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# Tamil Arasu

JANUARY-FEBRUARY-MARCH - 2006





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# Tamil Arasu

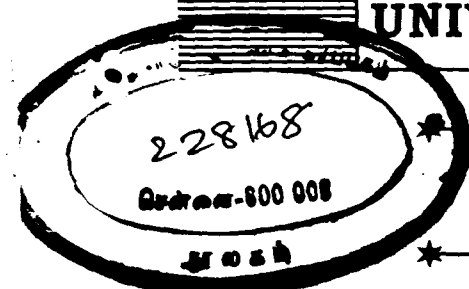
Magazine of the Government of Tamil Nadu  
Thiruvalluvar Year - 2036 - 37  
January - February - March - 2006    Rs. 15/-

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Editor and Publisher :

C.MUTHUKUMARASWAMY, I.A.S., Director of Information & Public Relations  
and Ex-officio Addl. Secretary to Government, Government of Tamil Nadu  
Office : Tamil Arasu, Omandurar Government Estate,  
Annasalai, Chennai - 600 002. Tel : 25368926,  
Fax : 25364906 E-mail : [tamilarasu2@yahoo.com](mailto:tamilarasu2@yahoo.com)  
Printed at : Tamil Arasu Press, Omandurar Government Estate,  
Annasalai, Chennai - 600 002.

# PROSPECTUS FOR HIGHER EDUCATION IN UNIVERSITIES OF TAMIL NADU



Dr. (Mrs.) Susila Mariappan,  
Director, University Students Advisory Bureau

University Students Advisory Bureau (USAB) is an important functionary in the University of Madras. The USAB shares with the University accepting administrative responsibility. It performs uniquely special role in rendering services to the student Community. It is an establishment marking its 95<sup>th</sup> year of age and is vibrant in rendering counselling and guidance services to the students Community. There is no outfit of its kind in other Universities of Tamil Nadu. University of Madras was once the only one University for the erstwhile Madras Presidency. USAB was also the only one center dedicated to serve the students of the university. It was after 1947, University of Madras lent premise for creation of several Universities both within and outside Tamil Nadu. But, USAB remains in tact and nascent as it was at its birth in the year 1909. Hence, it could claim itself being the only one in entire Tamil Nadu and perhaps the oldest of its kind in the country.

## The Primary Functions of the USAB

- (i) To counsel the students of Universities both in Tamil Nadu and abroad on academic matters. They include informations related to (a) admission

in the courses offered by the University Departments and colleges/institutions affiliated to and recognized by University of Madras, (b) Fees for admission in the concerned institutions, scholarships/ Fellowships available to undergraduate and post graduate students and others. Besides, guidelines on academic programmes, the students have to take note of, while pursuing studies in the respective institutions, (e.g. duration of the courses of study, minimum educational qualification and marks required for admission in the respective institutions, etc.)

- (ii) To guide the students on matters related to (a) Training and employment opportunities available to graduates with organisations in India and abroad, (b) Conduct coaching programmes for preparing the fresh graduates for jobs matching with their educational qualification and aptitude and (c) Organise exhibitions, workshops, and fairs to benefit students for career options in agencies under public and private sectors.

## STUDY IN TAMIL NADU UNIVERSITIES

In Tamil Nadu alone, there are 23 Universities of which - State controlled ones and deemed ones. There are over 700 colleges spread all over Tamil Nadu. They are affiliated to State - controlled Universities Deemed Universities have no affiliated colleges. There are special institutions newly established by the Ministry of Science and Technology and Ministry of Human Resources Department of Government of India. They have been recognized by the Universities in Tamil Nadu for research and training (e.g., institutions under CSIR, ICAR, ICMR, BARC). There are other independent and autonomous organisations dedicated to Research and Development applied to agriculture, health, water supply and sanitation, industrial processes and products.

Tamil Nadu claims 10% of educated manpower in the country. About 25% of the technical manpower is contributed by Tamil Nadu. University Grants Commission (UGC) has identified University of Madras and Madurai Kamaraj University as Centres of Excellence and accredited over a dozen colleges as autonomous institutions in the state of Tamil Nadu. Tamil Nadu is thus playing major role in higher education in India.

Sources of information on higher education in Tamil Nadu and Indian Universities could be traced in documents of the Government and Universities; for example, Gazette Annual Reports, Websites and Press. However, a simple, handy and ready reference material is scarcely traceable to contain relevant information on higher education in Tamil Nadu. USAB felt the need of bringing out publications. One of its publications of

University Students Advisory Bureau is "Academic Profile of Tamil Nadu" - What is after Plus Two - 2005. It is a handy reference to be used by teachers, educational consultants, parents, authorities in the Government and Educational Societies / Trusts. One can at a glance, locate the College / University in Tamil Nadu and opt a course of study in it.

The courses of study are found in more than a dozen of disciplines. To cite a few, there are (1) Physical and Chemical Sciences, (2) Biological Sciences (3) Engineering and Technology (4) Medicine (5) Agriculture (6) Animal Husbandry (7) Law (8) Arts (9) Geosciences (10) Energy (11) Environment (12) Computer Sciences and Application (13) Biotechnology (14) Aerospace science and Engineering (15) Nanotechnology and (16) Management. These disciplines are to expand with emergency needs of the time.

## NATIONAL REGISTER FOR DEGREES AWARDED BY INDIAN UNIVERSITIES

There is a national register listing the Degrees awarded by the Universities accredited by apex bodies including University Grant Commission (UGC), All India Council for Technical Education, (AICTE), Medical Council of India (MCI), Ministry of Agriculture and Animal Husbandry (MOA), Ministry of Science and Technology (MOST) and Ministry of Human Resource Development (MOHRD) in the Government of India. As per recent records available to Universities, there are over 80 degrees in Arts and Sciences alone which are recognized by UGC.

## **COURSES OF STUDY AND DEGREES AWARDED BY THE UNIVERSITIES IN TAMIL NADU**

The courses of study in disciplines viz., Arts and Science, Engineering, Medicine, Agriculture, Animal Husbandry, etc. available in Universities in Tamil Nadu and special institutions could be seen in a single source "Academic Profile of Tamil Nadu - Study After Plus Two" - Authored by Dr (Mrs.) Susila Mariappan, Director, University Students Advisory Bureau University of Madras, Chepauk, Chennai - 600 005. Copies are available with USAB. Those who are interested to own a copy of the above handbook may write to or contact in person Office of the University Students Advisory Bureau, University of Madras, Chepauk, Chennai - 600 005. Tel.91-44-25392255

The courses of study in Arts and Sciences at undergraduate level are normally offered by the colleges affiliated to University of the region where the college is located. The essential qualification for securing admission in UG programmes of Arts and Science, Commerce, Law, Medicine, Engineering, Agriculture, Animal Husbandry, Physical Education, Management, Computer Science, Library & Information Science is pass in Plus Two Examinations conducted by the Board of Higher Secondary Education (HSE) of Tamil Nadu Government and Central Board of Secondary Education (CBSE). A minimum of 60% in aggregate in combination of subjects as prescribed by the respective professional college and University is the desirable qualification for admission in professional colleges and universities (Refer Table 1).

## **ADMISSION CRITERIA**

The procedure for admission in general Arts & Science is uniform for all colleges located in Tamil Nadu. Pass in plus two examinations is sufficient to enter into Arts and Science College. However, there is a limit to the intake of students in each UG degree programme of a college. The University of the region sanctions the strength of students to be admitted in a course of study in a college. It is therefore necessary for a student to secure high percentage of marks in the subject of study and compete with others in securing admission. The college(s) have no obligation to admit any student ignoring academic proficiency. It is on several times First Come - First Served norm.

The reservations to weaker section in admission to all UG programmes are to be entertained by the colleges, which receive Grant-in-aid from the Government. Thus 18% of the seats in each of UG programmes is reserved for the candidates belonging to Scheduled Caste and Scheduled Tribes.

The duration of the UG programmes in Arts and Science is normally three years after Plus Two. It varies at any rate with professional courses of study. Four years of duration in one spell is set for Engineering Degrees (B.E / B.Tech) It is five years for B.Arch. Duration of courses of study in disciplines viz., Agriculture, Medicine, Animal Science varies and it ranges from four to five years from the date of admission.

The fees to be paid at the time of admission by the students are fixed by the University / Government. It is obligatory for the aided

colleges to collect the fees as approved by the Government / University. Fee concessions to SC/ST students are available. Other fees except tuition fees are collected by the colleges with the approval and direction of the University concerned.

Scholarships are available to pursue studies in colleges/universities. The Government of Tamil Nadu and the Central Government award scholarships to meet educational expenditure to be incurred by a student. There are in colleges and Universities endowments created by the individuals, educational societies/Trusts which award prizes and scholarships/stipends to students of some special category e.g., outstanding student in specific subject or course of study, and other criteria spelt by the Society Trust.

Besides, counselling students on the above-mentioned areas like Higher education, Training programmes, etc., the USAB conducts many training programmes and short-term courses for the benefit of students. Currently, a course on Communication skill in English and Air Ticketing & Travel Management, sponsored by TAHDCO, Government of Tamil Nadu are being conducted by USAB. In each course 50 students are enrolled. Besides, USAB is conducting a coaching programme for Civil Service Preliminary Exam on self funding basis for the duration of six months. The USAB offers all type of assistance to the students irrespective of the Universities they come from. USAB also takes care of the foreign students admission and does the counselling for the students who aspire to go abroad.

## **The list of courses and training programmes offered by University Students Advisory Bureau**

### **Course after Plus Two**

#### **B.Sc Courses**

Applied Science, Applied Science (Computer Technology), Applied Science (Information Technology), Applied Electronics Apparel & Fashion Technology, Biochemistry, Biotechnology, Catering Technology & Hotel Management, Computer Science, Computer Applications, Costume Design & Fashion, Electronics Science, Electronics Media, Environment Management, Fine Arts & Painting, Geography, Health Care & Hospital Management, Home Science, Information Science & Management, Interior Design, Interior Decoration & Environment, Industrial Microbiology, Library Information Science, Microbiology, Nutrition & Dietetics Nutrition, Food Service Mgt. & Dietetics, Nautical Science Physical Education, Health Education & Sports Plant Biology, Rehabilitation Science, Rural Development Science, Rural Industries & Management, Tourism & Travel Management, Visual Communication,

#### **MANAGEMENT COURSES**

Business Administration, Business Management, Bank Management, Labour Management, B.Com. (Computer Application)

#### **B.A. COURSES**

Corporate Secretaryship, Cooperation, Music, Philosophy, Psychology, Sociology, Social Work.

