setting utilising native genius adopting certain indigenous herbs and methods. There are a few ayurveda clinics in the district.

Places of Interest: Horsely Hills, Madanapalle (Health Resorts), Tirupati (Holy Temple at Tirumalai), Pananasam, Tiruchannur (Temple) Chandragiri, Srikalahasti (Lord Siva Shrine). See Tourist Attractions, page 230 to 232.

Panchayati Samities: Bangarupalem; Chandragiri; Chinnagottigallu; Chittoor; Chowdepally; Gangadhara Nellore; Kalahasti; Karvetinagar; Kupam; Madanapalli; Palmaneer; Pichatur; Pulicherla; Punganur; Puttur; Satyaveedu; Thamballapally; Thottambedu; Vayalpad.

CUDDAPAH DISTRICT

Location & Size: It lies between 13°40' & 15°15' N and 77°30' & 77°55'. E Boundaries: N Kurnool; E Nellore; S Chittoor; & W Anantapur. Area 15,343 SQ. KM. Taluks (9) Badvel, Cuddapah, Kamalapur, Jammalamadugu, Proddatur, Pulivendla, Rajampet, Rayachoty and Siddhavatam. HQ: CUDDAPAH.

Historical Background: The present town of Cuddapah was founded in 16th cent. Rule of Vijayanagar was extended over the Cuddapah region. Nawabs of Cuddapah as representatives of Moghuls ruled the region when Hyderali conquered them (1779). After the defeat of Tippu and the fall of Srirangapatnam (1799) the region was controlled

by the Nizam who later ceded it to the English. The treaty of cession was signed at Hyderabad on Oct. 12, 1800. But owing to the rebellious nature of the poligars, who came to prominence since the fall of Vijayanagar Empire, the region has no peace for a long time. Then Thomas Munro, an English Collector succeeded in controlling poligars and a stable administration was set up.

Physiography: Natural Regions: The district is rich with hills, streams and long stretches of dense forests and valleys. 1. Black Soil Region; 2. Plateau and 3. Hill Valley. Cuddapah, Jammalamadugu, Kamalapur, Proddatur, Pulivendla taluks comprise black soil region. Rayachoty taluq lies in undulatory plateau. Badvel, Rajampet, Siddhavatam are enveloped by dense forests and valleys. Two hill ranges Veligonda, Palakonda from Tirupati Konda traverses the southern part of the district. Veligonda range forms boundary with Nellore district. While Palakonda range traverse north west and bifurcate Cuddapah Town into two. The western part Seshachala range join with Lankamala range to form Nallamalai range which run parallel to Veligonda range to reach Kurnool boundary. Gandikota gorge lies 8 KM. west of Jammalamadugu. Kamalapuram, Pulivendla, Rayachoty are filled with outcrops. Climate: Cuddapah is unpleasantly hot for four months in a year. Feb. to May are worst months with scorching sun. Cuddapah town is hotter than most other places in the district. Rayachoty lies in the plateau at higher elevation between 300 m. & 450 m. Proddatur and Jammalamadugu taluks though hot are good for health. Daily average temp. Max. 35.1°C. Min. 24.2°C. The district is situated away from coast, and consequently not much benefited by either of the monsoons. Rainfall: However with the onset of south west monsoon, the region cools down. To some extent, south west monsoon earlier and north east monsoon later in Oct. & Nov. bring rain in the region. There are about 41 rainy days in the year. Annual average rainfall: 686 mm. Jammalamadugu taluq records the lowest while Siddhavatam records the highest precipitation. There is no certainty about the rains in the district. Visitations of floods and droughts are quite common exposing the district to scarcity and famine. Historically the year 1874 had worst floods with 1217 mm. of annual rainfall while two years later 1876 the worst drought occurred when the annual rainfall was only 174 mm.

Natural Resources: Forests: 4760 Sq. km. occupy forests in the Dt. Economically important forests lie south of Veligonda and Palakonda hill ranges with long stretches upto 24 km. in length. Lankamala and Nallamalai ranges also have economic forests. Rosewood (Nallacheva), Yepi, Erracheva are some quality timber types that are available in these forests. The forest in Pulivendla taluq is a scrub jungle. Water Resources: The Penna river traverses the district from the west to east and enters through a gap at Somasila (Nellore Dt.) in eastern ghats. Its chief tributaries are Kundu, Sagileru flowing thro' Badvel and Siddhavatam taluks. Chitravati, Papagni, Cheyyeru (Bahuda) are

important streams that join from plateau. Pincha and Mandya are smaller streams that fall in Cheyyeru. Kunderu enters the district from Kurnool district to join Penna. All these tributaries and streams that join Penna are dry for the better of the year. They have water only when there is rain in their catchment areas. Kurnool-Cuddapah canal with an aquaduct on Penna reaches Cuddapah district to join old Cuddapah Tank. Porumamilla Tank receives water from Sagileru anicut. As Sagileru depends on rains in the catchment areas in Kurnool, Porumamilla Tank itself is undependable. The Chief Irrigation source in the district is Kurnool-Cuddapah canal. This canal is taken from Tungabhadra at Sunkesula and has a total length of 305 km. At its 219 km, the KC Canal enters Cuddapah from where it branches off into irrigation channels. Chapadu canal, Elugu canal, Mydullur canal, Vukkayapalli canal are from tanks which depend on rains. The rains in July & Aug. fill them which will be used until Apr. next.

Agriculture: Soil Types: South to North, 1. Red soil; 2. Patch of black soil (undifferentiated) in East and Solid block of black soil (undifferentiated). But for K-C canal which irrigates about 8040 ha the rest of the crop land in the district is rainfed. Dry farming is practised with the help of wells. Food crops are not dependable in the district. Import of food grains from the other parts of the State is inevitable. Groundnut is main commercial crop in the district. Mango and Orange are grown in orchards extensively on plantation scale. Banana is also cultivated for export markets. Kodur is reputed for Mosambi lime (Satkudi) and other citrus plantations. Siddhavatam taluk produces Musk melons (tarbuja) in Penna river beds on a large scale for export to nearby market towns.

Land Utilization: Total Geographical Area: 1531709; Forest: 31.1%; Barren and Uncultivable Lands: 3.6%; Land put to Non-Agricultural Uses: 7.4%; Cultivable Waste: 12.1%; Permanent Pastures: 3.9%; Land under Misc. Tree Crops: 1.0%; Current Fallows: 11.2%; Other Fallow Lands: 3.3%; Net Sown Area: 26.4%; Area sown more than once: 1.8%; Total Cropped Area: 28.2%.

Irrigation: 25.3% of Net Sown area is irrigated; 6.972 wells have independent ayacut while 990 wells in the district supplement recognised sources of irrigation (See water resources above).

Cropping Pattern: (Net sown area 406018 ha.) Cereals-Rice: 13.19%; Jonna: 24.8%; Korra: 12.8%; Ragi: 4.9%; Variga: 3.4%; Sajja: 9.8%; Commercial Crops: Groundnut: 20.8%; Cotton: 7%; Fruits: 4%. Farm Research: There is a Fruit Research Station at Anantarajupet near Kodur. It has a programme to develop Mango and citrus varieties. The breeding programme in Mango is based on hybridization using modern genetics. A fruit preservation laboratory is attached to the Research Station with a specialist in developing methods of fruit canning. This is the only research centre that specialises on fruits in the State.

Animal Husbandry: Mysore breeds are popular in the district. There are Veterinary Hospitals at Cuddapah, Proddatur, Pulivendla taluks.

Mineral Resources: Pyrites mining industry is active in Pulivendla taluqs. Nidujuvvi quarries supply Cuddapah flooring slabs. China Clay is quarried and exported from Rajampet taluks. Other ores found in the district are asbestos, barytes, ironore and Manganese etc. (See Mineral resources).

Population: Total 13,42,140. Men 6,85,986. Women 6,56,154. Density of Population 88 per Sq. km. Increase in the decade (1951-61) 15.41%; Urban Population: 13.20%; Religion: Hindus 81.5%; Muslims 14.0%; Christians 4.5%. Language: Telugu 11,58,875; Urdu 65,859; Lambadi 7,159; Tamil 2,963; Kannada 1,880.

Towns & Population: Cuddapah (M) 49,027; Rayachoty 16,721; Vempalle 9,051; Kamalapuram 7,641; Jammalamadugu 16,616; Proddatur (M) 50,616; Badvel 8,036; Rajampet 11,636 and Nandalur 7,742.

Occupational Pattern: Farming 65.6%; Industry 10.3%; Trading 4.8%; Misc. Services 19.9%.

Industry: There are three large scale units. There is one Solvent Extraction Plant with 50 tonnes of cake per day capacity extracting oil from groundnut cake, one cement factory at Erraguntla with a capacity of 1.65 lakh tonnes per annum and one unit manufacturing barium salts with a capacity of 34,000 tonnes per annum.

Based on the barytes and asbestos, there is one unit grinding and processing these minerals at Cuddapah. There are 25 general engineering workshops of which 10 are concentrated in Cuddapah. These units manufacture steel fabricated items like tractor trailers, trusses, grills, gates etc., besides attending to maintenance and repair work. There is one unit at Proddatur for reconditioning water pumps and manufacturing oil expellers. At Cuddapah one unit is engaged in the manufacture of expanded metal mesh and three units for steel furniture, steel trunks, rolling shutters and iron gates. At Proddatur there is a unit manufacturing agricultural implements, trusses and lorry chassis rebuilding. There are 3 tyre retreading workshops and 25 printing presses in the district. The rice and oil mills are spread over the important centres in the district. Ginning units are 10 and saw mills 8 located mostly at Cuddapah and Proddatur.

There are 2 Industrial Estates in the district. The Estate at Cuddapah has a provision for 20 factory sheds and the assisted private estate at Proddatur has a provision for 46 factory sheds. The Raw Material Service Centre of the Andhra Pradesh Small Scale Industrial Development Corporation is located in the Cuddapah estate to serve the entire Rayalaseema region.

Transport: Railways: The Madras-Bombay trunk route passes from S.E. to N.W. dividing the Dt. into two equal parts. The route length

Education: Total Literacy: 21.6%; Men: 33.42%; Women: 9.42%. There is one Arts & Science College at Cuddapah. A private polytechnic is managed at Proddatur.

Health: Hill region and Cuddapah neighbourhoods are infested with malaria in winter. The district is noted for endemic cholera. There are 6 hospitals and 6 dispensaries with a bed capacity of 226. There are 39 Ayurvedic and 1 Unani clinics in the Dt.

Panchayati Samities: Cuddapah; Jammalamadugu; Kamalapuram; Kodur; Lakkireddipalli; Muddanur; Porumamilla; Proddatur; Pulivendala; Rajampet; Rayachoti; Sthdout.

ANANTAPUR DISTRICT

Historical Background: The Pallavas ruled over the district (3rd cent.). Later a portion of the present district was conquered by the Nalas, who were defeated by the Western Chalukyan Emperor, Vikramaditya (7th cent.). The Rashtrakutas, the Western Ganga Kings and the Cholas ruled this tract later, in turns. After the Deccan invasion by Allauddin Khilji Hindupur and Madakasira taluks were brought under the Hoyasalas. The Delhi Sultan's reign was resented by the people. Later (14th cent.) for a period of two centuries, the district was under the control of the Vijayanagar kings. Penukonda (1571) was a temporary capital of Vijayanagar empire. They shifted to Chandragiri later. During the last years of the 16th cent. the district was ruled by the Nawabs of Golkonda. In 1687, the territory with the rest of Deccan became a part of Moghal empire. Later Nizam, who was the Viceroy of the Moghal ruler declared independence in 1723. In 1761, Hyder Ali occupied the district. Thrice the British waged war against Tippu Sultan, son of Hyder Ali and they were supported by the Peshwas and the Nizams. After the battles of 1792 and 1799, the whole of the district was under the Nizam. The district along with three others (Rayalaseema) was ceded to the East India Company in

Physiography Natural Regions: 1. The Northern Black Cottons (Gooty, Tadpatri, Rayadurg Taluks); 2. The Central Region is Semi-arid with scarce vegetation (Kalyandurg, Anantapur, Dharmavaram, Kaciri, Penukonda taluks) and 3. The high plateau region (Madakasira and Hindupur taluks). Parts of Gooty and Kalyandurg in the district have a gradient towards west. The northern region has a slope down which drain the rain water into Penna river. In general the district has a gradient from south to north. Manchukota range traverses in the district for about 56 km. in Gooty, Tadpatri and Anantapur taluks. Nagasamudram range (Gooty and Anantapur taluks), Mallappa range (Dharmavaram) Penukonda range (Penukonda, Hindupur taluks), Erramala range (Tadpatri taluk) are important hill ranges. Guttikonda and Singamala (Anantapur taluk) are hillocks. Hindupur, Madakasira taluk are cropped areas. The rest of the region is undulatory. Climate: The district is the driest part of the State. Madakasira and Hindupur are cooler than most other taluks, in the district. Summers are unpleasant particularly in Mar. to May. Daily average temp. Max 33·6°C, Min. 21·5°C. The highest tempt. in the year is 40·6°C while the lowest 22·2°C. Rainfall: Away from the Sea Coast, the district is not benefited by monsoons. However, N.E. monsoon contributes slightly for districts' precipitation. There are an average 39·9 rainy days in a year. Annual average rainfall is 544 mm. Penukonda records the highest rainfall 567·3 while the Kalyandurg records the lowest 512·31. Anantapur records the lowest rainfall in the State.

Agriculture: Soil types: 1. Red soil: dividing Cuddapah black soil (undiff.) and black soil (undiff.). Black soil is predominant in Gooty. Red Regur is distributed in all most all taluks. Red sand is distributed

in Gooty, Anantapur, Dharmavaram, Penukonda taluks. The soil in Kalyandurg taluk is a mixture of Red Regur and Red sands. Rice is sown broadcast and seldom transplanted. Korra, Jonna, Sajja are important cereals. Groundnut, Cotton, Castor are chief commercial crops. Horsegram is cultivated extensively. Spices like Coriander and Chillies are also grown. Penukonda is reputed for Guava.

Land Utilization: Total Geographical Area: 19,09,465 ha. Forest: 10.1%; Barren and Uncultivable Lands: 8.7%; Land put to Non-Agricultural Uses: 6.6%; Cultivable Waste: 7.9%; Permanent Pastures: 1.2%; Land under Misc. Tree Crops: 1.3%; Current Fallows: 12.8%; other Fallow Lands: 5.8; Net Sown Area: 45.6%; Area sown more than once: 0.7%; Total Cropped Area: 46.3%.

Irrigation: 12.2% of Net Sown area is irrigated 19,428 wells have independent ayacut while 8,892 wells in the district supplement recognised sources of irrigation (See water resources above).

Cropping Pattern: 8,70,336 ha; Cereals: Korra 20.3%; Jonna 16.7%; Rice 7%; Ragi 4%; Samai 0.01%. Pulses: Horsegram 10.6%. Commercial Crops: Groundnut 19.3%; Cotton 6.1%; Chillies 0.5%. There is a Government Silk Farm at Hindupur.

Animal Husbandry: The district is endowed with good breeds of cows. Sheep Farm is run by the Department of Animal Husbandry. There are three veterinary hospitals in the district.

Industry: There are 3 spinning mills, 2 cotton ginning and pressing units, 2 oil refining units, 2 mineral pulverising concerns, 1 weaving factory with powerlooms and one re-rolling mill. There are 23 silk twisting units, 9 dye houses and 3500 looms in the district. There is a Government Silk Reeling unit at Hindupur. Dharmavaram is famous for silk sarees. There are several ginning units and oil mills in the district processing cotton and oilseeds. Saw mill's number 21, while flour mills 60, Rice mills 32, Tobacco & beedi making units 4. Next to Anantapur, Guntakal and Hindupur are important centres for industrial activities. Polythene tubes, paper bags and envelopes, holdalls and bags are manufactured in Anantapur. There are 3 units making starch from tamarind seed (at Hindupur, Anantapur and Rayadurg) 4 steel furniture units, 7 light engineering units, 1 pesticides unit (at Kallur), 2 washing soap units (at Dharmavaram and Kadiri), 1 wax candles unit (at Kadiri) and 5 match units in the district. With the rich deposits of minerals like barytes, stearite, china clay, limestone and iron ore, mining operations are in progress. There are 2 pulverising units and 2 lime kilns. There are tanneries at Guntakal and Uravakonda. One unit manufactures fibre from sisal plant. It has a sisal (agave) plantation of 720 ha. Sugar-cane grown in Hindupur is used for jaggery. There is a Rural Indus-

tries Project functioning in the district with Anantapur as its headquarters — An assisted private Industrial Estate is located at Anantapur with 48 factory sheds. Work is in progress for the establishment of a Rural Industrial Estate at Sadalapalli near Hindupur with provision for 10 factory sheds.

Handloom is the chief occupation particularly in Urvakonda, Tadpatri, Dharmavaram. Beluguppa, Tanagallu in Kalyandurg are reputed for Kambalies.

Population: Total: 17,64,223; Men: 9,06,655; Women: 8,57,568. Population Density 92 per sq.km. Increase in the decade (1951-61): 18.92%. Urban Population: 17.4%. Towns & Population: Anantapur (M): 52,280; Kalyandurg: 10,256; Rayadurg: 23,779; Uravakonda: 17,926; Gooty: 19,057; Pamidi: 8,716; Guntakal (M): 48,083; Tadpatri (M): 23,129; Yadiki: 9,276; Dharmavaram: 20,405; Kadiri: 24,307; Penukonda: 7,993; Hindupur (M): 32,445; Madakasira: 9,975. Religion: Hindus: 88.8%; Muslims: 10.4%; Christians: 0.7%; Others 0.1%. Language: Telugu: 13,67,478; Urdu: 1,65,811; Lambadi: 32,907; Tamil: 94,92; Kannada: 1,69,921.

Transport: Railway: The district is served with 413 km of Railways. The Broadgauge Madras-Bombay trunk route passes thro' Tadpatri & Gooty taluks. The metregauge route from Guntakal to Bangalore passes thro' Anantapur, Dharmavaram, Penukonda and Hindupur taluks. A branch line of this metregauge route from Dharmavaram goes to Renigunta in Chittoor district passing thro' Kadiri taluk. Roads: The total road length in the district is 2523 km.

Education: Total: Literacy: 20.8%; Men: 31.04%; Women: 8.5%; Anantapur town is educationally very important centre in the district. There is one college of Arts & Sciences, One Engineering College, A Polytechnic at Anantapur. There is an Oil Technological Institute at Anantapur under the management of Government.

Health: Certain parts of the district are plague endemic areas. There are nine modern hospitals and nine dispensaries with a bed capacity of 355. There are 38 ayurvedic clinics in the district.

Places of Interest: Gooty (Fort), Lepakshi (Frescos), Tadpatri (Vijayanagar art). See page 233. Penukonda (Gangamahal Fort), Katarupalli (Vemana Tomb), Aluru Kona (Perenniel Springs), Hemavati (Jain Temple).

Panchayati Samities: Chennakothapally; Dharmavaram; Gooty; Kadiri West; Kalyandurg; Kambadur; Kanekal; Kodiganahalli; Kadiri; Madakasira; Penukonda; Rayadurg; Singanamala; Tadipatri; Uravakonda.

KURNOOL DISTRICT

Location & Size : It lies between 14°55' & 16°20' N and 78°28' & 79°36' E. **Boundaries :** N Mahbubnagar & Guntur; E Guntur & Nellore; S Cuddapah & Anantapur Districts and W Mysore. **Area :** The largest district in the State with an area of 21,027 SQ. KM. **Taluks :** (13) Adoni, Allagadda (Sirvel), Atmakur*, Banaganapalle*, Dhone, Giddalur (Cumbum), Koilkuntla, Kurnool, Markapur, Nandyal, Nandikotkur and Prattikonda. **HQ:** Kurnool.

Historical Background : Kurnool region is one of the earliest settlements of Telugu Cholas. It became a part of the Western Chalukyan Kingdom (8th cent. AD). During the reign of Kakatiya Ganapati Deva, it was conquered by the Kakatiyas. After the decline of the Kakatiyas, it came under the control of the Delhi Sultans (14th cent.) Later this area was ruled by the Pandavotti Reddis and Vijayanagar rulers. After the decline of Vijayanagar the western and eastern parts were merged in the Bijapur and Golkonda Kingdoms respectively; but later the entire territory became a part of Moghul Empire. The Asafjahi succeeded to the Moghul rule but in 1686 (see page 19) the district along with three other district (Rayachoti, Bellary and Channarayana) to the East India Company (1800). The East India Company again kept the district under the control of the Nawabs of Kurnool with the understanding that the Nawabs would pay a annual peshkash of One lakh Rupees. The last Nawab, Gulam Rasool Khan made secret attempts to put an end to the British rule (1838). Then he was deposed and killed. From 1839, the area was ruled by a British Commissioner. Banaganapalle was a small princely State in Kurnool District. After Indian Independence it was merged in the District. When new State was formed Kurnool was made temporary Capital of Andhra State for about 3 years October 1953—November 1956.

Physiography : Natural Regions : Three regions are formed by two hill ranges Nallamalai & Erramalai. 1. The eastern tract

* Independent Sub Taluks.

consists of Markapur & Cumbum taluks. This region being in eastern most of the district has the advantage of N. E. monsoon influence though certain parts do not receive much rainfall. However, this disadvantage is again offset by the presence of other water resources which are tapped by wells etc. This region is also known as Cumbum valley as it lies between Nallamalai and Veligonda ranges. 2. The second natural region, central tract lies between Nallamalai & Erramalai and cover Koilkuntla, Sirvel, Nandyal and Nandikotkur taluks and Atmakur and Banganapalle Sub-taluks. This region is the fertile portion of the district and is served by Kurnool-Cuddapah Canal. This is 200-250 m. above sea level. Kundu river traverses the region and hence the name 'Kundu Valley' for the region. The land form is generally plane. There are hillocks here and there. 3. The third region lies in the western part of the district consisting of Kurnool, Dhone, Prattikonda, Alur and Adoni taluks. The terrain in Kurnool, Dhone and Prattikonda are filled with hills and hillocks with sparse vegetation. The Nallamalai, Erramalai and the Veligonda are principal hill ranges in the district. The Nallamalai run south to north for about 112 Km. The forest in these Nallamalai presents a beautiful landscape and natural beauty around. The average height of the hill range is 600 m. with several peaks about 900 m. The Erramalai range traverses thro' eastern parts of Dhone and Kurnool taluks and western parts of Koilkuntla, Nandyal and Banganapalle. There are gorges in the north at Tamarajupalli and in south at Rampur. The Veligonda range runs on the eastern edge of Cumbum taluk and end 16 Km to the east of Markapur.

Natural Resources : Forests : About 6138 Sq. Km. or 25.5% of the geographical area of the district is occupied by forest. The major forest area is in Cumbum. Forest abundance is found in Markapur, Nandikotkur taluks. Forests at foothills are scrub jungles. The vegetation at the higher elevation has deciduous trees with quality timber. The forests on the plateau are of quality category. Sandawood is found in Markapur forest. **Water Resources :** Tungabhadra, Krishna, Hundri, Kundu, Gundakamma, Sagileru are important rivers in the district. Tungabhadra runs as northern boundary of the district and joins

Krishna at Sangameswaram in Nandikotkur taluk. The Krishna continues its course as northern boundary of the district and enters Guntur district on the east. Hundri with its source in Pattikonda flows into Kurnool taluk on the east. Rain water from Erramalai is drained into Hundri. Bhavanasi in Nandikotkur falls in Krishna. Kundu from Erramalai flows in Nandyal, Koilkuntla, Sirvel taluks to enter Cuddapah for confluence with Penna. Paleru in Nandyal joins Kundu. Gundlakamma with its source in Nallamalai traverses east ward into Cumbum then north easterly east into Markapur taluk and enters Guntur district at Mummidivanam of this district. Vakkileru in Sirvel and Harivanamvagu in Adoni and Aluru are minor streams. Hot springs are common in Nallamalai and Erramalai ranges. These springs contain mineral waters. Cumbum tank is another chief source. There are 14 irrigation tanks in Alur taluks. *Climate* : April & May are the hottest months in the year. South of Dhone taluk, N.E. of Nandikotkur taluk (near Srissailam) and higher elevations in Nallamalai are cold even in Summer. Daily average Temp. Max 39°C Min. 21.7°C. The highest Temp. in the year will be 43.8°C, the lowest 21.7°C. *Rainfall* : The district is benefitted by both the monsoons, though S.W. monsoon brings more rain to the district. East of Nallamalai gets rain during N.E. Monsoon. There are many days in a year with an annual rainfall of 635 mm. Nandyal records Max precipitation 796 mm. while Koilkuntla 548.6. K.C. Canal from 20 Km west of Kurnool taken from Tungabhadra flows in the district thro' Kurnool, Nandikotkur. Nandyal and Sirvel taluks have good irrigation in the district.

Agriculture : Soil Types. 1. Red soil : Upper half divided into two blocks. 2. East : Undifferentiated black soil forming part of Cuddapah soil. 3. West : Deep black soil extending towards north to Mahbubnagar. Each of these is again reclassified into three sub types : *Padu*, *Clayey*, and *Laterite (Tuvva)*. The soil in eastern tract is poor red soil. Central Region is filled with fertile regur. Part of Prattikonda taluk has regur. Alluvial soil occurs when Bhavanasi river meets Krishna. During monsoon Prattikonda, Dhone, Banganapalle, Adoni and Aluru

taluks and parts of Kurnool and Koilkuntla are exposed to famine. Jonna and Korra are the chief crops grown in the district. Groundnut and Cotton are important commercial crops. Banganapalle is reputed for Mango varieties.

Land Utilisation : Total Geographical Area : 23,98,661 ha. Forest : 25.5% ; Barren and Uncultivable Lands : 4.8% Land put to Non-Agricultural Uses : 5.2% ; Cultivable Waste : 4.4% ; Permanent Pastures : 0.5% ; Land under Misc. Tree Crops : 0.3% ; Current Fallows : 6.5% ; Other Fallow Lands : 4.2% Net Sown Area : 45.7% Area sown more than once : 2.4% Total Cropped Area : 48.1%

Irrigation : 87% of Net Sown area is irrigated ; 1,269 wells have independent ayacut while 2301 wells in the district supplement recognised sources of irrigation (See water resources above).

Cropping Pattern : Net sown area 1087007 ha ; Cereals : Rice 3.4% ; Sajja ; 30.5% ; Korra 22% ; Pulses (Horsegram, Redgram, and Bengalgram) 5% ; Commercial Crops—Groundnut : 17.6% ; Cotton : 14% and Chilli, Corriander, Misc. oilseeds, fruits : 4% ; *Farm Research* There is an Agricultural Research Station in Nandyal. Here Research is concentrated on improved varieties of cereals particularly Jonna and other millets and evolving suitable cultural practices for dry farming conditions.

Animal Husbandry : There are good grazing grounds in the district. Sugalias, a cowherd group in the district support themselves by tending herds. Veterinary Hospitals are located in Kurnool, Nandikotkur, Nandyal, Koilkuntla and Banganapalle.

Mineral Resources : Barytes, iron ore, gold are available. Once there used to be diamond mines near Jonnapuri.

Population : Total : 19,09,644. Men 9,65,131, Women 9,44,513. *Population Density*: 79 per SQ. Km.; Increase during the decade (1951-61) 18% ; *Urban population*: 19.23% ; *Religion*: Hindus 77.6%, Muslims 15.2% ; Christians 7.2% *Language* : Telugu 15,14,638 ; Urdu : 2,60,030 ; Lambadi : 10,265 ; Tamil : 4,263

Towns & Population : Kurnool (M) 100,815; Kodumur 9,091; Nandikotkur 12,130; Atmakur 13,217; Markapur 16,665; Giddalur 12,084; Cumbum 9,305; Nandyal (M) 42,927; Banganapalle 8,015; Koilkuntla 8,179; Dhene 11,247; Pattikonda 10,234; Maddikera 10,929; Adoni (M) 69,951; Kosigi 11,139; and Yemmiganur (M) 21,051.

Industry : The district has made good progress in the resource based industries. Kurnool, Nandyal and Adoni are important centres with slate deposits at Markapur. Stone and slates and slate pencils are manufactured. Soap, beedi making, steel trunks, and furniture, water proof cloth, rexine and jute canvas bag, paints and varnishes, turpentine thinner, optical frames, stainless steel utensils, aluminium vessels, light engineering units, agricultural implements, ready made garments, envelopes are made at one or more of the above three centres of the district in addition to the location of the saw mills, oil mills and printing presses. Leather tanning, leather footwear, tyre retreading are carried on mainly at Kurnool. From the clay deposits available in the district china clay washing plants are started. From barytes, steatite, oehres and limestone, units for barytes and steatite powder, marble chips are started at Bethamcharla and five lime kilns at Dhene.

Among the large scale units, mention may be made of one cement factory (Bugganapalle), 4 textile mills (1 at Nandyal and 3 at Adoni) and one factory manufacturing solvent extraction of groundnut oil, vanaspathi and washing soap (at Kurnool) and one solvent extraction of groundnut oil unit (at Adoni). Yemmiganur is famous for its handloom fabrics. Rosa grass oil is another speciality of the district. There are two Industrial Estates located in the district. One government estate is at Nandyal with provision for 10 factory sheds and the other assisted private estate is at Adoni with provision for 44 sheds.

Transport : Railways The total route length in the district is 344 km. The Madras-Bombay broadgauge trunk route traverses the 'Prattikonda, Alur, Adoni taluks. Machilipatnam-Goa route passes thro' Markapur, Cumbum, Nandyal, Dhene, Prattikonda. A branch line from Dhene goes to Samsamudra.

Nandikotkur, Koilkuntla, Sirvel and Banganapalli are not served by Railways. **Roads :** The total road length in the district is 2784 km. Of this 1354 km. is controlled by National Highways and State Highways. The district is well connected with important places outside.

Education : Literacy : 21.12 per cent, Men 32.6 per cent, Women 9.38 per cent. There are two colleges (one for women), a training college for graduate teachers, a college of Modern Medicine, and a Polytechnic (Nandyal).

Health : There is a fully equipped hospital at Kurnool serving for the purpose of clinical teaching too. There is missionary hospital at Nandyal. Totally there are nine modern hospitals and 22 dispensaries with a bed capacity of 579. There 37 ayurveda and 2 unani clinics.

Places of Interest : Srisailam (Mallikarjuna Shrine) Ahobalam, Mantralayam, Mahanandi. (See page 234)

Panchayati Samitis : Adoni; Alur; Atmakur; Banaganapalle; Bestwarpet; Dhene; Giddalur; Kodumur; Koilkuntla; Kurnool; Markapur; M. V. Nagar; Nandikotkur; Nandyal; Pathikonda; Yemmiganur; Yerragondapalem.

MAHBUBNAGAR DISTRICT

Location and size : The district lies between 15°55' and 17°20' N and 77° and 79° 12' E. **Boundaries :** N Hyderabad Dt. E Nalgonda and Guntur; S Krishna River and Kurnool Dt. and W Mysore. **Area :** 18,440 Sq. Km. **Taluks (12) :** Achampet, Alampur, Atmakur, Gadwal, Kalvakurti, Kodangal, Kollapur, Mahbubnagar, Maktal, Nagar-Kurnool; Shadnagar and Wanparti. **HQ. :** Mahbubnagar.

Historical Background : The territory was ruled by the Cholas in the fifth century. The ancient name of the region was Chelawadi or the 'Land of the Cholas'. After the fall of many

later dynasties, the last of which was the Kakatiyas, the region came under the sway of Bahmanis. After the fall of the Bahmanis, a portion of Mahbubnagar District was annexed by the Qutb Shahi kings, while the other portion became part of Bijapur. After 1686 the district became part of Aurangzeb's empire and early in the 18th century it was incorporated in the Nizam's dominions. Mahbubnagar was formerly known as 'Nagar-kurnool'.

Physiography: Natural Regions: 1. Hilly Region; 2. Plateau. Anantagiri hill range traverses from centre of the district towards north. Kodangal Taluk on the west is also covered with hills. There is another small hill range traverses through south east. The terrain has a gradient from North to South east. Kalvakurti, Nagar-kurnool, Kollapur, Alampur, Gadwal, Atmakur, Maktal taluks lie in plateau region. **Climate:** The western region has very hot summers and very cool winters. The highest Temp. in the year 32.8°C and while the lowest 23.3°C.

Rainfall: S.W. Monsoon brings more rain to the Dt. though N.E. monsoon too brings rain here. The annual rainfall is 121.8 mm. Nagerkurnool and Amarabada are humid while Narayana-pet, Maktal and Jadcherla are hot and dry.

Natural Resources Forests: The Dt. is endowed with good forests comprising of 3069 Sq. Km. Bamboo, Tamarind, Ippe, Babul, Sala, Tumiki, Nallamaddi, Teak etc., are found in these forests. Quality timber is found in Amarabad and Koyyalakonda forests.

Water Resources: The principal river is the Krishna which forms the South and South East boundary of the district. Bhima, a tributary of Krishna enters the district. The other tributaries of Krishna are the Dindivagu and Peddavagu also drain the district. Dindi traverses in Kalvakurti and Achampet and joins Krishna 26 Km. east of Chandragiri tank. Spring channels and wells are other sources of irrigation. Dindi project, Koilsagar, Ramadasagar, Moosapet project, Sarlasagar project are other irrigation sources in the district.

Agriculture: Soil Types East to West (i) Eastern half undir. (ii) Western half: Deep black soil fading in north to medium black soil. Alampur, Gadwal taluk have Regur while Maktal and Nagerkurnool are loamy. But Achampet soils are siliceous type. Jonna is the chief cereal. Groundnut, Castor are important commercial crops. Horsegram is exported from the district.

Land Utilisation: Total Geographical Area 1840688 ha Forest: 26.2%; Baren and Uncultivable Lands: 5.5%; Land put to Non-Agricultural Uses 4.6%; Cultivable Waste: 1.5%; Permanent Pastures: 3.5%; Land under Misc. Tree Crops: 0.7%; Other Fallow Lands: 2.0%; Net Sown Area: 49.0%. Area sown more than once: 1.1%. Total Cropped Area: 50.1.

Irrigation: 11.6% of Net Sown area is irrigated; 9103 wells have independent ayacut while 17,945 wells in the district supplement recognised sources of irrigation (Sea Water resources above)

Cropping Pattern: (Net sown area 903823 ha.) Cereals Rice 12.8%; Jonna 31.8%; Sajja: 4.7%; Ragi 4.8%; Misc. Millets: 11.9%; Pulses Commercial Crops Groundnut 6.9%; Gingely 0.4%; Chilli 0.02%.

Animal Husbandry: Achampet taluk is reputed for a short variety of draught cattle which is in demand from other parts. Shadnagar has a chilling centre for milk collection. Goats and sheep are raised extensively. Sheep unit is working at Appanapalli. There is a sheep farm at Mahbubnagar.

Mineral Resources: The district is reputed for quality silicious stones, comparable to Corundum. It is used for making mortars and pestles. River Krishna flows thro' the Amarabad plateau for 160 Km. forming a valley. There are quarrying centres in the river basin.

Population: Total 15,90,689; Men 7,94,054; Women 7,96,635. Population Density 86 per Sq. Km.; Urban Population 14.04%; Increase in the decade 1951-61: 9.92%. Religion: Hindus: 90.4%; Muslims: 8.7%; Christians: 0.9%; Language: Telugu: 13,46,950; Urdu: 1,36,846; Lambadi: 6,26,30; Tamil 760; Kannadi: 25,500.

Towns and Population : Mahbubnagar (CM) 35,588 ; Bado-
nagar (TM) 8,438 ; Farooqnagar (TM) 8,151 ; Kalvakurti (TM)
6,324 ; Kollapur (TM) 7,949 ; Nagarkurnool (TM) 6,577 ; Wana-
partih (TM) 12,685 ; Alampur (TM) 7,378 ; Gadwal (CM) 16,376 ;
Maktal (TM) 6,744 ; Utkur (TM) 6,741 ; Narayanpet (CM)
20,504 ; Kodangal (TM) 6,812 ; and Kosigi (TM) 8,824.

Industry : Industrial activities are mainly based on rice,
groundnut and castor grown in the district. There are one
spinning mill and one wool processing unit at Mahbubnagar and
one oil mill and refinery at Jadcherla in the medium and large
industry sectors.

Next to Mahbubnagar and Jadcherla, Wanaparti, Shadnagar
and Gadwal are the other industrial centres. Modern small
industries are very few. There are 5 light engineering units and
20 fabricating units at Mahbubnagar and Jadcherla. One unit is
manufacturing auto-cigarette lighters for use in cars utilising the
good quality quartz available at Shadnagar. The A. P. Mining
Corporation has undertaken the mining operations and proposes
to set up a unit for the calcination and crushing of quartz and
supply to the glass factories. At Narayanpet, one unit is engaged
in silk twisting and doubling. There are over 50 sheller type rice
mills and 200 huller rice mills, 25 oil mills, 22 saw mills and 9
pounding presses. Oil milling is concentrated in and around
Jadcherla.

Important cottage and village industries are cotton and silk
weaving, wool weaving, tanning, pottery, carpentry and black-
smithy. More than 50,000 artisans are engaged in these trades.
Handloom weaving is spread over the district. Towns of
Narayanpet and Gadwal are prominent for handloom specialities.
A few powerlooms are also in the use. There are about 2,900
silk looms. There is a pilot production centre at Kothakota
(near Wanaparti) set up by the All India Handloom Board to
popularise new designs. Wool Industry is concentrated in
Maktal, Nagarkurnool, Atmakur and Mahbubnagar taluks.

Eri silk worms are reared on castor leaves in Shadnagar
taluk and about 70 families have taken this up on a cottage scale.

and the spinning of eri silk is being done on Trivadi type of
Charkas. Improved spinning devices need to be introduced.
Tassar rearing is being carried out in forest areas of Kodangal
taluk and a Tassar seed station is set up at Kosgi. Bombee
articles are prepared by crude methods in the district.

There is one Industrial Estate at Mahbubnagar with provi-
sion for 28 sheds.

Transport : Railways : Secunderabad-Bangalore metergauge
route via Kurnool traverses thro' district passing thro' Shadnagar,
Mahbubnagar, Jadcherla stations. **Roads :** The district is
covered with 1248 Km. of road length of which 1120 Km.
belong to State Highways. Jadcherla is a junction for roads
radiating in all the four directions.

Education : Literacy : 13.2%. Men 21.39%. Women 5.28%.
Erstwhile Wanaparti and Gadwal Zamindars were reputed for
patronising Telugu Language and Literature. There is a College
at Gadwal and a Polytechnic at Wanaparti. A functional literacy
project under the auspices of Andhra Mahila Sabha (Hyderabad)
is taking shape at Shadnagar (1967).

Health : The Western Region is a healthy place. Achampet
is endemic malaria area. There are 18 modern hospitals and
dispensaries with a total bed capacity of 323. Besides there are
5 Ayurvedic and 4 Unani Clinics.

Places of Interest : Alampur (Temple), See Page 235; Panagal
(Fort), Koyyalakonda (Fort & Mint), Umamaheswaram (Temple).

Panchayati Samitis : Achampet ; Alampur ; Amangal ;
Atmakur ; Bijnapally ; Gadwal ; Jadcherla ; Kalwakuri ;
Kodangal ; Kollapur ; Kosigi ; Mahbubnagar ; Maktal ;
Nagarkurnool ; Shadnagar and Wanaparti.

HYDERABAD DISTRICT

Location & Size : Administrative Capital (Hyderabad city) of Andhra Pradesh is situated in this district. Lying on the west boundary of the State, it lies between 17° & $17^{\circ}50'$ N and $77^{\circ}5'$ & $79^{\circ}5'$ E. Boundaries N Medak Dt. E. Nalgonda Dt. S Mahbubnagar Dt. and W Mysore State. Area 7,739 sq. km. Taluks (8) Hyderabad East, Hyderabad West, Ibrahimpatnam, Medchal, Pargi, Shabad, Tandur and Vikarabad. State Capital and District Hq. Hyderabad City (Pop. 12, 51, 120.)

Historical Background : The most important fact about the district is obviously its inclusion of the twin cities of Hyderabad and Secunderabad and the Fort of Golkonda. Secunderabad, which is separated from Hyderabad by the Hussainsagar lake, was once one of the largest military stations during the British Period. Golkonda was once a famous fort and is said to be built by Ganapati, the famous Kakatiya king. After the decline of Kakatiyas, (14th Cent.) the Bahmani ruled over the area. In the reign of Muhammad Shah III (1463) the thirteenth king of the Bahmani dynasty, a Turk of Hamadan, Sultan Quli by name who had been a slave in the imperial household, was appointed to pacify the country round about Golkonda. The Kakatiya fort of Golkonda was ceded to this Turk. He soon succeeded in restoring order and assumed the style of Sultan Quli Qutb Shah (1512). He made Golkonda as his capital. Sultan Quli had rebuilt the old Kakatiya mud fort with rock. The Qutb Shahi kings of Golkonda were builders (See page 19). Mohammad Quli Qutb Shahi the fifth king of the Qutb Shahi dynasty of Golkonda (1591), while hunting one day on the south bank of the river Musi was attracted by the fresh and green appearance of the site on which the city of Hyderabad now stands about 9 km. from the fortress of Golkonda and selected it as the site of his new capital. He called the new city 'Bhagnagar' after the lady of his love, Bhagmati. When the city grew it was renamed later as 'Hyderabad'. The first work taken in hand was the laying out of four bazars at the entrance of each of which a great arch was erected on the principal road, the space within the arches being designated the Chakravan or four arches which name it still retains. At the

junction of the streets was erected the Charminar which is the most conspicuous landmark in the city of Hyderabad. The Jami Masjid was founded in A.D. 1597-58. The next work to be undertaken was building of permanent bridge over the Musi to connect the new city with the old fortress capital of Golkonda. This bridge still exists and is known as the old bridge (*Puranapool*). Aurangzeb invaded the area in 1684 but actually the siege of Golkonda began in 1687 and lasted eight months and the kingdom of Golkonda became just another Moghul district. Later Nizam-ul-Mulk, the Viceroy of the Deccan declared himself independent of the Moghuls (1724) and founded the Asafjahi dynasty (See page 19). British stationed their army as a protection to Nizam under a Defence Pact till 1947. As the Seventh Nizam Mir Osman Ali Khan (d. 1967), ruled the State as a princely state in British empire. With 'police action' in 1948 (See page 21) implemented by Government of India, the Hyderabad State was integrated as a part of free India. Hyderabad City and its neighbourhood was previously under special administration as 'Atraf-E-Balda'. Bagah was a small Dt. north of city. These two constituted Nizam's personal property. This is known as *Sar-A-Rhas*. Hyderabad Dt. itself was newly constituted in 1949 with five taluks including Hyderabad city. Annexing Tandur, Pargi and Vikarabad, the Dt. was later reconstituted (1956).

Physiography : Natural Regions The district is hilly region. Rachakonda range with dense vegetation traverses in South eastern direction from Peepalapad in Ambapet region to cross the district into Nalgonda Dt. The Anantagiri range traverses north to south thro' Tandur and Vikarabad taluks. Scattered hillocks and outcrops of black stone are ubiquitous in the district. One such hillock surrounds the capital city Hyderabad. Moulali Golkonda and Nallakonda in Tirumalagiri are important. The general slope of the land is from west to east and south east. **Climate:** Summers (Apr. & May) are hot and dry. Big and small tanks sometimes make climate slightly humid. The highest Temp. in a year will be 42° c. while the lowest 9° c. The climate is pleasant salubrious and healthy during Oct.—Mar. in the year.

Natural Resources : Forests Shabad taluk has good forest region. However forest area is scattered throughout the district.

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Water Resources: The total forest area is 999 Sq. km. Nallamaddi and Similipi are tree types that are found in the district. **Water Resources:** The chief river in the district is Musi. It is also known as Muchukonda. With its source in Anantagiri range in Sivareddipet, it flows east right through the mid line of Hyderabad city and ultimately falls in R. Krishna in Nalgonda Dt. The river is practically dry as a masonry dam was built to impound the water into Osmansagar lake. Sakalavani (East) a tributary to Musi, Pasupuluru (Haldi), a tributary of Manjira are streams in the Dt. **Osmanagar** was built in 1918. Length 1257 m. Number of flood sluices 16. Water impounded and is used for Drinking water and a part of it for irrigation. **Himayatsagar** was built in 1926. Length 2255 m. Number of flood sluices 17. About 28 m. above the river bed. The water is used for irrigation. **Hussainsagar**, **Mir Alam Tank**, **Vunda Tank**, **Horabimpatnam Tank**, **Asafanahar** a canal of 92 km. are other sources of water in the Dt.

Agriculture: Soil Types: Entirely Red soils. Foot hill regions are fertile. Red soils with irrigation facilities are suitable for Garden cultivation. Highly productive Grape gardens are specially grown in and around Hyderabad city. **Anab-e-shahi**, a variety of table grape is a prized variety (See page 63).

Land Utilisation: Total Geographical Area: 772577 ha. Forest: 12.6 per cent; Barren and Uncultivable Lands: 6.9 per cent Land put to Non-Agricultural Uses: 9.5 per cent; Cultivable Waste: 2.8 per cent; Permanent Pastures: 9.0 per cent; Land under Misc. Tree Crops: 1.7 per cent; Current Fallows: 2.0 per cent; Other Fallow Lands: 3.9 per cent; Net Sown Area: 41.6 per cent; Area sown more than once: 1.5 per cent; Total Cropped Area: 43.1 per cent.

Irrigation: 14.5% of Net Sown area is irrigated; 985 wells have independent ayacut while 382 wells in the district supplement recognised sources of irrigation (See water resources above)

Cropping Pattern: Net sown area 322476 ha **Cereals** Jonna 29 per cent; Rice 15 per cent; Ragi 3 per cent; Bajra: 2.4 per cent; Sesai 0.01 per cent **Pulses:** 14.2%.

Commercial Crops: Castor 8.5 per cent; Gingelly 3 per cent; Groundnut 2 per cent; Chilli 0.1 per cent; Onion 0.5 per cent.

Animal Husbandry: There are about 250 poultry units in and around Hyderabad city. A full-fledged Dairy Farm is attached to Andhra Pradesh Agricultural University, Rajendranagar. A Wool Technological Laboratory is also located at Rajendranagar.

Mineral Resources: Building materials, Granite, Lime Stone, are in plenty. The minerals of economic importance available in the district are quartz, felspar. Quality quartz for glass making is available in abundance around Hyderabad city.

Population: Total 20,63,601. Men 10,67,662. Women 9,95,939. Population Density 267 per sq. km. **Urban population.** 62.18%; Increase in the decade (1951-61): 13.2 per cent; Religion: Hindus: 71.0 per cent; Muslims: 26.1 per cent; Christians: 2.4 per cent; **Language:** Telugu: 11,68,598; Urdu: 5,33,939; Lambadi: 30,444; Tamil: 44,609; Kannada: 16,488. **Towns and Population:** Hyderabad: 1,251,119; Shamshabad: 5,790; Tandur: 16,736; and Vikarabad: 9,035. **Occupational Pattern:** Farming 17 per cent, Industry 19 per cent, Trading 16 per cent, Misc. Services 47 per cent.

Industry: **Cottage Industry** Metalware in Asifnagar, Bidai, Himroo, Tanneries in Mushirabad (Hyderabad), Glass factories, Railway workshop (Government) Govt. owned printing units. There are 32 Rice Mills and 12 Tobacco Processing units. Hyderabad is a highly industrialised city of the State (See P. 91). Development of large and small industries has been significant from the late fifties. There are five Industrial Estates in the city. Sanatnagar is the first in which 66 Industrial units occupying 91 sheds. An expansion programme is contemplated and 71 ha. are acquired in which one assisted private Industrial Estate with 101 units and a cooperative Industrial Estate with 60 units are under construction. The Chandulal Baradari Estate provides for 29 sheds and the Moula Ali Estate provides for 39 units. In addition, there is another Industrial Estate in the district.

Vikarabad about 72 km. from the city which provides accommodation for 24 units. Space is a precious and scarce item for industrial ventures in the city. Over 1000 small industries established in the district are largely influenced by the locational pull of the metropolitan city creating demand for many sophisticated industrial products, the demands of the large scale industries and a few resources of the adjoining areas. Industrial servicing and consumer items contribute a significant share of the existing units. The following are some of the products manufactured in the small industry sector mostly in the city.

Steel furniture, sheet metal, ferrous and non-ferrous foundries, water metres, bicycles and parts, industrial fasteners, agricultural implements, rolling shutters, automobile parts, sewing machines, electrical conductors, expanded metal, barbed wire and stay wire, wire nails, safety pins and hair pins, chemical plants, diesel engines, power tillers, mosaic tiles, R. C. C. pipes, stoneware pipes, ceramic ware, enamelled sign boards and neon signs, saw mills, wood-working units, packing cases, bobbins and pins, mirrors, lenses, ready made garments, fine chemicals, surgical cotton, cosmetics and perfumery, photographic materials, paints and varnishes, washing soap, confectionery, cattle and poultry feed compound, polythene products, cardboard cartons, matches, wireless receivers, aerated waters, electrical bakelite parts, scientific glass apparatus and leather tanning, leather and rubber footwear.

Seven large scale industrial undertakings established in the public sector by the Central Government in and around Hyderabad are enumerated in the section on the 'Industrial Development' of the State (See Page 83). Among the large industries in the private sector at Hyderabad twenty two are given below:

1. Hyderabad Allwyn Metal Works, Sanatnagar: It was originally started with the manufacture of utility articles like steel furniture and hospital requirements and later bus bodies. It is now concentrating mostly on the manufacture of refrigerators. (Annual capacity 4100 nos.)