### Courses after under graduation

| SCIENCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | HUMANITIES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | MANAGEMENTS                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Advanced Biochemistry<br>Anatomy<br>Applied Geography<br>Applied Geology<br>Applied Plant Science<br>Biomedical Genetics<br>Biophysics<br>Biotechnology<br>Chemistry<br>Electronics Science<br>Environmental Toxicology<br>Geology<br>Genetics<br>HRD Psychology<br>Industrial Microbiology<br>Inorganic Chemistry<br>Library Information Science<br>Mathematics<br>Medical Biochemistry<br>Medical Microbiology<br>Molecular Biology<br>Organic Chemistry<br>Physical Chemistry<br>Physiology<br>Physics<br>Polymer Science<br>Spatial Information Tech.<br>Statistics<br>Zoology (Special) | Ancient History<br>Anthropology<br>Archaeology<br>Criminology & Criminal<br>Justice Administration<br>Comparative Religion & Philosophy<br>with specialization in Christian Studies/<br>Vaishnava Studies/Jaina Studies/<br>Saiva Siddhanta Studies,<br>Defence & Strategic Studies<br>Econometrics<br>Economics (Indian Economics)<br>Historical Studies<br>Indian Philosophy<br>Islamic Studies<br>Indian Music<br>Journalism & Mass Commn.<br>Politics Public Administration<br>Public Affairs<br>Public Management<br>Sociology<br>Work Education<br>Applied Linguistics<br>Applied Sanskrit<br>Arabic<br>English<br>French<br>Hindi<br>Kannada<br>Malayalam<br>Sanskrit<br>Tamil Literature & Culture<br>Tamil Studies<br>Telugu<br>Urdu | M.C.A.<br>M.B.A.<br>M.Com. (Internl. Business)<br><br><b>Diploma courses</b><br>Dip. in Clinical Pathology<br>Dip. in Adv. Laboratory<br>Methods in Hematology and<br>Pathology |

### P.G. Courses Offered in the Affiliated Colleges

| SCIENCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | HUMANITIES                                                                                                                                                                                                                                                                                                                                    | MANAGEMENTS                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Advance Organisational<br>Behaviour<br>Applicable Science<br>Applied Geography<br>Applied Microbiology<br>Aquaculture<br>Biochemistry<br>Bioinformatics<br>Biotechnology<br>Botany<br>Chemistry<br>Computer Science<br>Computer Science &<br>Tech.<br>Counselling & Guidance<br>Defence Studies<br>Electronics Media<br>Environmental Biology<br>Food Service Mgt. &<br>Dietetics<br>Forensic Science<br>General Genetics<br>Geography<br>Geology<br>Home Science & Mgt.<br>Home Science -Food &<br>Nutrition<br>Hotel & Catering Mgt.<br>Human Devel. & Family<br>Studies<br>Information Tech. | Applied History<br>Applied Psychology<br>Arabic<br>Business Economics<br>Corporate Secretaryship<br>Economics<br>English<br>History<br>History of Fine Arts<br>Human Resource Mgt.<br>Indian Music<br>Labour Management<br>Philosophy<br>Political Science<br>Psychology<br>Public Administration<br>Sanskrit<br>Sociology<br>Tamil<br>Telugu | M.C.A.<br>M.B.A.<br>M.Com.<br>M.Com. (Bank Mgt.)<br>MSW<br>PGDSC |

**SHORT TERM COURSES ORGANISED BY USAB**  
**Since 1990, Sponsored by State and Self Funding**

| S.No | Name of the Course                                                                                       | Year | Duration | No of Participants |
|------|----------------------------------------------------------------------------------------------------------|------|----------|--------------------|
| 1    | Public Relations                                                                                         | 1990 | 6 months | 60                 |
| 2    | Conversational English                                                                                   | 1990 | 3 months | 100                |
| 3    | Journalism                                                                                               | 1992 | 1 month  | 34                 |
| 4    | Conversational English                                                                                   | 1992 | 3 months | 94                 |
| 5    | Conversational English                                                                                   | 1993 | 3 months | 55                 |
| 6    | Bakery and Confectionery                                                                                 | 1994 | 2 weeks  | 25                 |
| 7    | Repairing and Maintenance of Electrical Home Appliances                                                  | 1994 | 2 months | 25                 |
| 8    | Setting up of Food Processing Industry                                                                   | 1995 | 1 month  | 50                 |
| 9    | Bakery and Confectionery                                                                                 | 1996 | 2 weeks  | 23                 |
| 10   | Plastic Reprocessing                                                                                     | 1996 | 40 days  | 40                 |
| 11   | Plastic goods Manufacturing                                                                              | 1996 | 40 days  | 40                 |
| 12   | Leather goods Manufacturing                                                                              | 1996 | 40 days  | 40                 |
| 13   | Maintenance of Electrical and Electronic Appliances                                                      | 1996 | 3 months | 40                 |
| 14   | Sales & Marketing Management                                                                             | 1997 | 3 months | 103                |
| 15   | Information Management Through Computer Applications                                                     | 1997 | 1 month  | 15                 |
| 16   | Video and Audio Servicing                                                                                | 1998 | 6 weeks  | 50                 |
| 17   | Food Processing                                                                                          | 1998 | 6 weeks  | 50                 |
| 18   | Journalism                                                                                               | 1998 | 3 months | 50                 |
| 19   | Television Production                                                                                    | 1998 | 1 month  | 33                 |
| 20   | Inclusive Education For Children with Disabilities in collaboration with Spastic Society of Tamil Nadu.  | 1998 | 1 month  | 50                 |
| 21   | Sales and Marketing Technology in Collaboration with Small Industries Service Institute, Govt. of India. | 1998 | 1 Month  | 50                 |
| 22   | Xerography                                                                                               | 1998 | 3 months | 40                 |
| 23   | Computer Hardware                                                                                        | 2000 | 3 months | 23                 |
| 24   | Computer Hardware                                                                                        | 2001 | 3 months | 44                 |
| 25   | Executive Secretaryship                                                                                  | 2001 | 3 months | 11                 |
| 26   | Airticketing & Travel Management                                                                         | 2001 | 3 months | 19                 |
| 27   | Executive Secretaryship                                                                                  | 2001 | 3 months | 16                 |
| 28   | Women Entrepreneurship                                                                                   | 2001 | 3 months | 54                 |
| 29   | Airticketing & Travel Management                                                                         | 2002 | 3 months | 95                 |
| 30   | Call Centre Executive Training                                                                           | 2003 | 3 months | 35                 |
| 31   | Call Centre Executive Training                                                                           | 2003 | 3 months | 36                 |
| 32   | Airticketing & Travel Management                                                                         | 2003 | 3 months | 46                 |
| 33   | Call Centre Executive Training                                                                           | 2003 | 3 months | 35                 |
| 34   | Airticketing & Travel Management                                                                         | 2004 | 3 months | 50                 |
| 35   | Airticketing & Travel Management                                                                         | 2005 | 3 months | 50                 |
| 36   | Airticketing & Travel Management                                                                         | 2005 | 3 months | 35                 |

**COACHING PROGRAMMES FOR COMPETITIVE EXAMS ORGANISED BY USAB**  
**Since 1985, Sponsored by State and Central Government**

| Sl.No | Coaching Programmes                                                            | Year | No of Beneficiaries |
|-------|--------------------------------------------------------------------------------|------|---------------------|
| 1     | Inspector of Income Tax and Excise Department                                  | 1985 | 50                  |
| 2     | Staff Selection Commission Clerical Grade Exam                                 | 1986 | 50                  |
| 3     | Probationary Officer's Exam of State Bank of India Staff Selection Commissions | 1988 | 100                 |
| 4     | Income Tax Inspectors Grade Exam                                               | 1988 | 100                 |
| 5     | Probationary Officer's Exam of State Bank of India                             | 1989 | 100                 |
| 6     | Reserve Bank Coin Note Exam of State Bank of India                             | 1989 | 100                 |
| 7     | UGC-CSIR-JRF Examination                                                       | 1989 | 100                 |
| 8     | Engineering and Medical Entrance Exam                                          | 1989 | 100                 |
| 9     | BSRB-Probationary Officer's Exam                                               | 1989 | 100                 |
| 10    | Clerical Grade Exam for Banking Service Recruitment Board                      | 1990 | 70                  |
| 11    | Professional Course Entrance Exam                                              | 1990 | 200                 |
| 12    | Probationary Officers Grade Exam of State Bank of India                        | 1990 | 75                  |
| 13    | BSRB Probationary Officers Exam                                                | 1990 | 100                 |
| 14    | Upper Division Clerk for Staff Selection Commission                            | 1990 | 35                  |
| 15    | Civil Service Examination Coaching for Preliminary Examination                 | 1991 | 45                  |
| 16    | Tamil Nadu Professional Course Entrance Examination                            | 1991 | 140                 |
| 17    | U.G.C. National Level Test                                                     | 1991 | 200                 |
| 18    | Income Tax Inspectors examination of the Staff Selection Commission            | 1991 | 100                 |
| 19    | Probationary Officers Examination of the BSRB                                  | 1991 | 60                  |
| 20    | Civil Service Exam Coaching Programme for Preliminary Exam                     | 1992 | 28                  |
| 21    | Professional Course Entrance Exam Medical and Engineering                      | 1992 | 236                 |
| 22    | BSRB Clerical Grade Exam                                                       | 1993 | 30                  |
| 23    | Professional Course Entrance Exam                                              | 1994 | 249                 |
| 24    | Professional Course Entrance Exam                                              | 1995 | 300                 |
| 25    | Tamil Nadu Public Service Examination Group I (Preliminary)                    | 1995 | 40                  |
| 26    | T.N.P.S.C. Group 1 (Main)                                                      | 1996 | 30                  |
| 27    | Professional Course Entrance Examination                                       | 1996 | 331                 |
| 28    | U.G.C. National Level Test                                                     | 1996 | 65                  |
| 29    | Professional Courses Entrance Examination                                      | 1997 | 252                 |
| 30    | Professional Courses Entrance Examination                                      | 1998 | 226                 |
| 31    | T.N.P.S.C. Group 1 (Preliminary)                                               | 1998 | 50                  |
| 32    | Civil Service Exam Coaching Programme for Preliminary Exam                     | 2002 | 40                  |
| 33    | Civil Service Exam Coaching Programme for Preliminary Exam                     | 2003 | 50                  |
| 34    | Civil Service Exam Coaching Programme for Preliminary Exam                     | 2005 | 50                  |

| MEDICAL                              | AGRICULTURE                   | VETERINARY            |
|--------------------------------------|-------------------------------|-----------------------|
| M.B.B.S.                             | B.Tech.-Agricultural Engg.    | B.V.Sc.               |
| B.D.S.                               | B.Tech.-Agricultural Biotech. | Veterinary Sc         |
| B.S.M.S. - Siddha Medicine           | B.Tech.- Horticulture         | B.Sc. - Fisheries Sc. |
| B.H.M.S. - Homeopathic Medicine      | B.Tech. - Food Process Engg.  |                       |
| B.U.M.S. - Unani Medicine            | B.Sc. - Agricultural Sc.      |                       |
| B.A.M.S. - Ayurveda Medicine         | B.Sc. - Horticulture          |                       |
| B.P.T. -Physiotherapy                | B.Sc. - Forestry              |                       |
| B.O.T. Occupational Therapy          | B.Sc. - Home Science          |                       |
| B.N.Y.S. - Naturopathy&Yogic Science |                               |                       |
| B.Sc. - Nursing                      |                               |                       |
| - Nursing for Trained Nurses         |                               |                       |
| - Speech-Language & Hearing          |                               |                       |
| - Allied Health Science              |                               |                       |
| - Emergency & Trauma Care Technology |                               |                       |

### PROFESSIONAL COURSES

| ENGINEERING               |                                |
|---------------------------|--------------------------------|
| B.E. BRANCHES             | B.TECH. BRANCHES               |
| Aerospace                 | Biomedical & Instrument        |
| Aeronautical Automobile   | Biotechnology                  |
| Civil                     | Chemical                       |
| Computer Science          | Computer Hardware Engg & Tech. |
| Electronics & Commn.      | Electrochemical                |
| Electrical & Electronics  | Food Processings               |
| Electronics & Instrument. | Preservation Tech.             |
| Electronics               | Geo-Informatics                |
| Environment               | Information Tech.              |
| Instrumentations Control  | Leather Tech.                  |
| Industrial                | Petrochemical Tech             |
| Instrumentation           | Pharmaceutical Engg& Tech.     |
| Mechatronics              | Textile Technology             |
| Mechanical                |                                |
| Metallurgical             |                                |
| Production                |                                |
| Polymer                   |                                |

# PASSPORT



**R**egional Passport Office (RPO) was established in George Town in Chennai (formerly Madras) in the year 1955. In the year 1966, it was shifted to the Government owned premises of Shastri Bhavan located at 26, Haddows Road, Nungambakkam, Chennai - 600 006.

Initially, RPO, Chennai was catering to the needs of Tamil Nadu and Pondicherry in addition to the neighbouring States of Kerala, Andhra Pradesh and Karnataka. In 1976, separate passport offices for these three states were established. In the year 1983, RPO, Chennai was again bifurcated and a separate office was established at Trichy with its own jurisdiction. Presently, the districts that come under the jurisdiction of Regional Passport Office, Chennai are given below :

- CHENNAI CITY
- COIMBATORE
- CUDDALORE
- DHARMAPURI
- ERODE
- KANCHEEPURAM
- KARAIKKAL
- KRISHNAGIRI
- NAMAKKAL

- NILGIRIS
- PONDICHERRY
- SALEM
- THIRUVALLUR
- THIRUVANNAMALAI
- VILLUPURAM
- VELLORE

Regional Passport Office, Chennai is primarily responsible for issuance of Indian Passports to the Citizens of India who are residing within its jurisdictional area. In addition to issue of passports, various other miscellaneous services like change of address in passport, additional endorsement regarding Emigration Check Not Required, Police Clearance Certificate, etc. are also being rendered by this office irrespective of the fact that the original passport is issued by Regional Passport Office, Chennai or not, provided the applicants stay in the area of jurisdiction of RPO Chennai.

There are five modes of submission of applications in Regional Passport Office, Chennai viz. (a) Direct Submission at counter & through authorised representatives of applicants, (b) by post, (c) through Travel Agents authorised by the Regional Passport

Office, Chennai, (d) through authorised Speed Post centres in Chennai and Pondicherry, (e) through District Passport Cells set up in the District Collectorates and (f) three centres set up in the office of the Deputy Commissioners of Police in Chennai City at Adyar, Anna Nagar and Flower Bazaar.

Normally, public dealing is limited only in the forenoon i.e. from 9.30 a.m. and 12.30 p.m. Enquiries on status of passport applications can also be had during that time.

Passport is issued under the Passports Act, 1967. It is an offence to knowingly furnish false information or suppress material information which attracts penal provision and other action under relevant Sections of the said Act. Whoever not being a Citizen of India makes an application for passport or obtains a passport by suppressing information about his nationality or holds a forged passport or any travel document shall be punishable with imprisonment for a term which shall not be less than one year but which may extend to five years and with fine which shall not be less than ten thousand rupees which may extend to fifty thousand rupees.

#### **ARE YOU APPLYING FOR THE FIRST TIME ? If YES, then**

Please

1) submit application form complete in all respects with four photographs (please do not staple photographs)

2) give proof of residence i.e. two copies of

- a) Ration Card or
- b) Statement of Running Bank Account or
- c) Telephone bill or
- d) Electricity Bill or
- e) Water Tax Bill or
- f) Voters Identity Card or
- g) Income Tax assessment order of last three years etc.
- h) Appointment Letter of Reputed Companies on letter head or spouse's passport copy, parent's passport copy (in case of Minor)

3) give proof of date of birth i.e.

- a) Two copies of Birth Certificate or School Certificate
- b) If illiterate, Sworn Affidavit from a Notary Public
- c) If literate and unable to produce any certificate, a sworn affidavit from a Notary Public / First class Judicial Magistrate

4) No Objection Certificate (NOC), if Govt. servant/ Public Sector Employee. (Alternatively, a declaration duly acknowledged by his/her Head of Office, to the effect that he/she has informed his/her employer of his/her intention to apply for a passport can also be attached) Persons serving in Defence Ministry / Establishment including Army, Navy, Air Force, Ordnance Factory etc. and Government Servants working in sensitive departments like Atomic

Energy Commission, Indian Space Research Organisation etc. should furnish NOC and an intimation to their Head of Department will not be accepted.

5) If you need 'ECNR' produce two copies of Degree Certificate /Three year Diploma Certificate (If Provisional Degree/ Diploma then submit two copies of all semester mark sheets also ) (Persons eligible to get ECNR Endorsement are listed separately)

6. If you are a Senior Citizen of 65 years or above, and your adult children has any valid passport, please attach a photocopy of the said passport.

7. If you are a member of Central or State Government service, attach a declaration by the Government servant countersigned by his/her Head of Office confirming the fact that the applicant is a member of his/her family.

8. If you are a retired Govt. servant and have held while in service a Diplomatic/ Official Passport, attach your cancelled old diplomatic/official passport as a proof.

#### **When applying in person:**

All copies of documents have to be self-attested; all original documents to be produced at counter which could be taken back after verification by counter officials

#### **When applying through Post:**

Copies of documents attested by a Gazetted officer to be sent to Regional

Passport Office, Chennai. Please do not send applications by post to Passport Application Collection Centre/District Passport Cells.

#### **When applying through a Representative:**

An application for a passport may be submitted through a representative carrying an Authority Letter as per specimen in the Passport Information Booklet attached to the application. All copies of documents should be attested by a Gazetted Officer at the designated places and the original should be shown for verification.

#### **RE ISSUE OF PASSPORT**

Re issue of passport can be done at any time after expiry of its validity and also even before one year of its expiry.

#### **HOW TO APPLY FOR RE-ISSUE ?**

1. Submit application form (Form 1) duly filled in with two unsigned photographs (do not staple photos)
2. If the passport is not renewed for more than one year, then photocopy the application form without affixing photo, signature and thumb impression and then affix photo , signature and thumb impression.
3. Surrender Old passport with two copies of the same
4. Submit Degree/Diploma Certificate, etc. if 'ECNR' required (For Details see list of persons entitled for ECNR endorsement)

5. To include spouse name after marriage, provide two copies of Marriage Certificate / Joint Sworn Affidavit with joint attested photo
6. Pay fee as per size of passport booklet - Rs.1000/- for normal booklet.
7. If there is any change in address, documents to prove your place of stay.
3. If the passport was LOST, furnish two copies of 'FIR' lodged with police. If 'FIR' not available, furnish Non-traceability Certificate issued by the Officer Incharge of the Police Station.
4. Furnish two copies of lost passport, if available
5. Fee applicable - Rs.2500/-

#### RENEWAL OF PASSPORT

Passport issued with short validity (one year or five years) can be renewed at any time after three months of its issue.

Short validity passport issued by other passport issuing authorities/offices can also be renewed at any time after three months of its issue provided applicants reside in the jurisdiction of RPO Chennai and produce proof in support of their stay.

#### HOW TO APPLY FOR RENEWAL

If the passport with short validity was issued by RPO Chennai, apply in miscellaneous form (Form 2) with a copy of the passport without fee. If the passport with short validity was issued by other offices,

- \* apply in miscellaneous form (Form 2)
- \* submit a copy of the passport
- \* No fee to be paid

#### ISSUE OF DUPLICATE PASSPORT IN LIEU OF LOST/DAMAGED PASSPORTS

##### HOW TO APPLY?

1. Submit Duplicate Passport Application form (Form 1) duly filled-in.
2. Surrender Damaged Passport with two copies of relevant pages

#### HOW TO APPLY FOR PASSPORT AFTER CHANGE OF NAME

COMMON TO a - d BELOW :

Please submit

- i) Application form (Form 2) duly filled-in with one photograph (please do not staple the photo)
- ii) Surrender present passport with two copies
- iii) Furnish two copies of proof of residence
- iv) Fee - Rs.1000/-

#### a) IN CASE OF NORMAL CHANGE IN NAME

i) Furnish original newspaper cuttings giving change of name published in two reputed newspapers - one LOCAL NEWSPAPER of the area in which he/she is residing and the second Newspaper of the area of PERMANENT ADDRESS.

ii) Furnish an affidavit as per format given in Annexure 'F' of the instructions attached to passport application

#### b) FOR CHANGE OF NAME AFTER MARRIAGE

i) Two copies of Marriage Certificate issued by Registrar of Marriages  
or

ii) A Notarised joint affidavit from the husband and wife. If unable to produce joint affidavit, furnish an affidavit with 'wedding photograph' wedding invitation card and a letter giving reasons for not being able to give joint affidavit. Marriage certificate issued by Church and Quasi's Certificate (with a certified translation) in case of Muslims can also be given as proof of marriage.

#### c) WHEN THERE IS A CHANGE IN NAME ON ACCOUNT OF DIVORCE

Please furnish

i) Divorce deed duly authenticated by Court (or) ii) Deed Poll (or) Sworn Affidavit as per specimen in Annexure 'F' given in the Instruction Booklet attached to the application.

#### d) CHANGE IN NAME IN CASE OF REMARRIED PERSONS (AFTER DIVORCE OR DEATH OF SPOUSE)

Please furnish

i) Divorce Deed or an affidavit in support of applicant's Divorce or Death Certificate of the previous husband/wife, as the case may be AND

ii) Two copies of marriage certificate issued by the Registrar or marriages in respect of recent marriage (OR)

An affidavit from the wife and the husband alongwith a Joint Photograph with present Spouse.

iii) Photocopy of present Spouse's passport, if any

#### ISSUE OF PASSPORT TO MINORS

Are you applying for passport for a minor? (Below 15 years)

#### Please furnish

1. A declaration from parents / Legal guardians affirming the particulars furnished in the application about the Minor Child not inclusion of the Minor in the either of Parent's passport etc.
2. Two copies Birth Certificate/School Certificate for proof of date of birth (Birth Certificate is a must for those born on or after 26.01.1989)
3. Two copies of Ration Card etc. or parents' passport copy for proof of stay.
4. Attach passport copies if both parents hold passports including ECNR/ECR page: Mother's passport should be in married name or should have husband's name entered in her passport or father's passport should have wife's name.
5. If both parents/one parent do not hold passport, furnish declaration (format available in website).
6. If either of the parents is staying abroad, furnish a consent letter in the form of an affidavit attested by Indian Embassy concerned (format available in website - please see "Minor Affidavit if parent(s) abroad").
7. In case the parent is a divorcee, furnish an attested copy of Court order giving custody of the child.
8. Fee applicable - Rs.600/- only.