2. Hyderabad Laminated Products, Sanatnagar:—This firm producing laminates and synthetic resins has a capacity of 450 tonnes, 400 tonnes respectively per annum. It has recently taken up production of phenolic resins, phenolic moulding powders and polyester resins with a capacity of 600 tonnes per annum each.

3. Hyderabad Asbestos Cement Products, Sanatnagar: This unit produces asbestos sheets, pipes and fittings with a capacity of 60,000 tonnes per annum.

4. Vazir Sultan Tobacco Co., Azamabad:—This is the biggest cigarette factory in South East Asia manufacturing the famous *Charminar* brand. It has an investment of over Rs. 30 crores.

5. Aluminium Industries, Ramachandrapuram: Produces plastic and rubber coated wires.

6. Bose Udyog Ltd., Moula Ali: Manufactures Footwear products.

7. Rai and Sons, Kukatpally: Is engaged in fruit canning and preservation.

8. Republic Forge Co., Moula Ali: Capacity of about 4200 tonnes steel forgings per annum.

9. Hyderabad Chemical and Pharmaceuticals, Azamabad: Manufactures aqua, injectables, tablets and anaesthetics.

10. Hyderabad Chemicals and Fertilisers, Moula Ali: Capacity per annum 27,000 tonnes of superphosphate and 82,000 tonnes of complete fertilisers.

11. Hyderabad Usha Works, Balanagar.

12. The D. B. R. Mills: Textiles unit 26,000 spindles and 503 looms.

13. Neta Cooperative Spinning Mills: Spinning with 12,000 spindles.

14. Jeevan Textiles Limited: Textiles with 56 loom (Cotton), 14 looms (art silk) and 2 looms (warp knitting).

15. Hyderabad Deccan Cigarette factory.

16. Tungabhadra Industries, Mushirabad: Solvent extraction of oil from groundnut cake.

17. Talasania Enterprises: Solvent extraction of oil from groundnut cake with 70 tonnes capacity per day.

18. Aryan Industries, Secunderabad: Manufactures Vanaspati and Soap.

19. Taj Glass Works: Capacity of 1800 tonnes per annum of glass ware and sheet glass.

20. Kohinoor glass factory: Capacity of 2580 tonnes per annum of glass ware and hollow ware.

21. Hyderabad National Industries Ltd.: Capacity of 2580 tonnes per annum of pressured ware bottles, hollow ware.

22. Indian Detonators Ltd.: Capacity of 240 lakh nos. of detonators per annum.

Transport: Airways: Hyderabad is connected with all major cities of India-New Delhi, Bombay, Calcutta and Madras. Begumpet Civil Air Port, 4 Km away from Hyderabad receives *Careville Jets*, *Skymaster*, *Viscount* etc. Air services from trunk routes and regional routes are operated by Nationalised *Indian Airlines Corporation*. Daily services are available on all trunk routes. Visakhapatnam and Vijayawada are connected by Air with five flights in a week. **Railways:** Secunderabad is a junction receiving trains from four corners of the country. There are train services from Calcutta & Madras via Vijayawada and Kazipet; from Delhi via Kazipet; from Bangalore and Hubli via Kurnool; from Bombay via Wadi and from Manmad. Eastern service to Kazipet passes thro' the border of Medchal and East Hyderabad. Western services traverses Hyderabad west enters Medak Dt. and enters Vikarabad Tk. to traverse Tandur

and crosses the State border. A branch line from Vikarabad goes to Zahirabad in Medak Dt. The southern service passes thro' Hyderabad and Shabad, while the Nn. service leads to Manmad thro' Medchal Tk. Kachiguda and Hyderabad (Nampally) are two other important stations within the city. Secunderabad is HQ for South Central Railway Zonal Office. **Roads:** Hyderabad City is nerve centre for roadways in district and connecting other parts of the State as well. Roads are radiated connecting all districts Hq. in the State. Of the 1152 KM road length, 50% is managed by National Highways, State Highways. Nationalised passenger transport (APSRTC) runs buses to all Dt. Hq. and other important centres like Tirupati, Vijayawada, Ongole, Tanuku, Narasapur, Bhimavaram etc. City Transport connecting Hyderabad and Secunderabad covering all important routes is managed by APSRTC. Cargo moving lorry transport however is organised by the private sector under a route permit system.

Education: Literacy 34.10%, Men 44.30%, Women 23.17%. Hyderabad-Secunderabad form twin cities, humming with cultural activities. It is the seat of the Osmania University (1918) with teaching faculties as well as affiliated college system. Andhra Pradesh Agricultural University (1964) is located in an extensive area of 4000 ha farm in Rajendranagar near Hyderabad. Astronomical Research Centre is organised at Nizamia Observatory. Hyderabad is chosen as HQ for certain institutes of National importance as given in a separate list. Besides it is the Hq. for many State level institutions. There are 20 Arts and Science Colleges, 6 Professional Colleges, 3 special professional schools, 66 high schools including Hr. Sec. Schools, 58 Middle Schools, 1010 Primary Schools 31 Adult Education Centres.

Places of Interest: Hyderabad and Secunderabad (many points of tourists interest), Anantagiri (Jatara), Golkonda (Fort), Gandikota (picnic) (See pages 210-221).

Panchayati Samitis: Chevella; Hayatnagar; Ibrahimpatnam; Medchal; Pargi; Rajendranagar; Tandur and Vikarabad.

MEDAK DISTRICT

Location & Size: It lies on the western boundary of Andhra Pradesh between 17°15' & 18°15' N and 77°20' & 79°10' E. **Boundaries:** N Nizamabad & Karimnagar; E Warangal & Nalgonda; S Hyderabad Dt. & W Mysore State; Area 9611 sq. km. **Taluk (8):** Andol, Gajwel, Medak, Narayankhed, Narsapur, Sangareddi, Siddipet and Zahirabad. **HQ Sangareddi.**

Historical Background: Kondapur a historical place in the district revealed the existence of a buried city of vast dimensions with a number of chaitya halls, stupas and monasteries. Nearly thousand coins relating to the period of Goutamiputra Satakarni (See page 16) and Vasishtiputra Pulumavi II the famous rulers of the Satavahana dynasty were found. This evidence established that South India had maritime trade relations with the Roman Empire from the first century B. C. Further the finds at this place have opened a new chapter in the history of Indian Pottery and the excavations clearly establishes that a high state of civilization was attained by the people who inhabited the place. History reveals that after the fall of the Rashtrakutas, the Yadavas of Devagiri and the Hoysalas of Dwarasamudra, the Kakatiyas of Warangal occupied the territory. However nothing about the detailed history of the territory is known until Malik Kafur the general of Allauddin Khilji invaded the south in 1309. Medak fort (See page 238) was very strong and resisted Malik-kafur's aggression. Thereafter when the Bahmani kings undertook their campaign against Telangana the whole of Telangana including Medak fell into their hands. Subsequently, the district came under the Qutb Shahis of Golkonda. During the reign of Salabat Jung in 1761, the whole of Telangana became part of the Nizam's territory and as such continued till 1948. 'Medak' is from the Telugu word 'Methuku' which means a particle of cooked rice.

Physiography: *Natural Regions:* 1. Hill Region, 2. Plateau. Hills from Balaghat range are spread in the district. Another hill range from Ramayanampeta extend northwards to Nizamabad Dt. to take a turn and re-enter southwards in Medak Dt. Yet another hill range from Northwest is spread Eastwards in the district.

MEDAK DISTRICT

Climate: Very hot summers and very cold winters are common in the district. But the district never records more than 37·8°C. The Min. Tem. 4·4°C. **Rainfall:** Annual rainfall is 743·78 mm. of which 581·6 mm. is due to N. E. monsoon. The climate in the Dt. is agreeable during the greater part of the year.

Natural Resources: *Forests:* The district has a forest area of 987 sq. km. yielding poor quality timber. Medak, Yellareddi, Narsapur forests have Teak, Nallamaddi and Sala varieties. These forests are rich with wild tigers and cheetahs.

Water Resources: Manjira a tributary to Godavari is the chief river in the district with its source in Mysore State. Manjira passes thro Anantagiri hills and flows East and North 98 km. in the district to enter Nizamabad Dt, where it joins Godavari river. Haldi (Pasupuleru) a tributary of Manjira enters from North and flows for 16 km. in the district. There are small and big tanks numbering 2,500. From Pocharam Reservoir, a canal of 40 km. irrigates 4820 ha. Malkapuram Tank supplies water to 12 villages in the neighbourhood, Mahbubnagar canal on the right and Fathenahar canal on the left of Manjira irrigate 4800 ha. Rayanapalli reservoir built (1926) by damming the stream pushpalavagu irrigates 20,000 ha. Devanoor Project on Manjira supplies water for irrigation, industries and drinking.

Agriculture: *Soil type:* East to West 1. Red soil: 2/3rds of district. 2. Medium black soil (lower portion, and laterite soil [upper portion] to the West; about 1/3rd of the district)

Land Utilization: Total Geographical Area: 959516 ha. Forest: 10·4%, Barren and Uncultivable Lands: 6·7%, Land put to Non-Agricultural Uses: 6·7%, Cultivable Waste: 3·8%, Permanent Pastures: 7·0%, Land under Misc. Trees Crops: 1·7%, Current Fallows: 10·1%, Other Fallow Lands: 3·6%, Net Sown Area: 50·0%, Area Sown more than once: 1·8%, Total Cropped Area: 51·8%.

Irrigation: 19·5% of Net Sown area is irrigated; 1,382 wells have independent ayacut while 1,254 wells in the district supplement recognised sources of Irrigation (See water resources above)

Cropping Pattern: (Net sown area 4,77,300 ha) *Cereals:* Rice 26.2%, Jowar 31.6%, Maize 10.8%, Ragi 3%. *Pulses:* Bengalgram 9.3%, Coriander 2.5%, Blackgram 3.5%, Mung 5.6%. *Commercial crops:* Chilli 2.2%, Castor 2.48%.

Mineral Resources: Nodular iron ore, China clay are the minerals available in the district.

Population: Total 12,26,465. Men 6,14,779. Women 6,11,686. **Population Density** 129 sq. km. **Urban Population** 7.73%. **Towns & Population:** Sangareddi (TM) 9,762, Sadasivpet (TM) 12,210, Mirabad (TM) 13,075, Kohir (TM) 8,407, Narayanakhet (TM) 6,059, Andol (TM) 10,681. **Medak (CM)** 15,891 and **Siddipet (CM)** 18,719. **Religion:** Hindus 86.6%, Muslims 10.2%, Christians 3.2%. **Language:** Telugu 10,22,436, Urdu 1,26,944, Lambadi 28,040, Tamil 380, Kannada 3,09,54.

Industry: Proximity to Hyderabad is a factor contributing to the establishment of large scale industries in the southern part of the district which is practically the suburb of Hyderabad. The Heavy Electricals is located at Ramachandrapuram in the public sector and one Co-operative Sugar Mill is proposed to be set up near Zahirabad. To promote the establishment of ancillaries an assisted private Industrial Estate is located Patancheru, with provision for 37 units. The estate has since been changed into a Government Estate. A rural Industrial Estate is proposed in Zahirabad taluk with provision for 15 units. There are 22 units making cement products concentrated mainly in Siddipet and Ramayampet. Indian Hume Pipe Co. is a large scale unit manufacturing large sized cement pre-stressed spun pipes used in water and sewage schemes. General engineering units are located in Sadasivpet, Zahirabad, Patancheru and Sangareddi. There are 2 hand-made paper units, 2 units making soap from non-edible oils, 2 stainless steel units, 1 tannery, 1 radio parts assembling unit, 1 box strappings and baling hoops unit and one unit making malleable castings in the district. 10 saw mills are also located. Jaggery is made from the existing sugarcane.

In the cottage sector, horn products are made at Zahirabad and brass idols of intricate design are made at Ramayampet. Sangareddi and Siddipet sarees of cotton and silk are popular. There are 48 Rice mills and 5 oil mills. Beedi Industry is localised around Siddipet.

Transport: *Railways:* Hyderabad-Wadi main line passes through the district crossing the border at four places in Sangareddi and Zahirabad Tq. Another railway line from Hyderabad Dt. passes through Gajwel & Medak taluks to reach Bodhan in Nizamabad Dt. *Roads:* The Dt. has route length of 170 km. Of this only 90 km. is controlled by local bodies; the balance of road length is managed by National & State Highways.

Education: Literary 13.74%, Men 22.9%, Women 4.53%.

Health: Medak has a salubrious climate between September and June in the year. But during rainy season malaria, flu are widespread. There are 11 modern hospitals with 112 beds in addition 4 dispensaries. There are also five Unani and 11 ayurvedic clinics in the district.

Places of Interest: Medak (Fort & Methodist Church), Kondapur, (Archaeological site). See page 237.

Panhayati Samitis: Dhubak, Gajwel, Jogipet, Medak, Naravankhed, Narsapur, Patancheru, Ramayampet, Siddipet and Zahirabad.

NIZAMABAD DISTRICT

Location & Size: It lies between 18°5' & 18°55' N and 77°40' & 78°40' E. **Boundaries:** N Adilabad district E Karimnagar district S Medak and W Maharashtra State. **Area** 8042 SQ. KM. **Taluka (7)** Armur, Banswada, Bodhan, Kamareddi, Nizamabad, Madnur and Yellareddi. **HQ.** Nizamabad.

Historical Background: Historically obscure 'Indur' by which the territory was originally known was conquered by Alaaddin Khilji in 1311 and later formed part of the Bahmani.

and Qutb Shahi Kingdoms and the Moghal Empire till it was brought under the Nizams (See Page 19). The original 'Indur' district under went territorial changes in 1905 and renamed as 'Nizamabad'.

Physiography: Natural Regions : 1. *Hill Region* 2. *Plateau*. A hill range from Maharashtra traverses in the north to enter Karimnagar on the west. There are hillocks in the east and west also. The rest of the region is plane plateau.

Climate : The climate is dry and salubrious during February—May. It will be humid during winter and rainy seasons. The highest temp. in the year is 43.3°C while the lowest 7.2°C **Rainfall** June—September are rainy months; S.W. monsoon brings good rain than N.E. monsoon. The average rainfall in a year is 1044.1 mm.

Natural Resources : *Forests :* Every taluk in the district has forest vegetation though economically not very important. Forest area: 1808 Sq. Km. Teak and Rosewood are some important timber types. *Water Resources:* Godavari is the chief river. It flows from Maharashtra on the west as north boundary for 112 Km. to enter Karimnagar on the east. Manjira is the chief tributary to Godavari. It enters from S.W. and flows 100 Km. in the district to fall in Godavari at Kundurti in Bodhan taluk. Edlakattavagu is a perennial stream in Kamareddi taluk. Nizamsagar commands in 1,10,000 hectares in Banswada, Bodhan, Nizamabad and Armur with 150 Km. main canal and 1600 Km. of distributaries. Pochampad has an ayacut of 20,000ha while Pocharam 5,200ha; Ramadugu and some 700 tanks water provide for an ayacut 30,800ha.

Agriculture : Soil Types : East to west 1. *Red soil* 2. *Medium Black soil*. Generally sandy and kankar soils are light in colour soils at foothills. River basins are fertile. Rice is broadcast sown as well as transplanted. Jonna, Maize and Pulses are chief foodcrops. Sugarcane, turmeric and groundnut are commercial crops.

Land Utilization : Total Geographical Area: 802,829ha Forest: 19.4 per cent; Barren and Uncultivable Lands: 9.2 per cent Land put to Non-Agricultural Uses: 7.4 per cent Cultivable Waste: 4.9 per cent; Permanent Pastures: 6.1 per cent; Land under Misc. Tree Crops: 1.0 per cent Current Fallows: 12.6 per cent; Other Fallow Lands: 3.3 per cent; Net Sown Area: 36.1 per cent Area Sown more than once: 3.1 per cent; Total Cropped Area: 39.2 per cent; *Irrigation :* 40.7 of Net Sown area is irrigated; 240 wells have independent ayacut while 2672 wells in the district supplement recognised sources of irrigation (See water resources above).

Cropping Pattern : Net sown area 2,88,796 ha *Cereals* Rice 39.06 per cent; Jonna 22.1 per cent; Maize 7.31 per cent; Samai 1.8 per cent; *Pulses* Bengalgram 5.90 per cent; Blackgram 3.6 per cent; Horsegram 2.1 per cent; *Commercial Crops :* Sugarcane 6.4 per cent; Groundnut 3.5 per cent; Gingelly 2.7 per cent; Chilli 1.6 per cent; Cotton 1.4 per cent; Linseed 1.5 per cent; *Farm Research* There is an agricultural Research Station at Rudrur for regional trials in improved cultural practices. Animal Husbandry Sheep & Goat raising is practised extensively in the district. A short statured horses are found in the district.

Population : Total 10,21,503. Men 5,09,485. Women 5,12,018. Population Density 127 per Sq. Km. Urban population 14.5 per cent Increase the population in the decade (1951—61) 22.3 per cent. *Religion* Hindus : 88.1 per cent Muslims : 10.4 per cent Christians : 1.4 per cent; *Language :* Telugu 800,91,80; Urdu : 1,133,53; Lambadi : 37,0992; Tamil : 1,114; Kannada : 22,181; *Towns & Population :* Nizamabad (CM) 79,093; Armur : (TM) 13,249; Kamareddy (TM) 10,318; Domakonda 6,508; Banswada (TM) 8,201; and Bodhan (CM) 30,929.

Industry : There are 2 Sugar factories in the district. At Shakkernagar of Bodhan taluk is located the Nizam Sugar Factory, the largest sugar factory in the country and which ranks among the larger sugar factories in East Asia with a crushing capacity of 4250 tonnes of sugarcane per day. A power

alcohol factory has come up at this place with a capacity of 81,82,000 liters per annum. Both of them are in the Public sector (See Page 76). There is one other distillery at Kamareddy in the Public sector with a capacity of 1,25,000 liters per annum. A Cooperative Sugar Factory has recently been set up at Janakampet near Nizamabad with a crushing capacity of 1000 tonnes a day. One spinning mill is coming up near Nizamabad. *Hyderabad Chemical and Fertilisers* located at Bodhan manufactures manures.

Among the small scale units, Khandasari Sugar Plants and tile manufacturing units are prominent. There are 11 Khandasari Sugar factories each with a crushing capacity of 100 tonnes of cane per day and are located at Nizamabad (2), Banswada (3), Bodhan (2), Yellareddy (1), Nangareddipet (1), Narsinganropalle (1) and Kamareddy (1). Of these, the last two are in the cooperative sector. Gur making units are spread over the district. There are 7 units making cement tiles, 2 each at Kisannagar, Mortabad and Kamareddy and one at Borlam. On account of their durability and cheapness compared with Mangalore tiles, there is good demand for cement tiles in the district. There are 2 units at Ganapur making mangalore tiles. *Indian Hume Pipe Company* has a factory at Nizamabad to make R.C.C. Spun Pipes. There is a unit at Nizamabad making cycle parts and assembling cycles with the brand name of 'Ajanta Cycles' and another making attractive plastic bangles. There are 7 units making fertiliser mixtures for the different crops in the district. 1 confectionery 4 washing soap units, 7 printing presses, 3 steel trunk making units, 1 bolts and nuts unit and about 20 units making agricultural implements, builders' hardware, automobile parts, rice and oil mill parts and sugar cane crushers and also undertaking servicing work at Nizamabad. Leather tanning and leather footwear are concentrated at Nizamabad and Kamareddy. 10 Saw mills and 20 furniture and wood working units are located at Nizamabad, Dichepalli and other places; the former two are the main timber centres of the district.

Beedi making provides large number of employment especially to women. The availability of good quality beedi leaves

and the existence of large skilled and cheap labour have influenced the location of 246 organised units of which 38 are at Nizamabad, the others are spread over the district. Rice Mills numbering nearly 100 are dispersed over the district. There are three oil mills and one ginning unit at Nizamabad.

There is a Government Silk Farm at Bhiknur in Kamareddy taluk to popularise mulberry cultivation and rearing of silk worms. Rural Arts, crafts and Industries Centre is located at Nivipet and 13 centres are established under the Community Development Programmes for imparting training in better methods to artisans.

There is an Urban Industrial Estate at Nizamabad with provision for 28 factory sheds and a Rural Industrial Estate at Kisannagar on the Hyderabad—Nagpur Road with a provision for 8 factory sheds.

Transport : *Railways* The train service between Secunderabad and Manmad traverses thro' from south to north west in the District in Kamareddy and Nizamabad taluks. *Roads* The road length in the district is 950 Km. 60 per cent of which belong to National Highways and State Highways. Bus facilities with 52 bus routes are available in the district with neighbouring Medak, Adilabad, Karimnagar and Hyderabad districts as well as other parts of the State and Maharashtra. *Waterways* Except Madnur and Kamareddy taluks in the district the other taluks have canal navigation facilities.

Education : Literacy 14.33 per cent Men 22.69 per cent Women 5.62 per cent. There is a college of arts & science at Nizamabad. **Health :** There are 10 modern hospitals. A leprosy clinic is maintained by Christian Mission in Dichepalli.

Places of Interest : Nizamabad (Mela and Jatara) Nizamagar for Picnic (See Page 235) Alicagar (Picnic), Dichepalli (Historical).

Panchayati Samitis : Armur; Banswada; Bheemgal; Dichepalli; Domakonda; Kamareddy; Madnoor; Yedpalli; Yellareddy.

ADILABAD DISTRICT

Location & Size : On the N. W. frontier of the State, the district lies between 18°40' & 19°45' N and 78°5' & 80°5' E. **Boundaries :** N. E. & W. Maharashtra State ; S. Nizamabad and Karimnagar Dt. **Area :** 16,333 Sq. Km. **Taluks (10)** Adilabad, Asifabad, Boath, Chinnur, Khanapur, Luxettipet, Mudhol, Nirmal, Sirpur and Utnur. **Hq. Adilabad.**

Historical Background : Sirpur and Asifabad regions were ruled by the Gonds for many centuries. Chinnur, Luxettipet and Nirmal regions have been inhabited by Telugu speaking population since a long time. The eastern parts of the Adilabad Dt. and the fort of Manikgadh at Sirpur appears to have been frontier town of the Kakatiyas of Warangal (See page 17). It was prominent during the campaign of Malik Kafur, the General of Allauddin Khilji and was stormed by him on his onward march to Warangal (1310). The campaign was graphically described by the court poet, Amir Khusro, who, in all probability, accompanied the army of Malik Kafur during the Deccan campaign. Later it came under the influence of Nizam. It remained so until 'Police Action' in 1948.

Physiography : Natural Regions : 1. Hill tract 2. Plateau. From northwest to south east Sahyadri (Satmala) range traverses for about 282 Km. thro' Adilabad, Utnur and Asifabad taluks. Nirmal hillocks lie west of Kadam river. The rest of the region is plateau interspersed with the hillocks.

Climate : The district experiences hot summers. The highest temp. in summer will be 40.6°C and the lowest in winter will be 15.6°C. The district has good precipitation being benefitted by S. W. monsoon.

Rainfall : Annual rainfall 1048.25 mm. East region receives more rainfall.

Water Resources : Godavari flows from west to east as a southern boundary to the district. Penganga a tributary of Goda-

vari runs as a north boundary to Adilabad Tq. and flows north in Maharashtra State and again forms as a border to Sirpur Tq. and takes another name Pranahita to flow as a eastern boundary and falls in Godavari. Peddavagu, a tributary traverses West to east 160 Km. in Utnur and Asifabad to join Pranahita. Kadam a tributary of Godavari flows north to South traversing Adilabad, Boath, Utnur, Khanapur. Kadam project is a source of irrigation. Wells and tanks help irrigation in Sirpur Tq.

Agriculture Soil Types : South to North i. Deep black soil almost whole of the district. ii. Strip of Red Soil skirting northern boundry. iii. Thin strip of undifferentiated black soil. In the foot hill regions and river basins the soil is fertile. Wheat and cotton are grown in such soils. Among cereals Jonna predominates.

Land Utilization : Total Geographical Area 1630479 ha. Forest : 39.5 per cent Barren and Uncultivable Lands : 6.8 per cent Land put to Non-Agricultural Uses : 4.3 per cent Cultivable Waste : 4.0 per cent Permanent Pastures : 4.7 per cent Land under Misc Tree Crops : 0.6 per cent Current Fallows : 3.3 per cent Other Fallow Lands : 3.6 per cent Net Sown Area : 33.2 per cent Area Sown more than once : 0.2 per cent Total Cropped Area 33.4 per cent.

Irrigation : 57.0 per cent of Net Sown area is irrigated. Some wells have independent ayacut while 339 wells in the district supplement recognised sources of irrigation (See water resources above).

Cropping Pattern : Net Sown Area 4,36,136 ha. **Cereals—** Rice 8.4 per cent Jonna 40 per cent Maize 3.4 per cent Wheat 1.6 per cent **Pulses** Greengram 5.8 per cent Redgram 3.8 per cent Bengalgram 3.1 per cent Horsegram 2.1 per cent **Commercial Crops** Cotton 16.30 per cent Gingelly 6.3 per cent Linseed 2.8 per cent Chilli 1.7 per cent Groundnut 0.4 per cent. Cotton, Linseed, Gingelly are chief farm surplus commodities available for export in the district. Mancherial and Adilabad are trading.

Animal Husbandry : Local breeds though short statured are reputed for hard work as draught animals. Good milch breeds found in Adilabad Taluk.

Mineral Resources : The principal mineral is coal in Mandamarri, Luxettipet Taluk and Bellampalli in Asifabad Taluk. There are slate, limestone, Chalpa red metal in Adilabad Taluk. Ironore and China clay mines in Rajulagutta of Sirpur Taluk are other important minerals.

Population : Total 10,09,301. Men 5,00,697. Women 4,99,604; *Population Density* 62 per Sq. Km. (Lowest density in the State). Urban Population 15.49 per cent. Increase in the decade (1951-61) : 21.37 per cent.

Religion : Hindus : 90.1 per cent. Muslims : 8.1 per cent. Christians : 1.1 per cent. Others : 0.7 per cent. **Language :** Telugu 6,57,877, Urdu 80,947, Lambadi 14,835, Tamil 2,099, Kannada 2,939.

Towns & Population : Adilabad (C. M.) 20,970; Asifabad (T. M.) 6,190; Bellampalli * 29,101; Kagaznagar* 30,604; Chinnur (T. M.) 9,645; Mancheri (C. M.) 13,822; Kadam Damsite * 6,235; Nirmal (C. M.) 19,896; Mudhol (T. M.) 7,560 and Bhainsa (T. M.) 12,346.

Industry : The Associated Cement Company has a cement factory at Mancheri with a capacity of 3.3 lakh tonnes per annum. Sirpur paper mills and *Sirsilk Limited* are located at Kagaznagar (Sirpur); the former has a capacity of 36,000 tonnes of paper per annum and the latter has 468 looms (Rayon).

Rice and flour mills numbering about 150 are spread over the district. Being an area rich in forests, there are 31 saw mills and a few woodworking units. There is one unit making soap. Beedies are made in 20 units in different parts of the district. Light engineering units are coming up to attend servicing and repairing work of rice and oil mill parts.

* Civic Status not yet determined.

Nirmal is renowned for the handicraft products. The carvings of Nirmal ware are highly appreciated.

There are two conventional Industrial Estates in the district established by the Government. They are at Nirmal and Mancheri. The former has a provision for 10 factory buildings and the latter has a provision for 10 factory buildings.

Transport : *Railways :* Madras-Delhi trunk route via Kazipet traverses thro' industrial regions (Bellampalli, Sirpur & Mancheri) in the east. And the Railway line of about 80 Km from Mukhed in Maharashtra terminates at Adilabad. *Roads :* The total road length in the district is 998 Km. and is connected with Nirmal by a national highway from S to N.

Education : Literacy 11.47 per cent. Men 18.4 per cent. Women 4.4 per cent.

Health : The district is infested with endemic malaria. There is one hospital, 15 dispensaries with a bed capacity of 79. There are in addition 6 ayurvedic and 3 unani clinics in the Dt.

Places of Interest : The district is renowned for natural scenic beauty. Kuntala (Waterfalls) 45m, Pocharam (Waterfalls 22m) Kadam Project, Basar (Saraswati Temple).

Panchayati Samitis : Adilabad, Asifabad, Boath, Chinnur, Khanapur, Luxettipet, Mudhol, Nirmal, Sirpur, Utnoor, and Wankidi.

KARIMNAGAR DISTRICT

Location and Size : The Dt. lies between 17° 55' and 19° N. and 78° 30' and 80° 20' E. Boundaries N. Adilabad E. Bastar in Madhya Pradesh S. Warangal Dt. and W. Medak and Nizamabad Dt. Area 11,870 Sq. Km. *Taluks* (7) Jagtial, Huzurabad, Karimnagar, Mantheni, Metpalli, Siroilla, Sultanabad. Hq. Karimnagar.

Historical Background: The Dt. was formerly known as 'Sarkar Yelagandal' and was renamed as Karimnagar in 1905. Most of the Dt. was under Kakatiyas. Malik Kafur, a General of Alauddin Khilji invaded this region in the year 1309 and the forts of Elgandal and Malangur fell into Muslim hands. These forts passed into the hands of Qutb Sahis in 1507 and later came into the possession of the Nizam.

Physiography: *Natural Regions:* 1. Hilly Region. 2. Plateau. Three hill ranges from Balaghat mountains are spread in the Dt. One of them protrude between Currupalli and Jagtial to reach Godavari bank ending at Vemlakurti. Another row of hills run parallel between Suni and Malangur villages. Kancherla, Marmulagutta have an elevation upto 700 m. The third hill ranges with its source in S. W. of the Manneru river valley and extends S. E. to join the second range. Then it goes beyond Rangiri to end upon the Godavari bank. The rest of the region is plateau. *Climate:* Karimnagar and Huzurabad Dt. record highest temp. than the rest of the region. Max Temp 43.3°C and with 27.2°C. There are occasions when this Min Temp still goes down 25°C *Rainfall:* S.W. monsoon brings rain in the Dt. Annual rainfall 889 mm.

Natural Resources: *Forests:* Godavari basin has a dense forest of about 2567 Sq. Km. (Teak, Tumiki, Nookamanu, Billu, Somi, Ippa, Chinnangi, Nallamaddi, Chandra, Kodisa, Chirumanu. Some varieties of timber giving trees are found in the Dt. Tigers and Cheetahs are found in good number in the forests of the district. *Water resources:* The Godavari and Manneru are two important rivers in the district. The Godavari river flows on eastern and northern flanks of the district forming a natural boundary with Adilabad Dt. The Godavari flows for about 282 Km. in the Dt. A tributary to Godavari, Manneru flows from west to east and takes a curve to the north at Karlagutta and finally joins the Godavari at Mahadevapuram. Smaller streams Peddavagu and Chetlavagu join Godavari river as tributaries. There are five minor irrigation sources in the Dt.

Agriculture: *Soil Types:* South to North 1. 3/4ths of the district red soil. 2. Thin strip on northern boundary: Deep

black soil. River basins have fertile alluvial soils. Tolikaru or first crops are raised in Chelaka soils. Pyru crops are raised in regurs. Masabu soils are suitable for garden cultivation. Upland predominates in the Dt.

Land Utilization: Total Geographical Area: 1184722 ha. Forest: 20.9 per cent, Barren and Uncultivable Lands: 7.5 per cent, Land put to Non-Agricultural uses: 7.1 per cent, Cultivable Waste: 2.2 per cent, Permanent Pastures: 5.4 per cent, Land under Misc. Tree crops: 0.9 per cent, Current Fallows: 12.6 per cent, Other Fallow Lands: 2.4 per cent, Net Sown area: 41.0 per cent, Area sown more than once: 1.7 per cent, Total cropped area: 42.7 per cent.

Irrigation: 28.0% of Net Sown area is irrigated; 2337 wells have independent ayacut while 1546 wells in the district supplement recognised sources of irrigation (See water resources above).

Cropping Pattern: 4,87,050 ha Cereals: Jonna 1 per cent; Rice 34.2 per cent; Maize 17.2 per cent; Pulses: Bengalgram 1 per cent Commercial Crops: Groundnut 15.2 per cent; Gingelly 19.1 per cent; Chilli 0.2 per cent; Farm Research: There is an agricultural research station at Karimnagar which concentrates on improved cultural practices on maize crop.

Mineral Resources: Iron Ore is available throughout the district. It is smelted in traditional way and plough shares etc. are made for cultivation. Konasamudram and Ibrahimpatnam were reputed for fine steel knives. Coal, Statetite and Talc are also common in the district.

Population: Total 16,20,417, Men 8,12,377, Women 8,08,040. Population Density 137 per Sq. Km. Increase in the decade (1951-61): 13.46 per cent, Urban population 7.06 per cent, Religion: Hindus: 94.7 per cent, Muslims: 4.3 per cent, Christians: 1.0 per cent. Language: Telugu: 15,21,139, Urdu: 63,763, Lambadi: 17205, Tamil: 458, Kannada: 250. Towns and population: Karimnagar (CM) 31,554, Sircilla (TM) 15,466, Vemulawada (TM) 7,420, Metpalli (TM) 7,862, Koratla (TM)

11,780, Jagtial (CM) 20,941, Peddapalli (TM) 11,712, and Manthani (TM) 7,779.

Industry: The only large industry in the district is the Jangaon coal mine. Excavation of coal is being done by the Singareni Collieries of Kothagudem (See Khammam Dt.) Among the small scale units beedi rolling is one of the prominent ones. In 1961 there were nearly 8,000 persons engaged in this and the registered beedi factories were 21 spread all over the district. There are also *Zarda* (Scented tobacco) factories. Of the 3 units the one at Kothapalle also produces perfumes. There are 2 soap units, 6 saw mills and 5 printing presses in the district. Rice and flour mills numbering nearly 200 are spread over the whole district. There are 23 oil mills. There are 5 engineering workshops engaged in repairs and maintenance at Karimnagar.

Karimnagar is noted for the silver filigree work of an exceedingly delicate nature being carried out by certain section of goldsmiths. The articles manufactured are bangles, caskets, betel boxes and cigarette cases besides costume jewellery. Handloom is a major cottage industry. In 1961, as many as 55,400 persons have been included as workers in this line. Metpalli and Sircilla are important handloom centres. The skilled weavers ply their deft fingers to produce the saris and cloth in pleasing colours. Production of bed sheets and curtain cloth is a special feature of this place.

There are industrial co-operative work centres at Karimnagar and Jagtial, a cutlery centre at Podur and a village industries artisans training centre at Karimnagar started by the Department of Industries. A Tassar Silk seed station is opened at Mahadevpur to impart training in the use of improved tools and methods of reeling and weaving of tassar cloth by modern methods.

An Industrial Estate is located at Karimnagar with provision for 16 factory sheds.

Transport: *Railways:* Madras-Delhi trunk route passes through the district from south to north. Karimnagar, the Dt. Hq. is

42 Km. away from the railhead, Peddapalli station. *Roads:* The total road length in the district is 600 Km. State has control over major road length (515 Km).

Education: Literacy 12.58 per cent, Men 20.69 per cent, Women 4.43 per cent. There is only one College of Arts and Sciences (Karimnagar). There are High schools in the entire district.

Health: Forest region is infested with endemic Malaria. Dt. has Hq. hospital and twelve local hospitals with a bed capacity of 186. In addition, there are 9 unani and 10 ayurvedic clinics in the Dt.

Places of Interest: Vemulawada (Ancient Sun God shrine), Kaleswaram, Darmapuri, Manthani.

Panchayati Samitis: Bhacmadevarapalli, Gangadhara, Husnabad, Huzurabad, Jagtial, Karimnagar, Malliyal, Mahadevpur, Manthani, Metpalli, Peddapalli, Sircilla, Sultanabad and Vemulawada.

KHAMMAM DISTRICT

Location & Size: It lies between 16° 40' & 18° 50' N. and 79° 50' & 81° 40' E. *Boundaries* N. Madhya Pradesh. E. Krishna, West Godavari and East Godavari; S. Krishna & W. Nalgonda & Warangal; Area 15,921 Sq. Km. *Taluks* (7) Bhadrachalam, Burgampad, Khammam, Madhira, Nugur, Palwancha and Yellandu. *Hq.:* Khammam.

Historical Background: Khammam Dt. was once part of Warangal Dt. (See Warangal & E. Godavari). On 1st Oct. 1950, an Additional Collector was posted to be in charge of the five taluks. On 1st Nov. 1953, Khammam as an independent district unit came into existence. Later, Bhadrachalam and Nugur taluks from E. Godavari were added to this district. Khammam town had a history of 950 years behind it. In the past, it was called 'Dayadula Ammapalem'. On the eastern side of the town, there

ANDHRA PRADESH ALMANAC

Sri Narasimhaswami temple on a hillock. The present name 'Khammam' appears to have been derived from its original name 'Sthambhadri or Sthambhagiri'. Khammam town was a centre of local administration even before 1299 but later on, it became a taluk of Warangal Dt. There is a legend prevalent in the people that three brothers by name Ranga Reddi, Lakshma Reddi and Vema Reddi had come here with hidden treasure from Orugai and constructed the present fort and a tank known as Lakshnavaram tank. In 1768 the fort acquired a mosque and a well by the efforts of one Zafaraddaula.

Physiography: *Natural Regions:* 1. Agency tract, 2. Hill Regions, 3. Plateau. The slope of the land form is from west to east. A hill range from Singareni traverses forward to south east towards Aswarapet and forms a boundary to Godavari valley. Mid region & Eastern region are filled with small hill ranges. Among these *Erragutta*, *Marrigutta*, and *Rajagutta* are important. Agency lies in Bhadrachalam and Nugur Tq. in the north. The rest of the region is plateau. *Climate:* The climate is hot during summer. The highest temp in the year will be 48.9°C while the lowest 13°C. The district is largely benefitted by S. W. Monsoon. *Rainfall:* The annual average rainfall is 990.6 mm.

Natural Resources: *Forests:* Forest area constitutes 8765 Sq. Km. Agency region in the north and eastern part of the district is filled with dense forest. Teak, Sandal, Sala, Ippa, Chinnangi, Kodisa, Bandaru, Nallamaddi, Bamboo are tree types found here. Wild life tigers, Chettah, bears are found in certain dense forest interiors. *Water Resources:* Godavari flows for about 180 Km. in the district as boundary to Bhadrachalam and Nugur taluks. Kinnerasani river from north west falls in Godavari. Munneru flows from Warangal Dt. in the western region to join Krishna in Nalgonda Dt. Wyr, Kattaleru, Paleru are other smaller rivers. Wyr project, Paleru project, Bejtapalli project, Kinnerasani (under construction) provide irrigation. Singabhu project in Yellandu Tq., Bayyaram tank near Garla also provide irrigation.

Agriculture: *Soil types:* East to West 1. Deep black soil in parts of Warangal and East Godavari, 2. Red soil, 3. In the

KHAMMAM DISTRICT

south, a thin strip of coastal alluvium. Khammam, Madhira, Yellandu, Palwancha are rich with black soils. The other type soils are found scattered in the district. Fertile stretches lie in the agency forest tracts.

Land Utilization: Total Geographical Area: 1589368 ha.; Forest: 47.5 per cent, Barren and Uncultivable Lands: 8.7 per cent, Land put to Non-Agricultural Uses 4.0 per cent; Cultivable Waste: 1.9 per cent, Permanent Pastures: 5.0 per cent, Land under Misc. Tree Crops: 0.7 per cent, Current Fallows: 5.5 per cent, Other Fallow Lands: 1.1 per cent, Net Sown Area: 25.6 per cent, Area sown more than once: 0.3 per cent, Total Cropped Area: 25.9 per cent.

Irrigation: 17.4 per cent of Net Sown area is irrigated; 318 wells have independent ayacut while 250 wells in the district supplement recognised sources of irrigation (Sea Water resources above).

Cropping Pattern: Net sown area 4,03,416 ha. *Cereals:* Rice 41.1 per cent, Sajja 20.1 per cent, Maize 2.9 per cent, *Pulses* Greengram 15.6 per cent, Horsegram 5.8 per cent, Bengalgram 1.8 per cent, Redgram 1.6 per cent and *Commercial crops* Gingelly 4.8 per cent, Tobacco 3.3 per cent and Groundnut 2.4 per cent.

Animal Husbandry: Hard working draught cattle of local breed is found in the district. Special type of quality sheep breed (red) is also found in Madhira Tq.

Mineral Resources: The district is endowed with abundant mineral wealth ranking top in the State. Coal, limestone, ironore are economic minerals that are now being exploited on large scale. Singareni and Kothagudem are major coal mining centres in India. Ironore in Bayyaram of Yellandu taluk is now mined and exported to Japan and other countries. Mica deposits are traced in and around Kolluru, Betapalli, Chromite deposits are being exploited in and around Deudukur in Madhira taluk and Enukuru in Palwancha taluk. Barium Sulphate is found

near Bhadrachalam, 5 Km. away from Khammam town. A type of mineral stone used in optics at Vamsur, Graphite near Bhadrachalam are also being explored for economic exploitation.

Population: Total: 10,57,225, Men 5,40,312, Women 5,16,913 Population Density 66 per Sq. Km. Urban Population 12.14 per cent. Increase in population (1951-61): 30.84 per cent, (topping the list in the State). Religion: Hindus: 90.1 per cent; Muslims: 5.6 per cent; Christians: 4.3 per cent; Language: Telugu: 8,34,712; Urdu: 55,962; Lambadi: 75,731; Tamil: 1,466; Kannada: 165. Towns & Population: Khammam (CM) 25,888; Yellandu (TM) 10,955; Bhadrachalam 5,740; Kothagudem* 69,728; and Madhira 6,059.

Industry: There are two large scale units at Kothagudem. Dr. King of Geological Survey of India discovered coal deposits near Yellandu in 1871. The Hyderabad (DN) Co. Ltd. acquired mining rights in 1886. The output increased gradually owing to demand for coal for use in industry and locomotives. The Singareni Collieries Company Limited came into being in 1921. Today Govt. of Andhra Pradesh own 87 per cent of the shares in the Company. The fixed assets of the company amount to Rs. 472.97 crores. Mining activity is concentrated in Kothagudem and Yellandu coal fields. The Singareni collieries have a paid up share capital of Rs. 5.6 crores. Production in 1966-67 was 43 lakh tonnes of coal valued at Rs. 12 crores. It employs 35,300 persons.

The Collieries are worked by pits and inclines and the method of working is by pillar and stall. Jackhammers were in use but these have been replaced by electrically operated hand drills. Modern mining machinery such as shuttle cars and conveyor belts are being extensively used in the new mines. In a fully mechanised mine such as Incline No. 5, coal comes from the face to Railway Wagon almost untouched by hands. (See pp. 30 and 76).

Barium Chemicals Ltd. is the first of its kind in India and is being put up with the foreign technical collaboration of L. A.

* Civil Status not yet determined

Mitchell Ltd., Manchester. Barium salts and compounds like barium carbonate, barium hydrate, barium chloride, barium sulphate, barium sulphide and nitric acid are manufactured. The by-product is sulphur including colloidal sulphur. The installed capacity is 4,840 tonnes per annum. The paid up share capital is Rs. 50 lakhs. A Fertilizer (Urea) factory is also proposed at Kothagudem in private sector.

The small industries are concentrated at Khammam, Kothagudem and Yellandu. Rice and oil mills and saw mills are located mainly at Kothagudem, Khammam, Wyr and Yellandu. There are 3 general engineering workshops and 3 sheet metal units at Khammam and Kothagudem. Yellandu has a unit making shoe tacks. There is one bone meal unit at Khammam. There are two cement based units at Khammam and Yellandu. Leather tanning is carried on in 5 units in Khammam, Kothagudem and Madhira taluks. Brass utensils are manufactured in Khammam taluk; aerated waters at Kothagudem and there is a stone crushing and grinding unit at Yellandu. A model blacksmithy centre of the Department of Industries is functioning at Khammam.

There is an Industrial Estate at Kothagudem with provision for 12 factory sheds and one Khadi and village industries. Industrial Estate is proposed at Palair with provision for 6 units.

Transport: Railways: The Kazipet-Vijayawada section of South Central Railway traverses through the district. There are two branch lines radiating from Dornakal. 1. Dornakal to Bhadrachalam road (Kothagudem) with route length of 55 Km. and 2. Dornakal to Yellandu (Singareni) of about 27 Km. Roads: The total length is 554 Km. Recently a road bridge was built on Godavari at Bhadrachalam to facilitate traffic.

Education: Literacy 15.05 per cent, Men 21.76, Women 8.04. There is an Arts and Science College at Khammam. A centre to give training in mining is located at Kothagudem.

Health: The district particularly agency tract is infested with the Malaria. Cold fever, lung disease are endemic during

Med. Jan. There are seven modern hospitals and 11 dispensaries and 8 special clinics in the Dt.

Places of Interest: Khammam (Historical), Korkonda (Buddhist remains) Bhadrachalam (Temple). Jataras are celebrated at Keodeli, Lakshmipuram, Nelakondapalli, Nagulavancha, and Venkatapuram.

Panchayat Samitis: Ashwaraopet, Bhadrachalam, Burgampad, Kallur, Khammam, Kothagudem, Kunavaram, Madhira, Soddimala, Tirumalaipalem, Vararamchandrapuram, Venkatapuram and Yellandu.

WARANGAL DISTRICT

Location and size: It lies 16° 50' & 18° 30' N and 78° 50' and 80° 51' E. **Boundaries:** N Karimnagar district and Madhya Pradesh; E Khammam district; S Nalgonda district and Khammam district; and W Medak & Karimnagar districts; **Area** 12,919 Sq. Km. **Taluks** (6) Jangaon, Mahbubabad, Mulug, Pakhal, Parkal and Warangal. **Hq. Warangal.**

Historical Background: As the other parts of the Deccan, this territory too was once a part of the Andhra Empires. The next were the Chalukyas of Vatapi, the modern Badami of Bijapur district. After the fall of the Chalukyas and the Rashtrakutas, the Rajas of Warangal known as Kakatiyas (See page 17) assumed independence, the first amongst whom was Prole Raja. The next was Ganapati Deva (1200-62), who made extensive conquests towards East and the North. He was a great patron of art and architecture as could be evidenced from the remains of the central temples within the 'Keerti Toranas' (4 gates) inside Warangal, which appear to have been begun during his reign. He was succeeded by Rudrama Devi (1262) and the last ruler in this lineage was Pratapa Rudra II (1292-1323) during whose reign the Warangal kingdom was finally conquered (1323) by Tughluqs of Delhi. Kakatiyas were great builders and the Chalukyan style was fully developed and reached its pinnacle

during their region. The structures belonging to this period reveal vigour and a sense of proportion and symmetry with intricate geometrical pattern. Though the Muslims occupied Warangal, a national struggle under the leadership of, Prolaya Nayaka put an end to the Muslim rule. Warangal once more became independent; but only to be annexed later by Brahmanis in 1422. On the break-up of the Bahmani kingdom it fell to the Qutb Shahis of Golkonda, Shitabkhan alias Sitapati-raja became the Qutb Shahi Governor of Warangal (16th cent). He slowly succeeded in carving out for him a separate principality comprising of Khammam, Nalgonda, and Warangal and was practically independent. Later until 1948, Warangal was under the control of Nizams (See Hyderabad district).

Physiography: *Natural Regions:* 1. Hilly Region. 2. Plateau. Hills and Hillocks are scattered throughout the district. Chandragiri hillocks about 15 Km away from Warangal and Hasanparti iron hills about 25 Km away are important. Hanamakonda with an elevation of 520 m is close to Warangal. The average elevation of the district is 265 m. Kandikal hillocks lie east of Laknavaram lake in Pakhal. **Climate:** Hot summers and cold winters prevail throughout the district. The highest temp in a year will be 42.8°C while the lowest 8.9°C. **Rainfall:** S. W. & N. E. monsoons bring rains to the district. 80% is due to S. W. monsoon. Average annual rainfall is 970.28 mm.

Natural Resources: *Forests:* The district is abundant with rich forest vegetation. Teak, sandalwood, sanders, ippa, bandaru, nallamaddi, bamboo are found in these forests. The forests are dense in the region of Mulug and Pakhal. **Water Resources:** Godavari, the chief river in the district flows for about 64 Km from north to south east directions. Munneru, Paleru are other important rivers. Munneru with its source from Pakhal taluk traverses 150 Km and joins Wyra before it falls in Krishna. Paleru starts its course from Warangal taluk running parallel to Munneru to fall in Krishna south of Jaggayyapet. Pakhal, Ramappa, Laknavaram, Ghanapuram tanks were built during Kakatiya period of the historical past. Ramappa and Laknavaram are so near each other that they are called twins.

Some of these huge tanks—Ramappa: 212 Sq. Km., Lakshavarani 144 Sq. Km. Pakhal 133 Sq. Km.

Agriculture : Soil Types. East to West—(i) Eastern half cutting district South-east to north-west deep black soil going upto Adilabad. (ii) Western half red soil merging into Hyderabad and Karimnagar. (iii) on the extreme eastern border a thin strip of red soil.

Mahbubabad and Pakhal taluks have regur soils while Warangal and Mulug have Chalaka soils. Jonna and rice are chief cereal crops. Greengram among pulses and groundnut among oilseeds form main crops. Farm surpluses from the district constitute rice, jonna, greengram and groundnut.

Land Utilization : Total Geographical Areas : 1288697 ha. Forest : 26.1 per cent Barren and Uncultivable Lands : 6.4 per cent Land put to Non-Agricultural Uses : 6.6 per cent; Cultivable Waste : 1.7 per cent Permanent Pastures : 7.0 per cent Land under Misc. Tree Crops : 0.9 per cent Current Fallows : 8.2 per cent; Other Fallow Lands : 4.1 per cent; Net Sown Area : 39.0 per cent; Area Sown more than once : 4.2 per cent Total Cropped Area : 43.2 per cent.

Irrigation : 25.0% of Net Sown area is irrigated; some wells have independent ayacut while 582 wells in the district supplement recognised sources of irrigation (See water resources above.)

Cropping Pattern : Net Sown area 5,00,217 ha. Cereals—Rice : 18.3 per cent; Jonna 36.1 per cent; Maize : 5.6 per cent; Millets : 3.01 per cent; Pulses—Greengram : 7.9 per cent; Redgram and Horsegram : 2.7 per cent. Commercial Crops—Groundnut : 14.1 per cent; Gingelly, Castor, Chilli and Fruits : 6.2 per cent. **Farm Research :** There is an agriculture research station at Chelivoi.

Animal Husbandry : Short statured draught cattle is found in the district. Lambadies chiefly patronise these. A cattle cum dairy Farm with a sheep section is located at Mammoor near Warangal. Nellore breed is propagated here.

Mineral Resources : The district ranks for mineral deposits. Limestone, building stones are chief items. Paritala is reputed

for diamonds. Sources of marble in the district are traced in 1928 near Papatapalli.

Population: Total 15,45,750. Men 7,91,156, Women 7,53,594. Population Density 120 per Sq. Km. Urban Population 14.16 per cent. Increase during the decade : (1951-61) 16.24 per cent. Religion : Hindus : 93.5 per cent; Muslims : 5.1 per cent; Christians : 1.3 per cent. Language : Telugu : 13,19,859; Urdu : 73,309; Lambadi : 1,16,385; Tamil : 2,029; Kannada : 481. **Towns & Population :** Warangal (CM) 1,56,106; Hasanparti : 7,719; Parkal (TM) 6,722; Narasampet 6,860; Mahbubabad (TM) 13,248; Dornakal (TM) 9,260; Jangaon (TM) 11,927; Cherial (TM) 6,017.

Industry : The biggest spinning and weaving mill of the State Azamjahi Mills is located at Warangal. It has a capacity of 36,136 spindles and 700 looms. There is a solvent extraction unit with a capacity of 25 tonnes of cake a day and a chip board factory with a capacity of 19,200 tonnes per annum at Warangal. At Dornakal, there is a unit manufacturing barium salts with a capacity of 4650 tonnes per annum.

Next to Warangal stands Ganjam in commercial and industrial importance. Leather tanning is one of the important industrial activities in the district. Out of the 12 tanneries, 11 are located at Warangal and 1 at Jangaon. There is one bone meal unit at Warangal. Cement tiles are manufactured by one unit. Two units are engaged in making other cement products. The Indian Hume Pipe Company has one of its factories at Warangal for the manufacture of RCC spun pipes. There are 13 general engineering workshops. (10 at Warangal and 3 at Jangaon) attending to general servicing work besides the manufacture of parts of the rice mill, oil mill, oil engines and centrifugal pumps. There are 13 units making agricultural implements and builders hardware (10 at Warangal and 3 at Jangaon). One of them is making iron buckets. There is one brick making unit, one match unit and one unit making aerated waters. Steel trunks are made in three units and plastic bangles in one unit at Warangal. Carpentry and wood working units numbering 14 are concentrated in Warangal and Jangaon. Units have come up recently at

Warangal for bicycle assembly, wire mesh and perfumeries. Foundaries are developing. Sodhan paints has a factory at Warangal.

The district has 19 printing press. Rice mills extend beyond 2000, flour mills number 25 and oil mills are 12 and these are all fairly spread out in the district.

In the Mulug project area, there are about 30 families engaged in the manufacture of bamboo products. Handloom weaving is ancient cottage industry. Two Rural Arts. Crafts and Industries Development Centres were started at Mulug and Narasampet to encourage the growth of Cottage Industries. Tassar silk is another traditional industry. At Venkatapur, a Tassar Cocoon Producers' Industrial Co-operative Society was formed.

There are two Industrial Estates in the district. The Estate at Warangal has provision for 40 factory sheds and the Assisted Private Estate at Jangaon has provision for 48 factory sheds.

Transport : Railways : Madras—Delhi trunk route passes thro' the district. Kazipet is a big junction. A train service from Kazipet is connected to Secunderabad and Hyderabad. Warangal, Pakhal, Mahbubad, Jangaon taluks are covered by railways. Parkal and Mulug have no access to railways. **Roads :** Route length of roads in the district totals to 850 Km. Warangal (Hanamakonda) is connected by a good network of roads with all towns and Hyderabad City. Historical places are connected with important centres by road.

Education : Literacy : 15.17 per cent, Men 23.43 per cent, Women 6.52 per cent. Higher Education is concentrated at Warangal. A Medical College ; Regional Engineering College besides a teachers College and a College of General Education are located at Warangal.

Health : There are 8 modern hospitals one each at taluk Hq with maternity wards attached to them. Field health staff protects the population against endemic diseases smallpox, cholera etc.

Places of Interest : Pakhal Lake, Ramappa, Lakshavaram, Ghanapuram, Bheemaghanapuram. All lakes with picnic interest. Warangal (Fort), Hanamakonda (Temple), Ramappa Temple (Mulug taluk). See pages 235-237.

Panchayat Samitis : Cheriya, Chityal, Etunagaram, Ghanapur, Gudur, Hanamakonda, Jangaon, Kodakondla, Mahabubad, Marripeda, Mulug, Narsampet, Parkal and Wardhanpet.

NALGONDA DISTRICT

Location & Size : It lies between 16° 20' & 17° 45' N and 78° 35' N & 80° 5' E. **Boundaries** N. Warangal Dt. E Khammam & Krishna Dt. S Guntur & Mahbubnagar W Mahbubnagar, Hyderabad & Medak ; **Area** 14,200 sq. km. Taluks (7). Bhongir, Devarakonda, Huzurnagar, Miryalaguda, Nalgonda, Ramannapet and Suryapet. **HQ :** Nalgonda.

Historical Background : The territory was once a part of Andhra Satavahana Empire. Later a branch of the Andhra Rulers ruled over this territory with Panagal as their capital till Kirtivarman, the Chalukyan King, conquered them. Later, it formed part of the Warangal kingdom. The Kakatiya kings of Warangal had constructed among other buildings, the temples of Sri Pachala Someswara and Sri Chayala Someswara at Panagal in Nalgonda. Later, Nalgonda became the capital of Jalakhana, who fought many valorous battle with the Bahmani kings. After the dissolution of the Bahmani kingdom, the territory was occupied by the Qutb Shahis (1424). Though Aurangzeb added it to the Deccan Suba, it had to be re-annexed to Hyderabad by Nizamul Mulk Asafjahi (1512-1543). Later when Asafjahi established their independent kingdom, the district was brought under their control and remained as such till 1948 (see p. 300.)

Physiography : Natural Regions : 1. Hill Region, 2. Plateau. The slope of the land form is from West to East. A hillock range from Nalgonda and Devarakonda Tq. enter Mahbubnagar Dt. Another hill range from South West follows the course of Dindi river to traverse North East to touch Warangal Dt. Nallapahad hill range approaches Dindi and Peddavagu to divide into two small ranges. Another hill range from Pennar in the west traverses North West upto Surikonda and takes an abrupt curve towards the middle of Narayanapuram and Ibrahimpetnam to

Devarakonda. Besides these, there are hundred smaller hillocks in the district. The rest of the region is plateau. **Climate :** Hot & Dry during May. The highest Temp. in the year is 41.7°C. while the lowest 10.0°C. **Rainfall :** S. W. & N. W. monsoons bring rains to the Dt. But 70% of the rain is from S.W. monsoon mostly between June-Sep. Annual average rainfall 728.72 mm. Devarakonda & Miryalaguda Tq. record lowest rainfall. Due to drought, Devarakonda is frequently exposed to scarcity and famine conditions.

Natural Resources : **Forests :** Forest vegetation can be seen in almost all Tq. Area 1,101 sq. km. Teak, Nallamaddi, Chandra, Tamrind, Tamihli are some of the tree types in these forests. Ippa and Chandra trees are found in the hill forests in Devarakonda Tq. abutting Krishna river.

Water Resources : Krishna is the chief river. It enters at Bleswaram in Devarakonda Tq. to traverse 85 km. in the district. Musi from North West flows in the district for 64 km. and merges with Alara river to fall in Krishna at Vadapalli (Wazirabad). Musi traverses in the district totally for 150 km. Peddavagu and Dindi are small rivers in Devarakonda taluk. Abalya, with its source west of Narayanapuram in hillocks traverse south east to join Kongal river to fall in Krishna. Abalya flows for about 130 Km. in the district. Nagarjunasagar is being built from 1955 (See Page 38) at Nandikonda village on Krishna River. Dindi project (1940) supplies irrigation to some extent.

Agriculture : **Soil Types :** North to South (1) Red Soil merging into Hyderabad—2/3rd of the district (2) Undifferentiated black soil merging with Guntur. Black regur occurs in Miryalaguda on the banks of Krishna. Jonna, Sajja, Cotton, Turmeric, Castor are khariff crops in Chelaka and Masabu soils. Pusa (Rabi) crops are raised in alluvial mixtures and black regur.

Land Utilization : Total Geographical Area : 1417684 ha. ; a Forest 7.4 per cent ; Barren and Uncultivable Lands : 6.0 per cent ; Land put to Non-Agricultural uses : 5.7 per cent ; Cultivable Waste : 2.9 ; per cent Permanent Pastures : 7.1 ; per cent Land under Millets, Tree crops : 0.8 per cent Current Fallows : 21.0 per cent Other Fallow Lands : 3.6 per cent Net Sown area : 30.5 per cent ; Area sown more than once 5.0 per cent ; Total 30.5 per cent.

Irrigation : 16.5% of net Sown area is irrigated ; 4,006 wells have independent ayacut while 757 wells in the district supplement recognised sources of irrigation (See water resources above)

Cropping Pattern : 6,46,684 ha. **Cereals :** Rice 18.3 per cent ; Jonna 36.1 per cent, Maize 5.6 per cent, Sajja 3.01 per cent, **Pulses :** Greengram 7.9 per cent, Redgram & Horsegram 2.7 per cent, **Commercial Crops :** Ground nut 11.1 per cent, Gingelly, castor, Chilli, Fruits : 6.2 per cent. **Farm Research :** There is an agricultural Research Station at Dindi. Varietal trials and improved cultural practices relating to rice and oilseeds are investigated here. **Animal Husbandry :** A special type of cattle breed of local origin occur in Devarakonda. Red or black, these cattle are found very useful as draught animals in farming. White cattle at Suryapet and Miryalaguda are reputed for statures and from. Goats are raised extensively in hill forest regions in Devarakonda, Miryalaguda and Suryapet Tq. A government livestock farm is located at Nagarjunasagar with a sheep section. Nellore breed is propagated.

Mineral Resources : Limestone for building (Miryalaguda), Slate deposits, Diamonds (in and around Nandikonda on the left bank of Krishna) are minerals of the district.

Population : Total 15,14,797, Men 8,08,232, Women 7,66,565 ; Population Density : 111 per Sq. Km. Urban Population 9.31 per cent, Increase in population during the decade (1951-61) : 22.35 per cent. Religion : Hindus : 92.7 per cent, Muslims : 5.0 per cent, Christians : 2.3 per cent. Language : Telugu : 1,38,4040, Urdu : 77,018, Lambadi : 92,576, Tamil : 8665, Kannada : 673. **Towns & Population :** Nalgonda (CM) 24,383, Suryapet (CM) 16,162, Hazarnagar (TM) 7,333, Miryalaguda (TM) 10,024, Vijayapuri* (Nagarjunasagar) 55,300, Devarakonda (TM) 8,311, Bhongir (CM) 17,549 and Aler 7,514.

Industry : The district has primary processing and servicing industries. Rice mills numbering 300 are spread out in the district. Castor being an important oilseed and groundnut coming next in importance in the district, oil mills have come up for the extraction of oil from these two materials. 5 saw mills and 1 wood working unit are located in the district.

There are 4 units making cement products ; One ink manufacturing unit and one tannery at Nalgonda. There are 7 Hgt

Engineering workshops and repairing units located mostly at Nalgonda and Bhongir. A dehydrated castor oil unit is coming up in the district in the public sector.

Rural industries project has been functioning in the district covering 7 blocks with nearly 1/3 of the area of the district. The general engineering workshop set up by the project and other engineering units coming up are creating industrial consciousness in the district.

Brass utensil manufacture is a traditional occupation; handloom weaving is another. Handloom fabrics of the area are very famous, especially the tie and dye work sarrees of Pochampalli. There are about 2000 looms in the villages of Pochampalli and Koilgudem, where the looms are concentrated. In wool weaving nearly 1000 artisans are engaged.

A conventional Industrial Estate is located at Suryapet with provision for 12 factory buildings.

Transport : Railways : Kazipet-Secunderabad line for a small stretch passes thro' north west of the district in Bhongir Tq. Roads : The total road length in the district is 985 Km. An infantry road for military purpose was laid in 1832 to connect Hyderabad with Machilipatnam. This is the only important road with a length of 115 Km. in the district. Recently a road was laid thro' the district to connect Hyderabad with Nagarjuna sagar.

Education : Literacy 12.80 per cent, Men 20.11 per cent Women 5.27 per cent. There is one Arts & Science College at Nalgonda.

Health : The district is infested with Malaria during Aug. and Oct. There is one modern hospital and 12 dispensaries with bed capacity of 149. There are 5 ayurveda and 4 unani clinics.

Places of Interest : Devarakonda (fort), Yadagiri (temple), Nagarjanakonda (historical and conjectural monuments), Nagarjunasagar (picnic). See pages 223 and 224.

Panchayati Samitis : Aler, Bhongir, Chintapalli, Devarkonda, Huzarnagar, Kodad, Miryalaguda, Motkur, Mungode, Nagaram, Nakrekal, Nalgonda, Peddavooz and Ramannapet.

* Civic Status not yet determined.

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DEFIANCE AUTOMOBILES, 49, M.G. Road, Secunderabad-3.

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RAMANUJAYA, Electricals & Mechanical Works, Gandhi Road, Vijayawada-2.
STAR INDUSTRIES, Labhipet, Vijayawada-2.
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PRAMOD PICTURES, 7, Ghasmandi Road, Secunderabad.
PREM PICTURES, 2538, Rashtrapathi Road, Secunderabad.
P. V. V. S. M. PICTURES, 8093, Rashtrapathi Road, Secunderabad.
QUALITY PICTURES, 1-D, Rashtrapathi Road, Secunderabad.
RAJSHRI PICTURES, 8, Rashtrapathi Road, Secunderabad.
RAMAKRISHNA PICTURES, 8093, Rashtrapathi Road, Secunderabad-3.
RAMESH FILMS, 2538, Rashtrapathi Road, Secunderabad-3.
RASHID MEHTA & CO., 8, Rashtrapathi Road, Secunderabad-3.
RUPAN PICTURES, 2538, Rashtrapathi Road, Secunderabad-3.
SADHANA PICTURES, 8093, Rashtrapathi Road, Secunderabad-3.
GANGETTHA FILMS, 153, Rashtrapathi Road, Secunderabad-3.
SARATHI PICTURES, 143, Rashtrapathi Road, Secunderabad-3.
SARVODAYA PICTURES, Ghasmandi Road, Secunderabad-3.
SELECT PICTURES CIRCUIT, 2538, Rashtrapathi Rd., Secunderabad-3.
SHAFADA FILMS EXCHANGE, 39, Ghasmandi Road, Secunderabad.
SHINDE SARPATDAR & CO., 39, Ghasmandi Road, Secunderabad.
SHIVRAJ FILM DISTRIBUTORS, 8093, Rashtrapathi Road, Secunderabad.
SHYAMSUNDER PICTURES, 28, Andiahnagar, Secunderabad.
SILVER SCREENS, 4, Rashtrapathi Road, Secunderabad-3.
SREE FILMS, 2, Rashtrapathi Road, Secunderabad-3.
SRINIVASA PICTURES, Rashtrapathi Road, Secunderabad-3.
SUMAN FILMS, 3-3-864/9, Opp: Arya Samaj, Mandir Sultan Bazar, Secunderabad.
SUNDER PICTURES CIRCUIT (P) LTD., 143, Rashtrapathi Road, Secunderabad.
T. V. PICTURES, 9093, Rashtrapathi Road, Secunderabad.
UDAYASHRI PICTURES, 155, Rashtrapathi Road, Secunderabad.
USHA FILMS, 8, Rashtrapathi Road, Secunderabad.
VANI FILMS DISTRIBUTORS, 8571, Rashtrapathi Road, Secunderabad-3.
VIAJA DISTRIBUTORS, 143, Rashtrapathi Road, Secunderabad-3.
YALLAMMA PICTURES, 3465, Rashtrapathi Road, Secunderabad.

FLOUR MILLS

N. S. AGARWAL, 15-2-679, Kishengunj, Hyderabad-12.
RAMESH FLOUR MILLS, 15-2-679, Kishenganj, Hyderabad-12.

FOOD GRAINS

S. PONNUSWAMI & CO., Rice & Paddy Merchant, Islampet, Vijayawada-1.
CENTURY TRADING COMPANY, Distributing Agents for Food Products, Kothari Buildings, Gandhinagar, Vijayawada-3.
AMBA KRISHNA MURTHY, Rice & Paddy Merchant, Vijayawada.
KONETI MADHAWA RAO & CO., Jamna Masjid, Vijayawada.
KRISHNA DISTRICT PRODUCE MARKETING BOARD, Rice & Paddy etc., 11-40-12, Pulipativari Street, Vijayawada.
BATCHU KOTIAH COMPANY, Toordall Grains etc., Thammalavari Lane, Vijayawada-1.
SUGGULA VEERARAGHAVARATNAM & CO., Rice & Gram Merchant, Tenali-2.
VASAVI GENERAL STORES, Foods Division, Akkayya Lane, Main Bazar, Tenali.
YALLAPALLI VENKATESWARLU & CO., Rice Paddy Merchant, Nellore.
DIDDI DAMODARAM & CO., Stonehousepet, Nellore-2.
P. KOTO REDDY & TINPADDI & CO., Foodgrain Merchants, Kavali, (Nellore District).
PATHI VENKATASWAMY CHETTY & CO., Foodgrains and General Commodities, 11-1-60, Bazar Street, Chittoor.
ABBASA BROTHERS, 90, Sarojini Devi Road, Secunderabad-3.
ABDULLAH & SONS, 91, Sarojini Devi Road, Secunderabad-3.
BABA TRADING CO., 11-1-954, Mallepelly, Hyderabad-1.
FAZAL & CO., Furniture Hirers, Secunderabad-3.
WAHEDIA SUPPLYING STORES, 11-6-389, Nampally Road, Hyderabad-1.
RAHMAN & CO., Fateh Maidan, Hyderabad-1.
RAHMAN & CO., 5-2-28, Jambagh Road, Hyderabad-1.

GENERAL MERCHANTS

C. V. RAMAMURTHY, Partner, Sea Way Shop, Fancy Goods, Visakhapatnam-1.
MOOSA MOHAMMED SONS, Merchants Anakapalle.
AMUL STORES, M. G. Road, Secunderabad-3.
AMUL STORES, 4-4-102, Sultan Bazar, Hyderabad-1.
ANIL STORES, 4-2-2 60/61, Hyderabad.
BOMBAY FANCY STORES, 6747, Rashtrapathi Road, Secunderabad-3.
B. P. & CO., 6726, Rashtrapathi Road, Secunderabad-3.
D. VALLABHADAS, 3-4-103, Naka Bazar, Secunderabad-3.

KATIAWAR STORES, 4-1-956, Abid Road, Hyderabad-1.
KATIAWAR STORES, Mahatma Gandhi Road, Secunderabad-3.
SRI LAKSHMI NARASIMHA. KIRANA & GENERAL Merchants, Mushirabad, Hyderabad-20.

GLASS MERCHANTS

ANDHRA GLASS MART, 22-6-193, Pathergatti, Hyderabad-2.
CENTRAL GLASS EMPORIUM, 5-2-1008, Nizamabad Road, Hyderabad-1.
ISHAQ ALI, 22-7-747, Mir Alam Maudli, Hyderabad-2.
SAFE GLASS MARE, 5-5-945, Nizamashahi Road, Hyderabad-1.
TAYAB ALI ABDUL MUSSAMM, Pathergatti, Hyderabad-2.

GRAIN AND KIRANA MERCHANTS

Haji SHAKOOR Haji JAMAL, Moor Mohamad, Amadalavalasa.
SANKA NARASIMHA RAO, Nandipativari Street, Vijayawada-1.
ABDUL KAREEM, Moh. Sardargadwala, 7-3-883, Hissamganj, Secunderabad-3.
ABDUL KAREEM, Moh. Sardargadwala, Begum Bazar, Hyderabad-12.
ABDUL SALAMCOOR ABDULLA, Laturawalla, 5-7-421, Begum Bazar, Hyderabad-12.
AGARWAL & CO., 15-9-473, Mahabubganj, Hyderabad-12.
ALBELLA PROVISION STORES, 10-1-13, Masab Tank, Hyderabad-28.
AMIR ALI AKBAR ALI, 15-7-503, Begum Bazar, Hyderabad-28.
AMMANABOLU NAGIAM, 15-7-403, Begum Bazar, Hyderabad-12.
ANDHRA TRADERS, 15-2-63, Krishnaaganj, Hyderabad-12.
ASHRAF KIRANA STORES, 5-7-503, Nampalley Market, Hyderabad-1.
BAUDEV GOVARDHAN, 15-7-523, Begum Bazar, Hyderabad-12.
BANKATLAL HANUMANDAS, 18-4-566/7, Shamsheerganj, Hyderabad.
BANNAIJI GOVINDALAL, 15-2-749, Osmanganj, Hyderabad-12.
BANSILAL SURAKRAN, 15-2-208, Chota Maharaj Ganj, Hyderabad-12.
C. P. NARASIMHULOO & CO., 15-2-780, Osmanganj, Hyderabad-12.
DAYARAM MEHTARAM, 15-2-7451, Osmanganj, Hyderabad-12.
DEVATA CHANDIRAIYA & SON, 5-2-925, Osmanganj, Hyderabad-12.
G. GOPHAL KAKANI, Begum Bazar, Hyderabad-12.
GANPALLY, Mahankali Munda, Secunderabad-3.
Haji AHMEDALI MOHAMMED, Osmanganj, Hyderabad-12.
HARIZMAL RATWATMAL, Begum Bazar, Hyderabad-12.
KANIRAM LAKSHMINARAYANA, Begum Bazar, Hyderabad-12.
KONDA VEERIAH & CHANDRASEKARAI, Mahankali Road, Secunderabad-3.
MEHTA PROVISION STORES, 65, Ramcoppet, Secunderabad-3.
MOHANLAL & CO., 15-9-610, Mahabub Ganj, Hyderabad-12.
R. J. BHAIJI, Begum Bazar, Hyderabad-12.
SITARAM RAMATAUR, 15-9-51, Maharaj Ganj, Hyderabad-12.
SITARAM RAMATAUR, 21-2-772, Patel Market, Hyderabad-2.

SREERAM RAMIAH & SONS, 1637, Mahankali Road, Hyderabad-20.
SRI LAKSHMI RICE & GENL. STORES, 2-1-338/D, Nallakunta, Hyderabad-20.
SWASTIK MIRCH STORES, Mirch Powder & Marala Merchants, 15-6-519, Begum Bazar, Hyderabad-12.
TELEKUNTA BALAKRISHNIAH VENKATESHAM & SONS, Hissanganj, Secunderabad-3.

GRANITE

ANDHRA GRANITE STONE WORKS, Chittoor.
INDIAN GRANITE ART WORKS, Chittoor.
INDIAN GRANITE MEMORIAL WORKS, Chittoor.
INDIAN GRANITE STORES, Chittoor.
MASILAMANI GRANITE WORKS, Kuppam.
RAJAGOPAL GRANITE WORKS, Chittoor.
VELMURUGAN GRANITE WORKS, Chittoor.

HARDWARE & PAINT MERCHANTS

SRI DURGA HARDWARE STORES, Vijayawada-1.
BOMBAY HARDWARE STORES, 15-1-511, Siddambar Bazar, Hyderabad-12.
C. V. K. SRINIVASULU, 1223, General Bazar, Secunderabad-3.
D. EKAMAJEE & SONS, 15-5-23, Afzalganj, Hyderabad-12.
DECCAN AGENCIES, P.B. No. 57, Secunderabad-3.
R. V. RAJIAH & N. SWAMIDAS, E-6842, Rashtrapathi Road, Secunderabad-3.
K. NARASIAH & CO., Bakaram, Hyderabad-20.
GUPTA & SONS, 5-2-430, Siddambar Bazar, Hyderabad-12.
MODERN COMMERCIAL CORPN., 3-6-344, Basheerganj, Hyderabad-29.
PREMIER HARDWARE CORPN., General Bazar, Secunderabad-3.
R. K. ANILAH, 15-5-24, Afzalganj, Hyderabad-12.
STANDARD INDUSTRIAL & HARDWARE CORPN., General Bazar, Secunderabad-3.
UNITED ENGINEERING CORPN., 147, Rashtrapathi Road, Secunderabad-3.

IRON AND STEEL DEALERS

SREE BADRINARAYANA IRON CO., Main Bazar, Vijayawada-1.
C. R. BANKER, 7953, Hill Street, Roniguni, Secunderabad-3.
SECUNDERABAD IRON AND STEEL SYNDICATE, HO. Kavadiguda Road, Secunderabad-3.
SECUNDERABAD IRON & STEEL SYNDICATE, Br. 15-2-687, Kishanganj, Hyderabad-12.

JEWELLERY

SYAMALA GOLD COVERING WORKS, Chilakalapudi (P.O.), Masulipatam (AP).
UMA GOLD COVERING WORKS, Chilakalapudi (P.O.), Masulipatam (AP).

JUTE INDUSTRIES

BIHANI BROTHER (P) LTD., Amadalavalasa.
GUDLA LAKSHMANAMURTHY JUTE PRESS, Amadalavalasa.
G. NEELACHALLAM JUTE PRESS, Rajam.
G. VENKATARAJU JUTE PRESS, Amadalavalasa.
JATASHANKAR JUTE PRESS, Amadalavalasa.
R. LAKSHMINARAYANA JUTE PRESS, Amadalavalasa.
SRI SATYANARAYANA BALING PRESS, Amadalavalasa.
SRI SINGICHETTY LAKSHMANASWAMY JUTE PRESS, Amadalavalasa.
SRI SITARAMA HAND JUTE PRESS, Tileru.
V. CHANDRAIYARAJU JUTE PRESS, Amadalavalasa.
V. NARASIMHARAJU JUTE PRESS, Amadalavalasa.
PODUGU VENKIAH JUTE PRESS, Amadalavalasa.
BOTHRA BROS. JUTE BALING PRESS, Rajam.
DHARMACHAND GARVANGI & CO., Jute Baling Press, Rajam.
CHELIKANI RAMA RAO JUTE BAILING PRESS, Rajam.
MADAN GOPAL DAGA JUTE BALING PRESS, Parvathipuram.
SITARAMA VILAS JUTE PRESS, Bobbili.
THE CHITTAVALASA JUTE MILLS CO., LTD., Chittavalasa.
THE NELLEMARLA JUTE MILLS CO., LTD., Nellimarla.

METAL INDUSTRIES

VIJAYALAKSHMI INDUSTRIES, Narasannapet.
MADRAS IRON WORKS, Parvathipuram.
M. GANGARAJU ALUMINIUM INDUSTRY, Parvathipuram.
PODUGU SANVAGANNA ALUMINIUM FOUNDRY, Parvathipuram.
SADASIVA METAL INDUSTRIES, Tekkali.
SRI KAKSHI LATHE TURNING WORKS, Anakapalli.
SRI SATYANARAYAN TURNING WORKS, Anakapalli.
THE AUTO GENERAL ENG. WORKS, Anakapalli.
GUNABATHULA ALUMINIUM CO., Anakapalli.
MADRAS IRON WORKS, Visakapatnam.
M. SATHIRAJU BLACKSMITHY, Visakapatnam.
GUNABATHULA ALUMINIUM CO., Anakapalli.
T. NAGANNA & SONS, Aluminium Co., Anakapalli.
SRI SATYANARAYANA IRON & BRASS WORKS, Nidadavolu.

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ANDHRA PRADESH ALMANAC

KOTHARAJU VARAHULU, Dealers in Brass, Copper and Aluminium.
Azzaram.
RAJAGOPAL METAL WORKS, Azzaram.
SRI KANYAKAPARAMESWARI METAL WORKS, Azzaram.
SRI RAMA METAL WORKS, Azzaram.
SRI SATYANARAYANA METAL WORKS, Azzaram.
C. SOMARAJU & SON, Brass & Copper Vessel Merchants, Azzaram.
SRI VENKATESWARA METAL INDUSTRIES, Azzaram.
GOVT. BLACKSMITHY & COPPER PRODUCTION CENTRE, Eluru.
INDIAN HUME PIPE COMPANY LTD., Kovvur.
JAYABHRATHI PIPE WORKS, Nidadavolu.
RADHAKRISHNA FERRO CONSTRUCTION WORKS, Nidadavolu.
KRISHNA INDUSTRIAL CORPN., Nidadavolu.
A. RAMULU METAL WORKS, Eluru.
P. KRISHNAMURTY ALUMINIUM WORKS, Gudiwada.
BANGA PAPAIAH ALUMINIUM INDUSTRIES LTD., Vijayawada.
BOYINA SRIRAMULU ALUMINIUM INDUSTRIES, Vijayawada.
K. VEERASWAMY ALUMINIUM WORKS, Vijayawada.
G. V. ALUMINIUM & BRASS MFGS., Vijayawada.
SRI KALI ALUMINIUM WORKS, Vijayawada.
SRI VIJAYA METAL INDUSTRIES, Vijayawada.
THE VIJAYAWADA METAL INDUSTRIES, Vijayawada.
VENKATESWARA ALUMINIUM INDUSTRIES LTD., Guntur.
P. SRIRAMULU ALUMINIUM WORKS, Ongole.
SRI M. VENKATACHALAPATHY METAL WORKS, Chittoor.
JAIRAM METAL WORKS, Chittoor.
KRISHNA METAL WORKS, Chittoor.
MAHBOOB METAL WORKS, Chittoor.
MAHESWAR METAL WORKS, Chittoor.
PADMALAYA METAL WORKS, Chittoor.
RAMACHANDRA METAL WORKS, Chittoor.
SAI METAL WORKS, Chittoor.
SRINIVASA METAL WORKS, Chittoor.
SRI RAM METAL WORKS, Kalahasti.
VENKATESWARA METAL INDUSTRIES, Panagal.
SRI RAM METAL WORKS, Chittoor.
MOPED INDUSTRIES LTD., Tirupati.

MICA

THE PREMIER MICA CO., Gudur.
ASSOCIATED MICA TRADERS, Gudur.
RAMSAI MICA EXPORTS, Gudur.
KRISHNA MICA EXPORTS, Gudur.
INDIRA MICA EXPORTERS, Gudur.
THE ALLIED EXPORTERS & IMPORTERS, CO., Gudur.

CONTINENTAL EXPORTERS & IMPORTERS, Gudur.
HINDUSTAN MICA SUPPLIES, Gudur.
ASSOCIATED MICA EXPORTERS, Gudur.
M. S. REDDY & CO., Gudur.
SOUTH INDIAN MICA CORPORATION, Gudur.
KARETI & MICA EXPORT, Gudur.
TALLABODU MICA CORPORATION, Gudur.
BHARVA MICA EXPORTING CO., Gudur.
ADALA RAMIREDDI MICA FACTORY, Gudur.
RAJMOHAN EXPORT, Gudur.
RUSTUM MICA CORPORATION, Gudur.
SWATI MICA CORPORATION, Gudur.
INTERNATIONAL TRADING CO., Gudur.
CHANDRASEKHARA REDDY MICA CO., Gudur.
RAMA VILAS MICA FACTORY, Gudur.
MAHADEVIAH SPLITTING DEPARTMENT, Rettapalli.
SEETA RAMA MINING CO., Gudur.
THE INDIAN UNION MICA PRODUCTS, Gudur.
CLIMMER EXPORTS, Gudur.
THE REVATHI MICA CO., Gudur.
INDIAN UNION MICA CO., Gudur.
A. P. REDDY & CO., Gudur.
ASHOKA EXPORTS, Gudur.
VIVEKANANDA EXPORTS AND IMPORTS CO., Gudur.
SRI VENKATESWARA & CO., Gudur.
VENKATESWARA MICA CO., Gudur.
SIVAKUMAR MICA SUPPLIES, Gudur.
MOSCOVITE MICA HOUSE, Gudur.
V. SESHUREDDY & CO., Gudur.
IMPERIAL MICA CORPORATION, Gudur.
P. DASARATHARAMI REDDY MICA CO., Gudur.
KARNATIC MICA CONCERN, Gudur.
P. KOTAREDDY MICA CO., Gudur.
Y. NARAHARI REDDI MICA, Gudur.
K. A. V. ACHARYA, W/9-173, Nalalamun, Gudur.
THE RADHAKRISHNA & SONS, Gudur.

MINING

FERRO ALLOYS CORPN. LTD., Garividi.
THE SOUTH INDIAN MINING & SLAB CO., Roofing & Flooring Slabs,
Petaancherla.
RAYALASEEMA MINING INDUSTRIES, Cuddapah.
SADHANA MINING INDUSTRIES, Cuddapah.
THE ANDHRA PRADESH MINING CORPORATION, Fateh Maiden
Road, Hyderabad-4.

MISCELLANEOUS

COROMANDAL CERAMIC CO., Bhimadole.
 DWARAKA BATTERY WORKS, Bhimadole.
 VENKATESWARA CERAMIC INDUSTRY, Bhimadole.
 MODERN DYE FACTORY, Eluru.
 INDIAN OIL CORPORATION LTD., Vijayawada.
 KHADI & VILLAGE INDUSTRIES COMMISSION, Vijayawada.
 SRI RAMA CEMENT CONCRETE WORKS, Vijayawada.
 THE ANDHRA SCIENTIFIC CO., LTD., Machilipatnam.
 THE B. & C. LTD., Rayalcheruvu.
 NAGARJUNA ART PRINTERS, Station Road, Kachiguda, Hyderabad-22.
 RAMNATH & CO., 141, Sarojinidevi Road, Secunderabad-3.
 KIGO. PHARMA (P) LTD., 12-2-709, Bairbhun, Hyderabad-20.
 SUVARNA AGENCIES, News Agents & Advertising Consultants, Surayaraopet, Vijayawada.

NEWSPAPERS AND PRESS CORRESPONDENTS

ATAPATALU, 12-1-1933, Malleshpalley, Hyderabad-1.
 ANDHRA BHOOMI, 36, Sarojini Road, Secunderabad-3.
 ANDHRA JYOTHI, 5-9-19/17, Opp. Secretariat, Saifabad, Hyderabad-22.
 THE ANDHRA PATRIKA, Vijayawada.
 ANDHRA PATRIKA (B.O.), 4-1-887, GPO Lane, Hyderabad-1.
 ANDHRA PRABHA LTD., Vijayawada.
 ANDHRA PRABHA OFFICE, 1-421, Bashirbagh, Hyderabad-1.
 ANDHRA VEENA, Hindi Monthly 4-5-753, Sultan Bazaar, Hyderabad-2.
 ASSOCIATED NEWS SERVICE, Troop Bazaar, Hyderabad-1.
 DECCAN CHRONICLE, 36, Sarojini Road, Secunderabad-3.
 DECCAN NEWS SERVICE, 15-1-609, Siddamber Bazaar, Hyderabad-12.
 HINDUSTAN TIMES, 272, Vithalwadi, Hyderabad-29.
 THE HINDU, Saifabad, Hyderabad-22.
 INDIAN EXPRESS, Vijayawada.
 INDIAN EXPRESS, B-1-42, Bashirbagh, Hyderabad-1.
 IQDAM WEEKLY, 12-2-15, Syed Ali Khan Road, Hyderabad-6.
 DAILY MILAP, Mukramjahi Road, Hyderabad-1.
 NAVABHARAT TIMES, Kasarakatta, Hyderabad-2.
 M. A. RAHIM, Staff Photographer, Chanderghatm, Hyderabad-24.
 STATESMAN (Cores), Jamabaugh, Hyderabad-16.
 SYED REHMAT ALI, 34, Muradasagaram, Hyderabad-16.
 TIMES OF INDIA, Gangammal Road, Hyderabad-29.
 UNITED NEWS OF INDIA, 9-2-45, Saifabad, Hyderabad-22.
 (See: Mass Communication)

OIL MILLS

SRI SATYANARAYANA GROUNDNUT OIL MILLS, Ponduru.
 SRI SAIBABA RICE GROUNDNUT OIL MILLS, Amadalavalasa.
 SRI JAYALAKSHMI OIL MILLS, Vetapalem.
 CHANDRASEKARA OIL MILLS, Kakinada.
 SRI SUBRAMANYESWARA OIL MILLS, Tapeswaram.
 SRI RAMAVILAS STEAM OIL MILLS, Mandapeta.
 SRI ANDHRA PRADESH KHADI & VILLAGE INDUSTRIES BOARD, Ambar.
 CHARKA SERVICING STATION & DYFING CENTRE, Pithapuram.
 K. GOPALASWAMI, Oils & Cakes, Kaygee Nagar, Vijayawada-2.
 N. NARASIMHA REDDY, Groundnut & Ground Nut Oil, C/o Messrs. N. Narasimha Reddy & Co., Pakala.
 G. SHANMUKHI, Groundnut & Groundnut Oil, P. Sadasiva Rao Sons, Railway Feeder Road, Tadpatri.
 T. G. LAKSHIMAYYA SETTY & SONS, Oils & Oil cakes, Adoni.
 SREE SATYANARAYANA OIL CO., Groundnut Oil and Groundnut, Nandyal R.S.

PAPER & STATIONERY MERCHANTS

ADVANCE STATIONERS, 22-7-231, Chatta Bazaar, Hyderabad-2.
 A. MD. ALI, Pathergatti, Hyderabad-12.
 AMRITLAL & SONS, G-15-2-2, Gowliguda, Hyderabad-12.
 ANAND BHANDAR, 4-5-476, Sultan Bazaar, Hyderabad-1.
 ANDHRA STATIONERY & PAPER EMPORIUM, 1244, General Bazar, Secunderabad-3.
 ASHOK TRADERS, 5-9-250, Abid Road, Hyderabad-1.
 M. BATCHU LINGIAH & SONS, 6, General Bazar, Secunderabad-3.
 G. BALAKRISHNA & SON, Maruthi Vadi, Secunderabad-3.
 COLI ESWARIAH, 3-2-73, General Bazar, Secunderabad-3.
 HINDUSTAN PAPER MART, 22-8-117, New Bridge, Secunderabad-3.
 INDIA PAPER MART, 7122, General Bazar, Secunderabad-3.
 KUSHALCHAND PVT. LTD., Tilak Road, Hyderabad-1.
 MYSORE PAPER CORPN., General Bazar, Secunderabad-3.
 OSMANIA GENL. AGENCY, E. R. Road, Hyderabad-1.
 RAJASHRI FACTORY, Industrial Area, Hyderabad-20.
 RUPEE TRADING CO., 4-1-928, Tilak Road, Hyderabad-1.
 M. RAMAIAH & CO., Dealers for Kores (India) Ltd., Bank Street, Hyderabad-1. Branch: 1-1-555, (T. F. 51564), Golkonda Cross Road, Hyderabad-20.

PETROL DEALERS

AGARWAL R. S. ESSO DEALERS, Beem Bazar, Hyderabad-12.
 AMAR PETROL SUPPLIERS, Sardar Patel Road, Secunderabad-3.

ANANT MOBILE SERVICE, 10-A, M. G. Road, Secunderabad-3.
 ANDHRA PRADESH SERVICE (AUTO), 16-8-931/1, Malakpet, Hyderabad-24.
 AUTO SUPPLIES, 5-10-1, Bashirabaugh, Kachguda, Hyderabad-27.
 BALAJI FILLING STATION, 3-4-211, Station Road, Hyderabad-27.
 BALAJI SERVICE STATION, 3-6-784/1, Himayatnagar, Hyderabad-29.
 BASHIR BAGH SERVICE STATION, Bashirabaugh, Hyderabad-1.
 DECCAN SERVICE STATION, Fateh Maidan, Hyderabad-1.
 FILMORE AGENTS BOC, Masab Tank Road, Hyderabad-4.
 STAR SERVICE STATION, 4-7-112, Putli Bowli, Hyderabad-4.
 SUBHAS PETROL SERVICE, B-6-194, Nizambagi Road, Hyderabad-1.

PHOTOGRAPHERS

CENTRAL STUDIO, Bashirbagh, Secunderabad-3.
 CHAYYA MANDIR, M. Market, Hyderabad-1.
 CITY GRAMAPHONE & PHOTOGRAPHIC CENTRE, Kothi Bus Stand, Hyderabad-1.
 JANATHA ART STUDIO, Gowliguda, Hyderabad-12.
 JANATHA STUDIOS, Press Photographers, 6-1-73/2, Lakdi-ka-pul, Hyderabad-4.
 LIBERTY STUDIO, Bashirbagh, Hyderabad-29.
 MEHTA BROS., Bank Street, Hyderabad-1.
 MOHAN, H. ART STUDIO, Bank Street, Hyderabad-1.
 MOORTHY & SONS, Nampally, Hyderabad-1.
 STATE PHOTO SERVICE, 94-F, Sarojini Road, Secunderabad-3.

PLASTIC AND POLYTHENE GOODS MANUFACTURERS

K. SUBRAHMANYA DUTT, B.Sc., Polythene Products, "Brundavan", Visakhapatnam-3. Tel: 289, 290 & 322.
 LIBERTY INDUSTRIES, Sanatnagar, Hyderabad-18.
 MAHAVIRA PLASTICS INDUSTRIES, Muralidar Bagh, Hyderabad-1.
 SANATNAGAR POLYTHENE INDUSTRIES, 32-2-623, Darushafa, Hyderabad-24.
 UTILITY INDUSTRIAL CORPN., Chandula Baradari, Hyderabad-2.

RADIO DEALERS

BHARAT RADIO TECHNOLOGICAL INSTITUTE, 363, Near Liberty, Hyderabad-29.
 CHIMALGI RADIOS, 4-1-978, Abid Road, Hyderabad-1.
 CITY RADIO & GRAMAPHONE & PHOTOGRAPHIC CENTRE, Hyderabad-1.
 EMSON ENGINEERING CORPN., 142, Rashtrapathi Road, Secunderabad-3.
 HYDERABAD RADIO HOUSE, 976, Abid Road, Hyderabad-1.

KALIDAS RADIOS, Sultan Bazar, Hyderabad-1.
 LUNAR RADIOS, Rastrapathi Road, Secunderabad-3.
 MOHAN RADIOS AND PHOTO GOODS, 4-3-505, Bank Street, Hyderabad-1.
 MOORTHY & SONS, 5-4-423, Station Road, Hyderabad-1.
 MURPHY RADIOS, M. G. Road, Hyderabad-4.
 NAGARJUNA ELECTRICALS, 6-1-73/11, Lakdikapul, Hyderabad-4.
 NAVRANG RADIO & ELECT. STORES, 5-2-83, Jambagh, Hyderabad-1.
 RADIO CENTRE, 87, Rashtrapathi Road, Secunderabad-3.
 RAMACHANDRA B. CHIMALGI, 15-3-1004, Hyderabad-1.
 S. S. RADIO & ELECLS., 1-8-27/11, Chikkadpally, Hyderabad-29.
 SARADA AGENCIES, Saifabad, Hyderabad-22.
 SONI AGENCIES, Sultan Bazar, Hyderabad-1.
 SEBASTIAN & SONS, 113, Sarojini Road, Secunderabad-3.

RADIO MANUFACTURERS

RADIO INSTRUMENTS ASSOCIATES (P) LTD., 1-10-84, Begumpet Hyderabad-16.

SAW MILLS

SRI RAM SAW MILLS, Ichapuram.
 MAHALAKSHMI SAW MILLS, Amadalavalasa (Srikakulam).
 SRI RAMAKRISHNA SAW MILL, Bobbili.
 KRISHNA SAW MILLS, Ichapuram.
 SRI GANESA SAW MILLS, Parvatipuram.
 SRI SITALAKSHMI SAW MILL, Srikakulam.
 SRI NILAKANTESWARA SAW MILL, Salur.
 SRI P. SITARAMAMURTHY SAW MILL, Vizianagaram.
 SRI G. K. FURNITURE WORKS, Vizianagaram.
 SRI SARADA SAW MILL, Anakapalli.
 SRI DURGA VIJAYA SAW MILL, Anakapalli.
 SRI SAIBABA SAW MILLS, Tanuku.
 SIRAJ SAW MILL, Akividu.
 CRESENT SAW MILL, Bhimavaram.
 SRI BHANU SAW MILL, Elumavaram.
 SRI DURGA SAW MILL, Eluru.
 SRI KRISHNA SAW MILL, Eluru.
 SRI GOWRISHANKAR SAW MILL, Eluru.
 SRI LAKSHMI TIMBER DEPOT, Eluru.
 SRI RAMANAJANEYA TIMBER DEPOT, Eluru.
 SRI RAMA TIMBER DEPOT, Eluru.
 VANI SAW MILL, Eluru.

SRI VENKATESWARASWAMI SAW MILL, Euru.
KANAKA DURGA SAW MILL, Gannavarani.
SRI RADHAKRISHNA SAW MILL, Palakol.
SRI VENKATESWARA SAW MILL, Palakol.
SRI SAIBABA SAW MILL, Tadepalligudem.
SRI SATYANARAYANA SAW MILL, Tadepalligudem.
ANDHRA SAW MILL, Tadepalligudem.
SRI APPALARAJU & MANIKKAM TIMBER DEPOT, Tadepalligudem.
SRI SAIBABA SAW MILL, Tanuku.
SRI SATYANARAYANA SAW MILL, Tanuku.
SRI VIJAYALAKSHMI SAW MILL, Vissakoderu.
SRI RAMCHANDRA FURNITURE WORK, Machilipatnam.
SRI ABBAS SAW MILL, Machilipatnam.
SRI SAROJINI SAW MILL, Machilipatnam.
SRI VENKATESWARASWAMY SAW MILL, Nandigama.
SRI VENKATESWARASWAMY SAW MILL, Vijayawada.
SRI DURGA SAW MILL, Vijayawada.
SRI KANAKADURGA SAW MILL, Sri Rama Saw Mill, Vijayawada.
D. RAMASWAMY REDDY SAW MILL, Guntur.
VENKATESWARA SAW MILL, Chirala.
MALLIKARJUNA SAW MILL, Narasaraopeta.
BALASUBRAMANYA SAW MILL, Narasaraopeta.
KRISHNA SAW MILL, Anantapur.
KHAJA MOHIDEEN SAW MILL, Anantapur.
BALAJI SAW MILL, Hindupur.
MARHTURI SAW MILL, Hindupur.
SANKARA VIJAYA SAW MILL, Hindupur.
FAKRUDDIN SAHEB SAW MILL, Anantapur.
ILLASU M. Rayadrug.
KADERIA SAW MILL, Anantapur.
KRISHNA SAW MILL, Anantapur.
SIVALAKSHMI SAW MILL, Anantapur.
VENKATESWARA SAW MILLS, Tadipatri.
VENKATESWARA SAW MILL, Anantapur.
HARI RAO SAW MILL, Kurnool.
ASHAPURI SAW MILL, Kurnool.
LAKSHMI SAW MILL, Kurnool.
PANDURANGA SAW MILLS, Nandyal.
ZEELANI SAW MILL, Kurnool.
MAZDOOR SAW MILL, Nizamabad.
M. A. RAHAMAN SAW MILL, Nizamabad.
HAFIZ ABDUL SAW MILL, Varni.
NEW SWASTIK SAW MILL, Karimnagar.
LAKSHMI SAW MILL, Karimnagar.
SHIVAJI BHANKI SAW MILL, Karimnagar.
PATEL SAW MILL, Jagtial.

SKIN MERCHANTS

ABDUL BAKSHI & BROS., H-1-4-712, Bakaram, Hyderabad-20.
C. R. & CO., 1-4-541, Bakaram, Hyderabad-20.
IQBAL & CO., M. R. 1-4-467, Bakaram, Hyderabad-20.
K. M. Mohammed Abdul Khader, 1-4-676, Bakaram, Hyderabad-20.

SPORTS GOODS DEALERS

ASIAD SPORTS, 5-4-794, Station Road, Hyderabad-1.
METRO SPORTS, 4-1-993, Abid Road, Hyderabad-1.
UBEROI & CO., 4-1-998/9, Abid Road, Hyderabad-1.