Are you applying for passport for children of age above 15 years and below 18 years ?

\* same requirements as above except the following :

- Fee applicable Rs. 1000/- if both parent do not hold valid passport and Rs.600/- if either of parent hold valid passport

- Personal particular forms to be enclosed as per requirement

**SPECIAL PROVISIONS FOR STUDENTS STAYING AWAY FROM PARENTS AND APPLYING FOR PASSPORTS :**

**IS YOUR SON/DAUGHTER STUDYING IN A COLLEGE AWAY FROM HOME ?**

SAY IIT DELHI/BITS PILANI/ETC.

- \* Apply in RPO, Chennai or in the Passport Office which covers the Institute
- \* Write hostel address under present address
- \* Write parents' address under permanent address
- \* Letter from Warden/Principal for proof of stay at hostel, etc.
- \* Usual proof of stay for parents' address
- \* Four personal particular forms instead of two forms
- \* Rs.600/- if below 15 years; Rs.1000/- if above 15 years and parents do not hold valid passport (the passport validity will be for 10 years): Rs.600/- if above 15 years and either of parent holds a valid passport (the passport validity will be for 5 years)

If staying away from parents with guardian instead of hostel, give proof of address of guardian under present address and also legal guardianship affidavit.

**Passports to Adopted Children**

All matters relating to adoption is dealt by the Central Adoption Resource Agency (CARA) in the Ministry of Welfare, Government of India

**Inter country adoption**

The prospective adoptive parents abroad (foreigners), who wish to adopt a child from India, have to approach the recognized foreign agencies of their country for adoption. The child for adoption may be taken from any of the child welfare agencies recognized by the Government of India.

Documents required in connection with issue of passport in inter-country adoption cases:

- 1) Application form duly filled in (a) Certificate of Recognition of the local adoption agency by CARA
2. Court Order with a copy of photograph of the child attested by the Court
3. No Objection Certificate from CARA
4. Power of Attorney
5. Child Study Report
6. Financial Guarantee executed by the foster parents and attested by Indian Mission abroad or Financial Guarantee executed by the local person with proof of solvency

7. Copy of child surrender (relinquishing) document
8. Sworn Affidavit for Date of Birth executed by the Orphanage
9. Legal Guardianship affidavit (as per format)

**Adoption of a child living with biological/natural parents by any Indian National living abroad/foreign national of Indian Origin living abroad.**

**Documents required for issue of Passports:**

1. Adoptive parents' passports copy
2. Legally valid adoption deed registered with Registrar of Documents
3. Proof of stay of adoptive parents
4. Birth Certificate of child

In case of adoption by Muslim, Christians and Parsis, the adoption can be done under the provisions of Guardians and Wards Act, 1890

**Documents required for issue of passport for the adopted child**

1. Court Order (with photograph of the child) for guardianship and for taking the child out of the country
2. Passport copy of adoptive parents
3. Guardianship affidavit
4. Proof of stay of adoptive parents
5. Birth Certificate of the child

**Adoption of a child by Indian Hindus from a child welfare organisation**

Documents required for issue of passport:

1. Court order (with photograph of the child) permitting the child to be adopted by the parents
2. Legally valid registered adoption deed
3. Parents' passport copy
4. Birth Certificate of the child or copy of surrender document from the orphanage

**In case place of adoption falls outside the jurisdiction of RPO Chennai:**

If a child is taken for adoption from a place which does not falls under the jurisdiction of Regional Passport Office, Chennai, the adoptive parents should submit passport application of that child with proof of residence and two sets of personal particulars forms giving the address of place of residence where from adoption took place and the present residence.

Passport shall be issued after obtaining police report from both the places where the adoption took place and the place of residence of adoptive parents.

\* \* \*

Source : <http://passport.tn.nic.in>

## Dr. Muthulakshmi Reddy

Dr. Muthulakshmi Reddy (1886-1968) was one of India's most distinguished women of her time. The first woman to be admitted as a medical student at the Madras Medical College, she was also the first woman to be nominated to the Madras Legislative Council, where she was elected Deputy Chairperson. She was the founder-president of the Indian Women's Association and became the first alderwoman of the Madras Corporation. Keenly aware of her role as a pioneer among women, Dr. Muthulakshmi Reddy, constantly fought for the emancipation and upliftment of women in India. She was the prime mover behind the legislation that abolished the devadasi system in 1929 and played a keen role in raising the minimum marriage age for women in India. Born to Narayanaswamy and Chandrammal on August 30, 1886, at Pudukottai in Tamil Nadu, Muthulakshmi was the eldest in a family of four. Her father, impressed with his daughter's thirst for knowledge even as a four-year old at the thinnai pallikoodam, was keen to educate her. Those days, girls were generally not sent to school and Narayanaswamy engaged tutors to teach her at home. Muthulakshmi sat for the Matriculation examination and passed out in flying colours in 1902.

The first woman doctor Muthulakshmi's dream to pursue higher education was tempered by her family's straitened circumstances. Narayanaswamy sought the help of the Maharaja of Pudukottai, who came forward to help



Muthulakshmi pursue her studies, and the young girl was able to join college at Pudukottai. Performing consistently and impressing the professors and principal of her college, Muthulakshmi applied for admission to medical college in pursuit of a childhood dream and succeeded. In 1907, she joined the Madras Medical College, where too, she achieved a brilliant academic record. With several gold medals and prizes to her credit, Muthulakshmi passed out in 1912 to become the first woman doctor in the country. Muthulakshmi had more surprises up her sleeve. When her parents broached the subject of marriage, she expressed her opposition to the very idea. She was of the view that marriage would force women to succumb to the power of men, but for once, Muthulakshmi met her match.

Impressed with her academic excellence, Dr. Sundar Reddy, a well-known surgeon, the first Indian doctor to become a Fellow of the Royal Society of Civil Surgeons (FRCS) approached Narayanaswamy and asked for his daughter's hand. He soon persuaded his daughter to marry Dr. Sundar Reddy in 1914. Muthulakshmi gave her consent not without a fight! She demanded that she be treated as an equal and given the freedom to do what she wanted. Later Dr. Reddy served at the Pudukottai Medical College as the chief doctor and Dr. Muthulakshmi joined her husband there. They worked together for three years, before returning to Madras where Dr. Reddy joined the Madras Medical College as an Assistant Professor. Soon afterwards, Muthulakshmi lost her sister to cancer, a tragedy that was to influence her decision to take to research on the dread disease, which she pursued at the Royal Cancer Hospital, UK. She also had training in gynaecology there. After her return to India, Dr. Muthulakshmi Reddy was elected to the Madras Legislative Council. Facing opposition from many quarters, Dr. Reddy enlisted the support of no less a personage than Mahatma Gandhi, when she sought to liberate devadasi women from the tyranny of their tradition. Gandhiji made public speeches and wrote in his columns in support of Muthulakshmi's efforts to uplift the status of women in India. Dr. Reddy was actively involved with several orphanage homes and women's welfare organisations, and initiated measures to improve the medical facilities given to slum dwellers. In 1930, she founded Avvai Home, a home for destitute women and orphans at Besant Avenue, Adyar. As an MLC, she introduced a

scheme of free education for girls upto class eight. The first alderwoman in 1937, Dr. Reddy became the first alderwoman of the Madras Corporation, where she introduced many schemes to improve the life of leprosy patients. She launched measures to widen the city limits, to relieve the congestion caused by the city's galloping population. To solve the water problem in the city, she recommended that more wells be dug in many parts of the city. Muthulakshmi, as a writer and orator could write and speak well in Tamil and English. She wrote many inspiring, patriotic articles in Sri Dharma, a magazine of those days. She translated Mahatma Gandhi's speeches from English to Tamil. Dr. Muthulakshmi Reddy was a delegate at the Round Table Conference in London. At a conference in Chicago, she spoke forcefully of the plight and status of women in India, voiced her protest against child marriage and advocated widow remarriage. During her address at the Golden Jubilee celebration of the Madras Medical College in 1935, Dr. Muthulakshmi Reddy first expressed her desire to start a hospital for cancer patients. With the overwhelming support of like-minded people, the foundation stone for the hospital was laid by Jawaharlal Nehru in 1952. The hospital which started functioning on June 18, 1954, was only the second of its kind in India and the first in South India. It is today a world-renowned institution offering treatment to nearly 80,000 cancer patients every year. An institution builder, who brought fame to Indian womanhood and was awarded the Padma Bhushan in 1956, Dr. Muthulakshmi Reddy passed away on July 22, 1968.

Source : [www.sanmargroup.com](http://www.sanmargroup.com)

# BLOOD

**BLOOD** - fluid pumped by the heart that circulates throughout the body via the arteries, veins, and capillaries

An adult male of average size normally has about 6 quarts (5.6 litres) of blood. The blood carries oxygen and nutrients to the body tissues and removes carbon dioxide and other wastes. The colourless fluid of the blood, or plasma, carries the red and white blood cells, platelets, waste products, and various other cells and substances.

## Erythrocytes (Red Blood Cells)

The erythrocytes, or red blood cells, make up the largest population of blood cells, numbering from 4.5 million to 6 million per cubic millimeter of blood. They carry out the exchange of oxygen and carbon dioxide between the lungs and the body tissues. To effectively

combine with oxygen, the erythrocytes must contain a normal amount of the red protein pigment haemoglobin, the amount of which in turn depends on the iron level in the body. A deficiency of iron and therefore of haemoglobin leads to anaemia and poor oxygenation of the body tissues.

Erythrocytes are constantly developing from stem cells, the undifferentiated, self-regenerating cells that give rise to both erythrocytes and leukocytes in the bone marrow. In the foetus, red blood cells are produced in the spleen. As they mature, the erythrocytes lose their nuclei, become disk-shaped, and begin to produce haemoglobin. After circulating for about 120 days, the erythrocytes wear out and undergo destruction by the spleen. Although all red blood cells are essentially similar, certain structures on their surfaces vary from person to person. These serve as the basis for the classification

into blood groups. There are four major blood groups, whose compatibility or incompatibility is an important consideration in successful blood transfusion.

## Leukocytes (White Blood Cells)

The leukocytes, or white blood cells, defend the body against infecting organisms and

foreign agents, both in the tissues and in the bloodstream itself. Human blood contains about 5,000 to 10,000 leukocytes per cubic millimeter; the number increases in the presence of infection. An extraordinary and prolonged proliferation of leukocytes is known as leukemia. This overproduction suppresses the production of normal blood cells. Conversely, a sharp decrease in the number of leukocytes (leukopenia) strips the blood of its defense against infection and is an equally serious condition. A dramatic fall in levels of certain white blood cells occurs in persons with AIDS. Leukocytes as well as erythrocytes are formed from stem cells in the bone marrow. They have nuclei and are classified into two groups: granulocytes and agranulocytes.