SUGAR INDUSTRY

SRI RAM SUGAR INDUSTRIES, Bobbili.
KHANDASARI CO-OP. SUGAR MILLS, Dandivalasa.
AMADALAVALASA CO-OP. SUGAR FACTORY, Amadalavalasa.
SADGURU KHANDASARI SUGARS, Jagannathapuram.
SREE VENUGOPALA KHANDASARI SUGAR, Narasimhampet.
PARAMESH KHANDASARI SUGARS, Pinapenki.
VENKATESWARA KHANDASARI SUGARS, Ramchandrapuram.
MAHAVIR KHANDASARI SUGAR, Baramam.
KALINGA KHANDASARI SUGAR, Chidambalapalli.
VENKATESWARA KHANDASARI SUGAR, Appanadoravalasa.
JAIPAL SUGAR, Anakapalle.
TANDAVA CO-OPERATIVE AGRICULTURAL & INDUSTRIAL SOCIETY (Factory at Payakaraopeta), Tuni.
THE ANAKAPALLE CO-OPERATIVE AGRICULTURAL & INDUSTRIAL SOCIETY LTD., P.O. Thummapala, Anakapalle.
THE ETHKOPPA CO-OPERATIVE AGRICULTURE AND INDUSTRIAL SOCIETY LTD., Ethkoppa, Machhapatnam Dt.
T. S. NAGARAM GUR & KHANDASARI SUGARS LTD., Seethanagara n.
SRI SOMARAJU SUGAR MILLS (Khandasari), Peddapuram.
CHODAVARAM CO-OPERATIVE AGRICULTURAL & INDUSTRIAL SOCIETY LTD., Govada.
SRI SOMARAJU SUGAR FACTORY, Baragupudi.
SRI SARVARAYA SUGAR LTD., Chelluru.
SIVAKAMI SUGARS, Pidipattu, Tanuku.
SRI VENKATAKRISHNA SUGAR MILLS, Dalla.
SRI CHODEY APPARAO & SONS LTD., Kakinada.
SURI APPARAYA KHANDASARI MILLS, Hatrevalapalli.
SRI KIRLAMPUDI SUGAR MILLS, Pithapuram.
SRI VENKATA SATYA SUGAR MILLS, Palimuru.
SRI SAHASRANAMA SUGAR WORKS, Rajahmundry.
THE DECCAN SUGAR AND ABKARI & CO., LTD., Samalkot.

GODAVARI SUGARS, Kapavaram.
SRI VENKARATHANA SUGAR MILLS, Dulla.
THE JEYPORE V. V. S. SUGAR CO. LTD., Chagallu.
SRI JANATHA SUGAR LTD., Manchili.
INDUSTRIAL ALCOHOL PLANT, Mandapaka, Tanuku.
CO-OPERATIVE AGRICULTURAL & INDUSTRIAL SOCIETY LTD.,
 Pulapalli, Palakol.
SRI VENKATESWARA KHANDASARI SUGAR (P) LTD., Tanuku.
CHALLAPALLI SUGAR LTD., Lakshmipura, Challapalli.
THE K.C.P. LTD. SUGAR FACTORY, Vuyyuru.
CHITTOOR CO-OPERATIVE SUGARS, Chittoor.
NIZAM SUGAR FACTORY, Shakkarnagar, Nizamabad.

TANNERIES

THE SOUTH INDIAN TANNING WORKS, Samalkot.
MD. YUSUF TANNERY, Adoni.
P. S. N. HUSSAIN TANNERY, Yemmiganur.
ABDUL BAQUR & CO., Hyderabad.
AMER KHAN TANNERY CO., Hyderabad.
H. E. H. AZIZ & CO., Hyderabad.
M. UMAR & CO., Hyderabad.

TEXTILES

SRI RAMACHANDRA SPINNING MILLS, Pandalapaka.
SURYANARAYANA SPINNING MILLS, Pandalapaka.
SURYARAYA TEXTILES, Vizianagaram.
MANIKKAM BANIAN FACTORY, Palakol.
S. BHARAT SPINDLE TAPE WORKS, Palakol.
VASUNDARA SPINDLE TAPE WORKS, Palakol.
GAMINI KNITTING WORKS, Tanuku.
SRI AKKAMAMBA TEXTILES LTD., Tanuku.
VENKATARAYA COTTON MILLS, Tanuku.
SRI SATYANARAYANA SPINNING MILLS (P) LTD., Venkataraya-
 puram, Tanuku.
VIJAYA SPINNING MILLS LTD., Vijayawada.
GRANDHI LAKSHMANASWAMI & BROS., Gudivadavari Street,
 Vijayawada.
JONAH & JOSEPH BROS., Crochet Lace Exporters, Narasapur.
AYTHA RAMARATHAN CHETTY CLOTH MERCHANTS, Sullurpet.
MOHAN BROS., Trunk Road, Nellore.
KALANGI RAJAGOPAL CHETTY & SONS, Sullurpet, Nellore.
TIRUPATI COTTON MILLS, Renigunta.
MADALLAPALLI MUNISUBRAMANYAM CHETTY, 291/10, Bazar
 Street, Chittoor.

SRI VENKATACHALAPATHI MILLS LTD., Padmavathi Naga-
 Tirupathi.
MAKAMS CLOTH EMPORIUM, Vayalpad.
ASOKA BEST SEWINGS MFG. CO., Chittoor.
NATAKALA NARAYANA CHETTY & SONS, Bazar Street, Chittoor.
MADANAPALLI SPINNING MILLS LTD., Chittoor.
COTTON TEXTILES LTD., Chittoor.
ANDHRA COTTON MILLS LTD., 9/223, Vederla Bazar, Proddatur.
PADMAVATHY SPINNING MILLS LTD., Kodur.
JAYANTHI RAMACHANDRAPPAN SEITTY MILLS (P) LTD., Rayadru.
TELENGANA SPINNING MILLS LTD., Pengari Textiles, Uppal.
MOOLA FACTORY, Tadpatri.
SUPER SPINNING MILLS, Hindupur.
CO-OPERATIVE WEAVING FACTORY, Tadpatri.
P. DASIAHMURU HANDLOOM WEAVING FACTORY, Tadpatri.
B & C MILLS, Tadpatri.
R. ESWARAIAH CHETTY & SONS, Mahatma Gandhi Road, Kadiri.
ANANTHAPUR COTTON MILLS LTD., "Lakshmi Nivas", Water Work
 Road, Tadpatri.
ADONI COTTON SPIN INDUSTRIES, Adoni.
ADONI COTTON MILLS, Adoni.
RAYALASEEMA MILLS, Adoni.
ADONI SPINNING WEAVING CO. LTD., Adoni.
B. & C. LTD., Adoni.
VENKATALAKSHMI COTTON MILLS (P) LTD., Nandyal.
YEMMIGANUR SPINNING MILLS, Adoni.
JEEVANLAL NARSI & SONS, Adoni.
DANDARADAS HARIDAS & SONS, Minchin Street, Kurnool.
SURYALAKSHMI COTTON MILLS, Mahabubnagar.
VENKATARATNAMBA TEXTILES LTD., Nizamabad.
NATARAJ SPINNING & WEAVING MILLS LTD., Nirmal.
AZAMSAHI MILLS LTD., Warangal.

TIMBER MERCHANTS

ADERU LINGAIAH & SONS, A-17-154, Mushirabad, Hyderabad-20.
ALA RAJIAH & SONS, Goshamahall, Hyderabad-12.
ALA RAMKISHAN & SONS, Goshamahall, Hyderabad-12.
A. P. PATEL & CO., 1-7-150, Bharam, Hyderabad-20.
AHAPURA TIMBER MERCHANTS, 5-5-691, Kattalmandhi, Hyde-
 rabad-12.
AVADOGDI NARASIMHA & BROTHERS, 5-5-697, Goshamahall Road,
 Hyderabad-12.
BALIAH & SONS, N. 5-3-292, Goshamahall Road, Hyderabad-12.
BALIAH & SONS, 9-5-1041, Goshamahall Road, Hyderabad-1.
BHARAT TIMBER DEPOT, A-15-16, Mushirabad Main Road, Hyde-
 rabad-20.

B. NARAYANASWAMY & SONS, 18, Narayanguda, Secunderabad-3.
G. N. PANTULU & CO., Timber Merchant, 3-4-523, Bakaram, Hyderabad-20.
RAJAM & CO., G., 1-8-701/2, Nallagunta, Hyderabad-20.
GOPALAKRISHNAIAH, P., New Bhoiguda, Secunderabad-3.
G. NAGESWAR RAO & BROS., Mushirabad, Hyderabad-20.
JAGGIAH & SONS CO., 3, New Bhoiguda, Secunderabad-3.
K. K. PATEL & CO., 4-9-56, Bakaram Road, Hyderabad-20.
LAXMI TRADING CO., 5-5-612/1, Kalakunta Road, Hyderabad-12.
SARDAR AMRICK SINGH & BROS., 1-7-391/4, Bakram Road, Hyderabad-20.
SREE RAM & CO., 5-5-631, Mulakunta Road, Hyderabad-12.
T. RAMALINGAM & T. VITAL RAO, 7, Bhoi Guda, Secunderabad-3.
VENKATARAJA & CO., M-5-3-291, Goshamahall Road, Hyderabad-12.

TOBACCO

VUYYURU RAMABALUDU CIGAR WORKS, Kakinada.
THE INDIAN LEAF TOBACCO CO., LTD., Anaparthi.
THE NATIONAL TOBACCO CO., OF INDIA LTD., Biccavolu.
J. DIVAKAR CIGAR FACTORY, Kakinada.
THE NATIONAL TOBACCO CO., OF INDIA LTD., Rajahmundry.
THE NATIONAL TOBACCO CO., OF INDIA, LTD., Raghudevapuram.
SRI NARAYANA CIGAR WORKS, Ramachandrapuram.
SRI YELLAREDDARMA CIGAR WORKS, Ramachandrapuram.
BANGARU SY. SURYANARAYANA TOBACCO CIGAR CO., Eluru.
GOLDEN TOBACCO CO., OF INDIA, Eluru.
S. R. ANDHRA BEEDI FACTORY, Eluru.
ROSHAM ISLAMIA BEEDI FACTORY, Eluru.
BRITISH INDIA TOBACCO LTD., Dommeru.
NATIONAL TOBACCO CO., OF INDIA LTD., Dommeru.
D. B. PUNNAIAH TOBACCO EXPORTERS, Kovvuru.
INDIAN LEAF TOBACCO DEVELOPMENT CO., LTD., Kovvuru.
MADDI VENKATASUBBA RAO TOBACCO FACTORY, Kovvuru.
K. MAHABOBBKHAN TOBACCO FACTORY, Kovvuru.
BANDARU SURYANARAYAN CIGARS LTD., Eluru.
ABDUL KHADER BEEDI FACTORY, Duvvuru.
APPOLO BEEDI FACTORY, Nellore.
BALA SAHIB BEEDI FACTORY, Nellore.
LANGAR CIGAR FACTORY, Nellore.
MODEL CIGAR FACTORY, Nellore.
MOUZHUR AHMED BEEDI FACTORY, Nellore.
MUSTAK AHMED FACTORY, Nellore.
SHAIK SAB BEEDI FACTORY, Nellore.
SPECIAL SUR-JAIL WORKSHOP (BEEDI) APPOLO BEEDI FACTORY, Nellore.

INDUSTRIAL & COMMERCIAL DIRECTORY

STOVE BEEDI FACTORY, Nellore.
SYED JAFFER HUSSAIN BEEDI FACTORY, Nellore.
BANAM BEEDI FACTORY, Nellore.
STOVE BEEDI FACTORY, Chittoor.
ANIL BEEDI FACTORY, Punganur.
ANIL BEEDI FACTORY, Rompcherla.
BHAKTHIMALA BEEDI FACTORY, Chittoor.
BAVUTTA BEEDI CATRY, Chittoor.
P. L. INAYATHULLA BEEDI FACTORY, Chittoor.
P. V. RAMACHANDRA RAO BEEDI FACTORY, Chittoor.
RYTHU BEEDI FACTORY, Chittoor.
TIGER HEAD BEEDI FACTORY, Punganur.
THE REDDY BEEDI FACTORY, Chittoor.
V. RANGIAH CHETTY & CO., Chittoor.
SHAIK AHMED SAHIB & SONS, Chittoor.
NOOR MOHAMED BEEDI FACTORY, Cuddapah.
TAPPAL BEEDI FACTORY, Rayachoti.
MERA MOHEDEEN BROS., Anantapur.
MADAV BEEDI WORKS, Dharmavaram.
KRISHNA SHETTY & SONS., Hindupur.
KRISHNA BEEDI FACTORY, Kadiri.
KARINJIA BEEDI WORKS, Tadipatri.
A. RANGIAH SIDDANTHI TOBACCO FACTORY, Peta.
VASIR SULTAN TOBACCO COMPANY LTD., Hyderabad.
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SYEDIAL BEEDI FACTORY, Latchapat.
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RAJA BEEDI FACTORY, Medak.
SHANTI POOL BEEDI FACTORY, Medak.
S. NARASIAH BEEDI FACTORY, Medak.
SIDDPET LION BEEDI FACTORY, Medak.
M. NARASIMHALU BEEDI FACTORY, Aloor.
MURASAGOUND BEEDI FACTORY, Bireli.
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RAMANA REDDI BEEDI FACTORY, Kalva.
RAMIREDDY BEEDI FACTORY, Madhakur.
GANESH BEEDI FACTORY, Nirmal.
KARIMUDDIN BEEDI FACTORY, Nirmal.
KISAN BEEDI FACTORY, Nirmal.
M. R. REDDI BEEDI FACTORY, Nirmal.
MANNA BEEDI FACTORY, Nirmal.
MAHADEVA SITARAMAN BEEDI FACTORY, Nirmal.
D. SARMA BEEDI FACTORY, Nirmal.
K. R. RAJA REDDY BEEDI FACTORY, Nirmal.
BHIMANASA G. M. REDDY BEEDI FACTORY, Nirmal.
M. RAMULU REDDY BEEDI FACTORY, Bhimsa.

M. R. REDDY BEEDI FACTORY, Nirmal.
T. S. REDDY BEEDI FACTORY, Nirmal.
V. TATAIAH & J. RAMAKRISHNULU TOBACCO CO., Mangalagiri.
RAVOORI RAMAKOTAIAH TOBACCO CO., Mangalagiri.
VENKATESWARA TOBACCO CO., Mangalagiri.
RAMAKRISHNA TRADERS TOBACCO CO., Mangalagiri.
RAJASTHAN TOBACCO CO., Koppuravur.
VENKATRAMA TOBACCO CO., Tadikonda.
STAR INDIA TOBACCO CO., Tadikonda.
TRIPURANENI SAMBASIVA RAO TOBACCO CO., Tadikonda.
JAYALAKSHMI TOBACCO CO., Tadikonda.
THE BEST INDIA TOBACCO EXPORT CO., Tadikonda.
EAST INDIA TOBACCO CO. LTD., Tadikonda.
MURALIKRISHNA TOBACCO CO., Tadikonda.
JAYASRI TOBACCO CO., Tadikonda.
MAJETY VENKATESWARA RAO TOBACCO CO., Tadikonda.
SOUTH INDIA TOBACCO EXPORT CO., Tadikonda.
FAMOUS INDIA TOBACCO CO., Tadikonda.
VIJAYASURI TOBACCO CO., Tadikonda.
INTERNATIONAL TOBACCO EXPORTERS, Tadikonda.
THE NEW INDIA TOBACCO CO., Tadikonda.
J. VENKATESWARA RAO TOBACCO CO., Tadikonda.
VIJAYA TOBACCO CO., Tadikonda.
GARENTAL NARASIMHARAO TOBACCO CO., Tadikonda.
BEST LEAF INDIA TOBACCO CO., Tadikonda.
GOGINENI NAGESWARA RAO TOBACCO CO., Tadikonda.
VENKATESWARA TOBACCO CO., Tadikonda.
TOBACCO TRADING SYNDICATE, Tadikonda.
ASHOK TRADERS, Tadikonda.
BOHINI TOBACCO CO., Tadikonda.
THE ANDHRA LEAF TOBACCO CO., Tadikonda.
INDIAN TOBACCO CORPN., Tadikonda.
GHOUSE LEZAM TOBACCO CO., Pedaparmi.
THALLAM VENKATARATHNAM & B. SUBBIAH TOBACCO CO.,
Mothadaka.
KACHERLA LAKSHMINARAYANA TOBACCO CO., Mothadaka.
BIJNEPALLI SUBBARAO & A. VENKATESWARA RAO TOBACCO
CO., Amaravathi.
CHINTALAPATI RAMAKRISHNAIAH TOBACCO CO., Amaravathi.
SRI VENKATESWARA TOBACCO CO., Dharnikota.
NARAHARI & CHOWDARI TOBACCO CO., Dharnikota.
DEGALA BHAVIAIAH TOBACCO CO., Yetkuru.
KOLLIPARA SUBBA RAO TOBACCO CO., Prathipadu.
MANCHIKALAPUDI NAGAIHA TOBACCO CO., Uppalapadu.
B. SAMBASIVA RAO TOBACCO CO., Perucherla.
R. V. S. RAO TOBACCO CO., Guntur.

KOMINENI VENKATESWARA RAO TOBACCO CO., Gunturivari
tota, Guntur.
PADARTHI RATNAM TOBACCO CO., Kothapet, Guntur.
KOKURI SUBBA RAO TOBACCO CO., Sivalayam Street, Kothapet,
Guntur.
FAMOUS LEAF TOBACCO CO., Post Office Road, Kothapet, Guntur.
MURTHY TRADING TOBACCO CO., Old Club Road, Guntur.
T. S. PALANIAPPA PILLAI TOBACCO CO., College Ground Street,
Kothapet, Guntur.
THE ROSHAN TOBACCO CO., Anandapeta, Guntur.
MERCANTILE TOBACCO CORPN., Anandapeta, Guntur.
KARPURAM TOBACCO CO., Old Bank Road, Guntur.
ASHRAM MOHANLAL TOBACCO POWDERING FACTORY, Sanga-
kunta, Guntur.
NAVAYUGA TOBACCO CO., Sayadhan Street, Guntur.
SULAMAKHAN & MAHABOBBKHAN TOBACCO CO., 1, China Bazar,
Guntur.
THE GREAT INDIA TOBACCO CO., Sangadikunta, Guntur.
RAMAKRISHNA TRADING TOBACCO CO., Budampad, Guntur.
Y. V. L. NARASIMHA RAO TOBACCO CO., Trunk Road, Guntur.
KOPPURAVURI VENKATESWARLU TOBACCO CO., Lalapet, Guntur.
G. V. RAGHAVIAH & SONS TOBACCO CO., Nagarapurpalem, Guntur.
G. V. RATIAH & CO., Nagaranpalem, Guntur.
MITTAPALLE ADINARAYANA TOBACCO CO., Trunk Road, Guntur.
MEREDDY SEETHAREDDY TOBACCO CO., Nagarampalem, Guntur.
MADDI VENKATASUBBIAH TOBACCO CO., Kannavaritota, Guntur.
ALURUKOTIAH TOBACCO CO., Nagaranpalem, Guntur.
J. AYYANA TOBACCO CO., Arandalpet, 4th lane, Guntur.
GOLIVARADAYYA TOBACCO EXPORTERS, Kothapet, Guntur.
SOLORAJ CHEGANRAJ TOBACCO CO., Trunk Road, Guntur.
MADISSETTY BRAMHAIAH & CO., Kakumanuvuri Street, Kothapet,
Guntur.
VENKATESWARA TOBACCO CO., Pothuruvaritota, Guntur.
CHANDAJI KHUBAJ TOBACCO CO., Yetkur Road, Guntur.
LALAJI KRISHANLAL TOBACCO & CO., Sangadigunta, Guntur.
BALALAIHA TOBACCO CO., Peddapuli Street, Guntur.
VERGINA TOBACCO CORPN., Somuvuri Street, Kothapet, Guntur.
SRI BHAVANI TOBACCO CO., Kothuruvaritota, Guntur.
VENKATACHALA TRADING CORPN., Sangadigunta, Guntur.
CHEBROLU HANUMAYYA TOBACCO CO., Sithambalagaruvu, Guntur.
BOCHIRAJU RAMA RAO TOBACCO CO., Mangalagiri Road, Guntur.
PADARTHY RATNAM TOBACCO CO., 2, Amaravathi Road, Guntur.
BADINADI RAMAYYA TOBACCO CO., Old Guntur, Guntur.
KALLURI NARASIMHA RAO TOBACCO CO., Puvvadavari Street,
Kothapet, Guntur.
MEGHRAJ SHESHMAL TOBACCO CO., Old Bank Road, Guntur.
P. LOKANATHA RAO TOBACCO CO., Mangalagiri Road, Guntur.

A. GATTUPALLI TOBACCO CO., Mangalagiri Road, Guntur.
K. S. MADHAVA RAO TOBACCO CO., Nehrunagar, Guntur.
THE INDIAN COUNTRY VIRGINIA TOBACCO CO., Kothapet, Guntur.
RAYAPATI VEERAAIAH TOBACCO CO., Arandalpet, 4th Line, Guntur.
PREMIER TOBACCO CO., Main Road, Kothapet, Guntur.
POLURI PURUSHOTHAM TOBACCO CO., Kothapet, Guntur.
GOODWILL TOBACCO CORPN., Near Old Police Line, Guntur.
GUTTIKONDA ANJIREDDI TOBACCO EXPORTERS CO., Mangalagiri Road, Guntur.
POLISETTY VENKATESWARLU TOBACCO CO., Gunturivaritota, Guntur.
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AMMANARAJA CHODAGAM: b. Feb. 6, 1909. Edn: Queen Mary's College, Madras, B.A. Took part in freedom struggle; Madras MLA, 1937 & 1946; **Deputy Speaker, Madras Legislative Assembly** 1946-52; Andhra MLA, 1955-62; Mem: Rajya Sabha, since 1962. Add: Hyderabad.

ANANTAKRISHNA SARMA, RALLAPALLI: b. Jan. 23, 1893, at Kalyanadurg Taluk, Anantapur District. Edn: Studied Classical Sanskrit Indology, Musicology. Was Telugu Poet Laureate at Mysore for about 30 years. Later while at Tirupati, he brought to light **Tallapaka Keertanas**. Pub: Lectures on Vemana (Tel.). Ed: Tallapaka Keertanas. Add: Tirupati.

ANANTHASAYANAM AYYANGAR, MADABHUSHI: b. Feb. 4, 1891, at Tiruchanur, Chittoor Dt. Edn: B.A., B.L., Madras and Tirupati took part in freedom struggle and courted jail several times; Mem **Constituent Assembly of India**; **Deputy Speaker, Lok Sabha** (1952-55); **Speaker, Lok Sabha** (1956-62); widely travelled in the Continent Now Governor of Bihar since 1962. Pub: Lectures on Culture Indian Religious Thought; Our Parliament. Add: Raj Bhavan Patna, Bihar.

ANJANEYALU, DHULIPALA: b. Feb. 10, 1923. Edn: B.A. (Hons.), B.L. Sub-Editor, *Indian Express* (1948-53), *The Hindu* 1953-59: Travelled Europe. Feature writer, Literary critic. Now Assistant Editor '*Vani*' (Telugu), AIR since 1959. Pub: *Indian Abroad-Window to the West* (1966). Add: 42, Mandavalli Street, Madras-28

APPARAO, PONANGI SRI RAMA: b. July 21, 1923. Edn: Andhra University and Osmania University, M.A., Ph.D., Served as Telugu Lecturer in various Colleges. Recipient, National Award for the Publication '*Natya Sastramu*', 1961. Hon. Secretary, **A. P. Sangheetha Natak Academi**, 1961. Pub: *Viswabarathi, Venuvu* (Poetic Prose), 1952, *Tajmahal* (Drama), 1942, *Natya Sastramu*, 1959. Add: Special Officer, Institute of Telugu, Department of Education, Govt. of Andhra Pradesh, Hyderabad.

ARUDRA (BHAGAVATULA SIVASANKARA SASTRI): b. Aug. 31, 1925, at Visakhapatnam. Edn: Discontinued studies to take part in '*Quit India*'; Imprisoned (1943-47). Modern poet of verse libre school. Edited *Anandavani* (weekly). Joined films (1949) as script writer. Associated with 150 films; Wrote 1,500 lyrics for films. Pub: *Twamevahan* (1949). *Gayalu-Geyalu* (1955), *Sinevali* (1960). *Koonalamma Padaalu* 1964. Presently engaged in writing *Samagrandhra Sahityam* in 15 volumes (11 volumes were published by 1967). Add: 1, Sivaprakasamudali Street, T. Nagar, Madras-17.

ATREYA: b. Playwright. Cine writer. Pubn: *Atreyanatikalu, Everudonga, Gumasta, Kappalu*. Add: Madras.

ALAKRISHNA RAO, S: b. May 31, 1901, at Asifabad. Municipal & Hyderabad. Practising Lawyer. Elected Chairman, Municipal Council, Asifabad from 1961 — **Chairman, Local Library Authority, Adilabad**. Add: Asifabad.

ALARAMAKRISHNAYYA, DUGGIRALA: b. July 10, 1905. Arrested at the age of 14 when he produced plays describing atrocities in Punjab. Andhra Mahasabha awarded him a title **boudha vanmaya brahma** in appreciation of his literary work **budha purana**. **President, Andhra Region Hindi Mahasabha**; jailed for 33 months between 1930-33. **Secretary, APCC**, 1947-50; M. P. (Lok Sabha), (1957-62). Add: Suryapet, Vijayawada.

ALARAMAREDDI, ADDURI: b. n.a. Rajyasabha, 1953-62. **Chairman, Zilla Parishad, Chittoor**, 1959-62. Minister for Agriculture, Govt. of Andhra, 1962; Later became Education Minister (March 1965-67). Add: Hyderabad.

APINEEDU, MAGANTI: b. Aug. 14, 1895. Edn: B.A. (Cal), B.Sc. (Ag) Calif. M.Sc. (Cornell.); Participated in freedom struggle and courted imprisonment; married Annapurna (deceased) a staunch congress worker. **Secretary, Harijan Sewak Sangh, Andhra Region** (1932-42). Mem: Legislative Assembly (1937-39 & 1945-52). **Parliamentary Secretary** (1937-39), **Project Officer, Community Dev. Programme**. Add: 64, Fourth Main Road, Gandhi Nagar, Madras-20.

ASAVARAJU, VALLURU: b. May 5, 1914. Edn: Engineering Diploma, Guindy, 1934. Mem: Hyderabad. Andhra Maha Sabha (1934); Joined State Congress (1946). Labour Leader (1948-49). Was Member of the Caretaker Government headed by M. K. Vello-di, after 'Police Action', Dec. 1949. Planning and Development Minister, 1956-59. **General Secretary, APCC** (1959-65), **Chairman** Andhra Pradesh Road Transport Corporation, 1965-66). Returned in Fourth General Election to Assembly from Siddipet Constituency. Now Revenue Minister 1967. Add: Hyderabad.

BHAGAVANTAM, SURI: b. 1909. Edn: B.Sc., (Hyderabad 1928), M.Sc., Madras (1932) D.Sc.; was reader in Physics, Andhra University, (1933); was Prof. in 1938; was Principal, University College (1941). Awarded Hony. Doctorate in Science (1941). **Pres: Physics Section, Indian Science Congress** (1946); **Scientific Liaison Officer, Indian High Commission, London** (1948); **Director, Research in Physics, Osmania University**, 1949-52. **Vice-Chancellor, Osmania University**, (1952-57). **Director, Indian Institute of Science** (1957-62) since 1962, **Scientific Adviser to the Defence Ministry, Govt. of India**. Add: New Delhi.

BHAGAVANTHRAO, ANAGANI: b. 1923. Edn: M.A., LL.B., Returned to Andhra Assembly from Kuching constituency in 1955 & 1967. **Pres: Backward Classes Association**; **Joint Secretary, Toddy Tapers Assn**; Andhra Pradesh Cottage Industries Minister (1957-60). Now MLA (1967). Add: Repalle.

- BHAGAVAT, TUMPUDI RANGANATHA:** b. Jan. 14, 1909. **Edn:** B.A., B.L., Advocate, Hig Court. Joined Andhra Bank Ltd., as Agent, 1945, successively became Asst. General Manager; Deputy General Manager, Joint General Manager and now General Manager, since April 1959. **Add:** Hyderabad.
- BHOJREDDI, M.:** b. Jan. 19, 1919, at Shamsabad. **Edn:** Matriculation. 1935. From 1933, was interested in library movement. **Mem:** Cong-Pres: DCC (1953-59), **Vice-Chairman**, Zilla Parishad 1959-62; connected with public life and activities. Now Chairman, Zilla Parishad, Hyderabad District. **Add:** 3-2-792, Kachiguda, Hyderabad-27. Tf-42843.
- BHUSHAN, VIDYA.** b. June 15, 1923. **Edn:** Udgir, Bombay (G. Art) 1944, Belgrade. Dip. in Fresco; Did murals for Nizam Palace, Delhi; life size portraits for Govt. Buildings in New Delhi and Hyderabad. Won Gold Medal in Hyderabad; Was awarded President's Plaque in the National Exhibition of Art at Delhi 1957. Won Silver Medal in International Exhibition of Art at Moscow 1957. Was Kathak dancer, Artist. Now Head of Painting Department, Govt. College of Fine Arts, Hyderabad. **Add:** Gagan Mahal Cooperation Colony, Hyderabad.
- BRAHMANANDA REDDI, KASU:** b. July 28, 1909, at Chirumamilla, Guntur. **Edn:** B.A., B.L., Guntur & Madras. **Mem:** AICC. Imprisoned for his participation in Freedom Struggle activities (1942-45); **President**, District Board, 1936; Madras M.L.A., 1946-52; **General Secretary**, A.P.C.C., 1955-56; Minister for Local Administration, 1956-58; **Finance Minister**, 1958-64; **Chief Minister**, since Feb. 1964. Returned to Legislative Assembly from Narasaraopet Constituency. **Add:** Ananda Nilayam, Begumpet, Hyderabad, Tf. 32886.
- CHAKRAPANI (ALURI VENKATASUBBARAO):** b. Aug. 5, 1908 **Edn:** Children's magazine in Telugu, **Chandamama**, **Yuva** Prolific writer, Cine writer, Producer; Nominated to A.P. Leg. Council Council (1964) **Pub:** **Trilochana**, **kaviraju**, **badadidi**, **devadasu** (Tr.) Scenerio to Dharmapathi (1941); Story writer to hit films **Swargaseema**; With B. Nagireddi produced hit films in Telugu **Sahukaru**, **Patala Bhairavi**, **Missiamma**, **Mayabazaar**, **Gundammakatha** **Add:** Vahini Studios, Vadapalani, Madras-26.
- BRAHMAYYA, GOTTIPATI:** b. Dec. 3, 1898. In politics since 1913; Was President East Krishna District. In Congress since 1922; Courted imprisonment thrice; **General Secretary**, A.P.C.C. **Vice President**, Pradesh Ryot Conference (1936-37), M.L.C. (1958); **President**, APCC, (1962-64); **Chairman**, Legislative Council, Andhra from Jul. 2, 1964. **Add:** Hyderabad.
- CHALAM (GUDIPATI VENKATACHALAM):** b. na **Edn:** na served Education Department. Prolific writer of short stories, attacking traditional taboos; now leading a spiritual life at Ramanashram. **Pub.** **jeevita sandasam**, **Maidanam**, **musings**, **premalekhalu**, **ramanashrama lakhalu sasanka**, **stri**. **Add:** Ramanashram, Tiruvannamalai, Madras State.

- CHAMAKUR, S. N.:** (Chamakura Satyanarayana) b. 8th April 1901, Village Ganjette, Nizam Dominions. **Edn:** Art Studies: 1923. Damerla School; Diploma in painting 1931- Sir J. J. School of Arts, Bombay. His painting **Dhyana Buddha** was selected from India for the British Empire Wembley Exhibition, 1923. **Estd:** Chamakur Art Akadamy, Madras 1938. Served South Indian Society of Painters, Madras, as its Hony. Secretary 1949-51-V.P. 52-59. V.P. Andhra Pradesh Lalit Kala Akademy, Hyderabad, 1961-64. Well known portrait painter. Awarded prizes for his pictorial compositions, **Add:** 53, Indira Nagar, Adyar, Madras.
- CHANDRAMOULI, KALLURI:** b. 1900 **Edn:** Scotland (1924) joined Cong. in 1926; President DT Board, Guntur 1922-30; Imprisoned in 1930, 1940 & 1942. M.L.A. 1947. Minister for Local Admn. (1947-52); **Gen. Secy.** APCC 1954; became Revenue Minister Andhra State (1955-56); and Minister for Religious Endowments (1956-62) **Chairman:** T. T. Devastanam (1963-64) **Add:** Hyderabad.
- CHANDRAREDDI, P.:** b. July 1904 at Damaramadugu; Advocate (1928) **Mem:** Madras Bar Council (1943-48) Judge, Andhra Pradesh; Court (1948-54); Judge (1954-63) High Court, Andhra Pradesh; Chief Justice, High Court, Andhra Pradesh. Acting Governor, Madras 1966; now, Vice Chancellor: Annamalai University **Add:** Annamalai Nagar, N.A. Dt.
- CHENCHURAMA NAIDU, NALAMOTHU:** b. 1914. Joined Congress 1936. Was Vice Pres., Nellore Dt. Board 1938-42 and Pres 1949-53. MLA since 1952; Minister for Municipal Admn. 1965-67. Now Minister for Municipal Administration, Forests & Accommodation Control. **Add:** Building No. 1, Begumpet, Hyderabad. Tf 33269.
- CHENNA REDDI, MARRI:** b. Jan. 1919 at Siripuram, Hyderabad. **Edn:** Medicine Graduate (1941); Participated in propaganda of Khaddar (1935); Founder Andhra Student Assn., Hyderabad (1940); Court- ed imprisonment; **Minister for Food**, Hyderabad 1952-56; Andhra Pradesh **Minister for Planning** 1962-64; **Finance Minister** 1964-67; returned to State Assembly and became State Minister for a few days when he was included in the Union Cabinet as Minister for Steel, Mines & Metals; **Mem:** Executive Committee Telugu Bhasha Samiti **Add:** New Delhi.
- DASARATHI:** b. Jan. 10, 1927 at Gudur, Mahbubabad. **Edn:** B.A. (Lit.) at Osmania Univ. Worked for abolition of Jagirdari System (Garla). Took part in freedom movement. Courted imprisonment (1947). Lyric writer; Playwright; Short Story writer. **Mem:** A.P. Sahitya Akademi since 1957. **Pubn:** **Agnidhara**; **Rudra Veena**; **Mahandhrodayam**; **Mahabodhi**; **Punarnavam**; **Galib Geetalu**; **Kavita Pushpakam**; tr. from Urdu; General plays and Short Stories. **Add:** 90/c, V. M. Street, Madras-4.
- DESHMUKH, CHINTAMAN DWARAKANATH:** b. Jan. 15, 1894. **Edn:** Bombay & Cambridge. Barrister at Law; Entered ICS in 1919. Held various posts in Central Govt. until 1943 and became Governor, Reserve Bank of India 1943-49; was India's Delegate to Brettonwoods for World Monetary Conference. Served as Indian

- Governor on IMF & IBRD and other financial bodies in Europe & USA (1946-49); Mem: Planning Commission 1950; M.P. and Central Minister for Finance (1956-60); Received Magassay Award (1957). Founder Pres: India International Centre; Founder Pres: Council for Social Work; Chairman, University Grants Commission (1956-60); Vice Chancellor, University of Delhi (1960-67); Received Hon. Doctorates from various Universities from World over. Add: Hyderabad-7.
- HARMARAO, TAPI:** b. Sep. 19, 1888. Edn: Madras B.A., Lecturer Kallikota College 1903. Founder: Vegujukka Grantha Mala 1911. Ed: Janavani 1936-39, Kagada 1939-42; Prolific Writer in Telugu Cine Writer (Telugu) Add: Hyderabad.
- URGABAI DESHMUKH:** b. July 15, 1909. Edn: Self Education M.A., B.L. (1934-42); participated in Salt Satyagraha 1930, Advocate 1942-52; Founder Pres Andhra Mahila Sabha, Madras 1937 with branches at Hyderabad (1957), M.P. 1946-52. Mem: Constituent Assembly (1946-50); Chairman Central Board of Social Welfare (1953-62); Married C. D. Deshmukh (1953). Mem. Planning Commission 1952-53; Hon. Director, India International Centre & Council for Social work; responsible for bringing out Social Welfare in India & Encyclopaedia of Social Work in India; Chairman National Committee on Girls and Womens Education (1958); Organizer, Functional Literary Project at Shadnagar; Add: Andhra Mahila Sabha, Hyderabad-7.
- IRI, VARAHAGIRI VENKATA:** b. Aug. 10, 1894. Edn: Barrister-at-Law. Participated in Civil Disobedience Campaign and courted imprisonment. Pres: All India Railwaymen's Federation 1927. Gen. Secy. 1926-36. Pres: All India Trade Union Congress 1929. Present at Second Round Table Conference as Labour Representative. Mem: Central Legislature 1934. Madras Minister for Labour and Industry 1936-39 and 1945-47. Indian High Commissioner in Ceylon 1947-50. M.P. 1952-57. Union Labour Minister 1952-1955 Governor Uttar Pradesh 1957-660. Governor Kerala 1960-65; Governor Mysore 1965-67. Elected Vice-President of India since 1967. Add: New Delhi.
- SOKHALE, MADHAVAPEDDI:** b. 1917. Artist, Story writer, Art Director for Films. Pubn: Ballakattu Papayya (Stories); Moogajevulu. Add: Madras.
- GOPALAKRISNAYYA, VAVILALA:** b. 1906. Vice Pres: Andhra Farmers Association (1942-46) Member Working Committee, Andhra Maha Sabha (1947-48). Andhra Cooperative Union 1945-48. Ed: Vidyarthi (1926) Jyoti (1937) Sahakaramu (1945-49) Writes frequently on public issues in news columns. Independent Member, Andhra Legislative Assembly from Sattenapalli since 1952. Add: Sattenapalli.
- GOPALAREDDI, BEZAWADA:** b. Aug. 5, 1907. Edn: Santiniketan. Imprisoned between 1930-42. M.L.A. 1937. Mem: Rajaji Cabinet 1937-39; holding the portfolio of Local Self Government; Finance Minister 1947-52 Pres: APCC 1954-55. Chief Minister Andhra State 1955-56; Home Minister Andhra Pradesh 1956; Finance Minister Andhra Pradesh 1956; Finance Minister 1957-58; Union Minister of State for Revenue and Civil Expenditure 1958-60; Housing, Works and Supply Minister, 1960-62; Union Cabinet Minister for Information and Broadcasting 1962-63; Vacated Ministry under Kamaraj plan 1963; Since May 1967 Governor of Uttar Pradesh; Founder Pres: Telugu Basha Samithi Madras, & Hyderabad and Andhra Pradesh Sahitya Academy. Add: Rajbhavan, Lucknow, U.P.
- GOVINDACHARYALU, ATMAKURI:** b. 1897. Edn: FRES (London) Staunch Congressman; Participated in freedom struggle from 1920 on wards and courted imprisonment. Member AICC & APCC, Ed: Sathyagrahi; Pubn: Biography of Mahatma Gandhi (Tel), "Indian Economics (Tel)", Indian Polity (Tel), "Utararamayana", Madras, M.L.A., 1946-52. Add: Eluru.
- GURUMURTI, B. V.:** b. July 31, 1916. Was Secy. Hyderabad State Congress, 1952-55. Was Pres: D.C.C. 1952-53; 1956-57. Mayor: Secunderabad Municipal Corporation, 1953-54. Was Minister for Labour 1962-67. Re-elected to State Assembly from Khairatabad constituency. Now Minister for Industries. Add: New Building, Block No. 2, Begumpet, Hyderabad, TF: 32595/37778.
- GWYN, J.P.L.:** b. June 22, 1916 in England. Edn: Dublin Univ. Studied Sanskrit, Philosophy etc; Learnt Telugu; was appointed in Indian Civil Service, 1939; Was Asst. Collector, Bellary; Collector, West Godavari (1952) and other districts in Andhra. Second Member, Board of Revenue, Govt. of Andhra Pradesh; Chairman, Committee for setting up an Institute for the Development of the Telugu Language; Retired from Service in 1967. Add: Banjara Hills, Hyderabad-34. TF: 32231.
- HANUMANTHARAO, MOTURU:** b. 1917. Member, CPI, since 1953 Madras, M.L.A., 1952, was Editor, Visalandhra. Add: Vijayawada.
- HANUMANTHARAO, MADAPATI:** b. Jan. 28, 1885. Edn. Warangal. Served in the Nizam State Service for 14 years and enrolled as a Lawyer to practice for 24 years. Was elected Hyderabad, Mayor for 3 consecutive terms (1951-54). Outstanding personality in public affairs and popularly known as 'Andhra Pitamaha' was Chairman, Andhra Pradesh Leg. Council. Add: Barkat Pura, Hyderabad, TF: 44512.
- JAGANMOHAN REDDI, PINGLE:** b. Jan. 23, 1910. Edn: Hyderabad Leeds & Cambridge. Practicing Advocate at High Courts of Bombay, Madras and Hyderabad (1937-46); Legal Adviser to State sponsored commercial undertakings such as State Bank of Hyderabad etc. Addl. Judge, Hyderabad High Court (1948). Preside Judge, Hyderabad High Court, Judge, Andhra Pradesh High Court (1956-65) and became its Chief Justice (1965). Pub: The Hyderabad Excess Profit Tax. Add: B-1-12 Saifabad, Hyderabad-22, TF: 35287.
- JAGANNATHADAS, B.:** b. July 27, 1893 at Berhampur, Orissa. Edn: M.A., M.L. (1916); Connected with constructive work of Gandhiji. Judge & Chief Justice, Orissa High Court, 1948-53. Judge, Supreme Court of India (1953-59); Chairman, Second Pay Commission. At

- present Pres: Voluntary Health Services, Adyar, Madras-20. Add: 19, Second Main Road, Madras-20.
- JASHUA, GURRAM:** b. Sep. 28, 1895, at Vinukonda. Edn: Elementary Edn; Ubahayabhasha Praveena. Was Teacher, Andhra MLC. Pubn: Firdousi, Swapnakatha, Kandi Seekulu. Awarded Sahitya Akademi literary award for his Krestu Charitramu (poem) 1963. Add: Vinukonda, Guntur Dt.
- KALAJEE:** b. Sept. 9, 1914. Social Satire Writer. Pubn: na godava; paramatmudi katha. Add: Hyderabad.
- KANAKALINGESWARARAO, BANDA:** b. Jan. 20, 1907. Edn: Noble College, Machilipatnam, Law College, Madras. B.A., B.L., Practised Law till 1935. Actively engaged in theatre affairs, Acted in films Sarangadhara, Balanagamma and others. Started professional drama troupe Prabha Theatres, Eluru. Toured continent as a Member of a Cultural Delegation (1934). Recipient of an award from Sangita Nataka Akademi for his contributions to the Telugu Stage. Revived Kuchipudi dance. Founded 'Sri Sidhendra Kala Kshetram', Kuchipudi, Krishna Dt. Add: C/o All India Radio, Vijayawada.
- KASIPATI, KAPILA:** b. Sept. 14, 1908. Satirist. Edn: B.A., LL.B., Guntur & Banaras, 1931; Editorial Staff Member, The Mail, The Swarajya. News Editor, All India Radio, 1959. State Broadcasting Officer, Madras, 1947; travelled European countries 1948; Writer in Telugu short stories, plays poems. Director of Public Relations. Govt. of Andhra 1954. Regional Officer, Central Board of Film Censors, Madras, till 1966. Add: Hyderabad.
- KATARI, RAMDAS:** b. Oct. 8, 1911. Edn: Secunderabad & Training Ship Dufferin, Bombay. Served in Hooghly River Survey for a few years; then in Indian Navy War Service in Atlantic & Indian Oceans; organised several Sea Commands. Chief of Personnel at Naval HQ (1949-51); Imperial Defence College, London (1953); Dy. Chief of the Naval Staff Officer Commanding Dy. Chief of the Naval Staff Indian Navy (1954-55); Flag Officer Commanding, Indian Fleet (1956-58), Chief of Naval Staff Indian Navy (1958-62). Chairman, Andhra Pradesh State Road Corporation (1962-64); Add: C/o Union Ministry of External Affairs, Govt. of India, New Delhi.
- KOTAYYA, PRAGADA:** b. July 26th 1912. Devoted to emancipation of handloom weavers in Andhra region. Gen. Secy. the then Madras State Handloom Weavers, M.L.A., 1962-67; Jt. Secy., A.P.C.C. 1957-58. Chairman, Chirala Cooperative Spinning Mills, 1961-66. Add: Nidubrolu, Guntur Dt.
- KOTIREDDI, K.:** b. Oct. 1887. Edn: Law. Started practising as Barrister in 1919. M.L.C. 1928-35, M.L.A. 1937-39 & 1946-51. Minister for Hindu Religious Endowments, 1943-47; M.L.A. (Andhra) 1964. Add: Cuddapah.
- KRISHNA SASTRY, DEVULAPALLI VENKATA:** b. 1897 at Chandrama Palem. Edn: B.A., worked in Kakinada and Peddapuram Mission High Schools, 1918-20; Poet of Modern School; Lecturer P.R. (now Govt.) College, 1932-44; Pres: Nevya Sahitya Parishat 1942-43. Pub:

- Krishnapaksham, Kanneeru, Oorvasi, Rigvedhi, Mahati.** Add: 5-9-22/10, Adarsh'ngr, Hyderabad-22, TF: 35703.
- KRUPANIDHI, G. V.:** b. June 24, 1896. Edn: Madras M.A., B.L. Participated in non-cooperation movement, 1920. Jt. Ed: Swarajya, Madras, 1921-33, Editorial Staff Member, Hindustan Times, New Delhi, 1934-47. Ed: Indian News Chronicle, Delhi. Special Rep. Hindustan Times, 1950-56. Genl. Manager, Southern Languages Book Trust, Madras. Since 1958, Editor, Deccan Herald, Bangalore. Add: 27, Viviani Road, Richards Town, Bangalore-5.
- KUMARILASWAMI, E.:** b. 1924. Edn: Diploma Holder of Sarada Ukil School of Art, New Delhi. Diploma in Fine Arts, Visva Bharathi University, Santiniketan. Recipient of Govt. of India Scholarship. Participated in most of the exhibitions held in Europe and Asia. Executed mural in Kala Bhavan, Santiniketan. Represented in the National Gallery of Modern Art, New Delhi, Hyderabad Museum, Salar Jung Museum, Sangharika Museum, (Rajasthan) and in many private collections. Member, All India Fine Arts & Crafts Society, New Delhi and A. P. Lalit Kala Akademi. Now Lecturer in Delhi Polytechnic and Sarada Ukil School of Art, New Delhi. At present engaged in Parliament House Decoration of murals on Historical subjects. Add: New Delhi.
- KURMAYYA, VEMULA:** b. 1907. Edn: B.A., LL.B., Madras M.L.A. 1946-52; Information Minister, 1946-47; Rural Uplift Minister, 1947-49; Andhra M.L.A., 1955. Add: Vijayawada.
- KUTUMBARAO, KODAVATIGANTI:** b. Oct. 29, 1909. Edn: B.A., 1929; Ed: Yuva, 1935 and Sub-Ed: Andhra Patrika Weekly, 1940-42; Chandamama since 1951. Prolific Writer of short stories; Cine Writer (Bala Nagamma and others). Add: Trustpuram, Kodambakkam, Madras-24.
- LAKSHMANA BAPUJEE, KONDA:** b. Sep. 27, 1915 at Wankadi, Asifabad, Adilabad. Edn: Studied Law (1940). Started practising Law in 1940. Imprisoned for participating vigorously in Vande-mataram movement; campaigned in Freedom Struggle sponsored by Hyderabad State Congress. A leading co-operator connected with handloom sector. Chairman, Hyderabad Handloom Cooperative Society; M.L.A. (1952-57). Dy. Speaker A.P. Assembly 1957-60; Minister for Small Industries 1960-62; M.L.A. (1967); from Hyderabad constituency; Now Minister for Information and Public Relations. Add: Jaladrusvum, 6-1-2/1, Hyderabad-22.
- LAKSHMANARAO, KANURU:** b. July 25, 1902. Edn: Studied Engineering in Madras & Birmingham; B.E., M.Sc., Ph.D. (Birm), M.I.C.E. (Lond.); M. I. Struc. E. Madras P.W.D. (1950-52); Mem: Designs & Research, Central Water & Power Commission, 1953-62; Connected with almost all the designs of River Valley Projects in India like Koyna, Nagarjuna Sagar, Hirakud, Sharavati taken up after India independence thro' a series of five year plans. Visited most of the dams in the Egypt, Europe and USA. Pres: Central Board of Irrigation & Power; Pres: Institution of Engineers (India) 1959-60; Chief Engineer (Floods), Govt. of India; Pres: National

- Committee of the International Conference on Soil Mechanics & Foundation Engineering. Elected to Lok Sabha, 1962 & 1967. Union Minister of State for Irrigation & Power since 1963; Was awarded the President's Gold Medal thrice for the best technical paper in the journal of **Institution of Engineers, India**; was conferred with Padma Bhushan, 1963; Chief Editor, Engineering & Technology volumes Vijnana Sarvaswamu series (Encyclopaedia indica in Telugu); Pubn: Calculations, Designs & Testing of Reinforced Concrete. Add: 9, Janpath, New Delhi.
- LAKSHMIBAI, SANGAM:** b. 1914 at Ghatkeswaram. Edn: Graduate of S.N.D.T. Women's Univ., Bombay. Jailed twice for participating in salt satyagraha (1930) and Freedom Struggle activities of Cong M.L.A. (Hyderabad): Dy. Minister, Hyderabad State, 1952-56; Mem Lok Sabha, 1962-67. Add: Ajampura, Hyderabad.
- LAKSHMIKANTAM, PINGALI:** b. Jan. 10, 1894. Edn: M.A. Madras Univ. 1927. Was Prof. of Telugu upto 1949 in Andhra Univ. Programme Adviser, A.I.R., Hyderabad (1953-56) Mem. Central Sahitya Akademi, New Delhi. Was Prof. of Telugu, S. V. Univ., 1956-65 Tirupati; Writings. Add: Tirupati.
- LAKSHMINARASAYYA, M. N.:** b. Jan. 1913. Edn: Studied Medicine in Madras: Participated in State Congress Campaigns in Freedom Struggle, 1946 onward; M.L.A., 1957; Chairman, Zilla Parishat 1959-62. Minister for Small Scale Industries, 1962-64 and Panchayat Raj Minister, 1964-67; Re-elected on Congress Ticket from Ibrahim patnam Constituency, 1967 as M.L.A. Add: Alwal, P. O., Bolaram Secunderabad.
- LAKSHMIRANJANAM, KHANDAVALLI:** b. 1908. Was Prof. of Telug Osmania Univ. till 1965. Ed: Sangraha andhra vijnana kosha Pubn: Telugu dukki, Andhra Sahitya Charitra Sangraram Andhrula Charitra Samskriti. Add: Vidyanagar, Hyderabad-7.
- LATCHANNA, GOUTHU:** b. Aug. 16, 1909 at Barua. Courted imprisonment by participating in salt satyagraha and freedom struggle launched by Congress. Organised a Farmers Institute at Ichchpuram, Pres: INTUC Andhra Branch, 1948-53; Andhra Agriculture Minister, 1953-54; Minister for Labour, Social Welfare & Electricity 1955-56; Separated from Congress and returned on Krishik Le Party Ticket in mid-term election to Andhra Assembly, 1955; Late Gen. Secy: Swatantra Party and re-elected to State Assembly from Sompeta constituency in 1962 and 1967. Add: 6-2-656, Chintala basti, Hyderabad.
- LINGARAJU KROVVIDI:** b. Nov. 5, 1901. Joined as Cong. Volunteer in his student days 1921. Courted imprisonment, M.L.A. (Madras 1946-52. Parliamentary Secretary to Revenue Minister, 1946-4 Ed: 'Congress', 'Pratapatrika'. Pub: 'Ammu'. Add: Rajahmundry
- MADHUSUDANARAO, D.:** b. July 15, 1917. Edn: B.A., Jt. Secretary Andhra Nataka Kala Parishat; Produced Social Dramas between 1940-45; Mg. Director, Annapurana Pictures (P) Ltd., Madras Hyderabad. Mem: Andhra Pradesh Sangit Natak Akadami. Ad 6-3-569, Khairatabad, Hyderabad-4.

- MADHUSUDANARAO, V.:** b. 1921. Edn: Diploma in Painting, 1945, Central School of Arts & Crafts, Hyderabad, where presently he is teaching. Exhibited all over India and abroad. Won awards of A. P. Lalita Kala Akademi in 1963, 1965, 1966 and 1967 and Akademi of Fine Arts Calcutta, in 1964. Won many prizes from Hyderabad Arts Society. Paintings are to be found in Lok Sabha, Museums of Cairo, West Germany, Hyderabad, in private collections and in A. P. Lalita Kala Akademi. Hony. Jt. Secretary of Hyderabad Arts Society & Member of the A. P. Lalita Kala Akademi. Add: 11-5-83, Red Hills, Nampally, Hyderabad-4.
- MUHAMMAD IBRAHIM ALI ANSARI:** b. June 10, 1917, at Mahbubnagar. Edn: Hyderabad and Aligarh. Studied Forestry at Coimbatore, M.R.H.S.; Served in Nizam Forest Department, 1939 and resigned 1946; was Mem: DCC; was Chairman, Mahbubnagar Municipal Council 1956; nominated President of Muslim Welfare Board. Elected to Assembly from Mahbubnagar Constituency, 1967. Now Minister for Prisons (1967). Add: 3-6-230, Himaynagar, Hyderabad, TF: 34438/32989.
- MURTI, B. S. (BAYYA SURYANARAYANAMURTHI):** b. Oct. 29, 1909; Edn: Rajamundry, D.A., B.Ed., General Secretary, Ninth Andhra Student Convention; Parliamentary Secretary to Industry Minister, 1937-39; 1946-47; Imprisoned twice in Freedom Struggle activities, 1944-46; M.L.A., 1946-52; Assistant Editor, 'Andhra Prabha', 1944-1946; Editor, 'Navajeevana', President, Andhra Harijan Samak Sangh 1949. President, Andhra Agri. Labour Congress. Mem: Lok Sabha, from Nagaram (E.G. Dt.) for all the 4 General Elections in 1952, 1957, 1962 & 1967. Parliamentary Secretary, Ministry of Community Dev.; Union Dy. Minister, Community Dev.; 1959-67; now Dy. Minister, Health & Family Planning, since Apr. 1967. Add: New Delhi.
- NAGABHUSHANAM, PATURI:** b. Aug. 11, 1907; Edn: D.L.S., Devoted to constructive work in Library Movement and spread of knowledge thro' Mobile Libraries in boats on canals etc., Ed: 'Grandhralaya sarvaswamu' monthly. Imprisoned for Satyagraha movement. Engaged in propagating Gandhian Philosophy. Pub: 'Grandhalayamula Registration' etc. Add: Patanata, Vijayanagara-2.
- NAGAYYA, VUPPALA:** b. Apr. 17, 1907. Worked in Revenue Dept., District Board Offices till 1934; Entered film field in 1934; appeared in various character roles in Grihalakshmi, Vande mataram, Potana, Swargaseema, Tyagayya, Vemana, Ramadas; Recipient of 'Padmashri' title (1964). Add: Madras-17.
- NAGESWARARAO, AKKINENI:** b. Sept. 20, 1924, at Baghavapuram, (Krishna Dt.); took part in dramas, as a student particularly in feminine roles. Toured United States and other Far East Countries; Reputed as character actor, particularly as hero in social themes. Add: Hyderabad.
- NAGESWARARAO, PENDYALA:** b. Apr. 23, 1917. Edn: High School Education. Was stage actor in feminine roles. Entered film field

- as a cine musician (Talliprema). Started directing film music (Drohi). Was declared 1959-60, best Music Director (Jayabheri). So far directed (music) 70 films. Add: 9-a, Bazulla Road, Madras-17.
- NAGIREDDI, BOMMIREDDI:** b. Dec. 1, 1912; Business magnate; Exporter of Onions, Film Producer & Director. Mg. Director of Vauhini Productions, Vijaya Productions Studios. His film hits with Chakrapani, include 'Sahukaru', Patala Bhairavi, Pellichesichodu, Chandraharam, Mayabazaar, Appuchesi Pappukoodu etc. Add: Vadapalani, Madras-26.
- NAGIREDDI, T. N.:** b. June 19, 1916, at Madanapalle; Edn: Studied Intermediate; worked for Cooperation Movements in the Dt. Active supporter of Congress from 1935; connected with public bodies in Madanapalli & Horselyhills. From 1964, Chairman, Zilla Parishad, Chittoor. Add: Madanapalle, Chittoor District.
- NARASIMHARAO, MUNIMANIKYAM:** b. Dec. 29, 1893. Humanist. Prolific writer 'Kantam' is his pet character. Pubn: Kantam-kathalu, Munimakikyam kathalu, Minimanikyam natikalu. Add: Hyderabad.
- NARASIMHA RAO, P.V.:** b. 1921 in Karimnagar. Edn: B.Sc., L.L.B., Nagpur University; Knows fluently five languages Tel, Hindi, Eng., Urdu & Marathi. Participated in 'vandemataram' movement. Was Gen. Secy., Hyderabad State, Was Vice-Pres., APCC (1953). Congress M.L.A., since, 1962. Minister for Law & Information, 1962. Minister for Law (1936-67). Re-elected from Mantheni (Karimnagar, Dt.), constituency. Now Minister for Health. Add: 3-6-158, Himayat Nagar, Hyderabad, 32511/34126.
- NARASIMHARAO, STHANAM:** b. Sept. 23, 1902, at Bapatla, Guntur Dt. Entered drama field in his boyhood. As a fine feminine character. He staged two thousand plays and was awarded Nataka Vatamsa; Nataka Kala Prapoorna between 1920 & 1960. President, Andhra Nataka Kala Parishad, 1950; was conferred with 'Padmasri'. His feminine roles received acclaim particularly in characters like Satyabhama, Roshanara, Madhuravani, Chitrangi, Chintamani. Add: Hyderabad.
- NARASIMHA REDDI, D.:** b. Dec. 20, 1918, at K. G. Palli; Edn: Pulivendla & Madras, M.B., B.S., Medical Practitioner; Congressman; Elected as uncontested Chairman, Zilla Parishad, Cuddapah. Add: Pulivendla, Cuddapah District.
- NARASIMHA SASTRI, NORI:** b. Feb. 6, 1900. Classical & Historical novelist. Pubn: Narayanabhatta, Rudramadevi, Mallareddi, Gitamali, Somanathavijayamu. Add: Repalle.
- NARASINGA RAO, J. V.:** b. Oct. 14, 1914, at Luxettipet, Adilabad Dt., Edn: M.A., L.L.B., Benares & Allahabad. Practised Law. Was associated with Andhra Maha Sabha & Hyderabad State Congress. Mem: AICC. President, Hyderabad State Congress (1954). Minister for PWD, 1956-60. Was associated with INTUC. Chairman,

- A. P. State Electricity Board (1965-66). M.L.A. from Luxettipet Constituency, 1967. Minister for PWD. Add: 'Dwaraka', 1-2-412/8, Domala Guda, TF: 32663/33861/32295.
- NARASINGARAO, MANDUMALA:** b. Mar. 17, 1896. Edn: Law Practised Law upto 1926. Founded 'Ryat', Urdu Journal, Hyderabad M.L.A., 1928-42; 1952-62. President, Andhra Convention, 1936; P.W.D. Minister, 1956-60; Home Minister, 1960-61; Minister for Municipal Administration, 1961-62. Add: Hyderabad.
- NARAYANA, A.L.:** b. July 1890. Edn: Madras Head of the Dept. of Physics, M. R. College, Vizianagaram, 1914-23; Asst. Director, Solar Observatory, Kodaikanal, 1928-35; he became its Director (1935-46), Principal, M. R. College, Vijayanagaram, 1948-56; Mem: Governing Body, Institute of Nuclear Physics; M.L.C., 1950-62. Vice-Chancellor, Andhra University, 1956-65. Add: Vizianagaram.
- NARAYANA REDDI, C.:** b. Nov. 15, 1931. Edn: Ph.D. Hyderabad. Poet & playwright. Pub: Ajantasundari (musical play); Divvela Muvvalu (poems), Karpura vasanta rayalu, Nagarjuna sagaramu Ramappa (Musical play), Viswanatha Naidu (poetry). Add: Viveknagar, Hyderabad-20, TF: 33633.
- NARAYANA REDDI, K. V.:** b. at Huzurabad Taluk, Karimnagar Dt., Edn: M.A. (Econ.) Hyderabad. Was University Lecturer. Was MLA, 1952-1957. Was MLC, 1962. In 1967, elected to Assembly from Kamalapur constituency. Now Minister for Planning and Law. Add: 4-8-891, Himayatnagar, Hyderabad. TF: 35820/33535/33078.
- NARAYANAREDDI, RAVI:** b. June 4, 1908. Edn: Hyderabad; Discontinued Studies and joined Civil Disobedience Movement, 1930. One of the founders of the State Congress. Entered Andhra Maha Sabha, 1933 and its President in 1941, 1944 & 1945. Joined Communist Party in 1939. Imprisoned in 1938 as a Congressman and later in 1951 as Communist. Went underground for five years; M.L.A., 1957-62. Dy. Leader of the Opposition & Chairman, Public Accounts Committee; Elected to Lok Sabha, 1962-67. Add: Hyderabad.
- NAYUDAMMA, YELAVARTI:** b. Sept. 10, 1922. Edn: Benares B.Sc., (Industrial Chemistry), Leigh University, U.S.A., College of Leather Technology, Northampton, England. Made outstanding contribution to Leather Science & Technology in India. President, Indian Leather Technology Assn. Advisor: Indian Investment Centre — widely travelled Europe & USA, Fellow of Indian Academy of Sciences. Associated with Central Leather Research Institute, Adyar, Madras from its inception in different cadres of scientist capacities and became its Director in 1958. Add: Central Leather Research Institute, Adyar, Madras-20.
- NIRVIKALPANANDA, SWAMI (PSEUDONYMS 'SRI POORNANANDA' 'SRI VANAMALI'):** b. Dec. 20, 1915. Entered ashram life in his 18th year (1933) at Ramakrishnamath, Bhuvaneshwar.

- Founded 'Ramakrishna Prabha'; spiritual monthly 1944. Knows four languages—Telugu, Sanskrit, Bengalee and English. **Pubn:** 'Bhagavadgita', Ashtadasa sloka geeta, Bhaktitattvam etc. **Add:** Rajahmundry.
- PADMAJANAIDU:** b. Nov. 17, 1900. Joined Congress at Hyderabad, 1929; was imprisoned (1942); **Mem:** Lok Sabha (1950-51). Governor of West Bengal (1956). **Add:** Rajbhavan, Calcutta.
- PADMARAJU PALAGUMMI:** b. June 24, 1915, at Tirupatipuram, W. G. **Edn:** M.Sc., Banaras University. Short Story Writer. Cine-writer. Was awarded New York Herald Tribune Prize for his story, 'Galivana' (Cyclone). Worked as Chemist, Lecturer Kakinada & Bhimavaram. **Add:** 1-C, Appakannu Mudali Road, Madras-14.
- PATTABHIRAMARAO, S. B. P.:** b. Dec. 30, 1911. **Edn:** B.A., B.L., Madras M.L.A., 1952. Madras Minister for Commercial Taxes 1952-53; Andhra Education Minister 1953-54, 1956-62. **Add:** Kapileswarapuram, East Godavari District. **Add:** 'Pagasus House,' 1, M. Tank, Hyderabad-28, TF: 33993.
- PRASAD, K. L. N.:** b. Jan. 1, 1928. Business magnate in Vijayawada. Managing Director, Andhra Printers Ltd., Vijayawada, Madras Engg. Metal Works Ltd., Director, Andhra Bank Limited, Hindustan Ideal Insurance Co., National Small Scale Industries Corporation. **Add:** Suryapet, Vijayawada-2.
- PRASAD, L. V.:** b. Jan. 17, 1908, at Somavarappadu near Eluru. **Edn:** Highschool. Originally a farmer; joined films 1930. Leading producer and director Telugu Films. **Add:** 55, Third Main Road, Gandhinagar, Madras-20.
- RADHAKRISHNA, BHAMIDIPATI:** b. Nov. 14, 1931. Playwright, Cine-writer; Humanist & Satirist; **Pubn:** Dantavedantam; Keertiseshulu; Manastatwalu; Videmeti. **Add:** Danavayapet, Rajahmundry, East Godavari District.
- RADHAKRISHNAN, SARVEPALLI:** b. Sept. 5, 1886. **Edn:** Madras Christian College, FRSL, M.A., D.Litt., LL.D. etc. Professor of Philosophy in Presidency College & Mysore University. **Vice-Chancellor**, Andhra University, Benares Hindu University, 1939-48. Spalding Professor of Eastern Religions at Oxford (1936). **President**, Andhra Maha Sabha; Was Lecturer in Comparative Religion Oxford, Hibbert Lecturer (1929 & 30). **Indian Ambassador** in Soviet Russia, 1949-52, the only Indian Ambassador who had audience with Stalin. **Vice-President** of India 1952-62, for two terms and **President** of India (Rashtrapati); 1962-67; Was conferred with Bharat Ratna. Prolific writer on Indian Philosophy; widely travelled. **Pub:** Philosophy of Rabindranath Tagore; Reign of Religion in contemporary Philosophy; Indian Philosophy, 2 vols. **An Idealist view of Life: East & West in Religions; Kalki (The future Civilisation); the Religion we need of Gautama, the Buddha; Eastern Religions and Western Thought; Religion & Society; Education,**

- Politics & War; Bhagavad-Geetha, Dhammapada; The principal upanishads; Recovery of faith, Brahmasutra, Religion in the changing world. **Add:** 'Girija' 30, Edwards Elliotts Road, Madras-4.
- RADHAKRISHNA RAO, C.:** b. Sept. 10, 1920, at Hadagali. **Edn:** M.A. (Stat.), Andhra University, awarded Gold Medal by Calcutta University, Ph.D., Sc.O., Cantat; 2, F.N.I., was at Duckworth Shanti Swarup Bhatnagar Memorial Award (C.S.I.R.), 1963 for notable contribution to scientific research in India. Awarded the Guy Medal in Silver of Royal Statistical Society, London, 1965; elected member of the International Statistical Institute, 1951. Fellow of National Institute of Sciences of India, 1953; was appointed as Professor of Statistics at Indian Statistical Institute, Calcutta 1948. Travelled wider in Europe, U.S.A. & Asian countries, and lectured on statistical problems. Now Director, Research & Training School, I.S.I., Calcutta. **Pubn:** Produced 104 scientific papers on statistical topics science 1940, on co-editor Sankhya (1964). **Add:** Director, Research & Training School, Indian Statistical Institute, 203, Barrackpore Road, Calcutta-35.
- RAGHAVAYYA, VENNELAKANTI:** b. 1896. **Edn:** Studied Law & Practised Law Social Worker. Participated in Freedom Struggle launched by Congress from 1921 onwards and courted imprisonment several times. Devoted his life time for the uplift of aborigines **yanadi** tribe. Founded free boarding houses for **erukula, lambadi yanadi** tribes. **President**, Dakshina Bharat Adivasi Sevak Sangh. Acted as Parliamentary Secretary to the Chief Minister, 1946-47. **Add:** Nellore.
- RAGHUNATHA REDDI, K. V.:** b. Sep. 4, 1924 at Virur, Nellore Dt. **Edn:** Annamalai University, 1945; Lucknow University. Worked in Research Dept. of Lucknow University. Was Senate member Annamalai University, (1947-59). Enrolled as an Advocate of High Court, Madras in 1950 and of Supreme Court in 1958. Elected as a member of Rajya Sabha, 1962. Represented Rajyasabha at the Commonwealth Conference in 1966. Toured continental countries and lectured at Humboldt University, Germany. Now, Union Minister of State for Industrial Development & Company Affairs from March 13, 1967. **Pubn.** Criminal Law Procedural and Substantial. **Add:** New Delhi.
- RAGHURAMAYYA, KOTHA:** b. 1912. **Edn:** Guntur & Lucknow; Barrister 1937; Joined as Asst. Secretary, Department of Law, Madras Govt., 1941; was promoted to Secretary in 1949-52 when he resigned. He contested for Tenali Lok Sabha seat and got himself elected. Elected to Lok Sabha in 1952, 1957, 1962 & 1967. Union Dy. Minister for Defence 1956-62; Deputy Minister for Defence Production 1952-64; Deputy Minister for supplies 1964-67. Union Minister of State for Petroleum & Chemicals. **Add:** 12, Ashok Road, New Delhi-1.

- RAJAGOPALA RAO KATRAGADA:** b. May 22, 1918. Edn: Vidya Pra-
veena, Andhra Univ. Secretary Visalandhra Vijnana Samiti.
Madras MLA 1952-53; Andhra MLA 1953 & 54. Add: Visalandhra,
Machavaram, Vijayawada.
- RAJAIH:** b. 1925, at Siddipet. Edn: Diploma from Govt. College of
Fine Arts & Architecture, Hyderabad (1948); Paints religious and
rural scenes in tempera colours. Indian folk art, specially of
Andhra, has influenced him most. Exhibits regularly in the vari-
ous all India Exhibitions; Represented in the National Gallery of
Modern Art and the Hyderabad State Museum besides other Indian
Museums. Instructor in Govt. High School, Siddipet; Member of
the State Lalit Kala Akademi. Add: Siddipet.
- RAJAMANNAR, PAKALA VENKATA:** b. May 10, 1901. Edn: B.A.,
B.L., Madras, 1921. Advocate; Playwright; Was appointed as Adv-
ocate-General, Madras 1944-45; Was elevated to Bench as Judge of
Madras High Court, 1946; Became Chief Justice of Madras, 1948-61,
MLC, 1962-64; Chairman, Fourth Finance Commission; 1964-66;
Was Chairman, Lalitakala Akademi, New Delhi. Ed. Kala 1962.
Add: 9, Victoria Crescent Road, Madras-8.
- RAJANIKANTA RAO, B.:** b. 1920. Lyrical poet; Writer of musical
features. Programme executive, All India Radio. Pub: *Satapatra*
Sundari, *Andhra Vaggeyakarula Charitra*. Add: AIR, Kursang.
- RAJU, P. T.:** b. Aug. 17, 1903. Edn: Ph.D. Sastri (Banaras); Widely
travelled and lectured on Indian Philosophy Series. President,
Indian Philosophical Congress 1960; Tata Visiting Professor of
Philosophy, the Asia Institute 1949. Now Professor of Philosophy
& Indian Studies at the College of Wooster, Wooster, Ohio, USA.
since 1963. Was awarded Padmabhushan. Pubn: *Vedanta & Criti-
cal Humanism*; *Telugu Literature*; *Cultural Heritage of India*;
Eastern & Western & Radhakrishnan; *Introduction to Cooperative*
Philosophy. Add: The College of Wooster, Wooster, Ohio, United
States.
- RAJU, PUSAPATI VIJAYARAMA GAJAPATI.** b. May 1, 1924. Edn:
Madras & California (USA), MLA, 1951-57. Lifetime Trustee, Sim-
hachalam Devasthanam, Mem: Lok Sabha, 1957-60; MLA., 1962;
Andhra Health Minister, 1960-62; Education Minister, 1962-65;
Minister without portfolio, 1965-67; Elected M.L.A. from Bhimuni
Patnam. Add: Vizianagaram.
- RAMACHANDRA REDDI, BEZAWADA:** b. Nov. 24, 1894. Edn:
Madras 1919; President, Nellore District Board; President, Nellore
Educational Council; MLC 1927-37; Chairman, Legislative Council,
Madras 1930-37. President, Andhra Natak Kala Parishad 1945.
M.P., 1952-57; Add: Buchireddipalem, Nellore District.
- RAMACHANDRA REDDI, NOOKALA:** b. Jan. 11, 1919. Edn: Nagour,
Took part in *Vandemataram* movement. M.L.A. 1957-62. Andhra
Agriculture Minister 1960-62 and Revenue Minister 1962-67. Add:
Hyderabad.

- RAMAGOPAL, H. V.:** b. Dec. 27, 1921. at Peddapuram, E. G. Dt.
Edn: Kakinada and Madras. College of Arts & Crafts, Diploma in
Painting, Certificate in Sculpture 1943. Interested in Art from
early boyhood. Apprenticed under Varada Venkataratnam of
Damerla Art Society, Rajahmundry. Interested in music, drama,
dance and aesthetics. Now, Senior Instructor in Painting, College
of Arts & Crafts, Madras-3. Add: Bharati Nagar, Pallavaram,
Madras-43.
- RAMAKRISHNA, VELAGAPUDI:** b. Mar 4, 1896. Edn: Edinburgh,
London, Oxford; Entered in ICS, 1922; held various senior admini-
strative posts in the State Government before he became Labour
Commissioner; Director of Resettlement and Employment and
Development Commissioner when he resigned. Nominated to
Central Legislature MLC 1952-54; In retirement, he utilised his
time constructively and started a chain of industrial concerns in
Vuyyur (KCP) and Madras (Central Workshops), Chairman,
Andhra Cement Co. Cauvery Sugars & Chemicals Ltd., Jeypore
Mining Syndicate, KCP Limited, Associated with various other
industries. Add: Sudarsan Mahal, 55, Peters Road, Madras-6.
- RAMAKRISHNA RAJU, R. B.:** b. Feb. 10, 1891. Edn: Studied Law,
Madras 1911 and practised Law in Chittoor. Madras MLA 1937-39;
Chairman, Madras Legislative Council 1946-52; Andhra MLA
1955-62; as Independent. Mem: Telugu Bhasha Samiti, Madras
& Hyderabad 1967; President, Andhra Pradesh Sangita Natak
Akademi 1957-63. Add: Chittoor.
- RAMAKRISHNARAO, ABBURI:** b. May 20, 1896. Poet. Was Librarian
Andhra University, Waltair. Pub: *Vooaganamu*, *Poorvaprema*
(poetry), *Suryarajakathlu*, *Nadi Sundari*. Add: Hyderabad.
- RAMALINGARAJU, R.:** b. 1915 at Padmarajapuram Razole Tq. E.G.
Dist. Has been associated with A.P.C.C. since 20 years. Was Pre-
sident Dist. Ryots Congress. MLC since 1958; now Minister for
Endowments. Add: C.J.'s Bungalow, Begumpet, Hyderabad. TF:
33437; 35234; 34994.
- RAMANUJA RAO, DEVULAPALLI:** b. Aug. 25, 1917. Edn: B.A.,
I.L.B. Participated in Freedom Struggle. Took part in Coopera-
tive Movement. Mem: Rajya Sabha 1960-62. President, Andhra
Saraswat Parishad 1952-55; Secretary, Andhra Pradesh Sahitya
Akademi (1957-). Pub: *Navya Kanta Neerajanam*, *Saraswat Nava-
neetam* etc. Add: Andhra Pradesh Sahitya Akademi, Kalabhavan,
Hyderabad-4.
- RAMARAO, AVASARALA:** b. Oct. 15, 1890. Edn: B.A., B.L., (1910-
13), Advocate. Organised Theosophical Society in Rajahmundry
(1925). President, All India Jan Sangh 1960-62. MLC (1962-67).
Add: Rajahmundry.
- RAMARAO, MAREMANDA:** b. Historian: Specialised in medieval
Andhra History. Professor of History, S. V. University, Tirupati,

- since 1954. Pub: *Andhra thro' Ages; Buddhism in Andhra; Kakatiya Sanchika*. Add: Dept. of History, S. V. University, Tirupati.
- RAMARAO, S. V.:** b. 1936. Gudivada in Krishna District. Edn: B.A., B.Com., Andhra University; Diploma in Painting from the College of Arts & Crafts, Madras. Research Scholarship Holder of Govt. of India for two years; Mem: All India Fine Arts & Crafts Society, New Delhi; Participated in various All India Exhibitions; Won many prizes including Lord Croft Award (1965); Represented in the collections of National Gallery of Modern Art, New Delhi; National Gallery, Madras; Fred Harvey Art Gallery, Bangalore. His paintings were acquired by many eminent Arts Collectors, Herbert Read, Lord Croft abroad and in India, International Cultural Centre, New Delhi and Kumika Art Gallery, New Delhi; now in the United States. Add: n.a.
- RAMASWAMY, ARIGEY:** b. 1895 at Secunderabad. In 1912 Started Temperance movement by founding Suneeti Bala Samajamu; has been associated with amelioration work. Was M.P. (1950); was Dy. Minister 1954-56; elected MLA since 1957 onwards from Vikrabad Constituency; now Minister for Social Welfare. Add: 8-2-314, Kummarguda, Secunderabad. Tf. 34961/74894.
- RAMASWAMY, THOTA:** b. Dec. 5, 1906 at Veeravaram, Peddapuram, E.G. Dist; Ed: Pithipuram; Ed: in Presidency College, Madras 1929; President Dist. Board, E.G. Dist (1937-40). Participated in individual Satyagraha 1941. Pres: State Sugarcane Growers Committee (1940-55); Pres: Indian Sugarcane Committee Pres: Co-operative Central Bank (1956); was Chairman; Zilla Parishad (1959). MLA 1952-55; was elected MLC since May 1963—thro Assembly. Now Minister for Panchayat Raj since May 1964 onwards. Add: 'Ananda Nivas', Barkatpura, Hyderabad. 32764/34744.
- RANGA, N. G. (GOGINENI RANGANAYAKULU):** b. Nov. 7, 1900. Edn: Oxford. Prof of Economics; Taught at Pachayappa College, Madras 1931-36; President, APCC, 1947-50. Mem: Congress Working Committee 1947-51. Formed Krishik Lok Party 1952; Founded Farmers Institute in Nidubrolu. Was Editor 'Financial Times'. Mem: Rajya Sabha 1952-57; Lok Sabha 1957, 1962 & 1967. Add: Nidubrolu, Guntur District.
- RANGARAO, S. V.:** b. July 3, 1918. Edn: B.Sc. worked as Fire Officer. Entered Film field (Patala Bairavi). Now character actor in Telugu, Hindi and Tamil films. Add: Habibullah Road, Madras-17.
- RANGAREDDI, PIDATALA:** b. Sept. 10, 1917. Participated in Freedom Struggle and courted imprisonment in 1937, 1940, 1944, Madras M.L.A., 1940-50 & 1952-57. M.P. 1950-52. Congress Whip in Legislature; Joint Secretary, APCC, 1957-58. President, A.P.C.C. 1958-60; Andhra Minister for Planning 1960-62. Add: Hyderabad.
- RANGAYYA APPARAO, MEKA:** b. Oct. 10, 1915. Edn: M.A., President, Andhra Nataka Kala Parishad; Andhra Maha Sabha; M.L.A. 1955 onwards; Minister for Culture & Excise 1962-67. Add: Nuzvid.
- RAO, C. S.:** b. May 1, 1925 at Kakinada. Edn: B.A. (Lit.), Madras. Ed: Merupu (MSS Magazine) in 1940. Wrote about 30 one act plays. Now, Film Director, Pub: E. Desa Megina (a travelogue) Add: 5, Vijayaraghavachari Road, Madras-17.
- REDDAPPA NAIDU MOPURI:** b. Oct. 10, 1932. Kapupalem, E. G. Dt. Edn: Kakinada & Madras; Diploma in Fine Arts, Govt. College of Arts & Crafts 1960. Creative Artist; Recipient of National Award at National Exhibition of Art, New Delhi 1962; was awarded Gold Medal A.P. Lalitakala Akademi at Hyderabad 1963. Participated in the IV Paris Biennale 1965 Hyderabad Art Society, Gold Medal 1966. His art pieces are in the collections of Lalita Kala Akademi, new Delhi, National Gallery at Modern Art, New Delhi by the collection of Malaysian Government at Kuala Lumpur; the collection under Ministry of Educa., New Delhi. Now Art Designer, Weavers Service Centre, All India Handloom Board, 20, Oliver Road, Madras-4. Add: 7, Perumal Naicken St., Madras-7.
- REDDI, B. N. (BOMMIREDDI NARASIMHA REDDI):** b. Nov. 16, 1908 at Kothapalli (Cuddapah Dt.) Edn: G.D.A. 1935. Entered Film Industry 1936 and established Vauhini Pictures 1938. Hit films directed by him include *Vandemataram*, *Sumangali*, *Devata*, *Swargaseema*, *Malleswari*, *Pujaphalam*. Add: 5, New Boag Road, Madras-17.
- REDDI, K. R.:** b. 1917 at Perur, Mahbubnagar Dt. Edn: School Education. Entered politics at early age. President Congress Committee, 1952-53; Secy. D.C.C. 1956; Pres: Panchayat Samiti and Vice Chairman, Zilla Parishad 1959 Social Worker, Edited *Pilupu* in 1953. Now elected Chairman, Zilla Parishad. Add: Mahbubnagar.
- REDDI, P. T.:** b. 1915 at Annavaram, Karimnagar Dt. Edn: Diploma in Painting, Sir J. J. School of Art 1940, Govt. Mural Scholarship (1914); 1941-42 fellowship. Resigned the same in 1942 movement. In 1941 formed first group of contemporary artists in Bombay. Published drawings and painting portfolios. Between 1942-45 held three 'One Man' shows. Also worked in film industry, Printing presses & publicity studios. Since 1946 took to furnishing business. In 1956 after a lapse of 11 years resumed painting, exhibiting regularly all over India. Seld 'One Man' show at Hyderabad, Bombay, Calcutta and Delhi. Add: Kalpana Industries, Hyderabad.
- SADALAKSHMI, T. N.:** b. Jan. 23, 1928. Edn: Madras & Secunderabad Social Worker; organised amelioration work in prohibition. Gen. Secy: A.P. Arundhati Conference; Pres. A. P. Valmiki Conference Andhra MLA 1962-67; Minister for Hindu Religious Endowment 1962-64. Social Welfare (1934-67). Add: Hyderabad.
- SADASIVA REDDI, DINNAPATI:** b. Apr. 28, 1897. Edn: Madras & Oxford. Joined Education service under Govt. of Madras and served in various capacities as educator and administrator (1923-42) when he became Director of Public Instruction in the composite Madras State (1948-52). Was awarded MPE by British Govt. for meritorious service (1940). Served as UNESCO expert in Leba-

- non (1952-54); Andhra DPI 1954-57; Vice-Chancellor Osmania Univ. since 1957. Add: Vice-Chancellor's Lodge, Hyderabad-7. Tf. 71088.
- SAMBAMOORTHY, P.:** b. Feb. 14, 1901. Edn: Madras; B.A., B.L., Studied Western Music at Munich Univ. Germany. Lecturer, Indian Music, Queen Marys College, Madras (1928-37); joined Univ. of Madras in the Dept. of Music in 1937 and served till he retired as Head of the Dept. (1961-64); since 1964 Prof. of Musicology at S. V. Univ. Tirupati. Add: 116, Santhome High Road, Madras-4.
- SAMBASIVA RAO, POTUKUCHI:** b. 1929. Novelist. Founded Navya Sahiti Samiti; Mem: P.E.N. Pub: *anveshana* (1957) *edu rojula majili*; *kothaviluvala bratukulu* (stories). Add: 208, Boyiguda, Secunderabad.
- SAMBHJIRASAD, SIVALENKA:** b. Jan. 25, 1911. Edn: Machilipatnam Adyar, Shantiniketan (1034-36) Mem: Standing Committee, All India News Papers Editor's Association 1942-43; 1944-48; 1949-51; Mem: *Rajyasabha* 1952-56; MLC, 1958 onwards Chief Editor: Andhra Patrika group of Newspapers & Periodicals. Add: 7, Thambuchetti St., Madras-1.
- SANJIVAREDDI, NEELAM:** b. May 9, 1913. Edn: Anantapur. As a student he entered Freedom Struggle Satyagraha movement and courted imprisonment. Secy. APCC 1937-1940; MLA 1946 Madras Minister for Prohibition 1949-51. Pres: APCC 1951-52; Mem: *Rajya Sabha*. Dy. Chief Minister, Andhra State 1953-56; Chief Minister 1956-60. Pres: AICC 1960-62. Again Chief Minister 1962-64; Union Minister for Steel & Mines 1964-66; Union Minister for Transport, Shipping & Civil Aviation 1966-67. Elected to Lok Sabha 1967 but resigned when elected to the post of Speaker. Lok Sabha 1967. Add: New Delhi.
- SANJIVAYYA, DAMODARAM,** b. Feb. 14, 1921. Edn. B.A., B.L., M.P. 1950-52. M.L.A. & Madras Minister for Cooperation 1952-53. Andhra Minister for Health & Cooperation 1953-55. Mem: *Rajyasabha* 1964; Pres: AICC 1962-64; Union Labour Minister 1964-66. Union Industries Minister 1966-67. Add: New Delhi.
- SARASWATIDEVI, ILLINDLA:** b. 1915. Short storywriter and social worker; Andhra MLA; Vice-Pres: Andhra Yuvati Mandali Pub: *Pandaga bahumanamu* (stories) *Jatiratnalu* (folksongs). Add: Hyderabad.
- SASTRY, S. M. Y.:** b. Nov. 3, 1913. Participated in quit India movement (1942); now top executive, Bombay Municipal Corpn. Short storywriter and playwright known for wit and satire. Pub: *Lancham pattina officer—Labham chesina golladi* (short stories) *mahanubhavalu*. Add: Bombay Municipal Corporation, Bombay.
- SATYANARAYANA, MOTURI:** b. 1902 at Dondapadu, Krishna Dt. Edn: National College, Machilipatnam; Social Worker; joined the National Movement—1920; propagated Hindi in South India; was Secy. *Rashtra Bhasha Prachar Samiti*, 1936-38; Gen. Secy. *Dakshina Bharat Hindi Prachar Sabha*, Madras (1938-60); political detainee

- (1942-44); was Mem. Constituent Assembly of India (1948-50); was M.P. Provisional Parliament; was nominated to *Rajya Sabha* 1952-66. Was Jt. Secy. India Cultural Academy, New Delhi; Mem: Executive Council; Madras M.L.C. (1952-54); Senate, Univ of Madras (1952-54); Central Board of Film Censors (1952-62); Official Language Commission; was awarded "Padma Shri" (1958) and "Padmabhushan" (1962); was Editor (i) *'Dakshina Bharat'* (Bi-monthly) and (ii) *Hindi Prachar Samachar* (monthly)—1938-60; Founder Secretary of Telugu Bhasha Samiti. Add: 7, First Crescent Road, Gandhinagar, Madras-20 Tf: 72936.
- SATYANARAYANA, VISWANATHA:** b. 6-10-1895 at Machilipatnam. Edn: M.A., was Principal, Govt College, Karimnagar, *Kinnerasani-patalu*; Prolific writer *'Veyipadagalu'*, *'Cheliyalikatta'*. Add: Marutnagar, Vijayawada.
- SATYANARAYANA RAO, VENIGALLA:** b. Aug. 1918. Edn: Punadi-padu, Machilipatnam, Krishna Dt. A leading co-operator; Joined Congress about 1940. Participated in Individual Satyagraha 1941 and courted imprisonment. MLC since 1958 elected from the Guntur Local Authorities Constituency; now Minister for Excise and Prohibition. Add: 7-1-30 Amirpet, Hyderabad. Tf: 32938/37151.
- SATYANARAYANA RAO, YANDAMURI** (PSUEDONYMS *'SRIVATSAVA'* and *'SATYA'*) b. May 21, 1913. Edn: B.A., B.Ed., Kakinada and Rajamundry. Worked as a teacher for sometime. Sub Editor *Janavani* 1937-39. Held various positions in All India Radio from 1939 onwards; now programme executive A.I.R. New Delhi. Pub: *sirandhri*, *samsarasagaram*, *gandhi suktulu*, *teerani korikalu*, *ratna-lanavvu*. Awarded prize for *'Ushkirnalu'* (19th cent. Telugu literature) by A.P. Sahitya akademi. Add: Room No. 529, AIR, Akasavani Bhavan, New Delhi.
- SATYANARAYANARAU, PENDYALA:** b. 1895 Edn: Madras & Oxford entered ICS held various senior administration posts before he took up Finance Secretaryship 1936; was Director-General of Food Dept. Diwan, Jodhpur State (1948-49). Adviser, Madhya Bharat Ministry 1952-54; Chairman, Damodar Valley Corporation (1954-56); Adviser, Rajpramukh, Travancore-Cochin 1956. Add: Hyderabad.
- SEETARAMAMURTHI, TUMMALA:** b. Dec. 25, 1901 at Kavuru Edn: Classical Sanskrit studies. Participated in freedom struggle. Was Telugu Teacher at Guntur Pub: *Mahatmuni Aatmakatha*, *Dharma Jyoti*, *Aatmarpanam*, *Tenugu Neeli*, *Geeta Darsanam*. Add: Guntur.
- SHRINAGESH, SATYAVANI MALLANAH:** b. May 11, 1903. Edn: Public School in England, Cambridge University and Sandhurst; was commissioned in 1923, and held various positions in the Army till he was appointed as Chief of Army Staff, Indian Army, 1955-57; was awarded the 'Legion of Merit (Degree of Commander) 1955; Principal, Administrative Staff College of India, Hyderabad, 1957-59; Governor, Assam 1959-62. A.P. 1962-64; Mysore 1964-65; Add: 12-A, Friends Colony, Mathura Road, New Delhi.

SIDDHA REDDI, SEELAM: b. Aug. 23, 1927 at Banigandlapadu, Khammam Dt. Edn. Khammam and Hyderabad, B.A., B.L., was associated with Students Union; was President Taluk Congress Committee and later Pres: D.C.C., Khammam. MLC since 1958; now Minister for Medium and Minor Irrigation. Add. 'Eruvaka', Somajiguda, Hyderabad. TF: 33700; 32193; 32434.

SITAKUMARI, YELLAPRAGADA: b. 1914 Social Worker; Literary Critic. Founder Mem: Andhra Yuvati Mandali. Add: Andhra Yuvati Mandali, Barkatpura, Hyderabad.

SIVASANKARASWAMI TALLAVAJULA: b. 1892. Modern romantic poet. Former Member Sahiti Samiti & Navya Sahitya Parishad. Pub: Kritulu, Sivasankara kritulu; Add: c/o Andhra Pradesh Sahitya Akademi, Kala Bhavan, Hyderabad.

SOMAYAJULU, J. V.: b. Oct. 16, 1908; Edn: M.A., B.Ed., Worked in 'Financial News', Bombay 1934-35; Statistician, Batliwala & Co. Returned to Madras and founded a stock broker firm; Director, Andhra Cements Ltd. Leader of Trade Delegation on behalf of Andhra Chamber of Commerce to South Asian countries and Japan; Add: 337, Thambuchetty St., Madras-1.

SRINIVAS, M., RAYAPROLU: b. Oct. 25, 1925; Civil Engineer by profession, English poet; Ed: East & West; Add: Maredepalli, Secunderabad.

SRINIVASAIYENGAR, K. R.: b. Apr. 17, 1908. Edn: Tirunelveli and Palayamkottai. Worked in Ceylon as Educator. Prof. of English Lingraj, College, Belgaum (1933-44); Vice Principal, Basaveshwam College, Bagalkot (1944-47). In 1947, joined as Professor of English, Andhra Univ. till 1965, when he was appointed as Vice Chancellor of that Univ. Visiting Professor to Leeds Univ. (1959). Pub: Lytton Strachy; a critical study 1938; Indo-Anglican Literature, 1943; Sri Aurobindo, 1945; The Indian Contribution to English Literature, 1946; a New Deal for our Universities; The Inner Mind and Heart of Britain, 1955; The Indian Writing in English and the Adventure of Criticism, 1962; Francois Mauriac, 1964. Shakespeare; His word and his art., 1964, Rabindranath Tagore, 1965. Add: Vice Chancellor, University Campus, Waltair.

SRINIVASARAO (SRI SRI) b. 1910. Edn: na; Poet & Playwright. Leader of progressive group in literary field. Developed his distinct modernism in thought and expression. Experimented boldly with new innovations in phrase and metre. Reputed as prajakavi (poet of the people). Pub: Mahaprasthanam a collection of his poetry, translated into Russian and other languages; Chandramati. Add: Madras-28.

SRIRAMULU REDDI, P.: b. Apr. 5, 1892 at Putalapattu. Edn: Oriental title, Andhra Univ. Pub Tr. Kambaramayana, Periapuranam, Naladiyar, Silappadikaram, Manimekhalai, Bharati songs from Tamil, Viswamitra Charitra (prose) five parts. Add. Putalapattu, Chittoor Dt.

UBBARAJU, GOKARAJU: b. July 1, 1915, at Juvvala palem, W.G. Dt. Edn: Benaras, Studied Pharmacology at Sanfransisco Medical Centre (California, USA), Started his own pharmaceutical manufacturing concern, South India Research Institute, Sirinagar, near Vijayawada. M.L.C. 1958-64. Dy. Chairman, Legislative Council, A.P. till 1964. Add: Vijayawada-2.

UBBARAO, KALLURI: b. May 25, 1897. Took part in Civil disobedience movement and courted imprisonment in 1920 and 1923; Madras M.L.A. 1937-40 and 1946-52; Andhra M.L.A. 1953-62; Dy. Speaker, Andhra Assembly 1955-56; conferred Padmasri 1967. Add: Hindupur.

UBBARAO, KOKA: b. July 15, 1902, at Rajahmundry, E.G. Dt. Edn: Rajahmundry and Madras; Advocate, Madras High Court 1926; was elevated to the Bench of Madras High Court (Mar. 1948-1954 July); when Andhra High Court was constituted at Guntur, he was appointed as the first Chief Justice (July 5, 1954 to Oct. 31, 1956) and later Chief Justice, Andhra Pradesh (Nov. 1, 1956 to Jan. 30, 1958); Justice, Supreme Court (1958-66) and became its Chief Justice (July 1966, Apr. 1967); was nominated by Consortium of opposition parties in the newly elected (1967) Lok Sabha for Rashtrapati but without success. Add: 7, Rest House Crescent, Bangalore-1.

UBBARAO, RAYAPROLU: b. Mar. 17, 1892, at Garlapadu, Guntur. Edn: Bapatla, Hyderabad & Shantiniketan. Began writing poetry since 1909; joined Osmania Univ. in 1921 as Head of Telugu Dept; Principal, Univ. College, Warrangal, 1947-50; Pres: Hyderabad Telugu Academy, 1950; Member, Central Sahitya Akademi, General Council. Prolific Writer of Poetry in Telugu. Pub: Lalita (1909), Trinakanthamu (pure lyric) 1914, Swapnakumar, Telugu Tota, Jadakuchulu, Vanamala, Madhukalapam and Kannepatalu and a number of Trn. from Kalidasa etc. Add: Lalitakutir, 44, Nehru-nagar, Secunderabad.

UBBAREDDI, B. V.: b. July 1, 1903. Edn: B.A., B.L., Pres: Dt. Board, Kurnool, 1938-42 & 1949-53; Participated in Satyagraha movement and was jailed 1942-45; M.L.A. 1955; Speaker, Legislative Assembly 1962. Add: Hyderabad.

UBBA REDDI, DANDA VENKATA: b. Apr. 16, 1899 at Nellore. Edn: Nellore, Madras, London and Edinburgh. M.B., B.S., M.Sc., Started Medical Career in 1925 as private practitioner and Medical Inspector of Schools, Nellore. Entered Government Service in 1930 and served in various capacities in the department and became Principal, Guntur Medical College, Guntur before retirement in 1956. Was President, Physiology Section, Indian Science Congress. Was Professor and Director of the Upgraded Dept. of History and Medicine, Osmania Medical College, Hyderabad. Pubn: Special Scientific papers on History of Medicine. Monograph on History of Medicine. Now Secy, Telugu Bhasha Samiti. Ed: of publications, Andhra Pradesh Academy of Sciences. Mem: National Commission for Compilation of History of Sciences in India. Corresponding

- Member, American Assn. of History of Medicine. Mem: International Society of Hist. of Medicine, Fellow of the Indian Academy of Medicine. Add: Emeritus Professor of Hist. of Medicine, 1-10-82, Ashok Nagar, Hyderabad-20. TF: 34777.
- SUNDARAYYA, PUCHALAPALLI:** b. 1913. Gannavaram Krishna Dt. Entered politics in 1917 participating in Madras session of Indian National Congress. Mem: AICC 1928-30; Led student demonstration and was imprisoned in a Borstal School, 1930-32; joined Communist Party in 1932 and organised party activities in Andhra; M.P. 1952-55. Top Communist Leader in Andhra; M.L.A. 1955-67. Was Leader of the opposition in the Andhra Assembly. Add: Vijayawada.
- SURYANARAYANA, PANCHAGNULA:** b. Apr. 4, 1897. Resigned from Govt. office and participated in Freedom struggle; Worked in the Congress office and *Swarajya Patrika*; Entered Business as whole saler of piece goods of Mettur Textiles; Director, Tirupati Cotton Mills etc; Sheriff of Madras 1962. Add: Indian Chamber Buildings, Madras-1.
- THANUPILLAI, PATTAM A.:** b. July 1885; Edn: B.A., B.L., Trivandrum 1914; quickly gained practice and took interest in public affairs; elected to Travancore Legislative Assembly 1928; M.L.A., Travancore, Cochin; Pres: Travancore State Congress; Chairman, State Committee of the P.S.P. Chief Minister, successively, Travancore 1948, Travancore-Cochin 1954 and Kerala State 1960-62; Governor of Punjab 1962-64; now Governor of Andhra Pradesh. Add: Rajbhavan, Hyderabad-4. TF: 34343.
- THIMMAREDDI, PEDDIREDDI:** b. Nov. 24, 1914, at Chenepalli, Vayalpad, Chittoor Dt. Edn: Madras. Left studies. Took to politics from 1936 onwards and courted imprisonment; Pres: Andhra Rashtra Ryot Sangham (1940-41); Madras M.L.C. 1952-53 in Krishik Lokh Party Ticket; Andhra Minister for Local Administration 1953-55, 1955-60; Chairman: A. P. Khadi Board 1962-64; Pres: AFCC 1964-67; Elected M.L.A. 1967; Visited UK as Agricultural Export on the Invitation of Nuffield Foundation; now Minister for Agriculture; Add: Building No. 2, Begumpet, Hyderabad; TF: 37232/33909.
- TIRUMALARAO, MOSALIKANTI:** b. Jan. 29, 1901, at Kakinada; Edn: Left studies in preference to Congress party work 1921; Took part in Freedom Struggle; Mem: Central Legislature 1937-41; Mem: Council of States 1945-47; was imprisoned several times M.P. 1949-52; Lt. Governor, Vindhya Pradesh (1956); Union Dy. Minister for food 1956-62; Mem: Lok Sabha 1957; Add: Kakinada.
- VALLURI, S. R. (SITARAMARAO):** b. June 25, 1924 at Kakinada; Edn: B.Sc. (Eng.), Benaras University, D.I.Sc. at Indian Institute of Science, Bangalore, 1946-48. Ph.D. (sum Laude) in Aeronautics. Research Fellow (1954-57) at Guggenheim Aeronautical Laboratories, California Institute of Technology U.S.A. Head of the Department of Aeronautics and Applied Mechanics, IIT, Madras, 1963-65. Presently Director, National Aeronautical Laboratory, Bangalore. Was consultant to

- & U.S. Government Establishments. Was consultant to the Douglas Air Craft Company for five years. Received Wright Bros. award 1963 from the Society of Automotive Engineers (U.S.A.) for contributions in the studies of metal fatigue. Pub: 25 special scientific papers relating advanced aeronautics published in International Scientific journals. Add: Director, National Aeronautical Laboratory, Post Box No. 4, Bangalore-17.
- VAMANARAO, V. C.:** b. March 23, 1909. Edn: B.A. (Hons.). Entered Erstwhile Hyderabad State Educational Service 1934 and became Director of Public Instruction in 1962 in Government of Andhra Pradesh. After retirement in 1964 he was appointed as Vice Chancellor, S. V. University, Tirupati. Add: Tirupati.
- VARALAKSHMAMMA, KANAPARTI:** b. Oct. 6, 1896, at Bapatla. Edn: Degree Course. Prolific Writer in Telugu. Pub: *Sayada, machettu needa muchhatalu, vasumati, Satya Draupadi*. Add: Rajahmundry.
- VEERARAGHAVALU TANETI:** b. July 6, 1817. Edn: B.A., B.L., Machilipatnam & Madras. MLA since 1955. Was member of Kumarappa Committee on Agrarian Reform. Minister PWD, 1965-67. Now Education Minister, since 1967. Add: Building No. 258, Fair Lawns Opp. Belvista, Hyderabad. TF: 32882.
- VENKATAPPAYA, BURRA:** b. Oct. 1907. Entered I.C.S., 1936 and served as Senior Officer in the then Bombay Province and became Finance Secretary to the Government of Bombay. He was appointed as Executive Director of Reserve Bank of India, Chairman, State Bank of India, 1962-65. Mem: Planning Commission, New Delhi, since Aug. 1967. Add: Planning Commission, New Delhi.
- VENKATRAMA RAO, BOINAPALLI:** b. Sept. 2, 1920. Edn: High School; Proficient in Telugu, Hindi & Urdu. Ardent Sarvodaya Social Worker. Participated in Andhra Movement in Telengana thro' Andhra Maha Sabha, from 1939 onwards. Was imprisoned in 1947 for attacking Razakar Movement. Propagated Bhoodan Movement thro' Pada Yatra. Joined Socialist Party 1950 — later in Praja Socialist Party. From 1961, Chairman Local Library Authority, Karimnagar. Member of various organisations connected with Public Life. Add: Chairman, LLA, Karimnagar.
- VENKATARAMIAH, RELANGI:** b. Aug. 9, 1919. Edn: Elementary Education. Acted in 150 films mostly Telugu as Comedian. Add: 20, Neelakanta Mehta Street, Madras-17.
- VENKARANGIAYA, MAMIDIPUDI:** b. Jan. 8, 1899. Was Professor of Politics, Bombay University. Was Principal, V. R. College, Nellore, W.G.B. College (Now DNR College), Bhimavaram. Prolific Writer on public issues. Pub: *Arthashastra of Kautilya (Tr.) History of India, Raiyaganaramu*. Ed: History of Freedom struggle in Andhra Pradesh, 1965-66. Add: 81, Maredpalli, Secunderabad.