## Granulocytes

The granulocytes form in the bone marrow and account for about 70% of all white blood cells. Granulocytes include three types of cells: neutrophils, eosinophils, and basophils. Neutrophils constitute the vast majority of granulocytes. They travel about by amoeboid movement and can surround and destroy bacteria and other foreign particles. The eosinophils, ordinarily about 2% of the granulocyte count, increase in number in the presence of allergic disorders and parasitic infestations. The basophils account for about 1% of the granulocytes. They release chemicals such as histamine and play a role in the inflammatory response to infection.

## Agranulocytes

The agranulocytes include the monocytes and the lymphocytes. Monocytes are derived

from the phagocytic cells that line many vascular and lymph channels, called the reticuloendothelial system. Monocytes ordinarily number 4% to 8% of the white cells. They move to areas of infection, where they are transformed into macrophages, large phagocytic cells that trap and destroy organisms left behind by the granulocytes and lymphocytes. In certain diseases of long duration (tuberculosis, malaria and typhoid) the monocytes act as the main instrument of defense.

Lymphocytes, under normal conditions, make up about 20% to 35% of all white cells, but proliferate rapidly in the face of infection. There are two basic types of lymphocytes: the B lymphocytes and the T lymphocytes. B lymphocytes tend to migrate into the connective tissue, where they develop into plasma cells that produce highly specific antibodies against foreign antigens. Other B lymphocytes act as memory cells, ready for subsequent infection by the same organism. Some T lymphocytes kill invading cells directly; others interact with other immune system cells, regulating the immune response.

## Other Constituents of Blood

The blood also contains platelets, or thrombocytes, and at least 15 other factors active in blood clotting. Platelets are tiny plate-shaped cytoplasmic bags of blood-clotting chemicals produced by megakaryocytes; if their production is hindered, as by AIDS or chemotherapy, there is an increased risk of bleeding. Also circulating in the plasma are the



hormones that the endocrine glands secrete directly into the bloodstream. In addition, essential salts (such as those of sodium and potassium), essential plasma proteins (albumin , globulins , and fibrinogen), and metabolic wastes (such as urea ) circulate in the plasma.

Serum, a straw-coloured liquid, essentially composed of plasma without fibrinogen, makes up the liquid component of blood that separates from the clot. Serum is separated from whole blood by centrifuging and can serve various medical uses. Normal human serum is sometimes used to treat shock and the loss of fluid resulting from severe burns.

### BLOOD BANK

- site or mobile unit for collecting, processing, typing, and storing whole blood , blood plasma and other blood constituents.

Most hospitals maintain their own blood reserves, and the American Red Cross provides a nationwide collection and distribution

service. The Red Cross collects about 50% of the blood for the nation's blood banks. The Food and Drug Administration-licenses blood banks.

Whole blood may be preserved for up to 21 days without losing its usefulness in blood transfusions ; an anticoagulant is added to prevent clotting. Blood plasma, the fluid portion of the blood, may be frozen and/or dried and stored indefinitely. Blood and donors are screened for Hepatitis , AIDS, Malaria , and other infectious diseases. The potential risk of acquiring AIDS or hepatitis through transfusions has made it a common practice among patients anticipating surgery to "bank" their own blood before it is needed.

Many blood banks also have facilities for Apheresis , bone marrow donations, and related procedures. Some centers save umbilical cord blood (blood that is especially rich in stem cells) for use in treatments; however, the cost of preparing and storing such blood is much higher than that of normal blood. Sometimes parents store their newborn's cord

blood at a private cord blood bank in case the child has need of it, but the use of one own's cord blood is ineffective or undesirable in many diseases where such blood is used as a treatment.

### BLOOD TRANSFUSION

- transfer of blood from one person to another, or from one animal to another of the same species.



Transfusions are performed to replace a substantial loss of blood and as supportive treatment in certain diseases and blood disorders. When whole blood is not needed, or when it is not available, plasma, the fluid of the blood without the blood cells, can be given. Alternately, such components of the blood as red cells, white cells, or platelets may be given for particular deficiencies. Blood substitutes , which are under development, are expected ultimately to ease the chronic short supply of blood and to alleviate certain storage and compatibility problems.

In whole-blood transfusions, the blood of the donor must be compatible with that of the recipient. Blood is incompatible when certain factors in red blood cells and plasma differ in donor and recipient; when that occurs, agglutinins (i.e., antibodies) in the recipient's blood will clump with the red blood cells of the donor's blood. The most frequent blood transfusion reactions are caused by substances of the ABO blood group system and the Rh factor system. In the ABO system, group AB individuals are known as universal recipients, because they can accept A, B, AB, or O donor blood.

Persons with O blood are sometimes called universal donors, since their red cells are unlikely to be agglutinated by the blood of any other group. In the Rh factor system, agglutinins are not produced spontaneously in an individual but only in response to previous exposure to Rh antigens, as in some earlier transfusion. Transfusion reactions involving incompatibility

eventually cause haemolysis, or disruption of donor cells. The resulting liberation of haemoglobin into the circulatory system, causing jaundice and kidney damage, can be lethal.

In addition to providing for the compatibility of blood groups in transfusion, it is necessary to determine that the donor's blood is free of organisms that might cause syphilis , malaria , serum hepatitis , or HIV , the virus believed to cause AIDS . Allergic reactions to transfusions may occur in cases where allergic antibodies have been transmitted from the donor's blood, possibly because of some type of food recently ingested by the donor. These problems have increased the popularity of autologous transfusions, transfusions using a person's own blood, which has been donated ahead of time.

### BLOOD GROUPS

- differentiation of blood by type, classified according to immunological (antigenic) properties, which are determined by specific substances on the surface of red blood cells.



Blood groups are genetically determined and each is characterized by the presence of a specific complex carbohydrate. About 200 different blood group substances have been identified and placed within 19 known blood group systems. The most commonly encountered blood group system is the ABO, or Landsteiner, system. Individuals may contain the A, B, or both A and B antigenic substances, or else lack these substances (type O). In the ABO system an individual who lacks one or more of these antigens will spontaneously develop the corresponding antibodies (agglutinins) shortly after birth. Thus a person with A type blood will naturally produce anti-B agglutinins, a person with B blood will produce anti-A agglutinins, and a person with O blood will produce anti-A and anti-B agglutinins; but a person with AB blood will not produce any agglutinins in this blood group system. Since these agglutinins are always present in the blood, in blood transfusion the donor blood must be compatible with the recipient's blood, i.e., the donor's blood must not contain antigen corresponding to the recipient's antibody.

Other blood group systems, such as the MNSs, Lewis, Lutheran, and P systems, are not important in transfusion because they act like true antigen-antibody systems, i.e., antibodies do not appear in blood plasma until the individual has been immunized by exposure to the other blood group antigens as in previous transfusions. In general, blood group substances are weak antigens, and antibody formation after transfusion occurs less than 3% of the time. Immunization can occur by

pregnancy as well as by transfusion. Thus, in the Rh factor blood group system, an Rh-negative mother carrying an Rh-positive foetus produces anti-Rh antibodies against foetal red blood cells that cross the placenta. Since blood type is a genetic trait that is easy to test and the blood type of an individual is related to his or her parent's blood types by the laws of Mendelism, blood group typing is used legally to establish paternity. Anthropologists use the frequency of occurrence of various blood groups as tools to study racial or tribal origins.

### BLOOD CLOTTING

- process by which the blood coagulates to form solid masses, or clots.

In minor injuries, small oval bodies called platelets, or thrombocytes, tend to collect and form plugs in blood vessel openings. To control bleeding from vessels larger than capillaries a clot must form at the point of injury. The coagulation of the blood is also initiated by the blood platelets. The platelets produce a substance that combines with calcium ions in the blood to form thromboplastin, which in turn converts the protein prothrombin into thrombin in a complex series of reactions. Thrombin, a proteolytic enzyme, converts fibrinogen, a protein substance, into fibrin, an insoluble protein that forms an intricate network of minute threadlike structures called fibrils and causes the blood plasma to gel.

The blood cells and plasma are enmeshed in the network of fibrils to form the

clot. Blood clotting can be initiated by the extrinsic mechanism, in which substances from damaged tissues are mixed with the blood, or by the intrinsic mechanism, in which the blood itself is traumatized. More than 30 substances in blood have been found to affect clotting; whether or not blood will coagulate depends on a balance between those substances that promote coagulation (procoagulants) and those that inhibit it (anticoagulants). Prothrombin, a substance essential to the clotting mechanism, is produced by the liver in the presence of vitamin K. When the body is deficient in this vitamin, bleeding is more difficult to control. In haemophiliacs, or "bleeders," the blood's coagulation time is greatly prolonged. The coagulation of blood within blood vessels in the absence of injury can cause serious illness or death, especially when a clot forms in the coronary arteries (thrombosis) or cerebral arteries (stroke or apoplexy). To prevent coagulation of the blood in persons with known tendency to clot formation, and also as prophylaxis before performing surgery or blood transfusion, the blood's natural anticlotting substance, heparin, is reinforced by an additional amount of an anticoagulant such as Dicumarol injected into the body.

### BLOOD PRESSURE

- force exerted by the blood upon the walls of the arteries.

The pressure in the arteries originates in the pumping action of the heart, and pressure waves can be felt at the wrist and at other points

where arteries lie near the surface of the body. Since the heart can pump blood into the large arteries more quickly than it can be absorbed and released by the tiny arterioles and capillaries, considerable inner pressure always exists in the arteries. The contraction of the heart (systole) causes the blood pressure to rise to its highest point, and relaxation of the heart (diastole) brings the pressure down to its lowest point.

Blood pressure is strongest in the aorta, where the blood leaves the heart. It diminishes progressively in the smaller blood vessels and reaches its lowest point in the veins. Blood pressure manifests itself dramatically when an artery is severed or pierced and the blood (under pressure) ejects in spurts.

Since blood pressure varies in different arteries, the pressure in the brachial artery of the forearm serves as a standard. A sphygmomanometer measures blood pressure in millimeters of mercury; blood pressure gauges that do not use mercury also produce readings that are expressed in terms of millimeters of mercury. Normal blood pressure readings for healthy young people should be below 120 mm for systolic pressure and 80 mm for diastolic pressure, commonly written as 120/80 and read as "one-twenty over eighty." With age, and the constriction of the small arteries and then the larger ones, blood pressure increases, so that at 50 years, a person may typically have a systolic pressure between 140 and 150, and a diastolic pressure of about 90.

Factors other than heart action and the condition of the arteries also influence blood pressure. Temporary high blood pressure usually occurs during or following physical activity, nervous strain, and periods of rage or fear. Therapy for persistent high blood pressure, sometimes called hypertension, consists of sufficient rest, a diet low in salt and alcohol, reduction in weight where there is obesity, and increased exercise. Drug therapy may include diuretics, beta-blockers, calcium-channel blockers, or ACE inhibitors. Low blood pressure (hypotension) has not been studied as extensively as high blood pressure. If not caused by disease or injury, it is generally considered to be a benign or even advantageous condition; however, studies have linked hypotension with feelings of tiredness or faintness and minor psychiatric conditions in some people.

### BLOOD TEST

- examination of blood routinely or as an aid in diagnosing a suspected disease.

Tests may be performed on whole blood or on the plasma portion only. Blood typing identifies the proteins at specific sites on red blood cells, a necessity in determining compatibility for blood transfusion. Human Lymphocyte Antigens (HLA) is a form of white blood cell typing prerequisite for organ and bone marrow transplants.

The Coulter Cell Counter is widely used in electronic counts of red blood cells for the diagnosis of anemia and polycythemia. White

cell counts are vital in detecting infections or in confirming leukemia. Serum or plasma may be collected, cultured, and inoculated with bacteria or other substances for the purpose of detecting the body's reaction to infections, cancer, or HIV, the virus that causes AIDS. Plasma may also be examined for evidence of functional disorders, e.g., for blood sugar in testing for diabetes mellitus.

Blood tests for tumour markers, such as prostate-specific antigen, are effective in detecting cancer in high risk groups. Almost all blood tests are now performed by electronic equipment, and results are evaluated and printed out by computer.

### BLOOD SUBSTITUTE

- substance that mimics the function of blood.

Blood substitutes typically concentrate only on reproducing the function of haemoglobin, the molecule that carries oxygen through the body, and do not attempt to replicate the blood's other functions. Blood donated by humans must be refrigerated, can be contaminated by such diseases as AIDS and hepatitis, and is often in short supply. Designers of blood substitutes hope to eliminate these problems and develop genetically engineered or chemical products that will be tolerated by people of all blood types.

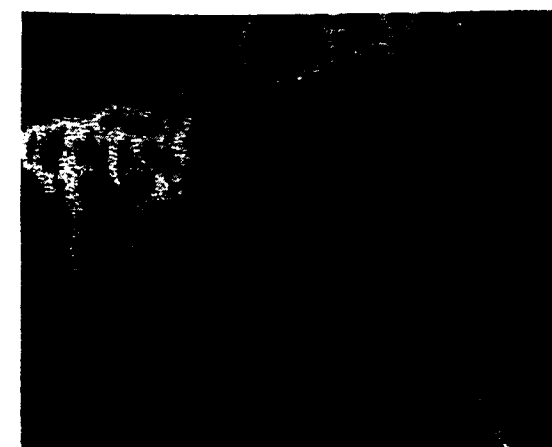
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Source : <http://www.encylopedia.com>

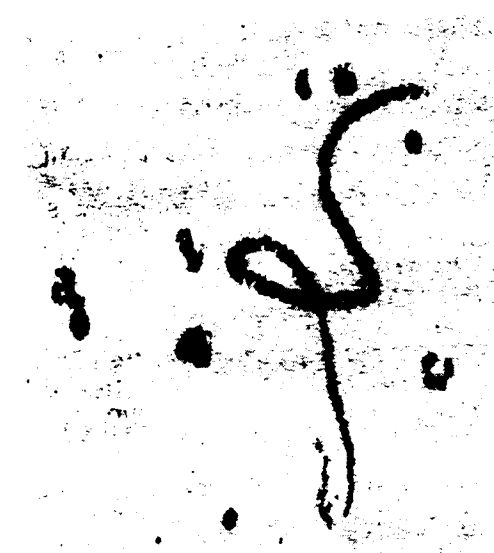
## LYMPHATIC FILARIASIS

### What is Lymphatic Filariasis (LF)?

- Lymphatic filariasis (LF) is commonly known as elephantiasis.
- It is usually acquired in childhood.
- For many years, no symptoms are seen but the lymphatic system is damaged.
- Lymphatic filariasis is caused by thread like worms known as filaria adult parasites. These adult worms (male and female) settle in lymph nodes and the



Adult Filaria Worms



Microfilaria

female worm gives birth to millions of young ones known as microfilariae.

- These microfilariae circulate in the blood stream and are transmitted to other men through the bite of mosquito.
- Since there are no symptoms at early stage, the persons with microfilariae are not recognized and they keep on transmitting the disease to the community.
- The infected persons have swollen legs or enlarged lymph nodes/lymph vessels or hydrocele at a late stage when their lymphatic system is already damaged.
- The infected persons with filariasis may have frequent acute attack of adenolymphangitis when they may have symptoms of fever, pain and redness in the affected body parts. Each such attack increases the occurrence of elephantiasis.

### Why should people take DEC tablets during Mass Drug Administration (MDA)?

- The people, who are living in filaria affected areas, may be having microfilariae in their blood.
- They may not be recognized because they do not show signs and symptoms at early stage.
- DEC kills microfilariae and therefore even those persons who look healthy, should take DEC so that the microfilariae if present in their blood, will be killed and the disease progression will be halted. Besides, microfilariae will not be transmitted in the community through the bite of mosquito.

- DEC tablets should therefore be taken by everybody in the community in the filaria affected areas except pregnant women, children below two years of age and very sick persons.

#### How many tablets one should consume?

- The dose for different age groups is indicated below.

| Age (in years) | DEC Dose | IEC (Tablets of 100 mg each) |
|----------------|----------|------------------------------|
| <2             | Nil      | Nil                          |
| 2-5            | 100 mg   | 1 tablet                     |
| 6-15           | 200 mg   | 2 tablets                    |
| 16 & above     | 300 mg   | 3 tablets                    |

#### When people should take DEC tablets?

- DEC tablets should be taken only once in a year on the National Filaria Day -21st January 2005.
- A single dose of DEC will kill the microfilariae and prevent the transmission of filariasis in the area.
- Those who have not consumed DEC tablets on 21st January 2005 should be given DEC tablets on 22-23<sup>rd</sup> January (mop-up round))

#### How these tablets should be taken?

- The tablets should not be taken on empty stomach. If the tablets are taken on empty stomach, it may cause stomach upset. Therefore, tablet(s) should be consumed after eating.

#### Are there any side effects of DEC drug?

- DEC is very safe drug, which has been in use for the last 50 years in India.



Filaria transmitting mosquito

- People, who look healthy but have microfilariae in their blood, may have some symptoms after consumption of DEC due to killing of microfilariae in their blood.

These symptoms may be head ache, fever, itching of the skin, dizziness and vomiting. They have to contact the nearest health Centre or hospital for treatment of these symptoms.

#### How DEC tablets are distributed?

- Tablets are distributed by Health staff, Education department, ICDS, NGO, SHG, Volunteers etc. They ensure that the tablets are consumed in their presence.
- DEC tablets are distributed in the following districts of Tamil Nadu.

| S.No | DEC Districts   | S.No. | DEC+ ALBENDAZOLE Districts |
|------|-----------------|-------|----------------------------|
| 1    | THIRUVANNAMALAI | 1     | KANCHEEPURAM               |
| 2    | CHEYAR          | 2     | SAIDAPET                   |
| 3    | VILLUPURAM      | 3     | THIRUVALLUR                |
| 4    | KALLAKURICHI    | 4     | POONAMALLEE                |
| 5    | CUDDALORE       | 5     | VELLORE                    |

6 TIRUCHIRAPALLI  
7 PERAMBALUR  
8 PUDUKKOTTAI  
9 ARANTHANGI  
10 KANNIYAKUMARI  
11 CHENNAI-CORP

6 THIRUPATHUR  
7 NAGAPATTINAM  
8 THIRUVARUR  
9 THANJAVUR

community shall be educated about the source reduction of mosquito breeding places. Community participation should be encouraged explaining the benefits of larvivorous fish such as Guppy and regular use of insecticide treated mosquito bed nets.

#### You can prevent elephantiasis / hydrocele by :

Annual Mass Drug Administration (MDA) of single dose of DEC (Diethylcarbamazine citrate) for 5 years or more to the eligible population to interrupt transmission of the disease.

#### Key message on Morbidity Management

You can prevent frequent attacks of adenolymphangitis by taking care of the affected parts by daily washing with soap and water and exercise. If there are such acute



Washing



Drying

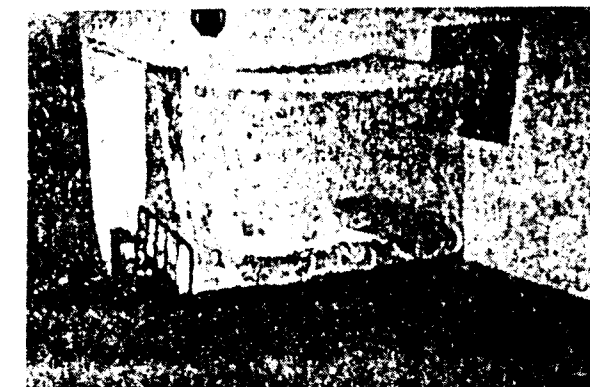
acute attacks of fever and pain.

attacks of filariasis, consult nearest PHC for treatment.

Demonstrate the correct method for washing the affected part with ordinary soap and water at room temperature every day. In other words, people who are affected by the disease (for example with swollen limbs) will have to practise morbidity management every day to prevent recurring

#### Key message on Mosquito Breeding and Control

Filaria causing mosquitoes breed in polluted water in and around houses. The



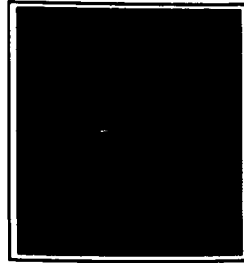
Insecticide Treated Bed Net

Home-based management of cases with lymphoedema is simple and effective, which minimises the suffering caused by acute and chronic manifestations of the disease.

If all the eligible population takes DEC tablets once a year for 5-7 years, the future generations will be completely free from filariasis.

\* \* \*

# TOTAL CLEFT LIP & PALATE REHABILITATION



- Dr. S. M. Balaji

It is a matter of prestige that after 25 long years, a dentist from Tamil Nadu has been awarded the coveted Dr. B.C. Roy National Award. The recipient is none other than the world-renowned dental and maxillofacial surgeon, Dr. S. M. Balaji.

Recently, he hosted a Live Surgical Cleft Lip and Palate Workshop of international proportions at his state of the art hospital, an exclusive health center that specializes in providing world-class treatments for dental and facial problems. The International Cleft Lip and Palate Foundation had chosen this one-of-a-kind hospital for hosting its first intensive live surgical workshop. Over a hundred and fifty cleft surgeons from around the world gathered for some brain storming sessions on the latest advances in cleft surgery. Several conventions were challenged, controversies debated and consensus made. We approached this globe trotting, dynamic surgeon to clear our queries about the latest developments in the correction of this deformity called "Cleft Lip"

## What is cleft lip and palate?

A cleft lip is a separation in the upper lip. A cleft palate is an opening in the roof of the mouth, which divides the mouth and nose. Clefts result from incomplete development of the lip and/or palate in the early weeks of pregnancy. It is during this time that the face is being formed. The lip and primary palate develop at

4 to 6 weeks of gestation, while the secondary palate develops at approximately nine weeks.

A cleft lip or cleft palate can be either unilateral (one-side only) or bilateral (both sides). A cleft can be either complete or incomplete. A complete palatal cleft involves both the primary and secondary palate, while an incomplete cleft involves the secondary palate only. A child may be born with either a cleft lip or cleft palate or both.