- ENKATARANGA REDDI, KONDA:** b. Dec. 10, 1891. **Edn:** Studied Law; started Law Practice in Mahbubnagar 1919; was responsible for Andhra Maha Sabha in the State of Hyderabad, 1922; **President**, Andhra Maha Sabha. Participated in Satyagraha and courted imprisonment. Hyderabad Excise Minister, 1952-56; held Home (1957-59), Revenue (1959), Deputy Chief Minister (1960-62), portfolio in A.P. **Add:** Hyderabad.
- ENKATARAO, BALANTRAPU:** b. Jan. 1, 1887, at Mallam near Pithapuram. **Edn:** Classical Sanskrit Studies. One of the twin poets 'Venkata Parvateesakavulu.' **Pub:** Brindavanamu, Siva Puranam, Brahmapuranam, Children Literature. **Add:** Pithapuram.
- ENKATARAO, DAMERLA:** b. April 33, 1894, at Rajamundry. **Edn:** M.A., L.T., served as Educator in the Department of Education, (1919-40); Connected with various public institution in Rajahmundry, M.L.C., 1952-53. **Add:** Rajahmundry.
- ENKATA SESHACHALAPATI RAO, TENNETI:** b. Oct. 15, 1911. **Edn:** Studied Medicine, L.M.P. Elected Councillor from 1936 and became Chairman. Municipal Council Vijayawada (1946-54). Connected with various public affairs in Vijayawada. M.L.A., 1962 onwards Hanumanpet, Vijayawada.
- ENKATASESHA SASTRI, GADIYARAM:** b. Feb. 15, 1901, at Proddatur. Classical Poet & Critic; Andhra M.L.C.: **Mem:** A. P. Sahitya Akademi, **Pubn:** Sivabharatam (poetry), Srinathuni kavitasamraiyam (criticism), Valmiki. **Add:** D. 23, Co-operative Colony, Proddatur, Cuddapah District.
- ENKATASESHAYYA, NEELAMRAJU:** b. Dec. 22, 1905. Started his journalist career at Twentyone (1926) as reporter in **Andhra Patrika** and became its Assistant Editor in 1945. Edited 'Natyakala' 1933-35. Assistant Editor (1949-59), Andhra Prabha and its Editor, since 1959. **Add:** Vijayawada.
- ENKATASUBBHAYA, GORREPATI:** b. July 1, 1897. Biographer. **Pub:** Sarat; Chalam; Sarojini; Mana rytu bidda. **Add:** Ghantasala, Krishna District.
- ENKATASUBRAHMANYAM, BURRA:** b. Age. 58. Advocate-General Andhra Pradesh. Story writer, Literary critic. **Pub:** Vijaya. **Add:** 10-2-6, A. C. Guards, Hyderabad-28. TF: 32432.
- ENKATESWARARAO, NARLA:** b. Dec. 1, 1908. **Edn:** Machilipatnam, B.A., 1934. Associated with journalism in his student days when he was writing for Krishnapatrika. Connected with Swarajya, 1935 as Editor. Janavani (1936-37), Prajamitra (1937-38). Entered 'Andhraprabha' service as News Editor (1938-42) and became its Editor (1942-59); Founder, Editor, 'Andhra Jyothi', issued from Vijayawada (1960), **President**, Andhra Journalists Association (1945-48); **Mem:** Andhra Pradesh Sahitya Akademy 1957; **Mem:** Rajya Sabha 1958. **Pub:** Matamanti Neti Russia, Kotta Gadda, Narla Varimata. His writings are powerful in expression

- influencing and shaping the public opinion. Carved new vistas in Telugu journalism establishing certain basic ethics in the profession. **Add:** Andhra Jyoti, Vijayawada.
- VENKATESWARLU PILLALAMARRI:** b. (Age 52). **End:** M.L.A., 1946-52; **President**, Andhra Trade Union Congress; was imprisoned 1947-48 and 1948-51; M.L.A., 1952. **Add:** Vijayawada.
- VIJAYABHASKARA REDDI, K:** b. 1922, at Laddagiri, Kurnool District. **Edn:** B.A., B.L., Madanapalli & Madras. Participated in Freedom Struggle, 1942. Took part in Co-operative Movement. **Mem:** APCC, since 1951. Was MLA and Secretary, Congress Legislative Party, 1955-62. Visited United States as Guest to study educational system. Was **Chairman**, Zilla Parishad, Kurnool (1959-67). Now Minister for Cooperation. **Add:** D.G.P's Bungalow, Begumpet, Hyderabad.
- VISWANATHA SASTRY, RACHAKONDA:** Short story writer. He developed a new technique of writing streams of consciousness. **Add:** 15-12-15, Sir B. N. Sharma Gardens, Visakhapatnam-2.
- VISWANADHAM, TENNETI:** b. 1896. **Edn:** Studied Law in Trivandrum. **President** (for a longtime), DT Congress Committee, Visakhapatnam; M.L.A., 1937; Parliamentary Secretary, 1937-39; Again elected as M.L.A., 1946-51 and was **Chief Parliamentary Secretary**, 1946-47, **Chairman**, Municipal Council, Visakhapatnam, 1947-51; M.L.A., 1952-53 on Praja Party Ticket; Leader of the opposition, 1952. **Finance Minister** in Prakasam Cabinet, 1953-54; **Chairman**, Company Law Board, 1956-60; Elected from Madugala to A.P. Assembly as Independent, 1962-67. Leader of the opposition in Andhra Assembly (1962-67). Elected to Lok Sabha, 1967. **Add:** New Delhi.

ANDHRA PRADESH SAHITYA AKADEMI PUBLICATIONS

Available at Akademi Office, Kala Bhavan, Saifabad, Hyderabad

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3. Vastu Pada Kosam,
4. Dialect Dictionary of Handloom Vocabulary.

Andhra Pradesh Almanac Advt

CURRENT BIOGRAPHY (ADDENDA)

BHANUMATI RAMAKRISHNA, P.: b. Sept. 7, 1925 at Ongole. Edn College education. Character Actress. Swarga Seema, Malleswari and others. Short Story writer. Was conferred with 'Padmasri' 1966. Recipient, Cash Award from Andhra Pradesh Sahitya Akademi, Hyderabad. Pub: Attagari Kathalu; Bhanumati Kathani kalu. Add: Bharani Gardens, Arcot Road, Madras-26.

BHANUMURTY, VEMARAJU: b. Dec. 25, 1923. Edn: Maruteur and Kakinada, B.A., Sub-Editor, Andhra Prabha (1948-54); Joined Union Ministry of Information & Broadcasting as Assistant Information Officer (1954). Now, Information Officer, Press Information Bureau, New Delhi. Pub: Science Katha; Sabda Prapanchamu Jeeva Vikasamu; Mrityu Rahasyam and others. Add: Sector III No. 1046, Ramakrishnapuram, New Delhi-22.

BHIMANNA BOYI: b. Sept. 23, 1911 at Mamidikuduru, Dt. Edn: B.A., B.Ed., Andhra Uni. Worked as Teacher. Participated in the Freedom Struggle. Pub: Has published 22 books: Janapaduni Jabulu (letters) 1940; Paleru (play) 1946; Ragodyam (songs) 1954; Deepa Sabha (poem) 1955; Raghavasistam (play) 1959; Anadi Kosanunchi Anantatam Loki (lyrics in free verse) 1962; The Seventh Season (poems in English) 1964; Raga Vaisakhi (Novel in poetic prose) 1965; Akhanda Tandavam (song) 1966 and a few others. Mem: Executive Board, A.P. Sahitya Akademi, and Senate, Andhra Univ., Vice-President, All India Telugu Writers Conference, Add: Rasalini, Ashoknagar, Hyderabad, A.P.

BRAHMAYYA, PARVATANENI: b. 2, 1908. Edn: Graduate of University of Madras. Studied in London for 4 years. Practicising Chartered Accountant, Partner: Brahmayya & Co., Madras, Bangalore, Vijayawada, Hyderabad and other places. Pres: Institute of Chartered Accountants, New Delhi (1962-63); Pres: Andhra Chamber of Commerce (1964-66). At present Director, Central Board of Directors, State Bank of India, Bombay. Pres: Board of Directors, Madras Circle of State Bank of India; Trustee: Unit Trust of India, Bombay. — Takes lot of interest in Economics, Industries and commerce and finances. Add: Brahmayya & Co., Andhra Insurance Buildings, Tambuchetti Street, Madras-1.

DHARMA REDDI, P.: b. Jan. 12, 1918 at Dharmaram, Parkal Taluq, Warangal Dt. Edn: B.A., Hyderabad. Participated in Freedom Struggle. Joined active politics in 1951. Was Pres: District Co-operative Central Bank Ltd., Warangal, Pres: Panchayati Samiti, Parkal; Vice-Chairman: Zilla Parishad, Warangal. Since 1962 Chairman, Zilla Parishad, Warangal. Add: Hanamakonda, Warangal-1.

KRISHNA, B. S. R. (BANDLAMUDI SIVA RAMAKRISHNA):

Mar. 15, 1925 at Siripuram, Guntur Dt. Pub: (Tr.) Samsa Sukham; Vishada Geeti and three others. Now Chief Editor (Telugu) United States Information Service, Madras, Add: 25, Loganathan Colony, Mylapore, Madras-4.

KRISHNAMURTI, BHADRIRAJU: b. June 19, 1928 at Ongole. Edn: Andhra Univ. B.A. (Hons.) Telugu Literature; A.M. (Linguistics) 1955; Reader, S.V. Univ. (1961). Since Oct. 1962 Prof. of Linguistics, Osmania Univ. Hyderabad. Lectured on Linguistics at various Univ. centres. Visiting Lecturer in Linguistics at the Univ. of California (1960-61). Visiting Professor of Linguistics at Cornell Univ. from Feb. 1967 to May 1967. Attended and read a paper in the 10th International Congress of Linguists, Michigan. Attended the International Congress of Orientalists, (1967), Bucharest, Rumania. Fields in which specialised: 1. General Linguistics. 2. Dravidian Linguistics. 3. Telugu Language and Literature. Pub: Telugu Verbal Bases: A comparative and Descriptive Study, Los Angeles (1961). A Telugu Dialect Dictionary of Occupational Vocabularies, Volume-I, Agriculture, Hyderabad (1962); Konda or Kubi—A Dravidian Language (in press). Add: Professors' quarters, Osmania University Campus, Hyderabad-7. TF: 71165.

LAKSHMAIAH NAIDU JAVADDI. b. Nov. 16, 1901 at Penugonda, W. G. Dt. Edn: High School Education. Pres. Panchayati Board for 31 years. Mem: Taluka and District Board for 14 years. Pres: Co-operative Central Bank, Eluru. Pres. Saraswati Granthasala. Founder, Viswamitra (a periodical) M.L.A. Chairman, Local Library Authority, West Godavari Dt. Add: Penugonda, W.G. Dt.

MALLIKHARJUNA RAO, PANDIRI, b. Apr. 9, 1903 at Rajamundry. Edn: High School Education. Studied Hindi & Sanskrit at Allahabad (1921-22); was arrested for participating in the Boycott during the Prince of Wales visit to India. Attended Gauhati Congress (1926); toured and organised Hindi propaganda under the auspices of Assam Provincial Congress Committee; worked in Congress Party 1931-32; Edited Subhashi (1928); Kinnera (1948-56); started business: Veto & Co. Madras 1938. Deeply interested in Art, Architecture and Sculpture. Mem. Telugu Bhasha Samiti: Add: 18, Jones Street, Madras-1. TF 25068.

RAMA RAO, NANDAMURI TARAKA (N.T.): b. May 28, 1923 at Nimekuru, Gudivada. Edn: B.A. Acted in more than 160 motion pictures taking 120 different types of roles. Noted for his philanthropic attitude. Founded NTR Trust for the benevolent causes Add: 63-A, Bazullah Road, Madras-17.

RANGANATHAM, R: b. March 17, 1911 at Nellore, Edn: B.A., B.L. Nellore & Madras, takes keen interest in educational development

Cultural and Religious Activities. Has been connected with various public activities in Cuddapah. Since 1950, Correspondent Sri Ramakrishna Higher Sec. School, Cuddapah and other institutions. Chairman, Local Library Authority, Cuddapah since 1953. Legal Adviser to Municipal Council and Government Pleader. Add: Christian Line, Cuddapah.

SATYANARAYANA KAPPAGANTULA: b. July 28, 1916. Started journalist career as Sub-Editor, Jana Vani (1936-37); Reporter, Andhra Patrika (1937-38); Sub-Editor, Andhra Prabha (1938-42); from 1945 with "The Mail" in various capacities in the editorial department; now News Editor in the same paper since 1963. Editor Prapancha Darsini. Pub: Manikyam, Evariki Varena, Telavarujamu Patalu, 'Rina vimukti' and others. Add: 5, Veera Bhadram Street, Madras-4.

SESHACHALAM, M: b. Nov. 18, 1898 at Royyuru, Krishna Dt. Edn: B.A., Educational Publisher since 1923. Founder: 'Educational India', Promoter 'Home Library Plan' and EMESCO Pocket Books. Now, Asst. State Commissioner (Scouts) for Circars Area. Add: Machilipatnam.

SITAPATI, GIDUGU VENKATA: b. Jan. 28, 1885 at Bheemunipatnam; Edn. Madras and Rajahmundry, B.A., L.T.; Lecturer, Parlakimidi Rajah's College (1908-1910) 1911-32; Head Master Jaipore Board High School 1911; Lexicographer—worked on Suryandhra Nighantu; Cine Actor 1939-47; Chief Compiler, Vijnana Sarvaswamu (Telugu Bhasha Samiti) 1947-58. Pubn. Ed. Kshetraina padas; Tr. Kuvalayavali; Balanandam; Add. 6-2-960 Khairatabad, Hyderabad.

VISWAM, VIDWAN: b. Oct. 21, 1915 at Anantapur; knows many languages (Telugu, Sanskrit, Prakshit, Pali, Hindi, Bengali, Kannada, English). Pub: Virikanne (1935); Stalin (1943); Penneti pata (1955), Bhoomi (1957) and other 16 literary works. Tr. Chekov Stories (1943); Russia Yuddha Kathalu (1944). Now Resident Editor, Andhra Prabha Illustrated Weekly, Madras. Add: Express Estate, Mount Road, Madras-2.

The bio-data of the following persons could not be included as the material was received too late. It will be used for the next annual edition.

K. ANJALI DEVI (Cine Actress), 2, Pughs Road, Madras-28.

DANTU BHASKARA RAO (Business Magnate), Suryaraopet, Kakinada

GUMMADI VENKATESWAR RAO (Cine Actor), 37, Habibullah Road, Madras-17.

JAMUNA (Cine Actress), 30, Tirumala Pillai Road, Madras-17.

LAKKARAJU SUBBA RAU, Advocate (Retd.), Vanivilas, Temple Street, Kakinada-1.

K. MAHESWAR (Cine Writer), 6, North Crescent Road, Madras-17.

PINGALI NAGENDRA RAO (Cine Writer), 6, Lakshmi Colony, North Crescent Road, Madras-17.

K. PRATYAGATMA (Cine Director), 46, Second Main Road, Raja Annamalaipuram, Madras-28.

P. PULLIAH (Cine Director): 13/2, Ratnachetty Street, Royapettah, Madras-14.

S. RAJESWARA RAO (Music Director), 3/5, Eldams Road, Madras-18.

K. V. REDDI (Cine Director), 3, Murugesh Mudaliar Road, Madras-17.

SAMUDRALA V. RAGHAVACHARYA (Cine Writer), 12, Second Street, Zackriah Colony, Madras-24.

T. V. S. SHARMA (Art Director), 23/13, Luz Avenue, Madras-4.

SURYAKANTAM (Cine Actress), 8, Second Main Road, C.I.T. Nagar, Madras-4.

ITURI VENKATESWARA RAO (Cine Writer), 12/6, Andanan Nagar, Madras-24.

Despite best efforts Bio-data of the following prominent persons could not be included for want of particulars.

ANANDAM, Deputy Chairman, Andhra Pradesh Legislative Council, Hyderabad.

BHANUPRASAD.

ALI BALASUNDARAO

ORA SASTRY, Editor, Andhra Bhoomi, Hyderabad.

ISWARA DUTT, New Delhi.

ATI CHANDUR

RAMAMOHANA RAO, Asst. Editor, Andhra Jyoti, Vijaya-

CHIRANJEEVI

RAMAKRISHNA

RADHAKRISHNA, Editor, Andhra Patrika Illustrated Weekly, Thambu Chetty Street, Madras-1.

ARUDRA

Scientist, Atomic Energy, Establishment, Bombay.

Journalist, Hyderabad.

KRISHNAJI NAYAK, Deputy Speaker, Andhra Pradesh Assembly.

FOURTH FIVE YEAR PLAN IN ANDHRA PRADESH*

(See Planned Economy page 113)

The size of the State Plan envisaged during the Fourth Five Year Plan is in conformity with the indications given by the Planning Commission regarding the preparation of the States' Fourth Plan. The Central Planning Commission have advised the States that an outlay which might be twice the outlay in the Third Plan should be considered as the upper limit for the initial formulation of the States' Fourth Plans. The actual outlay in the Third Plan in the State is expected to be of the order of Rs. 345/- crores. Moreover the outlay earmarked for the States' sector in the National Plan is Rs. 7,660/- crores and on the basis of population and other important factors such as balanced development of all the regions in the country, overall investments (including Central, State and Private Sectors) in the earlier plans past performance etc. Andhra Pradesh is entitled to a plan outlay of Rs. 700/-† crores. According to present indications, the total outlay may go up to Rs. 775/- crores including provision for Nagarjunasagar and Srisailem projects (See pages 38; 70).

In order to realise the basic objective of achieving a 40% increase in the State income, simultaneously contributing its share towards the solution of pressing national problems such as scarcity of food-grains, the strategy of the Fourth Plan will be (a) In the consumer goods sector, particularly in Agriculture along with the fuller utilization of potential created in the preceding three plans, specially in the field of irrigation, to emphasise the role of quick yielding projects like minor irrigation; (b) With the longterm goal of catching up with the states; to lay the foundation for industrialisation on a significant scale in subsequent plans. The latter programme will call for (i) the erection of considerable electric power potential; (ii) the expansion of technical education and (iii) the development of potential industrial areas to attract new industries. (See page 91).

Agriculture: The allocation for agriculture and irrigation in the 4th Plan is about 30% of the total outlay. This does not include the provision for Nagarjunasagar Project. Nearly ¾ of this provision is earmarked for minor irrigation. Completion of major and medium irrigation projects already started and for the development of ayacut

* This draft plan was originally developed in 1965. In tune with All India Pattern, State Govt. developed Annual Plans (see page 189) year after year. It is reported that the Fourth Five Year Plan will be launched from 1969.

† This figure is later revised as Rs. 522 crores.

areas for quick utilisation of the irrigation potential. In considering the outlays in agriculture it has to be remembered that in the first three plans, considerable sums were already spent in the State for establishing the necessary organisational structure for Agricultural development. The allocation for power is proportionately larger than in the Third Plan. Scarcity of power has been the inhibiting factor in the past for development of industries in the State. Moreover there is an increasing demand for more electricity for agricultural purposes. In the Third Plan, transport and social services, especially general and technical education did not receive adequate attention due to the heavy demands from priority sectors such as agriculture. In the Fourth Plan it is proposed to make up the lag in the development of these sectors to a large extent.

In the Fourth Plan, an amount of Rs. 78 crores is earmarked for the agricultural sector (excluding irrigation and ayacut development) against an anticipated outlay of Rs. 49.75 crores in the third plan. Out of the Rs. 17 crores provided for agricultural schemes in the Fourth Plan, Rs. 2 crores is proposed to be spent on Intensive Agricultural District Programmes (See pages 64 & 258), Rs. 5 crores on Modified Package Programmes, Rs. 1.57 crores on seed farms, seed stores and distribution of improved seeds, Rs. 1.88 crores for control of pests and diseases, Rs. 1.25 crores for streamlining the organisational set up and the remaining Rs. 5.30 crores on various individual commodity development schemes, distribution of improved agricultural implements, etc. Out of the amount of Rs. 8 crores provided in the Fourth Plan for Agricultural Research Training and Education, Rs. 3.50 crores are meant for strengthening the new agricultural university (See page 160) constituted in June 1964 and its constituent colleges and Rs. 4.50 crores for the research and training schemes of the Agricultural Department (See page 62). There are two vocational agricultural schools in the State. In the Fourth Plan, it is proposed to establish 6 more schools with an intake capacity of 25 each. Out of Rs. 4.50 crores earmarked for agricultural research in the Fourth Plan an amount of Rs. 0.70 crore will be spent on research on rice, Rs. 0.37 crore on sugarcane, Rs. 0.32 crore for agricultural education, Rs. 0.34 crore for establishing a large scale fruit and vegetable processing plant and the rest for research on various important crops etc.

Animal Husbandry: Andhra Pradesh occupies the fourth place among all the States of the Indian Union in respect of livestock population and ranks first in the number of poultry and sheep. The State has roughly 1/10 of the country's cattle population, 1/15 of its sheep and 1/5th of its poultry. Livestock occupies an important place in the State's rural economy. In the Fourth Plan an amount of Rs. 5.50 crores is provided for Animal Husbandry Schemes the details of which are given in the following table:

OUTLAYS ON ANIMAL HUSBANDRY SCHEME

Scheme	Amount proposed in the Fourth Plan	
	(Rs. Crores)	
1. Key Village Schemes	1.48	
2. Cattle Development	0.64	
3. Feed & Fodder development scheme	0.30	
4. Sheep Development	0.58	
5. Poultry Development	1.00	
6. Veterinary Aid	0.70	
7. Other Schemes	0.80	
Total	5.50	

There are at present eight artificial insemination centres in the State. During the Fourth Plan it is proposed to establish six more centralised semen collection centres. One more cattle development project is proposed to be established in Guntur. Under cattle development schemes, it is proposed to reorganise four livestock farms and establish one more live stock farm. There are at present 12 livestock farms in 12 districts of our State. It is also proposed to start 40 sheep and wool extension centres. Under poultry development eight Intensive Poultry Development Blocks will be established, in addition to five Intensive Poultry Production-cum-Marketing Centres.

Fisheries: In the Fourth Plan, development of fisheries will be in terms of project approach and the schemes will be drawn up with an export slant. An amount of Rs. 3.50 crores has been provided for the development of fisheries during the Fourth Plan. With a view to developing and exploiting intensively the potential of Nagarjuna-sagar Dam which is expected to be spread 285 sq.km. of water when the project is completed, a master plan costing Rs. 34 crores spread over a period of 20 years was drawn up. The scheme envisages stocking of seed in the reservoir, colonisation of fishermen, transport and preservation of fish and marketing it through cooperative societies. In the fourth plan preliminary work connected with this Master Plan will be taken up. There are two lakes in Andhra Pradesh which also have outlets to sea. They are the Kolleru in Krishna and West Godavari districts and Pulicat lake in Nellore district. These are roughly 250 sq.km. and 200 sq.km. in area respectively. These lakes are yielding a sustained fishery wealth. The problems of each of these lakes being unique, the entire area has to be surveyed and Master Plans for the development of these lakes have to be drawn up.

A fishing harbour at Kakinada is under consideration. It is proposed to provide more shore facilities at Kakinada and also construct medium sized mechanised boats of 50 and 30 footers for going far into the sea. In addition to this existing boat building yard will also be strengthened for undertaking the construction of medium sized boats. For this purpose, an outlay of Rs. 22.85 lakhs has been proposed. Apart from Kakinada, Narasapur and Krishnapatnam are also proposed to be developed as fishing harbours. At Narasapur besides constructing the harbour, anchor hall and cold storage will also be provided. At Krishnapatnam besides constructing the harbour, a boat building yard for constructing steel boats will also be set up. An outlay of Rs. 60 lakhs at the rate of Rs. 30 lakhs each for Narasapur and Krishnapatnam harbours has been proposed. Visakhapatnam harbour occupies the centre of the East Coast line and commands a rich sector of the East Coast line and commands a rich sector of the fishing grounds. These vast fishing grounds can be exploited with the deep sea-fishing vessels. With a view to conduct fishing operations by acquiring deep sea fishing vessels, it is proposed to set up a Fishing Corporation.

Forests: The long term objectives of the Plans for development of forests has been to progressively increase the forest areas to 33% of the geographical area, as laid down in the National Forest policy, by bringing in waste lands under afforestation and improving the existing forests by raising plantations of economically important and quick growing species over extensive areas. At present, the forest area in the State forms 23.8% of the geographical area (see page 27). In the Fourth Plan, an amount of Rs. 4 crores is allocated for forest development schemes against Rs. 1.28 crores provided in the third plan.

Cooperation: A sum of Rs. 5.50 crores is provided for cooperation against Rs. 4.50 crores allotted in the third plan. The membership in primary agricultural credit societies will be increased from the level of Rs. 34 lakhs at the end of the third plan to Rs. 45 lakhs at the end of the Fourth Plan. It is expected that by the end of the Fourth Plan the coverage of villages by primary agricultural credit societies will be up to 100% as against 90% at the end of the third plan. The extension of credit is the most important part of the programme. An increase in membership unaccompanied by the provision of adequate and timely credit will not only discourage new members but also inflict infinite damage to the success of cooperative societies. The credit requirements for current and capital expenses by the end of the fourth plan are estimated to be of the order of Rs. 250-300 crores. The target fixed for the disbursement of loans by cooperative societies during the last year of the Fourth Plan is Rs. 34.50 crores — Rs. 67.50 crores under short and medium term loans and Rs. 17 crores under long term loans. In the last year of the Third Plan the amount distributed

through short and medium term loans will be Rs. 30 crores and long term loans Rs. 6 crores.

Community Development: The distinction between Stage I, Stage II and post Stage II of the community development pattern blocks has been given up as the reorganised blocks consist of villages and population drawn from the pre-existing patterns of blocks at different stages under community development classification (see page 196). The distribution under community development of funds to the reorganised blocks will be on the basis of their classification as 'above average', 'average', 'below average, and tribal blocks' depending on their level of development. Funds will be allotted on a varying per capita basis in inverse proportion to the level of development so that blocks which are less developed will get larger funds compared to others which are better off. An amount of Rs. 23 crores for Community Development is provided in the Fourth Plan.

Irrigation: The State's Third Plan contains 42 major and medium irrigation and flood control projects under the category of spill over schemes and 17 new schemes (see page 17). Of the 17 new schemes, only six were put on ground as the Planning Commission has not yet communicated its decision for the inclusion of the rest in the Third Plan. The eleven schemes which could not find place in the Third Plan are now proposed to be taken up in the Fourth Plan as new schemes. Out of the 48 schemes now in execution in the Third Plan, only 13 irrigation schemes and 3 flood control schemes will spill over to the Fourth Plan. In the Fourth Plan, a sum of Rs. 75 crores is earmarked for Major and Medium Irrigation projects excluding Nagarjunasagar Project which it is hoped will be financed from the central sector. The provision for minor irrigation Rs. 40 crores.

Power: The installed capacity at the beginning of the Third Plan was 213 MW. By the end of the Third Plan the capacity has increased to 292 MW. (see page 66). In the Fourth Plan a provision of Rs. 200 crores is made for Power Development. This amount does not include Rs. 35 crores required in the Fourth Plan for the work on Srisailem Project. The new schemes with an installed capacity of 900 MW proposed for inclusion in the Fourth Plan are given in the following table:

Schemes	Cost (Rs. in crores)	Capacity in MW
1. Kothagudem Thermal Scheme Station A. Stage II	4.99	120
2. Kothagudem Thermal Scheme Station B.	41.05	480
3. Lower Sileru Hydro Electric Scheme	22.98	300
Total:	69.02	900

Industry: The investment by the private sector in industries during the First and Second Plans was of the order of Rs. 21 crores and 25 crores respectively while during the Third Plan, an amount of Rs. 55 crores is estimated to be invested. In view of the State's industrial backwardness it is imperative that concerted efforts are made towards achieving a substantial investment in industries in the Fourth Plan. It is considered that investments in the private sector to the extent of about Rs. 150 crores during the Fourth Plan are feasible if the necessary facilities are provided for the purpose. In the Fourth Plan a sum of Rs. 60 crores is provided for the development of Industries and Mining against Rs. 15.62 crores allotted in the Third Plan. The distribution of this outlay among the constituent heads is as follows:

OUTLAY UNDER INDUSTRIES SECTOR

Head of Development	Third Plan anticipated outlay	Proposed provision in the 4th plan (Rs. Crores)
Large & Medium Industries	6.13	21.65
Mining	0.52	2.50
Village & Small Scale Industries	5.65	23.20
Handlooms	3.32	12.65
Total:	15.62	60.00

An amount of Rs. 23.20 crores has been earmarked in the Fourth Plan for village and small scale industries excluding Handlooms. Efforts will also be directed at promoting small industries both as producers of consumer goods and as ancillaries of specific major units on the basis of well-articulated common production programmes. Emphasis will also be laid on providing more credit facilities through the State Industries Act. With this objective in view an allotment of Rs. 10 crores has been made for development of small scale industries.

Roads: An amount of Rs. 30 crores on 'Roads & Transports' is allotted in the fourth plan. The breakup of this provision is given in

Item	Outlay proposed in the 4th plan (Rs. crores)
I. State Highways	
i. Spillover works	6.00
ii. New works (upgrading only)	18.42
iii. Tools, Equipment & Staff	2.58
Total:	27.00
II. Zilla Parishad & Panchayati Samiti Roads	
i. Spillover works	0.50
ii. New works	17.00
iii. Tools, Equipment & Staff	2.50
Total:	20.00
III. Municipal Roads	2.50
IV. States' Contribution to the capital account of Andhra Pradesh Road Transport Corporation for the Development of Passenger Transport	5.00
V. Improvement of Minor Ports and Canals	5.00
VI. Development of Tourism	0.50
Grand Total:	60.00

By the end of the Fourth Plan, the total road length under all categories in the State is expected to be 47,790 km and the likely road length per 100 sq. km will be 18 km.

Health and Medical Services: During the Fourth Plan, an amount of Rs. 16.50 crores is provided under the head 'Medical Services'. The physical targets envisaged by the end of the Fourth Plan with the outlay are: Seats in Medical Colleges 1,250; number of hospital beds 30,620; population per one hospital bed 1,140; number of Doctors 10,400; population per one Doctor 3,500; number of Nurses 6,300; and population per one Nurse 5,714. The provision for public health programmes is Rs. 9 crores.

An amount of Rs. 10.52 crores is expected to be incurred in the third plan on Water Supply and Drainage Schemes in Municipal areas. The two principal schemes under this head are Manjira Water Supply Scheme and Tatipudi Reservoir scheme which are expected to supply water to the Central Projects located or proposed to be located in

and around Hyderabad and Visakhapatnam respectively. In the Fourth Plan, a sum of Rs. 23.50 crores is earmarked for Urban Water Supply & Drainage Schemes. Of this amount, Rs. 4.64 crores will be spent on the spillover schemes of the Third Plan while an amount of Rs. 10.79 crores will be spent on 47 new water supply and Rs. 8.07 crores on new drainage schemes. In the Fourth Plan, an amount of Rs. 5.50 crores is provided for housing and slum clearance schemes.

Education: The State's Third Plan for General and Technical Education was originally formulated with an outlay of Rs. 23.61 crores with the aim of enrolling 95% of the boys and 70% of the girls of the age group 6—11 years by the end of the Plan period and increasing the education facilities for the other categories to the extent necessary. However, the provision in the Third Plan had to be revised subsequently owing to the emergency and it is now expected that the actual outlay during the Plan will be of the order of Rs. 21.20 crores. It is estimated that about 92.9 percent of the boys and 63.5% of the girls of the age group 6—11 will be enrolled by the end of the Third Plan. A sum of Rs. 64.50 crores is provided in the Fourth Plan under General and Technical Education as shown below:

Heads	Provision in the Fourth Plan
General Education	
(i) Elementary Education	24.20
(ii) Secondary Education	18.60
(iii) University Education	5.80
(iv) Other Schemes	2.90
Sub Total	51.50
Technical Education	
(i) Technical Education	10.00
(ii) Fine Arts	1.15
(iii) Craftsmen Training Schemes	1.85
Sub Total	13.00
Grand Total	64.50

The main targets of enrolment at various stages of education in the Fourth Plan are shown in the table below:

			(anti- pated)	Target
Primary				
Stage & Group	Unit	1960-61	1965-66	1970-71
Age group (6-11)	Lakhs	29.76	37.00	48.00
Age group (11-14)	"	4.08	6.66	11.16
Secondary				
Age group (14-17)	"	1.96	2.73	11.00
Engineering Degree	No. of Seats	1,015	1,495	1,855
Diploma	"	2,433	3,303	4,453

Welfare: The object of the Fourth Plan proposals for the welfare schemes is to intensify the efforts already initiated for the amelioration of the socio-economic conditions in the economically backward areas and economically backward section of the population. The provisions earmarked for the various welfare heads of development in the Fourth Plan are: Welfare of Scheduled Tribes Rs. 5.50 crores; Welfare of Scheduled classes and other Backward classes Rs. 5.50 crores; Social Welfare Rs. 2 crores and Labour and Labour Welfare Rs. 1.90 crores.

A sum of Rs. 1.90 crores is provided for Labour & Labour Welfare Schemes in the Fourth Plan against an anticipated outlay of Rs. 0.01 crores in the Third Plan. The principal schemes proposed in the Fourth Plan are shown in the following table.

Scheme	Outlay proposed in the Fourth Plan (Rs. Crores)
1. Establishment of Labour Welfare Centres	0.44
2. Establishment of two Holiday Homes for workers	0.18
3. Employment schemes (State's share)	0.12
4. Employees' State Insurance Schemes (State's share)	0.66
5. Other schemes	0.50
Total	1.90

Information: The anticipated outlay on publicity and broadcasting in the Third Plan are Rs. 11.63 lakhs and Rs. 11.33 lakhs respectively. Under publicity schemes, information centres have been opened in the district headquarters as well as State headquarters and the mass media

of publicity viz. film shows, song and drama performances, exhibitions etc. are being used on a wide scale during the third plan period. There were 8,933 Community radio sets working at the end of the Second Plan period and it is anticipated that 14,396 more sets will be installed during the Third Plan period taking the total number of radio sets to 23,329 covering about 82% of the inhabited villages in the State at the end of the Plan. Since the efforts made during the Third Plan with limited funds have touched only the fringe of the problem, provision of Rs. 50 lakhs under Publicity and another Rs. 50 lakhs under Broadcasting is made in the Fourth Plan to carry out Plan publicity and community listening on a much wider scale.

It is proposed in the Fourth Plan to increase the tempo of publicity programmes like production and exhibition of documentary films, song and drama performances, exhibitions, production of publicity literature etc. which raise the general awareness among the public. With the proposal for the installation of 5000 community radio sets in the Fourth Plan all the inhabited villages in the State will be having community radio sets at the end of the Fourth Plan. A new scheme for the installation and maintenance of rediffusion system is also proposed during the plan period.

RAJU COMMITTEE RECOMMENDATIONS

(District Administration)

The formation of Zilla Development Board with the Collector as Chairman for the economic growth of the districts has been recommended by a Committee appointed under the Chairmanship of M. T. Raju,* I.C.S., First Member, Board of Revenue, in regard to having a single authority charged with securing economic growth of the districts.

According to Raju Committee's recommendations the 'Zilla Development Board' should have the Zilla Parishad Chairman as its Vice Chairman and the Secretary of the Zilla Parishad, as Secretary.

Full collaboration of the Zilla Parishad and Panchayati Samitis would be required in the execution of the district plan. The Board's task would be to formulate and implement programmes designed to secure sound economic growth of the district and in particular programmes connected with agricultural and industrial production as also irrigation, power, animal husbandry, fisheries and cooperation and marketing.

* From October 29th, 1967, Chief Secretary, Government of Andhra Pradesh.

The Committee made it clear that the intention was to prepare an integrated agricultural and industrial production plan for the year for maximum production based on the district budgets of various departments, Zilla Parishads and the Samitis and that the existing powers of the Zilla Parishads and Samitis would not be affected in any manner by this process.

The draft plan for the district would be placed before the Zilla Parishad for approval. It would be the responsibility of the Zilla Development Board to implement the plan and achieve the targets envisaged under it.

This board would report to the State Development Board every quarter on the progress of the execution of the plan. At the end of the year, the Zilla Development Board would submit a report to the State Board indicating the economic growth achieved and explaining the shortfall, if any, and the reasons for this. The State Board would submit an annual report to the Government reviewing the economic growth in each of the districts.

To ensure efficient implementation of the integrated district plan, it is suggested that the Collector should be the head of the Departments of Agriculture, Co-operation, Panchayati Raj and Industries so far as the district is concerned. He exercises all the administrative powers within the district of the heads of these departments at the State Level. The statutory and non-statutory administrative powers of the head of departments are delegated to the Collector. The district heads of these departments would merge with the organisation of the Collectorate.

In the case of irrigation, the Executive Engineer (Irrigation) is under the administrative control of the Collector for the execution of sanctioned works. The Collector is relieved of all revenue and civil supplies work and for this purpose a District Revenue Officer would be appointed for each district to enable the Collector to devote himself almost entirely to development work. The District Revenue Officer is generally a senior scale I.A.S. Officer and works under the direct control of the Collector.

The Panchayati Samiti is responsible for implementation of the scheme included in the district plan within its purview. The Revenue Divisional Officer is responsible for the supervision and effective implementation of the district plan in respect of blocks within his jurisdiction. He sends reports to the Collector about the progress of schemes.

According to the Committee, the question of integration of the revenue establishment with the department at the village level can be considered only when the new land revenue pattern is known. Only as and when the revenue establishment and the panchayati are integrated at the village level, can the question of integration of the posts of Revenue Inspector and village level worker at the firka level appropriately be considered.

Gram Panchayati shall be the instrument of development at the village level and for this purpose its revenue must be augmented. In such a case, there can be one Executive Officer at the village level, who will be an agent of the Government at the village level for the levy and collection of taxes. He will also be the Secretary of the Panchayati and functions under the panchayati for that purpose.

It is also considered necessary to consider the grouping of panchayatis so that they may become financially viable. The number of Panchayatis can be reduced substantially by the merger of neighbouring villages within a convenient radius of about 5 km.

At the State Level: At the State Level, it is suggested that the Director of Agriculture, Registrar, co-operative Societies and Director of Industries shall also function as Ex-Officio Secretaries. The District Collector whose office is merged with those of the District Heads of these departments would then function in respect of the concerned programmes under the general direction and supervision of the State Heads of Departments who would be exercising the powers of Government by virtue of their ex-officio status.

The Development Board at the State level will have the Chief Secretary (who is also the Development Commissioner) as Chairman. Other members would be Member, Board of Revenue (Commissioner for Irrigation & Ayacut Development), Vice-Chairman, Secretaries to Public Works Department, Agriculture and Panchayati Raj Department, Director of Agriculture, Director of Industries & Registrar, Co-operative Societies (all the three will be ex-officio secretaries). Chief Engineer (General) and Secretary, Planning (Member-Secretary).

The State Development Board will not only review the progress of the district plans but also take all necessary steps for the proper implementation of these plans. The members will intensively tour for this purpose. The Board may meet in different districts by turns.

The State Development Board is responsible not merely for the district plans but also for other plan schemes related to agricultural and industrial production.

THE AMERICAN PEACE CORPS IN ANDHRA PRADESH

The Peace Corps is an agency of the United States Government established by John F. Kennedy. In the late President's vision, the Peace Corps would give American an ideal opportunity to share their technical skills and to increase international understanding by working and living side by side with people deeply engaged in the development of their own countries. The Peace Corps Volunteers receive three months' training in the United States of America in the technical skills required for their specific jobs and in the languages, history and culture of India. Their main activities are confined to food production, education, health, nutrition and small and rural industries. The State Government considered that the Peace Corps Volunteers could be very successful in the implementation of the Expanded Nutrition Programme which aimed at the production and consumption by villagers of nutritive foods like vegetables, fruits, eggs and fish.

At the request of the State Government in September 1965, a batch of 36 American Peace Corps Volunteers was posted to 19 Expanded Nutrition Programme Blocks. They have been provided with modest living accommodation, a cot, a chair, a table and a bicycle. The Peace Corps organisation has been paying subsistence allowance to the Volunteers and is making arrangements for their medical aid. The Volunteers are working in the Expanded Nutrition Programme Blocks are doing extension work in poultry, nutrition in school gardens. The Block Development Officers were instructed to give necessary cooperation to the Peace Corps Volunteers to carry on their work efficiently. The State Government convened Regional Sammelans of the Peace Corps Volunteers and the Block Staff and solved the problems encountered in the field.

During 1965-1966 the Peace Corps launched upon a programme of workshop training. Two of the volunteers made a start at the Basic Training School, Parvatipuram where instruction was imparted to the teachers and students during the vacation period on the erection of simple laboratory equipment and modelling of some scientific apparatus within the school premises by local efforts instead of depending on the supply of even simple things for the school from outside. After the initial experiment at Parvatipuram the programme was extended to Bheemunipatnam at the Science Teachers' Workshop there. Six such centres were started at Nizambad, Warrangal, Hyderabad, Nellore, Chirala and Eluru and for the entire Workshop Training Programme sponsored by the Peace Corps in Andhra Pradesh, the Government have allotted Rs. 1,77,800 for all these centres.

Source: State Administration Report 1965-66.

Note: In October 1967, there are nearly 200 American Peace Corps Volunteers in Andhra Pradesh in various centres including those in the Ayacut development of Nagarjunasagar.

* There are also four German Volunteers in Andhra Pradesh.

TITLE HOLDERS:

PADMABHUSHAN

PENDYALA SATYANARAYANA RAO: 'Kohinoor', Jubilee Hill, Hyderabad	1954
MADAPATI HANUMANTHA RAO: Andhra Kutir, Hanuman Tekdi	1955
MIR AKBAR ALIKHAN: Stone House, 5-9-11, Saifabad, Hyderabad-22	1965

PADMASRI

MACHANI SOMAPPA: President, Yemmiganur Weavers' Cooperative Production & Sales Society, Yemmiganur	1954
STHANAM NARASIMHA RAO: 1-8-449/14, Chikkadapalli, Hyderabad-20	1956
HILDA MARY LAZARUS: Sunny Side Waltair	1961
VINAYAK KRISHNA GOKAK: Formerly Director, Central Institute of English, Hyderabad	1961
N. BHANU PRASAD, (Formerly Scientist, Atomic Energy Institute, Bombay), Hyderabad	
KOMARAVOLU CHANDRASEKHARAM	
CHALLAGIRI NARASIMHAM, Hyderabad.	
G. RAMAKOTESWARA RAO: Chirag Ali Lane, Hyderabad	1964
SAYYID AHMADULLAH QADRI, M.L.C.: Urdu Writer, Andhra Pradesh	1966
KALLURI SUBBARAO, Hindupur	1967

TITLE HOLDERS OF ANDHRA ORIGIN LIVING
OUTSIDE ANDHRA PRADESH

PADMABHUSHAN

MOTURI SATYANARAYANA*: Secretary, Telugu Bhasha Samiti, 7, First Crescent Road, Gandhinagar, Madras-20	1962
K. L. RAO: 9, Janpath, New Delhi	1963
POOLA TIRUPATI RAJU	
L. VENKATA KRISHNA IYER	
MUTTA ANDAL VENKATA SUBBA RAO	

*Was also awarded Padmasri title in 1958.