Genetics and environmental factors are both considered instrumental in causing clefts. Cleft parents are known to be predisposed to having cleft children. But the main cause is attributed to the deficiency of Folic Acid during pregnancy. The other causes are radiation, pollution, nutritional deficiency etc.,

## INFANCY

### 1st Surgery - Lip Surgery

Children with cleft palate can have associated feeding, hearing and speech difficulties. The primary concern for a cleft-surgeon is creating a lip seal to enable the child to suckle milk. But before the child is healthy enough to undergo the surgery, a palatal plate should be given to prevent aspiration of milk from the mouth to the nose, through the cleft in the palate that creates a communication



Before Surgery



After Surgery

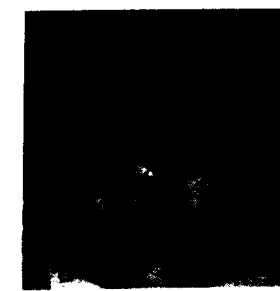


After 10 years

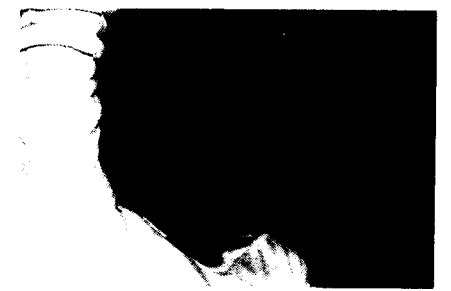
### Unilateral cleft lip repair



Before Surgery



After Surgery



After 6 years

### Bilateral Cleft lip Repair

between the mouth and the nose. The lip repair is attempted as early as the baby is fit enough to sustain the surgery. In the past, Millard's technique was considered the best in achieving a good lip contour. But it created a scar at the base of the nose. Several surgeons have attempted to remove this scar and Prof. Noordhoff succeeded by taking the 'C' flap inside the nose and suturing it in the invisible part of the nose. Prof. Balaji has taken intense training from Prof. Noordhoff in person in mastering the technique.

## EARLY NOSE CORRECTION

Earlier, the nose repair was delayed till the cessation of growth. The cleft child had to live with a deformed nose till they are eighteen, but now the focus is on "primary nose repair" where the nose is straightened with lip repair.

## IInd Surgery - Palate Surgery

The cleft in the palate should be repaired next, before the baby learns to speak, since the palate is the organ of phonation. There are many techniques to repair this defect but the primary aim is achieving a functional repair. The palate is a mobile organ with as many as six muscles attached to it. While performing palatal repair, one can merely stitch the two disconnected halves, as one would presume, but then, the function of the palate would be lost. To achieve a functional repair, the levator palati and the tensor palati muscles, that move the palate, have to be carefully elevated and stitched together. Since these muscles are tiny, extreme care and expertise is needed. This surgery is very essential for normal speech to develop.



Before



After

Palate Surgery

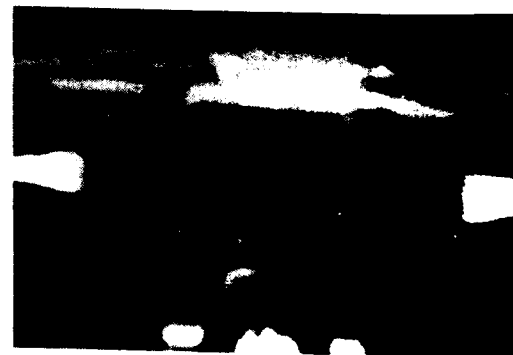
## SCHOOL GOING

### Illrd Surgery (if needed) Pharyngoplasty – Speech Correction

Because of the nature of the problem, the child with a cleft is more at risk of having a speech and/or language problem, and close attention must be given to the child's speech development. Most problems can, however, be resolved with speech and language therapy. All types of cleft palate, particularly cleft of the soft palate, are prone to problems with language development, articulation and nasality. Children will need regular supervision by the surgeon until they are 10 years of age:

1. Deficits in hearing (may be due to chronic ear infection, common in cleft).
2. Air outflow problems.
3. Problems of palate function, or
4. A combination of these factors.

Some cleft children have a nasal speech. This is due to two reasons. One may be due to a short palate; the other could be



Before



After

Pharyngoplasty – Correction of Nasal Speech

due to the hole between the nose and the mouth, in the teeth bearing bone.

The short palate could even occur in non-cleft children. These children appear to be speaking through their nose. This can be rectified with a simple surgery called *Pharyngoplasty*, performed at the naso-pharynx. But again the crunch is deciding on the method of surgery. After much research, Prof. Balaji has found that a stiff immobile palate requires a flap pharyngoplasty and a mobile, short palate benefits from sphincter pharyngoplasty. The child might have to undergo *naso-Endoscopy* for diagnosis of the defect.

## IV th Surgery - Bone Grafting Surgery



Oro-nasal fistula



Bone Grafting

The other problem about the defect in the tooth bearing part of the jaw; the deficiency in the bone can be corrected only by supplementing alveolar bone by filling the defect

with bone from some other part of the body. This essential treatment is called "Alveolar Bone Grafting". This also helps the proper eruption of the teeth. This bone grafting when done properly, unifies the two disjoint segments of the jaw and makes it whole. This helps in dentist and the orthodontist of the cleft care team to bring the improperly positioned teeth to proper alignment. The dentist and the orthodontist, with enough experience in teeth care of cleft play a major role in rehabilitating the cleft child.

In bilateral cleft children, sometimes the premaxilla and the front upper teeth jut forward so much that the children are unable to purse their lips. This also results in speech difficulty. Correction of this defect can be performed by a *premaxillary setback* together with early alveolar bone grafting.

The majority of children with cleft lip and palate who have initial speech problems will grow up to have normal speech if they are attended to at the appropriate time and have all the necessary speech therapy and surgical and orthodontic treatment.

## TEENAGE

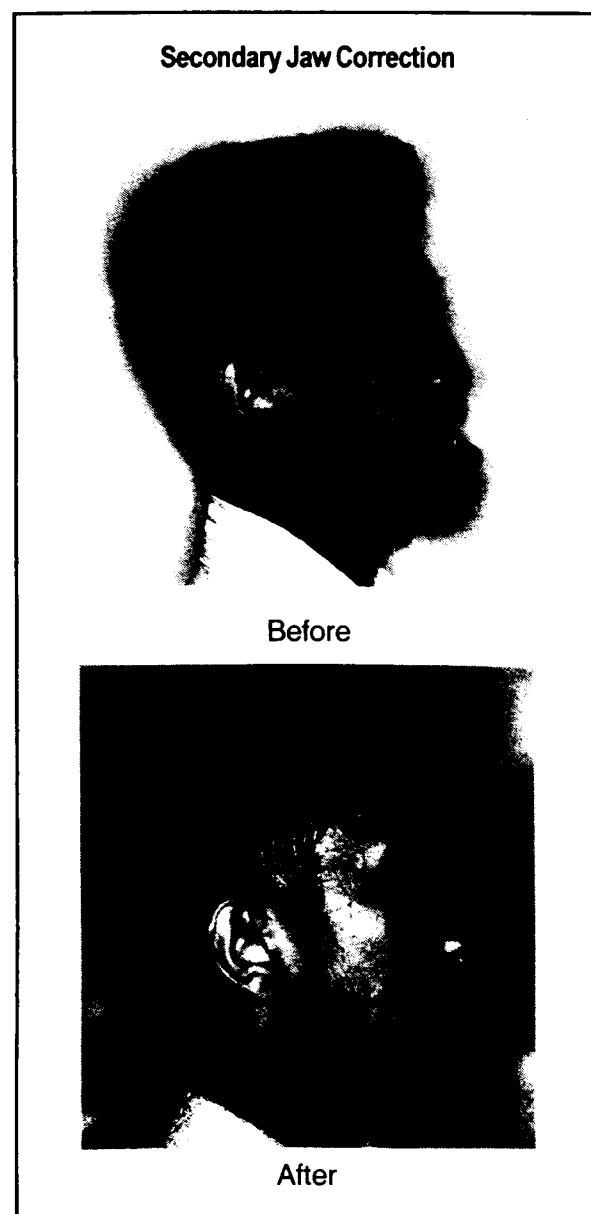
### Vth Secondary Corrections – Distraction Osteogenesis

This is the age when the children are concerned about their outward appearance and this is the age to perform the final and corrective cosmetic surgeries for the cleft individual. The lip, palate and the teeth are taken care of by the cleft-care team in the early years. But the

cleft in the upper jaw decreases the growth potential of the jaws. As a result, the upper jaw remains small while the whole face grows. Depending upon the degree of cleft and the nature of the primary repair done, the severity of the defect can range from slight depression to a dish face appearance.

### 1. Orthognathic Surgery

Secondary bone corrections must always precede soft tissue corrections. A good



infrastructure is the primary need. The upper jaw can be surgically cut and brought forward, or the lower jaw can be shortened according to the upper jaw size to improve the profile of the cleft teen.

### 2. Distraction Surgery

But if the discrepancy between the upper and the lower jaws is more, simple jaw surgery cannot provide stable, optimum results. The only other alternative is *Distraction Osteogenesis*. Due to complexity of the treatment planning and the dexterity required in execution of the same, very few surgeons have mastered it, but the technique provides very fine results. Here the maxilla is cut and a screw like device is fitted between the cut ends.

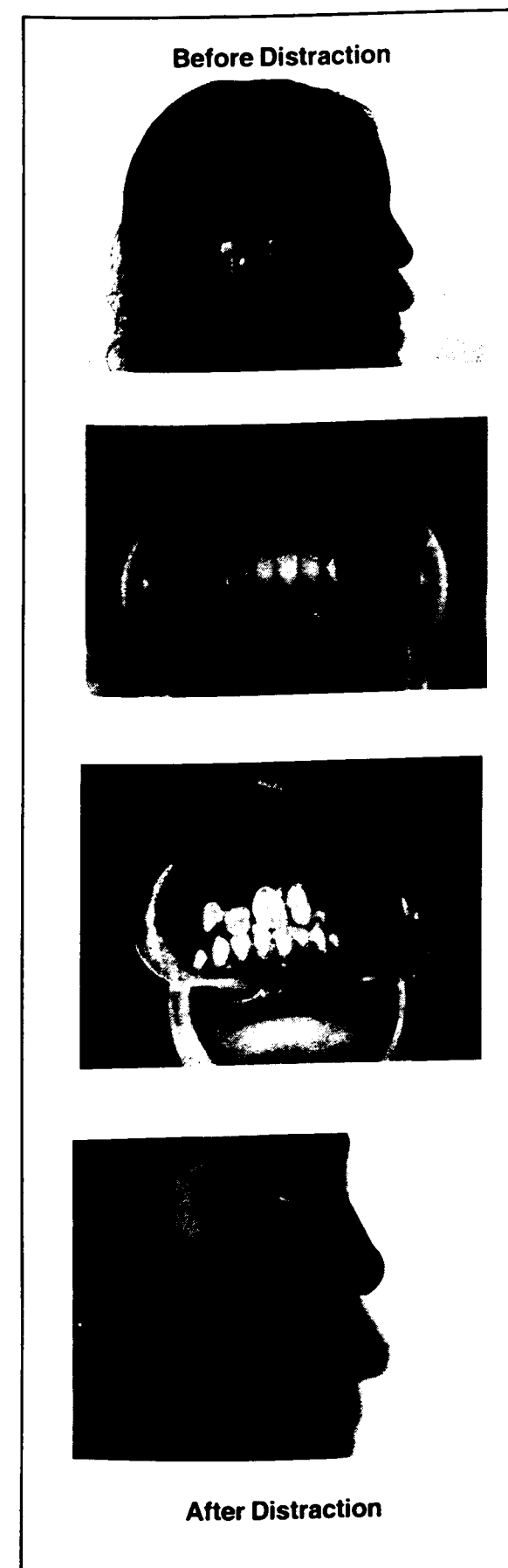
The rotation of the screw brings about gradual separation of the cut ends. The purpose of the distraction device is to gradually lengthen the space between the two cut ends so that new bone is formed to fill in the gap.