PADMASRI

N. G. K. MURTI, Chief Engineer, Koyna Hydrel, Maharashtra	1963
A. S. RAO: Scientist, Electronics Division, Atomic Energy Establishment, Trombay, Bombay	1965
V. NAGIAH: Cine Artiste, Madras-17.	
BHANUMATI RAMAKRISHNA: Cine Artiste & Writer, Bharani Gardens, Vadapalani, Madras-26.	1966
VINJAMURI VENKATA LAKSHMI NARASIMHA RAO: 10, Raman Street, Madras-17.	1966

RECIPIENTS OF CERTIFICATES OF HONOUR IN
SANSKRIT, PERSIAN & ARAB

MOHAMMED NIZAMADDIN, Firdaws, 180, Himyat Nagar, Hyderabad	1962
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EVENTS IN ANDHRA PRADESH DURING 1966

1. Srisaillam Coffor dam inauguration Jan. 31
2. Inams Abolition Bills passed Feb. 5
3. Iran's Envoy visited Hyderabad Mar. 5
4. Cultural Troupe from Soviet Russia visited Hyderabad Mar. 6
5. Nairobi Mayor visited Hyderabad Mar. 14
6. 1966-67 State Budget presented to Legislature Mar. 17
- 6a. Official Language Bill Introduced Mar. 24
- 6b. Council passed 'University Amendments Bills' Mar. 26
7. Biennial Elections to Rajya Sabha Mar. 28
8. Accord on Tunga waters reached at Delhi Apr. 23
9. Heavy Plates and Vessels Project Location at Vizag announced May. 31
10. Jack Lipkes visited Hyderabad June. 2
- 10a. Prime Minister Indira Gandhi's two-day visit to A. P. June. 25
11. K. R. Srinivasa Iyengar appointed new VC of Andhra Univ. June 25
12. Assembly passed resolution on Steel Plant July. 1
- 12a. Justice N. D. Krishna Rao appointed as Chief Justice July 8
13. Retired -do- July 18
14. Portfolios reallocation annuounced by Kasu Brahmananda Reddi July 16
15. Justice P. Jaganmohan Reddi appointed Chief Justice July 27
16. Nagarjunasagar waters let out Aug. 3
17. Tunga High Level Canal waters let out Aug. 6
18. Mayor & Dy. Mayor of Hyderabad election Aug. 18
19. V. B. Raju resigns RTC Chairmanship Sept. 1
20. South Central Zone Railway Inauguration Oct. 2
21. Steel Plant agitation: T. Amrut Rao ended fast Nov. 3
22. P. E. C. dessident's list of candiates announced Nov. 8
23. 'No Confidence' Motion admitted: on Steel Plant issue Nov. 18
24. Sixty seven Opposition Mambbers resign Nov. 18
25. Steel Plant: Union Minister Sanjiva Reddi's clarification Nov. 19
- 25a. Kothagudem Thermal Stage I inaugurated Nov. 27
26. Assembly adjourned sine die Nov. 22
- 26a. 'Kalpalata' Super Bazaar opened Dec. 14
27. Ghat Road to Kanakadurga at Vijayawada opened by Dr. K. L. Rao Dec. 23

EVENTS IN ANDHRA PRADESH DURING Jan. 1—Sept. 30, 1967

1. 27th All India Industrial Exhibition opened by Zakir Hussain -- Vice President Jan. 1
2. Prime Minister Indira Gandhi visited Hyderabad Jan. 1
3. Heavy Plates & Vessels Unit (Visakhapatnam) Foundation stone was laid by Union Works Minister Jan. 8
4. Hindustan Cables forwarded stay Jan. 10
5. Election Commission notified Programme for 4th General Elections Jan. 12
6. Dates for Filing Nominations of 4th General Elections Jan. 13-20
Feb. 15, 18 & 21
7. Elections held
8. Election Results announced --- Feb. 24
9. Congress emerged a majority party Feb. 25
10. Mir Osman Ali Khan, Nizam of Hyderabad passed away Feb. 25
10. The President Recognised Prince Mukramjahi as the new Nizam with the title 'His exalted Highness Mir Barkat Ali Khan Bahadur' Feb. 27
11. Governor dissolved the third Andhra Pradesh Legislative Assembly Feb. 28
12. Kasu Brahmananda Reddi was unanimously elected as Leader of Congress Legislative Party Mar. 2
13. Kasu Brahmananda Reddi Cabinet sworn in Mar. 6
14. Chenna Reddi was appointed as Union Cabinet Minister Mar. 12
15. All India Cattle Show at Vijayawada Mar. 15
16. Chief Minister presented Interim Budget 1967-68 (Deficit 2.71 crores) Mar. 23
17. B. V. Subbareddi was elected as speaker of Assembly Mar. 28
18. Brahmananda Reddi Minister expanded Cabinet with 5 new members; all in the Cabinet rank Apr. 4
19. His Exalted Highness Mir Barkat Ali Khan Bahadur Nizamul Mulk Asaf Jahi VIII was installed as the Nizam of Hyderabad Apr. 6
May. 8
20. Guduru Venkatachalam died
21. The Holy shastras of Guru Govind Singh arrived at Hyderabad. May. 13
June 26
22. State Budget was presented June 28
23. Nawab Mebdi Nawar Jung passed away Aug. 4
- 23a. Nagarjuna Sagar inauguration by Indira Gandhi Sept. 14
24. Burgula Ramakrishna Rao passed away
25. No confidence motion against Brahmananda Reddi Ministry was defeated Sept. 15
Sept. 20
26. A. C. Subba Reddi passed away

ACTS MADE DURING THE YEAR 1966 IN ANDHRA PRADESH

1. The Andhra University (Amendment) Act (I of 1966).
2. The Osmania University (Amendment) Act (II of 1966).
3. Sri Venkateswara University (Amendment) Act (III of 1966).
4. The Andhra Pradesh (Telengana Area) Jagirs (Commutation) Regulation (Amendment) Act (IV of 1966).
5. The Andhra Pradesh Appropriation Act (V of 1966).
6. The Andhra Pradesh Appropriation (No. 2) Act (VI of 1966).
7. The A.P. General Sales Tax (Amendment) Act, (VII of 1966).
8. The Andhra Pradesh Irrigation (Construction & Maintenance of Water Courses Amendment Act (VIII of 1966).
9. The Andhra Pradesh Official Language Act (IX of 1966).
10. The Andhra University (Second Amendment) Act (X of 1966).
11. The Osmania University (Second Amendment) Act (XI of 1966).
12. S.V. University (Second Amendment) Act (XII of 1966).
13. The Indian Registration (A.P.) Amendment Act (XIII of 1966).
14. The A.P. Cooperative Societies (Amendment) Act (XIV of 1966).
15. The Andhra Pradesh Shops & Establishments Act (XV of 1966).
16. The Andhra Pradesh (Agricultural Produce & Livestock) Markets Act (XIV of 1966).
17. The Andhra Pradesh Charitable & Hindu Religious Institutions and Endowments Act (XVII of 1966).
18. The Andhra Pradesh General Sales Tax (Second Amendment) Act (XVIII of 1966).
19. The Andhra Pradesh Sales of Motor Spirit Taxation (Amendment Act (XIX of 1966).
20. The Andhra Pradesh Appropriation (No. 3) Act (XX of 1966).
21. The Andhra Pradesh Appropriation (No. 4) Act (XXI of 1966).
22. The Andhra Pradesh Appropriation (No. 5) Act (XXII of 1966).

ORDINANCES 1966

1. The Osmania University (Amendment) Ordinance I of 1966.
2. Sri Venkateswara Univ. (Amendment) Ordinance II of 1966.

1967 ACTS AS ON JULY 31, 1967

1. The Andhra Pradesh Forest Act (I of 1967).
2. The Andhra Pradesh Appropriation (Vote on Account) Act (II of 1967).
3. The Andhra Pradesh Appropriation Act (III of 1967).
4. The Andhra Pradesh Sugarcane (Regulation of Supply & Purchase) Amendment Act (IV of 1967).
5. The Andhra Pradesh Appropriation (No. 2) Act (V of 1967).

ORDINANCES 1967

1. The Andhra Pradesh Sugarcane (Regulation of Supply & Purchase) Amendment Ordinance.

DIRECTORY OF INSTITUTIONS IN HYDERABAD
(Learned Institutions Research Centers and so on)

- ABUL KALAM AZAD ORIENTAL RESEARCH INSTITUTE**, Khairatabad, Hyderabad-4. Estt: 1959. Director: Mahendra Raj Suxena. Emphasis: Research in Orientology.
- ADMINISTRATIVE STAFF COLLEGE IN INDIA**, Bella Vista, Hyderabad-4. Estt: 1957. Principal: R. L. Gupta, Emphasis: Business Administration.
- AMERICAN CULTURAL CENTRE (USIS)**, Secretariat Road, Saifabad, Hyderabad-4. Estt: 1964. Director: Richard, A. von Glatz. Emphasis: American Cultural Information.
- AMERICAN STUDIES RESEARCH CENTRE**, Osmania University Campus, Hyderabad-7. Estt: 1964. Director: William Mulder. Emphasis: American Studies.
- ANDHRA MAHILA SABHA**, Nallakunta, Hyderabad-7. Estt: 1937 (Madras) 1957 (Hyderabad).
- ANDHRA PRADESH ACADEMY OF SCIENCES**, Physiology Block, Osmania University, Hyderabad-7. Estt: 1963. Secretary: H. L. Saxena. Emphasis: Science Popularisation.
- ANDHRA PRADESH AGRICULTURAL UNIVERSITY**, Hyderabad-30. See page 160.
- ANDHRA PRADESH LALITA KALA AKADEMI**, Kalabhavan, Saifabad, Hyderabad-4. Estt: 1962. Hony. Secretary: L. N. Gupta. Emphasis: Visual Arts.
- ANDHRA PRADESH PRODUCTIVITY COUNCIL**, A. C. Guards, Hyderabad-4. (Opposite to the Census of India Office). Estt: 1959. Hon. Secretary: Ram Row Macharla, Emphasis: Productivity in Industry and Industrial Management.
- ANDHRA PRADESH SAHITYA AKADEMI**, Kalabhavan, Saifabad, Hyderabad. Estt: 1957. Secretary: D. Ramanuja Rao. Emphasis: Telugu, Urdu, Sanskrit & Hindi Literature.
- ANDHRA PRADESH SANGEETA NATAKA AKADEMI**, Kalabhavan, Saifabad Hyderabad-4. Estt: 1957. President: Pasala Suryachandra Rao. Emphasis: Dance, Drama & Music.
- ARCHAEOLOGICAL SURVEY OF INDIA (S.E. Circle)** 2-2-4, Adikmet, Hyderabad-4. Estt: 1964. Superintendent: Mr. Mohd. Idrisullah Khan. Emphasis: Archaeology & History.
- BOARD OF CULTURAL PUBLICATIONS**, 2nd Floor, New Alpha, Hyderabad-20. Secretary: S. Razi Hasan Razvi. Estt: noa. Emphasis: Cultural Publications.

- BUREAU OF ECONOMICS & STATISTICS**, Khairatabad, Hyderabad-4. Estt: 1954. **Director:** D. Ranga Ramanujam, **Emphasis:** Economics & Statistics.
- CENTRAL INSTITUTE OF ENGLISH**, Osmania University, Campus, Hyderabad-7. Estt: 1958. **Acting Director:** Dr. R. K. Bansal, **Emphasis:** English Linguistic Studies.
- CENTRAL PUBLIC HEALTH ENGINEERING RESEARCH INSTITUTE**, Hyderabad Zone Centre, Osmania Medical College, Sultan Bazar, Hyderabad-1. Estt: 1960. **Scientist-in-charge:** Dr. G. K. Seti. **Emphasis:** Public Health Engineering.
- CENTRAL TRAINING INSTITUTE OF INSTRUCTORS**, ITI Buildings, Mallepally, Hyderabad.
- CITY CENTRAL LIBRARY**, Local Library Authority, Himayatnagar, Hyderabad-29. Estt: 1960. **Librarian:** S. Panduranga Reddi. **Emphasis:** General.
- COUNCIL OF SANSKRIT EDUCATION**, King Koti Road, Hyderabad-2.
- COUNCIL FOR SOCIAL WORK**, Indiranagar, Nallakunta, Hyderabad-7. Estt: (Hyderabad) 1967. **Director:** Durgabai Deshmukh. **Emphasis:** Research in Social themes.
- DAIRATUL MAARIF, Dairatul-Maarif**, i.e., — Osmania (Osmania Oriental Publication Bureau). Estt: 1888. **Director:** Dr. Mohd. Abdul Mu'id Khan. **Emphasis:** Oriental Publications.
- DAKSHINA BHARAT HINDI PRACHARA SABHA**, Khairatabad, Hyderabad-4. Estt: (Madras) 1922. **Emphasis:** Hindi education.
- GANDHIJI IN ANDHRA PRADESH**, 3-4-829 Barakatpura, Hyderabad-27. Estt: n.a. **Secretaries:** Prabhakaji; Kodati Narayana Rao, **Emphasis:** Collection of material on Gandhi in A.P.
- GEOLOGICAL SURVEY OF INDIA**, Southern Regional Office, 10-3-310, Ali Aivan Masab Tank, Hyderabad-28. Estt: 1961. **Director:** Shri M. S. Balasundaram. **Emphasis:** Geological Studies.
- HINDI PRACHAR SABHA**, Hyderabad.
- HYDERABAD ART SOCIETY**, C/o Govt. College of Fine Arts & Architecture, Hyderabad.
- HYDERABAD EDUCATION CONFERENCE**, 19, Bachelors Quarters, Jawaharlal Nehru Road, Hyderabad. Estt: 1913.
- HYDERABAD METROPOLITAN RESEARCH PROJECT**, Osmania University Press Road, Osmania University, Hyderabad-7. Estt: 1965. **Director:** Dr. Shah Manzoor Alam. **Emphasis:** Research on problems of Urban & Regional Planning.
- INDIA INTERNATIONAL CENTRE** (Hyderabad Branch), Indira Nagar, Hyderabad-7. **Director:** Durgabai Deshmukh. **Emphasis:** Sociological Studies.

- INDIAN INSTITUTE OF ECONOMICS**, 213, Himayatnagar, Hyderabad-29. Estt: 1953. **Incharge-Director:** Prof. M. Abdul Qadir. **Emphasis:** Economics.
- INSTITUTE OF ASIAN STUDIES**, 3-4-87. Barkatpura, Hyderabad. Estt: 1953. **Hon. Secretary:** V. K. Bawa. **Emphasis:** International relations, Asian Studies & Politics.
- INSTITUTE OF PREVENTIVE MEDICINE**, Narayanaguda, Hyderabad. Estt: 1890. **Director:** K. V. Subbarao. **Emphasis:** Preventive Medicine Research.
- INSTITUTE OF PUBLIC ENTERPRISE**, Arts College, Osmania University, Hyderabad-7. Estt: 1964. **Director:** V. V. Ramanadham. **Emphasis:** Public Enterprise.
- INSTITUTE OF TELUGU**, (Telugu Bhasha Samastha). C/o Office of Director of Public Instruction, Hyderabad. Estt: 1967. **Emphasis:** Telugu Language for Communication, Administration & Medium of instruction thro' Research & Development.
- ISLAMIC CULTURE BOARD**, Osmania University Campus, Hyderabad-7. Estt: 1925. **President:** Mukaram Jah Bhadur. **Emphasis:** Islamic History & Culture.
- LIBRARY FOR MEMBERS OF LEGISLATIVE COUNCIL & LEGISLATIVE ASSEMBLY**, Legislature Library, Public Garden, Hyderabad. Estt: 1952. **Librarian:** V. V. Bhaskara Rao, **Emphasis:** Economics, Politics, History & Social Sciences.
- MAX MUELLER BHAVAN**, The Indo-German Culture Centre, 3-5-43, Eden Bagh, Ramkote, Hyderabad. Estt: 1963. **Director:** Juergen Uwe Ohlau. **Emphasis:** Literature, Art, Indology, Indo-German relations.
- NATIONAL GEOPHYSICAL RESEARCH INSTITUTE**, Uppal Road, Hyderabad-7. Estt: 1962. **Director:** Dr. Hari Narian. **Emphasis:** Geophysics & Geology.
- NATIONAL INSTITUTE OF COMMUNITY DEVELOPMENT**, Rajendra Nagar, Hyderabad-30. Estt: 1964. **Dean:** George Jacob. **Emphasis:** Sociology, Rural Economics, Public Administration & Local Self Government.
- NIZAMIAH OBSERVATORY**, Begumpet, Hyderabad. Estt: 1908 (Under Osmania Univ. since 1919). **Director:** Akbar Ali. **Emphasis:** Astronomical & Seismological Studies.
- NUTRITION RESEARCH LABORATORIES**, Tarnaka, Hyderabad-7. Estt: 1918. **Director:** C. Gopalan. **Emphasis:** Nutrition and Allied subjects.
- ORIENTATION & STUDY CENTRE**, Institute of Training in Community Development, Rajendranagar, Hyderabad-30. Estt: 195. **Principal:** V. Ramanand.

- OSMANIA UNIVERSITY**, Hyderabad-7. Estt: 1918. Chancellor: Pattom A. Thanu Pillai, Governor of Andhra Pradesh. Vice-Chancellor: D. S. Reddi. Registrar: R. Deshpande.
- OSMANIA UNIVERSITY LIBRARY**, University Campus, Hyderabad-7. Estt: 1918. Vice-Chancellor: D. S. Reddi.
- RAVINDRA BHARATI AUDITORIUM**, Hyderabad-4.
- REGIONAL RESEARCH LABORATORY**, Hyderabad-9. (Beyond Tarnaka). Estt: 1944. Director: G. S. Sidhu. Emphasis: Chemistry & Chemical Technology with special reference to oils, fats, coal derivatives.
- SALARJUNG MUSEUM**, Diwan Devdi, Hyderabad-2. Estt: 1951. Director: V. D. Krishnaswami. Emphasis: Books in English, Urdu, Arabic, Persian & Turkish.
- SANGRAHANDHRA VIJNANA KOSHA SAMITI**, Vidyanagar, Hyderabad-7. Estt: 1955. Secretary: K. Lakshmirunajanam. Emphasis: Publication of an Encyclopaedia in Telugu (Alphabetical).
- SANSKRIT ACADEMY COLLEGE OF ARTS & COMMERCE**, Osmania University, Hyderabad-7. Estt: 1954. Director: Aryendra Sharma.
- SMALL INDUSTRIES EXTENSION TRAINING INSTITUTE**, Yousufguda, Hyderabad-16. Estt: 1962. Principal-Director: P. D. Malgavkar. Emphasis: Management, Area Development & Human Relations.
- SMALL INDUSTRIES SERVICE INSTITUTE**, 79, Azamabad, Hyderabad-20. Near Golkonda Chowrashtra. Estt: 1955. Director: P. Narasiah. Emphasis: Mechanical, Electrical, Automobile and Chemical Engineering, Glass & Ceramics, Leather & Footwear and business organisation.
- STAFF TRAINING COLLEGE** (State Bank of India), 502, Road No. 7, Banpara Hills, Hyderabad-34. Estt: 1961. Principal: S. K. Nathan. Emphasis: Banking Education.
- STATE ARCHIVES OF ANDHRA PRADESH**, Tarnaka, Hyderabad. Estt: 1929. Director: V. K. Bawa. Emphasis: History of Andhra Pradesh with special reference to Deccan.
- STATE CENTRAL LIBRARY**, Afzal Gunj, Hyderabad-12. Estt: 1891. Librarian: T. V. Ramanayya. Emphasis: General.
- STATE INSTITUTE OF EDUCATION**, Office of DPI, Hyderabad-4.
- STATE MUSEUM**, Gun foundry, Hyderabad. Estt: 1914. Director of Archaeology and Museum: Shri Md. Waheed Khan. Emphasis: Collection and Exhibition of articles of Historical Value.

- TELUGU & URDU ACADEMY OF HISTORY & SCIENCES**, Hyderabad.
- TELUGU BHASHA SAMITI**, Osmania University Campus, Hyderabad-7. Estt: 1947 (Madras): 1957 (Hyderabad-1). Secretaries: M. Satyanarayana, D. V. Subba Reddi. Emphasis: Publication of an Encyclopaedia in Telugu in 16 volumes.
- TRAINING CENTRE FOR THE ADULT DEAF**, Malakpet, Hyderabad. Director: J. Kishtappa.
- TRIBAL CULTURAL RESEARCH & TRAINING INSTITUTE**, Road No. 13, Banjara Hills, Hyderabad. Estt: 1963. Director-in-charge: D. R. Pratap. Emphasis: Anthropological Studies.
- VETERINARY BIOLOGICAL & RESEARCH INSTITUTE**, Hymayat Nagar, Hyderabad-28. Estt: 1947. Deputy Director: G. Pandurang. Emphasis: Veterinary Science.

DIRECTORY OF INSTITUTIONS IN ANDHRA PRADESH (Other than Hyderabad)

- ANDHRA UNIVERSITY**, Waltair. Estt: 1926. Chancellor: Pattom A. Thanu Pillai, Governor of Andhra Pradesh. Vice-Chancellor: K. R. Srinivasa Iyengar. Registrar: M. Gopalakrishna Reddi.
- ANDHRA GRANDHALAYA TRUST**, Sarvothama Bhavanam, Patamata. Secretary: Paturi Nagabhushanam. Emphasis: Library Movement.
- ANDHRA SAHITYA PARISHAD**, Telugu Academy, Kakinada. Estt: 1911.
- ANDHRA HISTORICAL RESEARCH SOCIETY**, Rajahmundry. Director: Rallabandi Subbarao. Emphasis: History with Special reference to Andhra.
- CENTRAL TOBACCO RESEARCH INSTITUTE**, Rajahmundry, East Godavari District. Estt: 1947.
- FRUIT RESEARCH STATION**, Anantharaju Peta, Kodur, Cuddapah.
- GOUTAMI LIBRARY**, Rajahmundry, Estt: 1898. Volumes (Library): 60,000. Emphasis: General.
- OIL TECHNOLOGICAL RESEARCH INSTITUTE**, Anantapur.
- RALLABANDI SUBBARAO GOVERNMENT MUSEUM**, Rajahmundry. Emphasis: Collection of records, grants, numismatics and other historical materials.
- KENDRIYA SANSKRIT VIDYAPEET**, Tirupati. Director: B. R. Sharma. Estt: 1961. Emphasis: Sanskrit Studies.
- SRI VENKATESWARA ORIENTAL RESEARCH INSTITUTE**, Tirupati. Emphasis: Ancient Culture, Indology, Sanskrit.
- SRI VENKATESWARA UNIVERSITY**, Tirupati. Estt: 1954. Chancellor: V. C. Vamana Rao. Registrar: B. Subba Rao.

FRATERNAL ASSOCIATIONS IN ANDHRA PRADESH

- ALL-INDIA CROCHET LACE EXPORTERS ASSOCIATION, Narsapur, West Godavari District..
- ANDHRA NAVIKA SANGHAM, (Canal Boat Navigation), Vijayawada, Krishna Dt.
- ANDHRA PRADESH GRAIN & SEEDS, MERCHANTS' ASSOCIATION, Phahade Niwas, Osmangunj, Hyderabad.
- ANDHRA PRADESH HOTELS ASSOCIATION, 93, Sarojini Devi Road, Secunderabad.
- ALL-INDIA GRAPHITE, CRUCIBLE MANUFACTURERS' ASSOCIATION, Rajahmundry, East Godavari District.
- ANDHRA CHAMBER OF COMMERCE, 63-B, Rashtrapati Road, Secunderabad.
- THE ANDHRA FILM CHAMBER OF COMMERCE, Andhraratna Road, Gandhinagaram, Vijayawada-3, Krishna District.
- ANDHRA PRADESH AGRICULTURAL MACHINERY & APPLIANCES ASSOCIATION, 148, Rashtrapati Road, Secunderabad.
- ANDHRA PRADESH PAPER MERCHANTS' ASSOCIATION, 335, Gowropolitan Club, Hanuman Tekdi, Hilderabad.
- ANDHRA PRADESH CHEMISTS, DRUGGISTS ASSOCIATION, Metliguda, Hyderabad.
- ANDHRA PRADESH PRINTERS' ASSOCIATION, 3-6-49 (Upstairs), Narayanaguda, Hyderabad.
- ANDHRA PRADESH SMALL INDUSTRIES ASSOCIATION, Industrial Estate, Vijayawada-7, Krishna District.
- ANDHRA PRADESH STATE COUNCIL FOR CHILD WELFARE, 6-3-1186, Begumpet, Hyderabad-16.
- ANDHRA PRADESH SPORTS COUNCIL, Fateh Maidan, Hyderabad.
- ANDHRA PRADESH WORKING JOURNALISTS ASSOCIATION, Hyderabad.
- ANDHRA STATE EXPORTERS' & IMPORTERS' ASSOCIATION, Ellore Bazaar, Guntur.
- ANDHRA STATE GUNNY TRADERS ASSOCIATION, Pulipativari St., Vijayawada-1.
- ANDHRA WRITERS' ASSOCIATION, Vidyanagar, Hyderabad.
- AUTOMOBILE ASSOCIATION OF SOUTHERN INDIA, 6, Mahatma Gandhi Road, Secunderabad.
- THE BHIMAVARAM CHAMBER OF COMMERCE, Bhimavaram, West Godavari District.

- BUILDERS' ASSOCIATION OF INDIA, Redhills, Hyderabad.
- THE CHAMBER OF COMMERCE, Attili, Tadepalligudem, West Godavari District.
- CHITTOOR DISTRICT SMALL SCALE INDUSTRIES ASSOCIATION, 205, Town Planning Area, Tirupati, Chittoor District.
- THE COCONADA CHAMBER OF COMMERCE, Commercial Road, Kakinada, East Godavari District.
- FEDERATION OF ANDHRA PRADESH CHAMBERS OF COMMERCE & INDUSTRY, 3573, Rashtrapati Road, Secunderabad-3.
- FEDERATION OF ANDHRA PRADESH SMALL INDUSTRIES ASSOCIATION, 128, Mahatma Gandhi Road, North, Secunderabad.
- FRUIT COMMISSION AGENTS' ASSOCIATION, Jambaghe Road, Hyderabad.
- THE GODAVARI CHAMBER OF COMMERCE LIMITED, Vallabhai Street, Kakinada, East Godavari District.
- GOUTAMI CHAMBER OF COMMERCE, Main Road, Rajahmundry, East Godavari.
- HYDERABAD AGRICULTURAL COOPERATIVE ASSOCIATION LIMITED, Opposite Public Gardens, Hyderabad.
- THE HYDERABAD CLOTH MERCHANTS' ASSOCIATION, No. 15-9-312, First Floor, Afzulgunj, Hyderabad.
- HYDERABAD DAL MILLS & MERCHANTS ASSOCIATION, Mukhtiar Gunj, Hyderabad.
- HYDERABAD KIRANA MERCHANTS' ASSOCIATION, Begum Bazaar, Hyderabad.
- HYDERABAD STATE FILM CHAMBER OF COMMERCE, 30, Ghasmandy Road, Secunderabad.
- HYDERABAD STATE MOTOR MERCHANTS ASSOCIATION, Mahatma Gandhi Road, Secunderabad.
- HYDERABAD STOCK EXCHANGE LIMITED, Bank St., Hyderabad.
- HYDERABAD TRADE ASSOCIATION, Singhavee Bhavan, Tilak Road, Hyderabad.
- INDIAN CHAMBER OF COMMERCE, P. Box No. 67, Guntur.
- INDIAN CONFERENCE OF SOCIAL WORK, Red Hills, Hyderabad.
- INDO-GERMAN CULTURAL SOCIETY- 208, Bibi Alwa, Hyderabad-25.
- INDO-IRAQ CULTURAL SOCIETY, 17-6-674, Chawrasta Buglo Beni, Hyderabad-24.
- INSTITUTION OF ENGINEERS (India), Khairatabad, Hyderabad.

INDUSTRIAL ESTATE MANUFACTURERS' ASSOCIATION, B-17, Sanatnagar, Hyderabad-18.
 JEEVAKARANYA SANGHAM, Rajahmundry.
 THE KRISHNA DISTRICT CHAMBER OF COMMERCE, Fort Road, Machilipatnam, Krishna District.
 MADRAS MICA ASSOCIATION, Gudur, Nellore District.
 MATERIALS MANAGEMENT ASSOCIATION, 3486-90, (First Floor), Rastrapati Road, Secunderabad.
 THE METAL MERCHANTS & MANUFACTURERS' ASSOCIATION, Gunduvari Street, Rajahmundry, East Godavari District.
 NAVYA SAHITYA PARISHAD, 208, Bhoiguda, Secunderabad.
 NELLORE CHAMBER OF COMMERCE, Tobacco Field, Nellore-1.
 PALASA CASHEW MANUFACTURERS' ASSOCIATION, Palasa, Srikakulam District.
 RAJAHMUNDY CHAMBER OF COMMERCE LIMITED, Rajahmundry, East Godavary.
 SAHITI MITRULU, Jadcherla, Mahabubnagar. Krishna District Writers' Association, Vijayawada.
 SAHITI SAMITI, Tirupati.
 SECUNDERABAD TRADES ASSOCIATION, 151, Sappers Lines, Secunderabad.
 SECUNDERABAD YARN MERCHANTS' ASSOCIATION, 1725, Gunj Bazaar, Secunderabad.
 SOCIETY FOR CULTURAL RELATIONS WITH FOREIGN COUNTRIES, 156, Dewdi Nawab Ikram, Yakutpura, Hyderabad-23.
 ST. JOHN AMBULANCE ASSOCIATION, St. Mary's Road, Secunderabad.
 VISAKHAPATNAM STEVEDORES ASSOCIATION, 'Port View', Visakhapatnam.
 VISAKHA WRITERS' ASSOCIATION, Visakhapatnam.
 VISALANDHRA VIJNANA SAMITI, Vijayawada.
 VIZAGAPATNAM CHAMBER OF COMMERCE, 16/9, Main Road, Visakhapatnam.
 VIZIANAGARAM CHAMBER OF COMMERCE, Main Road, Vizianagaram.
 YOUNG MEN'S CHRISTIAN ASSOCIATION, Sardar Patel Road, Secunderabad.
 YOUNG WOMEN'S CHRISTIAN ASSOCIATION, King Koti Road, Hyderabad.

DIRECTORY OF INSTITUTIONS OF ANDHRA INTEREST OUTSIDE THE STATE

NDHRA ASSOCIATION, Bombay.
 NDHRA ASSOCIATION, Calcutta.
 NDHRA ASSOCIATION, 14, Ashok Road, New Delhi.
 NDHRA ASSOCIATION, Ranchi, Bihar. Estt: 1956. Secretary: Y. Chalapati Rao.
 NDHRA SANGHAM, Sogendhragunj, Gwalior, Madhya Pradesh. Estt: 1958. Secretary: K. S. R. Sastry.
 NDHRA VIJNANA SAMITI, Piplani, Bhopal.
 NDHRA VIJNANA SAMITI, Virdivar, E. M. Road, Jamshedpur (Bihar), Estt: 1945.
 CHENNAPURI ANDHRA MAHA SABHA, Near Moore Market, Poonamallee High Road, Madras. Estt: 1916.
 MALAYSIA ANDHRA SANGHAM, Telok Anson, Malaysia. Pres: Adari Apparao. Estt: 1956.
 SARASA, 1, Sivaprakasa Mudali Street, Madras-17. Estt: 1966. Secretary: Ramalakshmi Andra.
 SATPURA PRAVASANDHRA SANGHAM, 9, Civil Lines, Betul, Madhya Pradesh.
 SIMPANG AMPAT ANDHRA SANGHAM, Secretary: Gummadi Appala Naidu, Simpang Ampat, Malaysia.
 TELUGU MAHAJANA SAMAJAM, Akbar Sabib Street, Triplicane, Madras-5. Estt: 1954.
 THE MAURITIUS ANDHRA MAHA SABHA, 37, Eugene Laurent Street, Port Louis, Mauritius. Secretary: L. Seetanah.

WHERE TELUGU IS TAUGHT OUTSIDE INDIA

<i>Name of the University</i>	<i>Language In-Charge</i>
1. University of Texas (Austin)	Mrs. Andree F. Sjoberg
2. University of Wisconsin (Madison)	Dr. Dan Matson
3. University of Cornell	Dr. Gerald B. Kelley
4. University of Pennsylvania	Dr. Leigh Lisker
5. University of California	n.a.

Where Telugu is taught outside India—(contd.)

There is rotating Summer School of South Asian Studies alternately at University of Chicago and University of Illinois Urbana, and University of Wisconsin.

Leningrad University,

Moscow University,

University of Uzbekistan, Tashkent.



Bengal Lamps

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POSTAL INFORMATION

Letters: (Including business reply envelopes)

Postage:

For a weight not exceeding 15 grams	.. 15 paise
For every 15 grams or fraction thereof exceeding 15 grams	.. 10 "
Inland Letter Cards: For each letter card	.. 10 "
Post Cards: (including Business reply Posts)	
Single	.. 6 "
Reply—Paid	.. 12 "

Book Pattern and Sample Packet:

Postage:

(i) Book Pattern and sample packets for the first 50 grams or fraction thereof	.. 10 "
(ii) Book Packets containing Printed Books only:	
For the first 50 grams or fraction thereof	.. 5 "
For every additional 25 grams or fraction in excess of the first 50 grams	.. 5 "
For every additional 25 grams or fraction in excess of the first 50 grams	.. 3 "
(iii) Book Packets containing Periodicals only which are registered with the Press Registrar of India:	
For the first 100 grams or fraction thereof	.. 8 "
For every additional 50 grams or fraction thereof in excess of the first 100 grams	.. 3 "

Parcels:

Postage:

(i) For a Parcel not exceeding 400 grams	.. 65 "
For every additional 400 grams or fraction thereof	.. 65 "
(ii) Parcels weighing over 4 kg. must be registered and the fee of 55 Paise for registration is charged	

Air Mail:**Surcharge for conveyance by Air:**

- | | |
|---|------------|
| (i) Letters, Letter-Cards and Post Cards | .. Nil |
| (ii) Packets (Including Regd. Newspapers) | |
| Each 10 grams or part: | .. 4 paise |
| (iii) Parcels each 200 grams or part | .. 35 " |

On Inland Postal Articles:

- | | |
|--|---------|
| (i) For each unregistered letter, Letter-card, Post-card or Packet | .. 15 " |
| (ii) For each registered letter, Letter-card, Post-card or Packet | .. 15 " |

On Foreign Postal Articles:

- | | |
|---|---------|
| For each letter, air-letter (aero-gramme) Post-card or Packet whether registered or unregistered: | .. 15 " |
|---|---------|

Express Delivery:

The fee is 15 paise per article in addition to the ordinary Postage

Certificate of Posting

The fee is 5 Paise for every three articles or for any less number

Registration:

- (a) Registration fee is 60 paise in addition to the Postage.
- (b) Acknowledgment: To obtain an acknowledgment signed by the addressee a fee of 10 Paise in addition to the postage and registration fee should be paid at the time of posting a registered article.
- (c) The sender of a registered article may obtain an attested copy of the amount specified by the sender:

Amount specified for remittance in the sender:	
Not exceeding Rs. 10.00	.. 15 "
For every additional sum of Rs. 10/- or part thereof exceeding Rs. 10/-	.. 15 "

Money Orders:

The commission on the issue of Inland Money Order is charged at the following rates:

On any sum not exceeding Rs. 10.00 or part:	.. 15 paise
For every additional sum of Rs. 10/- or part thereof exceeding Rs. 10/-	.. 15 "

Telegraph Rates:

Ordinary — 10 words or less	.. 1.00 Re.
Each additional word above 10 words	.. 10 paise

Express:

10 words or less	.. 2.00 Rs.
Each additional word above 10 words	.. 20 paise

the original receipt signed by the addressee on payment of a fee of 20 paise provided the application is made within 6 months of the delivery of the article.

Insurance:

In addition to the postage and the fee of registration the fee charged for insurance is:

Where the value insured does not exceed Rs. 100/-	.. 40 paise
For every additional Rs. 100/- or fraction thereof over Rs. 100.00	.. 20 "

Value-Payable Articles:

- (a) A posting fee at the following rates is to be paid in addition to the postage, registration fee and insurance fee where leviable:

Amount specified for recovery from the addressee — Not exceeding Rs. 15/-	.. 5 paise
Exceeding Rs. 15/- but not exceeding Rs. 25.00	.. 10 "
Exceeding Rs. 25.00	.. 15 "

Weights (Conversion factor: 1 pound=0.453 kilo gram.)												
Tons to Metric Tonnes												
Tons	1	2	3	4	5	6	7	8	9	10		
Metric Tonnes	1.02	2.03	3.05	4.06	5.08	6.10	7.11	8.13	9.14	10.16		
Pounds (av) to Kilograms												
Pounds	1	2	3	4	5	6	7	8	9	10		
Kilograms	0.45	0.91	1.36	1.81	2.27	2.72	3.18	3.63	4.08	4.54		
Tolas to Grams												
Tolas	1	2	3	4	5	6	7	8	9	10		
Grams	11.66	23.33	34.99	46.66	58.32	69.98	81.65	93.31	104.91	116.64		
Miles to Kilometres												
Miles	1	2	3	4	5	6	7	8	9	10		
Kilometres	1.61	3.22	4.83	6.44	8.05	9.66	11.27	12.87	14.48	16.09		
Feet to Metres												
Feet	1	2	3	4	5	6	7	8	9	10		
Metres	0.30	0.61	0.91	1.22	1.52	1.83	2.13	2.44	2.74	3.09		
Inches to Millimetres												
Inches	1	2	3	4	5	6	7	8	9	10		
Millimetres	25.40	50.80	76.20	101.60	127.00	152.40	177.80	203.20	228.60	254.00	279.40	304.80
Acres to Hectares												
Acres	1	2	3	4	5	6	7	8	9	10		
Hectares	0.40	0.81	1.21	1.62	2.02	2.43	2.83	3.24	3.64	4.05		
Sq. Miles to Sq. Kilo Metres												
Sq. Miles	1	2	3	4	5	6	7	8	9	10		
Sq. Kilo Metres	2.59	5.18	7.77	10.36	12.95	15.54	18.13	20.72	23.31	25.90		
Sq. Yards to Sq. Metres												
Sq. Yards	1	2	3	4	5	6	7	8	9	10		
Sq. Metres	0.84	1.67	2.51	3.34	4.18	5.02	5.85	6.69	7.53	8.36		
Sq. Feet to Sq. Metres												
Sq. Feet	1	2	3	4	5	6	7	8	9	10		
Sq. Metres	0.09	0.19	0.28	0.37	0.46	0.56	0.65	0.74	0.84	0.93		
Gallons (Imperial) to Litres												
Gallons	1	2	3	4	5	6	7	8	9	10		
Litres	4.55	9.09	13.64	18.18	22.73	27.28	31.28	36.37	40.91	45.46		

Centigrade	C/F	Fahrenheit	Centigrade	C/F	Fahrenheit
-17·8	0	32	32·2	90	184
-12·2	10	50	35·0	95	203
- 6·67	20	68	36·7	98	208·4
1·11	30	86	37·8	100	212
4·44	40	104	43	110	230
10·0	50	122	49	120	248
15·6	60	140	54	130	266
21·1	70	158	60	140	284
23·9	75	167	66	150	302
26·7	80	176	93	200	392
29·4	85	185	121	250	482
			149	300	572

Explanation: Central column refers to either centigrade or Fahrenheit. (1) For Example for converting 20°C see right column, i.e. 68°F; (2) for converting 93°F see left column, i.e. 35°C.

General: To convert centigrade to Fahrenheit multiply by 9 and divide by 5 and then add 32 degrees. To convert Fahrenheit to Centigrade* Subtract 32 degrees and multiply by 5 and then divide by 9.

***International Committee on Weights and Measures use 'celsius' for centigrads.**

SECTORWISE ESTIMATES OF STATE INCOME OF ANDHRA PRADESH AT CURRENT PRICES
(Rupees in lakhs)

Sl No.	Sector	1952-53	1955-56	1960-61	1961-62	1962-63	1963-64	1964-65	1965-66*
1.	(a) Agriculture	40109	39433	57925	65516	67689	84557	99117	79185
	(b) Fisheries	298	313	1177	1332	1418	1178	1440	1724
	(c) Forestry	160	214	511	552	690	848	1199	1201
		40667	39960	59613	67400	69797	86583	101756	82110
2.	Industry								
	(a) Mining	491	556	710	830	871	890	996	1107
	(b) Factory Estt.	1340	2137	3025	3688	4008	4181	4037	4975
	(c) Small Enterprises	4231	5137	5435	5944	6228	6669	5292	5285
		6062	7830	9170	10462	11107	11740	10325	11367
3.	Communications etc.								
	(a) Post & Telegraph	360	450	709	592	690	797	885	982
	(b) Railways	706	846	1292	2057	2171	2374	2674	3011
	(c) Banking and Insurance	299	382	593	658	731	838	998	962
	(d) Other Commerce Transport	9872	10660	13847	13292	13933	13988	9163	9232
		10237	12338	16441	16599	17525	17997	13620	14187
4.	Other Services								
	(a) Profession & Liberal Arts	5530	6372	7871	7990	8372	8636	7822	7646
	(b) Domestic Services	441	503	620	630	660	679	—	—
	(c) Govt. Services (Admn.)	4352	5236	8611	8375	9166	10149	10686	11251
	(d) House property	2343	2407	3485	4269	4300	4875	5580	6388
		12726	14518	20587	21264	22498	24339	24088	25285
	Total State Income	69692	74646	105811	115725	120927	140659	149789	132949
	Andhra Pradesh—								
	Per capita income (Rs.)	222	226	296	319	329	372	394	344
	India—Per capita income (Rs.)	265	255	326	334	339	371	422	N.A.

* Quick estimates
Source: Bureau of Economics and Statistics, Hyderabad

MISCELLANEOUS INFORMATION

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AREA, POPULATION & ALLIED DATA, STATE-WISE 1961

States/Unions Territories	Area Sq.Km.	Population in lakhs	% of Rural Population	Density of Popu- lation persons per Sq.km.	Sex Ratio Females per 1000 males	Percentage of workers
Andhra Pradesh	275244	360	82.6	131	981	51.9
Assam	121973	119	92.3	97	876	43.3
Bihar	174008	465	91.6	267	994	41.4
Gujarat	187091	206	74.2	110	940	41.1
Jammu & Kashmir	222870	36	83.3	—	878	42.8
Kerala	38869	169	84.9	435	1022	33.3
Madhya Pradesh	443459	324	85.7	73	953	52.3
Madras	129966	337	73.3	258	992	45.6
Maharashtra	307269	396	71.8	128	936	47.9
Mysore	191757	236	77.7	123	959	45.5
Nagaland	16488	4	94.8	22	933	59.4
Orissa	155860	175	93.7	113	1001	43.7
Punjab*	122010	203	79.9	166	864	35.0
Rajasthan	342267	202	93.7	59	908	47.6
Uttar Pradesh	294366	737	87.2	251	909	39.1
West Bengal	87676	349	75.6	393	878	33.2
Union Territories etc. of which	156917	75	62.7	45	895	41.4
Delhi	1483	27	11.2	1792	785	32.1
Goa, Daman & Diu	3733	6	83.9	170	1070	n.a.
Himachal Pradesh	28195	14	95.3	48	923	59.6
Tripura	10451	11	91.0	109	932	38.3
Manipur	22346	8	91.3	35	1015	45.9
Pondicherry	473	4	75.9	770	1013	37.5
N.E.F.A.	81426	3	n.a.	4	894	67.6
India	3276141	4392	82.0	138	941	43.0

* Includes Hariyana.

Note: Total may not tally due to rounding of.

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21. River Krishna (1962-63).
22. Srisailam (Colour).
23. Satyame Jayam.
24. Swatantra Vikasam.
25. Samanathwam Mana Hakku.
26. Sagara Thanayulu.
27. Sristilo Sristi.
28. Vegetables.
30. Village Volunteer Force.

FILMS OF ANDHRA PRADESH FROM FILMS DIVISION
GOVERNMENT OF INDIA

1. Castor: 25 Minutes.
2. Deccan Table Land (Part I, II & III): 36½ Minutes.
3. Godavari: 14½ Minutes (1956).
4. Godavari: 19¼ Minutes Colour (1959).
5. Nagarjunakonda: 17¼ Minutes.
6. Virginia Tobacco: 27 Minutes.
7. You too can grow Grapes: 13 Minutes.

G. S. PRESS, MADRAS-2.

ASTRONOMICAL DATA

1

1967 July - Dec.

CALENDAR

1889 Ashada - Pousha

1967 July							Ashadha — Sravana 1889						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
30	31	*	*	*	*	1	8	9	*	*	*	*	10
2	3	4	5	6	7	8	11	12	13	14	15	16	17
9	10	11	12	13	14	15	18	19	20	21	22	23	24
16	17	18	19	20	21	22	25	26	27	28	29	30	31
23	24	25	26	27	28	29	1	2	3	4	5	6	7
August							Sravana — Bhadrpada						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
*	*	1	2	3	4	5	*	*	10	11	12	13	14
6	7	8	9	10	11	12	15	16	17	18	19	20	21
13	14	15	16	17	18	19	22	23	24	25	26	27	28
20	21	22	23	24	25	26	29	30	31	1	2	3	4
27	28	29	30	31	*	*	5	6	7	8	9	*	*
September							Bhadrpada — Asvina						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
*	*	*	*	*	1	2	*	*	*	*	*	10	11
3	4	5	6	7	8	9	12	13	14	15	16	17	18
10	11	12	13	14	15	16	19	20	21	22	23	24	25
17	18	19	20	21	22	23	26	27	28	29	30	31	1
24	25	26	27	28	29	30	2	3	4	5	6	7	8
October							Asvina — Kartika						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	9	10	11	12	13	14	15
8	9	10	11	12	13	14	16	17	18	19	20	21	22
15	16	17	18	19	20	21	23	24	25	26	27	28	29
22	23	24	25	26	27	28	30	1	2	3	4	5	6
29	30	31	*	*	*	*	7	8	9	*	*	*	*
November							Kartika — Agrahayana						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
*	*	*	1	2	3	4	*	*	*	10	11	12	13
5	6	7	8	9	10	11	14	15	16	17	18	19	20
12	13	14	15	16	17	18	21	22	23	24	25	26	27
19	20	21	22	23	24	25	28	29	30	1	2	3	4
26	27	28	29	30	*	*	5	6	7	8	9	*	*
December 1967							Agrahayana — Pousha 1889						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
31	*	*	*	*	1	2	10	*	*	*	*	10	11
3	4	5	6	7	8	9	12	13	14	15	16	17	18
10	11	12	13	14	15	16	19	20	21	22	23	24	25
17	18	19	20	21	22	23	26	27	28	29	30	1	2
24	25	26	27	28	29	30	3	4	5	6	7	8	9

ANDHRA PRADESH ALMANAC
CALENDAR—1968 A.D.

1968 January							February						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	1	2	3	4	5	6	●	●	●	●	1	2	3
7	8	9	10	11	12	13	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24
28	29	30	31	●	●	●	25	26	27	28	29	●	●
March							April						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
31	●	●	●	●	1	2	●	1	2	3	4	5	6
3	4	5	6	7	8	9	7	8	9	10	11	12	13
10	11	12	13	14	15	16	14	15	16	17	18	19	20
17	18	19	20	21	22	23	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28	29	30	●	●	●	●
May							June						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	●	●	1	2	3	4	30	●	●	●	●	●	1
5	6	7	8	9	10	11	2	3	4	5	6	7	8
12	13	14	15	16	17	18	9	10	11	12	13	14	15
19	20	21	22	23	24	25	16	17	18	19	20	21	22
26	27	28	29	30	31	●	23	24	25	26	27	28	29
July							August						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	1	2	3	4	5	6	●	●	●	●	1	2	3
7	8	9	10	11	12	13	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24
28	29	30	31	●	●	●	25	26	27	28	29	30	31
September							October						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	1	2	3	4	5	6	●	●	1	2	3	4	5
7	8	9	10	11	12	13	6	7	8	9	10	11	12
14	15	16	17	18	19	20	13	14	15	16	17	18	19
21	22	23	24	25	26	27	20	21	22	23	24	25	26
28	29	30	●	●	●	●	27	28	29	30	31	●	●
November							December 1968						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	●	●	●	●	1	2	1	2	3	4	5	6	7
3	4	5	6	7	8	9	8	9	10	11	12	13	14
10	11	12	13	14	15	16	15	16	17	18	19	20	21
17	18	19	20	21	22	23	22	23	24	25	26	27	28
24	25	26	27	28	29	30	29	30	31	●	●	●	●

CALENDAR—Saka Pousha 1889—Pousha 1890

1889 Pousha — Magha							Magha — Phalguna						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	11	12	13	14	15	16	●	●	●	●	12	13	14
17	18	19	20	21	22	23	15	16	17	18	19	20	21
24	25	26	27	28	29	30	22	23	24	25	26	27	28
1	2	3	4	5	6	7	29	30	1	2	3	4	5
8	9	10	11	●	●	●	6	7	8	9	10	●	●
1889 Phalguna — Chaitra 1890							1890 Chaitra — Vaisakha						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
11	●	●	●	●	11	12	●	12	13	14	15	16	17
13	14	15	16	17	18	19	18	19	20	21	22	23	24
20	21	22	23	24	25	26	25	26	27	28	29	30	31
27	28	29	30	1	2	3	1	2	3	4	5	6	7
4	5	6	7	8	9	10	8	9	10	●	●	●	●
Vaisakha — Jyesta							Jyesta — Ashadha						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	●	●	11	12	13	14	9	●	●	●	●	●	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25
29	30	31	1	2	3	4	26	27	28	29	30	31	1
5	6	7	8	9	10	●	2	3	4	5	6	7	8
Ashadha — Sravana							Sravana — Bhadrapada						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	10	11	12	13	14	15	●	●	●	●	10	11	12
16	17	18	19	20	21	22	13	14	15	16	17	18	19
23	24	25	26	27	28	29	20	21	22	23	24	25	26
30	31	1	2	3	4	5	27	28	29	30	31	1	2
6	7	8	9	●	●	●	3	4	5	6	7	8	9
Bhadrapada — Asvina							Asvina — Karthika						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
10	11	12	13	14	15	16	●	●	9	10	11	12	13
17	18	19	20	21	22	23	14	15	16	17	18	19	20
24	25	26	27	28	29	30	21	22	23	24	25	26	27
31	1	2	3	4	5	6	28	29	30	1	2	3	4
7	8	●	●	●	●	●	5	6	7	8	9	●	●
Karthika — Agrahayana							Agrahayana — Pousha 1890						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
●	●	●	●	●	10	11	10	11	12	13	14	15	16
12	13	14	15	16	17	18	17	18	19	20	21	22	23
19	20	21	22	23	24	25	24	25	26	27	28	29	30
26	27	28	29	30	1	2	1	2	3	4	5	6	7
3	4	5	6	7	8	9	8	9	10	●	●	●	●

4
ANDHRA PRADESH ALMANAC
1969 Jan. - June CALENDAR Saka Pousha 1890 - Ashada - 91

1969 January							1890 Pousha — Magha						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
★	★	★	1	2	3	4	★	★	★	11	12	13	14
5	6	7	8	9	10	11	15	16	17	18	19	20	21
12	13	14	15	16	17	18	22	23	24	25	26	27	28
19	20	21	22	23	24	25	29	30	1	2	3	4	5
26	27	28	29	30	31	★	6	7	8	9	10	11	★
February							Magha — Phalguna						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
★	★	★	★	★	★	1	★	★	★	★	★	★	12
2	3	4	5	6	7	8	13	14	15	16	17	18	19
9	10	11	12	13	14	15	20	21	22	23	24	25	26
16	17	18	19	20	21	22	27	28	29	30	1	2	3
23	24	25	26	27	28	★	4	5	6	7	8	9	★
March							1890 Phalguna — Chaitra 1891						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
★	★	★	★	★	★	1	9	10	11	★	★	★	10
2	3	4	5	6	7	8	11	12	13	★	★	★	17
9	10	11	12	13	14	15	18	19	20	21	22	23	24
16	17	18	19	20	21	22	25	26	27	28	29	30	1
23	24	25	26	27	28	29	2	3	4	5	6	7	8
April							1891 Chaitra — Vaisakha 1891						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
★	★	★	★	★	★	5	★	★	11	12	13	14	15
6	7	8	9	10	11	12	16	17	18	19	20	21	22
13	14	15	16	17	18	19	23	24	25	26	27	28	29
20	21	22	23	24	25	26	30	1	2	3	4	5	6
27	28	29	30	★	★	★	7	8	9	10	★	★	★
May							Vaisakha — Jyesta						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
★	★	★	★	1	2	3	★	★	★	★	11	12	13
4	5	6	7	8	9	10	14	15	16	17	18	19	20
11	12	13	14	15	16	17	21	22	23	24	25	26	27
18	19	20	21	22	23	24	28	29	30	31	1	2	3
25	26	27	28	29	30	31	4	5	6	7	8	9	10
June 1969							Jyesta — Ashadha 1891						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
★	★	★	★	★	★	★	11	12	13	14	15	16	17
1	2	3	4	5	6	7	18	19	20	21	22	23	24
8	9	10	11	12	13	14	25	26	27	28	29	30	31
15	16	17	18	19	20	21	1	2	3	4	5	6	7
22	23	24	25	26	27	28	8	9	★	★	★	★	★
29	30	★	★	★	★	★							

Sun Rise (s.r.) and Sun Set (s.s.) in Indian Standard Time
For certain stations in Andhra Pradesh

Month Date	Adila- bad 19.40 N 78.31 E	Adoni 15.38 N 77.16 E	Amala- puram 16.36 N 82.03 E	Anaka- palli 17.41 N 83.06 E	Ananta- pur 14.42 N 77.05 E	Bapatla 15.56 N 80.32 E
	S R	S S	S R	S S	S R	S S
J 01	6.51	17.47	6.49	18.00	6.35	17.43
10	6.53	17.55	6.52	18.05	6.38	17.50
20	6.54	18.01	6.53	18.13	6.39	17.57
30	6.52	18.08	6.51	18.19	6.39	18.02
F 10	6.49	18.12	6.49	18.22	6.35	18.06
20	6.42	18.18	6.44	18.27	6.29	18.11
M 01	6.36	18.21	6.39	18.29	6.24	18.13
10	6.30	18.24	6.34	18.31	6.19	18.16
20	6.20	18.27	6.25	18.33	6.10	18.17
30	6.13	18.29	6.19	18.33	6.04	18.18
A 10	6.00	18.33	6.11	18.35	5.54	18.21
20	5.55	18.16	6.03	18.37	5.48	18.24
30	5.48	18.39	5.59	18.39	5.42	18.25
M 10	5.42	18.43	5.54	18.41	5.37	18.28
20	5.38	18.47	5.51	18.44	5.34	18.31
30	5.36	18.51	5.49	18.47	5.32	18.28
J 10	5.36	18.55	5.49	18.51	5.32	18.38
20	5.37	18.58	5.51	18.53	5.34	18.41
30	5.39	18.59	5.54	18.55	5.37	18.43
J 10	5.43	18.59	5.57	18.55	5.39	18.43
20	5.46	18.58	6.00	18.54	5.42	18.42
30	5.51	18.53	6.03	18.51	5.45	18.39
A 10	5.55	18.47	6.05	18.47	5.48	18.34
20	5.57	18.41	6.07	18.41	5.51	18.28
30	6.00	18.32	6.09	18.31	5.52	18.21
S 10	6.02	18.24	6.10	18.27	5.54	18.11
20	6.04	18.14	6.10	18.19	5.55	18.04
30	6.06	18.06	6.10	18.12	5.55	17.58
O 10	6.09	17.56	6.12	18.04	5.57	17.48
20	6.12	17.50	6.14	17.59	5.59	17.42
30	6.17	17.42	6.16	17.53	6.03	17.35
N 10	6.22	17.38	6.19	17.50	6.08	17.33
20	6.28	17.36	6.25	17.48	6.13	17.31
30	6.34	17.36	6.30	17.49	6.18	17.31
D 10	6.40	17.37	6.36	17.51	6.24	17.33
20	6.46	17.41	6.42	17.54	6.28	17.38

Sun Rise (s.r.) and Sun Set (s.s.) in Indian Standard Time
For certain stations in Andhra Pradesh

Month Date	Bhadra- chalam 17.42 N 80.59 E		Bhima- varam 16.34 N 81.35 E		Bobbili 18.32 N 83.29 E		Chittoor 13.13 N 79.06 E		Cud- daph 14.30 N 78.50 E		Eluru 16.45 N 81.10 E	
	S	R	S	S	S	R	S	S	S	R	S	S
J 01	6.39	17.44	6.33	17.41	6.29	17.30	6.36	17.57	6.40	17.56	6.34	17.42
10	6.41	17.53	6.36	17.48	6.31	17.35	6.38	18.01	6.42	18.03	6.37	17.49
20	6.44	17.57	6.37	17.53	6.32	17.43	6.40	18.08	6.44	18.08	6.38	17.56
30	6.42	18.01	6.37	18.00	6.31	17.49	6.40	18.13	6.44	18.13	6.38	18.01
F 10	6.38	18.07	6.33	18.04	6.27	17.55	6.38	18.17	6.42	18.17	6.34	18.05
20	6.34	18.12	6.27	18.09	6.21	17.59	6.33	18.21	6.38	18.21	6.28	18.10
M 01	6.27	18.15	6.22	18.11	6.15	18.02	6.29	18.22	6.32	18.23	6.23	18.12
10	6.21	18.17	6.17	18.14	6.09	18.05	6.25	18.24	6.27	18.25	6.18	18.15
20	6.12	18.19	6.08	18.15	6.00	18.07	6.17	18.24	6.19	18.26	6.09	18.16
30	6.08	18.20	6.02	18.16	5.52	18.09	6.11	18.25	6.12	18.27	6.03	18.18
A 10	5.57	18.23	5.52	18.19	5.43	18.12	6.03	18.26	6.04	18.29	5.53	18.20
20	5.51	18.25	5.46	18.20	5.36	18.14	5.58	18.26	6.00	18.29	5.47	18.21
30	5.43	18.28	5.40	18.23	5.29	18.18	5.53	18.28	5.53	18.32	5.41	18.24
M 10	5.37	18.31	5.33	18.26	5.24	18.19	5.49	18.30	5.49	18.34	5.36	18.27
20	5.32	18.35	5.32	18.29	5.20	18.25	5.46	18.33	5.46	18.37	5.33	18.30
30	5.32	18.38	5.30	18.32	5.18	18.28	5.45	18.36	5.45	18.40	5.31	18.33
J 10	5.32	18.42	5.30	18.36	5.18	18.32	5.45	18.39	5.45	18.44	5.31	18.37
20	5.34	18.45	5.32	18.39	5.20	18.35	5.47	18.42	5.46	18.47	5.33	18.40
30	5.36	18.47	5.35	18.41	5.22	18.37	5.49	18.44	5.49	18.48	5.36	18.42
J 10	5.39	18.47	5.37	18.41	5.25	18.37	5.52	18.44	5.52	18.48	5.38	18.42
20	5.42	18.36	5.40	18.40	5.29	18.36	5.55	18.43	5.54	18.48	5.41	18.41
30	5.45	18.42	5.43	18.37	5.33	18.31	5.58	18.40	5.58	18.44	5.44	18.38
A 10	5.49	18.38	5.46	18.32	5.36	18.26	5.59	18.37	5.59	18.41	5.47	18.33
20	5.51	18.31	5.49	18.26	5.38	18.20	6.01	18.33	6.01	18.35	5.50	18.27
30	5.53	18.24	5.50	18.19	5.40	18.13	6.02	18.25	6.02	18.29	5.51	18.20
S 10	5.55	18.15	5.52	18.09	5.43	18.04	6.01	18.18	6.03	18.21	5.53	18.10
20	5.56	18.06	5.53	18.02	5.44	17.54	6.02	18.10	6.03	18.13	5.54	18.03
30	5.58	17.59	5.53	17.56	5.46	17.45	6.02	18.04	6.04	18.06	5.54	17.57
O 10	6.00	17.49	5.55	17.46	5.48	17.37	6.02	17.57	6.05	17.58	5.56	17.47
20	6.02	17.44	5.57	17.40	5.52	17.31	6.03	17.52	6.07	17.53	5.58	17.41
30	6.06	17.37	6.01	17.33	5.56	17.23	6.06	17.47	6.10	17.47	6.02	17.34
N 10	6.11	17.33	6.06	17.31	6.00	17.22	6.10	17.44	6.14	17.44	6.07	17.32
20	6.16	17.32	6.11	17.29	6.06	17.18	6.15	17.43	6.19	17.43	6.12	17.30
30	6.22	17.31	6.16	17.29	6.12	17.17	6.19	17.44	6.24	17.43	6.17	17.30
D 10	6.28	17.33	6.22	17.31	6.18	17.19	6.25	17.46	6.29	17.46	6.23	17.32
20	6.33	17.38	6.26	17.36	6.23	17.24	6.30	17.51	6.35	17.50	6.27	17.37

Sun Rise (s.r.) and Sun Set (s.s.) in Indian Standard Time
For certain stations in Andhra Pradesh

For certain stations													
Month Date	Gudi- wada 16.28 N 81.03 E		Gudur (Nellore) 15.45 N 78.30 E		Guntur 16.20 N 80.27 E		Hindupur 13.49 N 77.29 E		Hydera- bad 17.22 N 78.26 E		Kakinada 16.59 N 82.20 E		
	S R	S S	S R	S S	S R	S S	S R	S S	S R	S S	S R	S S	
J 01	6.35	17.43	6.44	17.55	6.36	17.47	6.44	18.03	6.46	17.52	6.31	17.38	
10	6.38	17.50	6.47	18.00	6.39	17.52	6.46	18.08	6.49	17.57	6.33	17.45	
20	6.39	17.57	6.48	18.08	6.40	18.00	6.48	18.14	6.50	18.04	6.35	17.52	
30	6.39	18.02	6.46	18.14	6.38	18.06	6.48	18.19	6.49	18.09	6.36	17.57	
F 10	6.35	18.06	6.44	18.17	6.36	18.09	6.45	18.23	6.46	18.15	6.32	18.01	
20	6.29	18.11	6.39	18.22	6.31	18.14	6.41	18.27	6.41	18.19	6.25	18.06	
M 01	6.24	18.13	6.34	18.24	6.26	18.16	6.37	18.29	6.35	18.23	6.20	18.08	
10	6.19	18.16	6.29	18.26	6.21	18.18	6.32	18.31	6.29	18.25	6.15	18.11	
20	6.10	18.17	6.20	18.28	6.12	18.19	6.24	18.31	6.21	18.27	6.05	18.12	
30	6.04	18.19	6.14	18.28	6.06	18.20	6.17	18.32	6.14	18.29	6.00	18.13	
A 10	5.54	18.21	6.06	18.30	5.58	18.22	6.10	18.33	6.05	18.31	5.50	18.16	
20	5.48	18.22	5.58	18.32	5.50	18.24	6.04	18.34	5.58	18.33	5.44	18.17	
30	5.42	18.25	5.54	18.34	5.46	18.26	5.59	18.36	5.51	18.36	5.38	18.20	
M 10	5.37	18.28	5.49	18.36	5.41	18.28	5.55	18.39	5.47	18.39	5.33	18.23	
20	5.34	18.31	5.46	18.39	5.38	18.31	5.52	18.41	5.43	18.42	5.30	18.26	
30	5.32	18.34	5.44	18.42	5.36	18.34	5.51	18.43	5.41	18.46	5.28	18.29	
J 10	5.32	18.38	5.44	18.46	5.36	18.38	5.51	18.47	5.41	18.49	5.28	18.33	
20	5.34	18.41	5.46	18.48	5.38	18.40	5.53	18.50	5.42	18.52	5.30	18.56	
30	5.37	18.43	5.49	18.50	5.41	18.42	5.55	18.52	5.45	18.54	5.33	18.38	
J 10	5.39	18.43	5.52	18.50	5.44	18.42	5.58	18.52	5.48	18.55	5.35	18.38	
20	5.42	18.42	5.55	18.49	5.47	18.41	6.01	18.51	5.51	18.54	5.38	18.37	
30	5.43	18.39	5.58	18.46	5.50	18.38	6.04	18.48	5.54	18.51	5.41	18.34	
A 10	5.48	18.24	6.00	18.42	5.52	18.34	6.06	18.44	5.58	18.45	5.44	18.29	
20	5.51	18.28	6.02	18.36	5.54	18.28	6.07	18.39	6.00	18.39	5.47	18.23	
30	5.52	18.21	6.04	18.28	5.56	18.20	6.08	18.32	6.02	18.32	5.48	18.16	
S 10	5.54	18.11	6.05	18.22	5.57	18.14	6.09	18.24	6.03	18.23	5.50	18.06	
20	5.55	18.04	6.05	18.14	5.57	18.06	6.09	18.17	6.05	18.15	5.51	17.59	
30	5.55	17.58	6.05	18.07	5.57	17.59	6.09	18.11	6.06	18.07	5.51	17.53	
O 10	5.57	17.48	6.07	17.59	5.59	17.51	6.10	18.03	6.08	17.59	5.53	17.43	
20	5.59	17.42	6.09	17.54	6.01	17.46	6.12	17.58	6.10	17.52	5.55	17.37	
30	6.03	17.35	6.11	17.48	6.03	17.40	6.14	17.53	6.14	17.46	5.59	17.30	
N 10	6.08	17.33	6.14	17.45	6.06	17.37	6.18	17.50	6.18	17.42	6.04	17.28	
20	6.13	17.31	6.20	17.42	6.12	17.35	6.23	17.49	6.24	17.40	6.09	17.26	
30	6.18	17.31	6.25	17.43	6.17	17.36	6.27	17.50	6.29	17.40	6.14	17.26	
D 10	6.24	17.33	6.31	17.46	6.23	17.38	6.33	17.52	6.35	17.42	6.20	17.28	
20	6.28	17.38	6.37	17.49	6.29	17.41	6.38	17.57	6.41	17.46	6.24	17.33	

ANDHRA PRADESH ALMANAC

Sun Rise (s.r.) and Sun Set (s.s.) in Indian Standard Time
For certain stations in Andhra Pradesh

Month Date	Kalahasti 13.48 N 79.42 E	Karim- nagar 18.27 N 79.06 E	Kavali 14.57 N 80.03 E	Kham- mam 17.16 N 80.13 E	Kotah- gudem 17.32 N 80.39 E	Kuracool 15.51 N 78.01 E
	S R	S S	S R	S S	S R	S S
J 01	6.35	17.34	6.45	17.47	6.35	17.51
10	6.37	17.39	6.47	17.53	6.37	17.58
20	6.39	17.45	6.48	18.01	6.39	18.03
30	6.39	17.50	6.48	18.06	6.39	18.08
F 10	6.36	17.44	6.44	18.11	6.37	18.12
20	6.32	17.38	6.38	18.16	6.33	18.16
M 01	6.28	17.32	6.32	18.19	6.27	18.18
10	6.23	17.22	6.26	18.22	6.22	18.20
20	6.18	17.12	6.17	18.24	6.14	18.21
30	6.13	17.03	6.09	18.26	6.07	18.22
A 10	6.08	17.04	6.00	18.29	5.59	18.24
20	6.03	16.55	5.53	18.31	5.55	18.24
30	5.58	16.46	5.47	18.34	5.48	18.27
M 10	5.53	16.37	5.41	18.36	5.44	18.29
20	5.48	16.28	5.38	18.41	5.41	18.32
30	5.43	16.19	5.36	18.44	5.40	18.35
J 10	5.38	16.10	5.36	18.49	5.40	18.39
20	5.33	16.01	5.37	18.52	5.41	18.42
30	5.28	15.52	5.39	18.53	5.44	18.43
A 10	5.23	15.43	5.43	18.53	5.47	18.43
20	5.18	15.34	5.47	18.52	5.49	18.43
30	5.13	15.25	5.50	18.48	5.53	18.39
M 10	5.08	15.16	5.53	18.43	5.54	18.36
20	5.03	15.07	5.56	18.36	5.56	18.30
30	4.58	14.58	5.57	18.29	5.57	18.24
J 10	4.53	14.49	5.58	18.21	5.58	18.16
20	4.48	14.40	6.01	18.11	5.58	18.08
30	4.43	14.31	6.03	18.02	5.59	18.01
A 10	4.38	14.22	6.05	17.54	6.00	17.53
20	4.33	14.13	6.09	17.48	6.02	17.48
30	4.28	14.04	6.12	17.41	6.05	17.42
M 10	4.23	13.55	6.17	17.39	6.09	17.39
20	4.18	13.46	6.22	17.46	6.14	17.38
30	4.13	13.37	6.28	17.35	6.19	17.38
J 10	4.08	13.28	6.34	17.37	6.24	17.41
20	4.03	13.19	6.40	17.41	6.30	17.45
30	3.98	13.10			6.34	17.39
A 10	3.93	13.01			6.38	17.33
20	3.88	12.52			6.42	17.27
30	3.83	12.43			6.46	17.21

ASTRONOMICAL DATA

Sun Rise (s.r.) and Sun Set (s.s.) in Indian Standard Time
For certain stations in Andhra Pradesh

Month Date	Madana- palli 13.34 N 78.28 E	Mahabub- nagar 16.45 N 77.57 E	Machilipatnam 16.13 N 81.12 E	Nagar- juna 16.35 N 79.17 E	Nalgonda 17.04 N 79.15 E	Narasara- pur (w. c.) 16.27 N 81.45 E
	S R	S S	S R	S S	S R	S S
J 01	6.40	17.39	6.47	17.55	6.33	17.44
10	6.42	18.04	6.50	18.02	6.36	17.49
20	6.44	18.10	6.51	18.09	6.37	17.57
30	6.44	18.15	6.51	18.14	6.35	18.03
F 10	6.41	18.19	6.47	18.18	6.33	18.06
20	6.37	18.23	6.41	18.23	6.28	18.11
M 01	6.33	18.23	6.36	18.25	6.23	18.13
10	6.28	18.27	6.31	18.28	6.18	18.15
20	6.20	18.27	6.22	18.29	6.09	18.17
30	6.13	18.28	6.16	18.30	6.03	18.17
A 10	6.06	18.29	6.06	18.33	5.55	18.19
20	6.00	18.30	6.00	18.34	5.47	18.21
30	5.55	18.32	5.54	18.37	5.43	18.23
M 10	5.51	18.35	5.49	18.40	5.38	18.25
20	5.48	18.37	5.46	18.43	5.35	18.28
30	5.47	18.39	5.44	18.46	5.33	18.31
J 10	5.47	18.43	5.44	18.50	5.33	18.35
20	5.49	18.46	5.46	18.53	5.35	18.37
30	5.51	18.48	5.49	18.55	5.38	18.39
J 10	5.54	18.48	5.51	18.55	5.41	18.39
20	5.57	18.47	5.54	18.54	5.44	18.38
30	6.00	18.44	5.57	18.51	5.47	18.35
A 10	6.02	18.40	6.00	18.46	5.49	18.31
20	6.03	18.35	6.03	18.40	5.51	18.25
30	6.04	18.28	6.04	18.33	5.53	18.17
S 10	6.05	18.20	6.06	18.23	5.54	18.11
20	6.05	18.13	6.07	18.16	5.54	18.03
30	6.05	18.07	6.07	18.10	5.54	17.56
O 10	6.06	17.59	6.09	18.00	5.56	17.48
20	6.08	17.54	6.11	17.54	5.58	17.43
30	6.10	17.49	6.15	17.47	6.00	17.37
N 10	6.14	17.46	6.20	17.45	6.03	17.34
20	6.19	17.45	6.25	17.43	6.09	17.32
30	6.23	17.46	6.30	17.43	6.14	17.33
D 10	6.29	17.48	6.36	17.45	6.20	17.35
20	6.34	17.53	6.40	17.50	6.26	17.38
30					6.31	17.40

ANDHRA PRADESH ALMANAC

Sun Rise (s.r.) and Sun Set (s.s.) in Indian Standard Time
For certain stations in Andhra Pradesh

Month Date	Nellore 14.29 N 80.00 E	Nizama- bad 18.40 N 78.05 E	Onagole 15.33 N 80.03 E	Pedda- puram 17.06 N 82.13 E	Pitha- puram 17.07 N 82.20 E	Rajah- mundry 17.01 N 81.52 E
	S R S S	S R S S	S R S S	S R S S	S R S S	S R S S
J 01	6.35 17.51	6.51 17.52	6.37 17.50	6.31 17.38	6.31 17.38	6.32 17.35
10	6.37 17.58	6.53 17.57	6.40 17.55	6.33 17.44	6.33 17.44	6.34 17.42
20	6.39 18.03	6.54 18.05	6.41 18.03	6.34 17.50	6.34 17.50	6.35 17.51
30	6.39 18.08	6.53 18.11	6.39 18.09	6.34 17.56	6.34 17.56	6.35 17.58
F 10	6.37 18.12	6.49 18.17	6.37 18.12	6.30 18.00	6.30 18.00	6.31 18.01
20	6.33 18.16	6.43 18.21	6.32 18.17	6.25 18.05	6.25 18.05	6.26 18.06
M 01	6.27 18.18	6.37 18.24	6.27 18.19	6.19 18.09	6.19 18.09	6.20 18.16
10	6.22 18.20	6.31 18.27	6.22 18.21	6.14 18.10	6.14 18.10	6.15 18.11
20	6.14 18.21	6.22 18.29	6.13 18.23	6.05 18.12	6.05 18.12	6.06 18.13
30	6.05 18.22	6.14 18.31	6.07 18.23	5.59 18.13	5.59 18.13	6.00 18.14
A 10	5.59 18.24	6.05 18.34	5.59 18.25	5.49 18.16	5.49 18.16	5.50 18.17
20	5.51 18.24	5.58 18.36	5.51 18.27	5.42 18.18	5.42 18.18	5.43 18.19
30	5.43 18.27	5.51 18.40	5.47 18.29	5.36 18.21	5.36 18.21	5.37 18.22
M 10	5.44 18.29	5.46 18.41	5.42 18.31	5.30 18.25	5.30 18.25	5.31 18.26
20	5.41 18.32	5.42 18.47	5.39 18.34	5.28 18.27	5.28 18.27	5.29 18.28
30	5.40 18.35	5.40 18.50	5.37 18.37	5.26 18.30	5.26 18.30	5.27 18.31
J 10	5.40 18.39	5.40 18.54	5.37 18.41	5.26 18.34	5.26 18.34	5.27 18.35
20	5.41 18.42	5.42 18.57	5.39 18.43	5.28 18.37	5.28 18.37	5.29 18.38
30	5.44 18.45	5.44 18.59	5.42 18.45	5.30 18.39	5.30 18.39	5.31 18.40
J 10	5.47 18.43	5.47 18.59	5.45 18.44	5.33 18.39	5.33 18.39	5.34 18.40
20	5.49 18.43	5.51 18.58	5.48 18.44	5.37 18.38	5.37 18.38	5.38 18.39
30	5.53 18.39	5.55 18.53	5.51 18.41	5.40 18.34	5.40 18.34	5.41 18.35
A 10	5.54 18.36	5.58 18.48	5.53 18.37	5.43 18.29	5.43 18.29	5.44 18.30
20	5.56 18.36	6.00 18.42	5.55 18.31	5.45 18.23	5.45 18.23	5.46 18.24
30	5.57 18.24	6.02 18.35	5.57 18.23	5.46 18.18	5.46 18.18	5.47 18.19
S 10	5.58 18.16	6.05 18.26	5.58 18.17	5.48 18.08	5.48 18.08	5.49 18.09
20	5.58 18.08	6.06 18.16	5.58 18.09	5.49 17.59	5.49 17.59	5.50 18.00
30	5.59 18.01	6.08 18.07	5.58 18.02	5.51 17.51	5.51 17.51	5.52 17.52
O 10	6.00 17.53	6.10 17.59	6.00 17.54	5.52 17.43	5.52 17.43	5.53 17.44
20	6.02 17.48	6.14 17.53	6.02 17.49	5.55 17.34	5.55 17.34	5.56 17.35
30	6.05 17.42	6.18 17.45	6.04 17.43	5.59 17.30	5.59 17.30	5.60 17.31
N 10	6.09 17.39	6.22 17.44	6.07 17.40	6.03 17.23	6.03 17.23	6.04 17.24
20	6.14 17.38	6.28 17.40	6.14 17.38	6.09 17.25	6.09 17.25	6.10 17.26
30	6.19 17.38	6.34 17.39	6.18 17.39	6.14 17.25	6.14 17.25	6.15 17.26
D 10	6.24 17.41	6.40 17.41	6.24 17.41	6.20 17.27	6.20 17.27	6.21 17.28
20	6.24 17.48	6.45 17.46	6.30 17.44	6.25 17.32	6.25 17.32	6.26 17.33

Sun Rise (s.r.) and Sun Set (s.s.) in Indian Standard Time
For certain stations in Andhra Pradesh

Month Date	Sanga- reddi 17.37 N 78.04 E	Srika- kulam 18.19 N 84.00 E	Srisa- lavan 16.06 N 78.54 E	Tanuku 16.48 N 81.45 E	Tenali 16.13 N 80.36 E	Tirupati 13.39 N 79.25 E
	S R S S	S R S S	S R S S	S R S S	S R S S	S R S S
J 01	6.49 17.54	6.26 17.28	6.42 17.53	6.33 17.40	6.36 17.47	6.36 17.55
10	6.51 17.59	6.28 17.34	6.45 17.58	6.36 17.47	6.39 17.52	6.38 18.00
20	6.52 18.07	6.29 17.42	6.46 18.06	6.37 17.54	6.40 18.00	6.40 18.06
30	6.52 18.11	6.29 17.47	6.44 18.12	6.36 17.59	6.38 18.06	6.40 18.11
F 10	6.48 18.17	6.25 17.52	6.42 18.15	6.33 18.03	6.36 18.09	6.37 18.15
20	6.42 18.22	6.19 17.57	6.37 18.20	6.27 18.08	6.31 18.14	6.33 18.19
M 01	6.37 18.24	6.13 18.00	6.32 18.22	6.22 18.10	6.26 18.16	6.29 18.21
10	6.31 18.27	6.07 18.03	6.27 18.24	6.17 18.13	6.21 18.18	6.24 18.23
20	6.22 18.29	5.58 18.05	6.18 18.26	6.07 18.14	6.12 18.20	6.16 18.23
30	6.15 18.30	5.50 18.07	6.12 18.26	6.02 18.15	6.06 18.20	6.09 18.24
A 10	6.05 18.34	5.41 18.10	6.04 18.28	6.52 18.18	5.58 18.22	6.02 18.25
20	5.59 18.35	5.32 18.12	5.56 18.30	5.46 18.19	5.50 18.24	5.56 18.26
30	5.53 18.38	5.28 18.15	5.52 18.32	5.40 18.22	5.46 18.26	5.51 18.28
M 10	5.46 18.41	5.22 18.17	5.47 18.34	5.35 18.25	5.41 18.28	5.47 18.31
20	5.44 18.45	5.19 18.22	5.44 18.37	5.32 18.28	5.38 18.31	5.44 18.33
30	5.42 18.48	5.17 18.25	5.42 18.40	5.30 18.31	5.36 18.34	5.43 18.35
J 10	5.42 18.52	5.17 18.30	5.42 18.44	5.30 18.35	5.36 18.38	5.43 18.39
20	5.44 18.55	5.18 18.33	5.44 18.46	5.32 18.38	5.38 18.40	5.45 18.42
30	5.46 18.57	5.20 18.34	5.47 18.48	5.35 18.40	5.41 18.42	5.47 18.44
J 10	5.49 18.57	5.24 18.34	5.50 18.48	5.37 18.40	5.44 18.42	5.50 18.44
20	5.53 18.58	5.28 18.33	5.53 18.47	5.40 18.39	5.47 18.41	5.53 18.43
30	5.56 18.52	5.29 18.29	5.56 18.44	5.43 18.36	5.50 18.38	5.56 18.40
A 10	5.59 18.47	5.34 18.24	5.58 18.40	5.46 18.31	5.52 18.34	5.58 18.36
20	6.01 18.41	5.37 18.17	6.00 18.34	5.49 18.25	5.54 18.28	5.59 18.31
30	6.03 18.34	5.38 18.10	6.02 18.26	5.50 18.18	5.56 18.20	6.00 18.24
S 10	6.05 18.26	5.41 18.02	6.01 18.21	5.52 18.08	5.57 18.14	6.01 18.12
20	6.06 18.16	5.42 17.52	6.02 18.12	5.53 18.01	5.57 18.06	6.01 18.09
30	6.08 18.08	5.44 17.43	6.04 18.05	5.53 17.55	5.57 17.59	6.01 18.03
O 10	6.10 17.59	5.46 17.35	6.06 17.55	5.55 17.45	5.59 17.51	6.02 17.55
20	6.13 17.52	5.50 17.29	6.08 17.46	5.57 17.39	6.01 17.46	6.04 17.50
30	6.16 17.47	5.53 17.22	6.12 17.43	6.01 17.32	6.03 17.40	6.06 17.45
N 10	6.21 17.43	5.58 17.20	6.14 17.40	6.06 17.30	6.06 17.37	6.10 17.42
20	6.26 17.42	6.03 17.17	6.22 17.38	6.11 17.28	6.12 17.35	6.15 17.41
30	6.32 17.41	6.09 17.16	6.27 17.38	6.16 17.28	6.17 17.36	6.19 17.42
D 10	6.38 17.43	6.15 17.18	6.33 17.40	6.22 17.30	6.23 17.38	6.25 17.44
20	6.43 17.44	6.21 17.22	6.39 17.44	6.26 17.35	6.29 17.41	6.30 17.49

Sun Rise (s.r.) and Sun Set (s.s.) in Indian Standard Time
For certain stations in Andhra Pradesh

Month Date		Tuni 17.23 N 82.36 E	Vijaya- vada 16.34 N 80.40 E	Vijaya- vada 17.43 N 83.24 E	Vizian- agaram 18.07 N 83.30 E	Warangal 18.00 N 79.35 E					
		S R	S S	S R	S S	S R	S S	S R	S S	S R	S S
J	01	6.31	17.36	6.36	17.44	6.28	17.33	6.27	17.31	6.43	17.47
	10	6.32	17.42	6.39	17.51	6.30	17.38	6.30	17.37	6.46	17.53
	20	6.34	17.49	6.40	17.58	6.31	17.46	6.31	17.44	6.47	18.00
	30	6.33	17.53	6.40	18.03	6.31	17.50	6.30	17.49	6.46	18.05
F	01	6.30	17.59	6.36	18.07	6.27	17.56	6.27	17.54	6.43	18.10
	10	6.24	18.04	6.30	18.12	6.21	18.01	6.20	18.00	6.36	18.16
A	01	6.19	18.07	6.25	18.14	6.16	18.03	6.15	18.02	6.31	18.18
	10	6.12	18.09	6.20	18.17	6.10	18.06	6.09	18.05	6.25	18.21
	20	6.04	18.11	6.11	18.18	6.01	18.08	6.00	18.07	6.16	18.23
	30	5.58	18.12	6.05	18.19	5.54	18.10	5.52	18.09	6.08	18.24
M	01	5.48	18.15	5.55	18.22	5.44	18.13	5.43	18.12	5.59	18.28
	10	5.41	18.17	5.49	18.23	5.39	18.14	5.37	18.13	5.53	18.29
	20	5.35	18.20	5.43	18.26	5.32	18.18	5.31	18.17	5.46	18.32
	30	5.30	18.23	5.38	18.29	5.28	18.20	5.23	18.20	5.39	18.36
J	01	5.26	18.27	5.35	18.32	5.23	18.24	5.21	18.24	5.37	18.40
	10	5.23	18.29	5.33	18.35	5.21	18.27	5.20	18.27	5.36	18.43
	20	5.15	18.34	5.33	18.39	5.21	18.31	5.20	18.31	5.36	18.47
	30	5.10	18.37	5.35	18.42	5.23	18.34	5.21	18.34	5.37	18.50
A	01	5.06	18.38	5.38	18.44	5.25	18.36	5.27	18.35	5.40	18.51
	10	5.07	18.39	5.40	18.44	5.28	18.36	5.27	18.35	5.41	18.51
	20	5.05	18.37	5.43	18.43	5.32	18.35	5.30	18.34	5.44	18.51
	30	5.03	18.33	5.46	18.40	5.35	18.31	5.34	18.30	5.46	18.48
M	01	5.01	18.29	5.49	18.35	5.38	18.26	5.36	18.28	5.52	18.44
	10	4.98	18.23	5.52	18.29	5.40	18.20	5.39	18.19	5.55	18.35
	20	4.95	18.17	5.53	18.22	5.42	18.13	5.41	18.11	5.57	18.27
	30	4.97	18.07	5.55	18.12	5.44	18.05	5.43	18.04	5.59	18.20
J	01	4.98	17.58	5.56	18.05	5.45	17.55	5.44	17.56	6.00	18.10
	10	4.90	17.51	5.56	17.59	5.47	17.47	5.46	17.46	6.02	18.02
	20	4.82	17.41	5.58	17.49	5.49	17.38	5.48	17.37	6.04	17.53
	30	4.78	17.32	6.01	17.43	5.52	17.31	5.50	17.31	6.06	17.47
A	01	4.70	17.29	6.04	17.36	5.55	17.26	5.53	17.24	6.11	17.40
	10	6.00	17.26	6.09	17.34	6.00	17.22	5.59	17.21	6.15	17.37
	20	6.08	17.24	6.14	17.32	6.05	17.21	6.05	17.19	6.21	17.35
	30	6.13	17.24	6.19	17.32	6.11	17.20	6.10	17.18	6.27	17.34
M	01	6.19	17.26	6.25	17.34	6.17	17.22	6.16	17.21	6.32	17.37
	10	6.25	17.30	6.29	17.39	6.22	17.23	6.21	17.25	6.38	17.41

INDIAN NATIONAL CALENDAR

The number of days contained in the different months of this calendar is as follows: Chaitra-30 days (31 days in a leap-year), Vaisaka-31; Jyesta-31; Ashadha-31; Sravana-31; Bhadrapada-31; Asvina-30; Karthika-30; Agrahayana-30; Pousha-30; Magha-30; and Phalguna-30 days.

ANNIVERSARIES AND FESTIVALS IN 1968

New Year's Day	Mon.	Jan. 1	Sravan Pournami	Thu.	Aug. 8
Vaikunta Ekadasi	Thu.	Jan. 11	Independence Day	Thu.	Aug. 15
Bhogi	Sat.	Jan. 13	Sri Krishna Jayanti	Thu.	Aug. 15
Makara Sankranti	Sun.	Jan. 14	Tanguturi Prakasam		
Kanuma Panduga	Mon.	Jan. 15	(1869)	Fri.	Aug. 23
Republic Day	Fri.	Jan. 26	Vinayaka Chaturdi	Tue.	Aug. 27
Maha Sivaratri	Mon.	Feb. 26	Mahalaya		
Holi	Thu.	Mar. 14	Amavasya	Sun.	Sep. 22
"	Fri.	Mar. 15	Moola Pooja	Sat.	Sep. 28
Indian New Year's Day	Thu.	Mar. 21	Navaratri	Tue.	Oct. 1
Ugadi (Telugu New Year's Day)	Fri.	Mar. 29	Dasara	Tue.	Oct. 1
Sri Ramanavami	Sun.	Apr. 7	Gandhiji's Jayanti	Wed.	Oct. 2
Muharram	Tue.	Apr. 9	Deepavali	Mon.	Oct. 21
Good Friday	Fri.	Apr. 12	United Nations Day		
Kandukuri Veeresalingam (1848)	Tue.	Apr. 16	(1945)	Thu.	Oct. 24
Kasinathuni Nageswara Rao (1867)	Wed.	May 1	Andhra Pradesh Day	Fri.	Nov. 1
May Day	Wed.	May 1	(1956)		
Rabindranath Tagore (1861)	Tue.	May 7	Jawaharlal Nehru	Thu.	Nov. 14
Buddha Purnima	Sun.	May 12	(1889)	Thu.	Nov. 14
Miladi Nabi	Sun.	June 9	Children's Day	Fri.	Nov. 22
			1st day of Ramazan		
			Gurazada Apparao	Sat.	Nov. 30
			(1861)		
			Christmas Day	Wed.	Dec. 25
			Vaikunta Ekadasi	Mon.	Dec. 30

(State & Central Govt. Holidays are given separately)

BEGINNING OF ERAS IN 1968

Indian National Calendar	1890 Saka begins on March 21.
Ugadi (Telugu New Year's Day)	42 Keelaka begins on March 29.
Tamil New Year's Day	begins on April 13.
Bengali San	1375 begins on April 14.
Vikrama Samvat	2025 begins on March 29 (Chaitradi)
Saka era	1890 begins with the Bengali san or the Samvat era.
Hejira	1388 begins on March 31.
Buddha Nirvana	2512 begins on May 12.
Mahavira Nirvana	2495 begins on October 22.
Kaliyuga era	5069 begins on April 15.

ECLIPSES IN 1968

(Given in Indian Standard Time)

	Total Solar Eclipse	Total Lunar Eclipse	Total Solar Eclipse	Total Lunar Eclipse
	Mar. 29 Friday	April 13 Saturday	Sept. 22 Sunday	Oct. 6 Sunday
	d. h. m.	d. h. m.	d. h. m.	d. h. m.
Beginning of eclipse	2 14	8 40	14 37	15 25
Total or annular begins	...	9 53	16 14	16 40
Maximum of eclipse	4 30	10 17	16 48	17 12
Total or annular ends	...	10 42	17 23	17 44
Ending of eclipse	6 47	11 55	19 00	18 59
Total duration	4 33	3 15	4 23	3 34
Magnitude	0.899	1.117	1.001	1.174
Visibility in India	Invisible	Invisible	Visible	Partly visible

Note: The beginning and ending times of solar eclipses relate to the Earth as a whole and not to any particular locality.

VISIBILITY OF ECLIPSES

1. Partial Solar Eclipse, March 29—visible partly in Antarctica, southernmost part of South America and southern Pacific Ocean.

2. Total Lunar Eclipse, April 13—Visible in Europe, most of Africa, North America, South America, New Zealand, Antarctica Atlantic Ocean and the eastern part of Pacific Ocean.

3. Total Solar Eclipse, September 22—Visible in India, Pakistan, part of Burma, whole of Asia except the eastern parts, Europe (except parts of Spain), North-eastern part of Africa and parts of North America. In India the beginning is visible and the eclipsed Sun sets before ending. (Ex. At Bombay Eclipse begins at 17-1 and eclipsed Sun sets at 18-35; At Madras 17-16, 18-5 respectively)

4. Total Lunar Eclipse, October 6—Visible in India (Ending only) whole of Asia except the western parts, Australia, New Zealand, North America, Western part of South America, Pacific Ocean and the Arctic region. In India the beginning is not visible and the eclipse ends shortly after moon-rise.

ENTRANCE OF PLANETS INTO NIRAYANA SIGNS IN 1968

MERCURY = Budha

	d.	h.	m.
Makara	Jan. 8	13	44
Kumbha	Jan. 27	01	44
Makara *	Feb. 18	03	22
Kumbha	Mar. 11	14	57
Mina	Apr. 3	8	13
Mesha	Apr. 19	17	20
Vrisha	May 3	21	57
Mithuna	May 22	6	42
Vrisha *	June 28	11	21
Mithuna	July 2	11	3
Karkata	July 28	5	45
Simha	Aug. 11	21	01
Kanya	Aug. 28	16	28
Tula	Sept. 20	6	36
Kanya *	Oct. 14	23	58
Tula	Nov. 3	23	52
Vrischika	Nov. 23	14	33
Dhanus	Dec. 12	15	42
Makara	Dec. 31	12	32

MARS = Kuja

	d.	h.	m.
Mina	Feb. 8	18	59
Mesha	Mar. 19	7	57
Vrisha	Apr. 29	12	26
Mithuna	June 11	16	40
Karkata	June 26	19	20
Simha	Sept. 11	13	33
Kanya	Oct. 29	17	10
Tula	Dec. 18	17	51

VENUS = Sukra

	d.	h.	m.
Dhanus	Jan. 21	13	18
Makara	Feb. 15	01	45
Kumbha	Mar. 10	10	41
Mina	Apr. 3	18	56
Mesha	Apr. 28	03	53
Vrisha	May 22	13	50
Mithuna *	June 16	00	11
Karkata	July 10	10	1
Simha	Aug. 3	19	01
Kanya	Aug. 28	03	48
Tula	Sept. 21	13	33
Vrischika	Oct. 16	01	29
Dhanus	Nov. 9	16	51
Makara	Dec. 4	15	14
Kumbha	Dec. 30	6	25

JUPITER (Guru) enters Kanya on October 12, 6h 19m.; SATURN (Sani) enters Mesha on June 17, 7h 18m.; SATURN (Sani) enters Mina * on September 28, 9h 6m.; MERCURY remains in Kanya during they ear; NEPTUNE remains in Vrischika during the year; PLUTO in Simha, enters Kanya on October 6, 5h 30m; RANU enters Mina * on January 13, 8h 56m.

* Retrogration.

FIRST VISIBILITY OF THE MOON IN 1968 (Calculated for the Central Station of India).

January	1, 31	May	28	September	24
February	29	June	27	October	23
March	30	July	26	November	21
April	29	August	25	December	21

NOTE: The months of the Islamic calendar actually begin from the evening of the date of first visibility of the Moon, but are ordinarily taken to begin from the next day.

The month of Muharram, the first months of the Islamic calendar, begins on March 31, and Ramzan the 9th month begins on November 21, evening.

WORLD CLOCK

WHEN IT IS 12 NOON AT GREENWICH [Hyderabad 17-30 Hrs.]

	h. m. s.		h. m. s.		h. m. s.
Berlin	12 53 28	London	11 59 40	Rangoon	18 24 52
Cairo	14 05 00	Manila	20 06 00	Rome	12 49 48
Chicago	6 09 20	Melbourne	21 39 52	Saigon	19 06 44
Geneva	12 24 28	Peking	19 45 52	San Francisco	3 50 20
Hyderabad	17 30 00	Moscow*	14 30 16	Singapore	18 55 16
Honolulu	1 36 00	New York	7 04 00	Teheran	15 25 40
Kuala Lumpur	18 46 40	Ottawa	6 57 08	Tokyo	21 18 12
Leningrad*	14 11 12	Paris	12 9 20	Washington	6 51 44

* The Soviet Union, by a decree dated June 16, 1930, advanced all the clocks in union by one hour to which these times correspond.

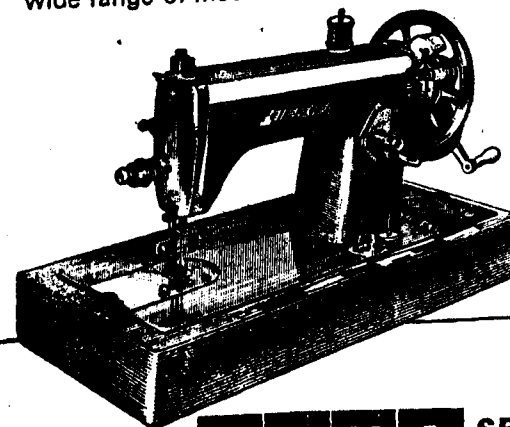
Source: Astronomical data is based on Lahri's Indian Ephemeris 1968.

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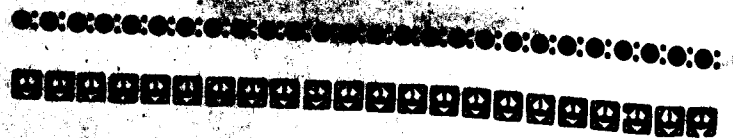
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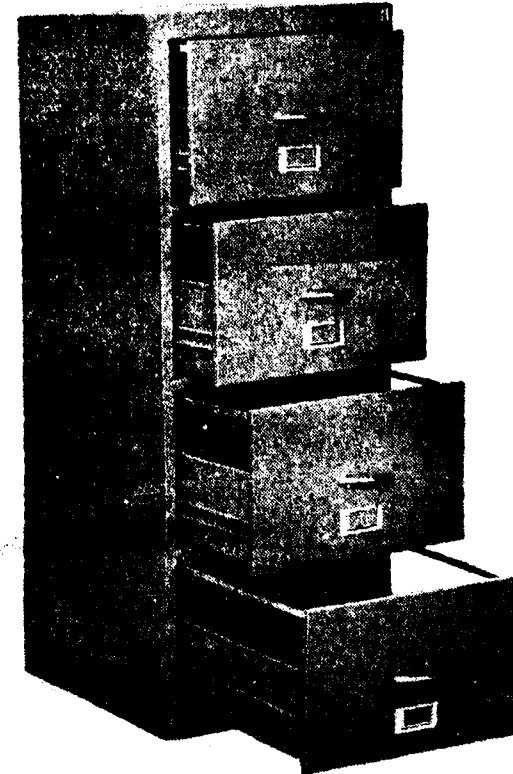
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1968 ANDHRA PRADESH STATE HOLIDAYS ^{1, 2, 3} FOR GOVERNMENT OFFICES

New Year's Day: Mon. Jan. 1; Ramzan: Tue. Jan. 2; Sankranti: Mon. Jan. 15; Republic Day: Fri. Jan. 26; Mahasivaratri: Mon. Jan. 26; Bakrid: Mon. Mar. 11; Holi: Thu. Mar. 14; Ugadi: Fri. Mar. 29; Muharram: Tue. Apr. 9; Independence day: Thu. Aug. 15; Janmashtami: Fri. Aug. 16; Vinayaka Chaturthi: Tue. Aug. 27; Mahanavami: Mon. Sep. 20; Vijayadasami: Tue. Oct. 1; Gandhi Jayanthi: Wed. Oct. 2; Naraka Chaturdasi: Mon. Oct. 21; Deepavali (Divali): Tue. Oct. 22; Ramzan Sat. Dec. 21; Christmas: Wed. Dec. 25.

¹. Bhogi, Sreerama Navami, Milad-un-nabi & Durgashtami fall on Sundays.

². In addition to the above mentioned General Holidays, all Sundays and Second Saturdays are holidays; the State Government employees may avail themselves restricted holidays not exceeding THREE during the year 1968. (See below)

³. Industrial establishments and undertakings under the control of the State Government, workers of all branches of Public Works Department and Educational institutions in the State have a different list of holidays.

1968 RESTRICTED HOLIDAYS FOR STATE GOVERNMENT EMPLOYEES

Ramzan: Wed. Jan. 3; Vaikunta Ekadasi: Thu. Jan. 11; Kanumu: Tue. Jan. 16; Holi: Fri. Mar. 15; 10th Muharram: Wed. Apr. 10; Mahavir Jayanthi: Thu. Apr. 11; Good Friday: Fri. Apr. 12; Arbain: Sat. May 18; Rabi-us-Sani (Yazdahum-sheriff): Mon. July 8; Avani-avittam (Sraavanapurnima): Thu. Aug. 8; Parsi's New Year's day: Thu. Aug. 29; Khordad Sal: Tue. Sep. 3; Onam: Wed. Sept. 4; Guru Nanak's Birthday: Tue. Nov. 5; Shab-i-Barath: Wed. Nov. 6; Shab-i-Qadr (lailathul Khathir) Tue. Dec. 17; Jumathul-vida: Fri. Dec. 20; Christmas Eve: Tue. Dec. 24; Boxing Day: Thu. Dec. 26; Vaikunta Ekadasi: Mon. Dec. 30.

1968 HOLIDAYS FOR CENTRAL GOVERNMENT OFFICES

Ramzan: Tue. Jan. 2; Republic Day: Fri. Jan. 26; Maha Sivaratri: Mon. Feb. 26; Holy: Fri. Mar. 15; Muharram: Tue. Apr. 9; Good Friday: Fri. Apr. 12; Independence Day: Thu. Aug. 15; Janmashtami: Fri. Aug. 16; Dasara: Mon. Sep. 30; Gandhi Jayanti: Wed. Oct. 2; Deepavali: Mon. Oct. 21; Gurunanak Bith Day: Tue. Nov. 5; Ramzan (Idul Fitr): Sat. Dec. 21; Christmas: Wed. Dec. 25.

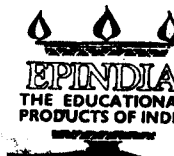
Idul Jaha, Rama Navami, Buddha Purnima fall on Sundays.

1968 RESTRICTED HOLIDAYS FOR CENTRAL GOVERNMENT EMPLOYEES

New Year's Day: Mon. Jan. 1; Guru Govind Singh Jayanti: Sat. Jan. 6; Sankranti: Mon. Jan. 15; Guru Ravidan Jayanti: Wed. Feb. 14; Holi: Thu. Mar. 14; Chetichand: Wed. Mar. 29; Mahaveera Jayanthi: Thu. Apr. 11; Rakhee Bandhan: Thu. Aug. 8; Onam: Wed. Sept. 4; Bhaidhuj: Sun. Oct. 20; Jumathul vidha: Fri. Dec. 30;

Miladi nabi, Maha rushi Bal Mik Jayanti, Guru Thez Bahadur Shasheed fall on Sundays.

Employees may use any two of these restricted holidays in a year.



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