Since new bone is formed between the cut ends, it is very stable and therefore the constraint in the amount of projection that can be achieved is non-existent.

Further soft tissue corrective surgery may be carried out after the bone surgery.

### 3. Rhinoplasty

Cleft of the lip often distorts the nose too. The cleft affects the nasal cartilages and the growth of the nasal structures. Bilateral cleft children have a flat nose with a short columella. Unilateral cleft children have an asymmetric



nose that is slumped on one side. Cleft nose, especially a unilateral one, is one of the most difficult deformities to correct. Owing to this, many surgeons deter secondary correction of cleft nose. To achieve mastery and perfection in this requires a lot of experience and expertise.

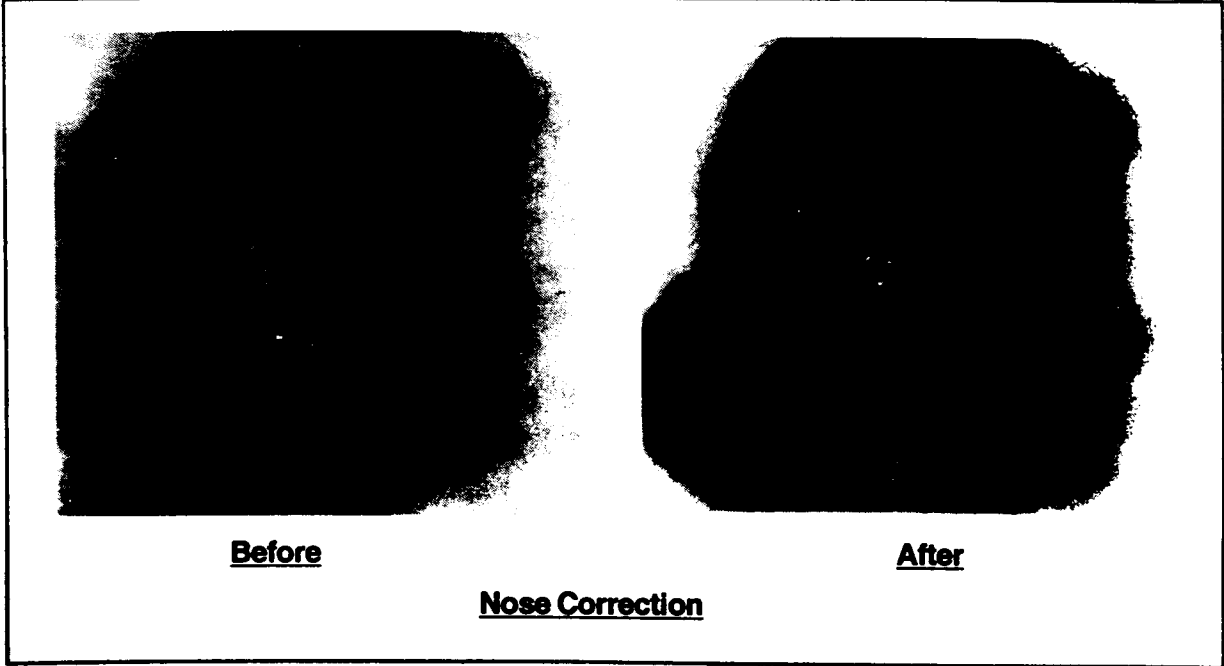
At the Balaji Cleft Center, the surgeon, Prof. Dr. S. M. Balaji, has indeed mastered the technique and the surgical outcomes speak volumes about the deftness of this surgeon. He has performed more than twenty five thousand surgeries till date and is active in research and scientific advancement. His surgical techniques have been published in several International Research Journals.

His research on cleft nose surgery has received the "the best research paper" award at the "International Conference on Cleft Lip and Palate" that was held in Zurich, Switzerland, and at the "International Conference of Maxillofacial Surgeons," held at Surabaya, Indonesia.

He recently bagged the "Gold Medal" for the best scientific presentation at the Asian Conference of the Maxillofacial Surgeons for his research presentation on Secondary Corrections in Cleft.

He has also bagged the prestigious Ginwallah Trophy twice and decorated as an "Expert" at the world cleft congresses held at Canada and Korea.

He has also been honoured by the Govt. of Tamil Nadu, the only state which provides economic assistance to children



born with cleft lip and palate, as the "Scientist of the Year, 2002." He has also been awarded "The Best Scientific Author" award – thrice for his books on Headaches, Cancer and Travels.

An official consultant to the Governments of Maldives, Mauritius, Seychelles and the Andaman, he heads his cleft care team at The Balaji Cleft Center, 30, K. B. Dasan Road, opposite to SIET College in Teynampet, Chennai.

The birth of a baby is a wonderful event; an event every parent awaits with a mixture of excitement and happiness. All parents hope and expect that their child will be born impeccable.

What turmoil does the parent undergo if the baby is not quite as "perfect" as they had expected and the baby is born with a **facial deformity!** But the fact is that there is

no necessity to despair and curse one's stars; it is a fully correctable condition.

Thanks to today's technology and the voluminous amount of research work undertaken by surgeons like Prof. Dr. S.M. Balaji; the baby can be completely rehabilitated to lead the life of a normal, healthy child. The only care that parents have to do is to be aware of the modern technology available to them and choose the right cleft center.

Since the complete rehabilitation requires a minimum of four surgeries stretched over the span of eighteen years, it is necessary to choose a cleft center that has a competent surgeon who is in constant touch with the latest advancements and who has the experience and expertise to handle those life-changing, intricate surgeries. \*

# Child Adoption

## Want to know about Child adoption?

This article gives you a detailed insight into the process of adoption, licensed agencies authorised to do adoption, the legal enactment for taking children under adoption and also about various other issues relevant for adoption of children.

## How to Adopt?

Adoption could be broadly divided into two categories.

- Indian parents / Non Resident Indian (NRI) desiring to adopt an Indian child is referred to as In-Country adoption.
- Foreign parents desiring to adopt a child is referred to as Inter-Country adoption.

Given below are the Licensed Agencies who are authorised to do Adoption.



## NAME AND ADDRESS OF THE LICENSED ADOPTION AGENCIES DOING IN-COUNTRY AND INTER-COUNTRY ADOPTION

| S. No | Name and Address of the Institution                                                                                                   | Telephone No. |
|-------|---------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 1     | Guild of Service<br>32, Casa Major Road,<br>Egmore, Chennai-600 008.                                                                  | 28194899      |
| 2     | Karnaprayag Trust<br>No.7, Rajakrishna Rao Road<br>Alwarpet, Chennai-600 018.                                                         | 24355182      |
| 3     | Institute of Fransiscan<br>Missionaries of Mary Society,<br>No.3, Holy Apostle Convent,<br>St.Thomas Mount,<br>Chennai-600 016.       | 22345526      |
| 4     | Concord House of Jesus<br>C-23, Anna Nagar East,<br>Chennai-600 102.                                                                  | 26202498      |
| 5     | Grace Kennett Foundation<br>No.34, Kennet Road,<br>Madurai-625 010.                                                                   | 2601767       |
| 6     | Families for Children<br>107, Vallalar Road, Podanur,<br>Coimbatore-641 023.                                                          | 2874235       |
| 7     | Congregation of the Sisters<br>of the Cross of Chavanod,<br>(SOCSEAD)<br>P.B.No.395,<br>Old Goods Shed Road,<br>Theppakulam, Trichy-2 | 2700923       |
| 8     | Christ Faith Home for Children,<br>3/91, Mettu Colony,<br>Manapakkam, Chennai-600 116.                                                | 22520588      |
| 9     | Bala Mandir Kamaraj Trust,<br>126, G.N.Chetty Road,<br>T.Nagar, Chennai-600 017.                                                      | 28267921      |
| 10    | St.Joseph's Charity Institute<br>Adaikalapuram,<br>Tuticorin District.                                                                | 245248        |

| S. No | Name and Address of the Institution                                                                                                                                                                                  | Telephone No. |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 11    | Missionaries of Charity<br>Nirmala Shishu Bhavan,<br>79, West Madha Church Road,<br>Royapuram, Chennai-600 013.                                                                                                      | 25956928      |
| 12    | Anantha Ashramam<br>Thenkanikottai Road,<br>H.C.F.Post, Mathigiri,<br>Hosur-635 110.<br>Dharmapuri                                                                                                                   | 262324        |
| 13    | Kasturiba Hospital<br>Gandhigram-624 302.<br>Dindigul District.                                                                                                                                                      | 2452328       |
| 14    | Claretian Mercy Home<br>Azahagusirai,<br>Ponnangalam Post,<br>Thirumangalam,<br>Madurai District.                                                                                                                    | 2441646       |
| 15    | Avvai Village Welfare Society,<br>Kilvellore,<br>Nagapattinam District.                                                                                                                                              | 275559        |
| 16    | Tirunelveli Social Service<br>Society, Palayamkottai,<br>Tirunelveli District                                                                                                                                        | 2578282       |
| 17    | Life Line Trust<br>8-E, Raghuram Colony,<br>Salem                                                                                                                                                                    | 2317147       |
| 18    | Kalaiselvi Karunalaya<br>Social Welfare Society,<br>3/PP1, Mogappair West,<br>Chennai-600 058.                                                                                                                       | 26257779      |
| 19    | Madras Social Service Guild<br>3/75, Nedugundram, Vandalur,<br>Chennai-600 098.                                                                                                                                      | 22378301      |
| 20    | PEACE (Poor Economy and<br>Children Educational Society),<br>No.70, 3rd Street, Sivaji Colony,<br>Edayarpalayam Post,<br>Coimbatore-25.                                                                              | 2456788       |
| 21    | Women's Organisation for<br>Rural Development,<br>P. B. No.1,<br>Pandamangalam Post,<br>P.Velur Taluk, Namakkal District.<br>Adoption Unit @<br>No.32A, North Street, Pothanur,<br>P.Velur Taluk, Namakkal District. | 230960        |

If you desire to adopt a child, the following procedure is to be followed:-

#### INTER-COUNTRY ADOPTION

1. Your application should be made to the Child Welfare Agency recognised by the Government of India in your Country.
2. Once you apply to the Social Welfare Agency of your Country, they will require certain important details of your family. The Agency will appoint a Social Worker to visit your home and meet the family members. This will be done to ensure that the family adopting a child will be able to provide all the emotional and financial support to the adopted child. The Social Worker will prepare a report after visiting your family which will be called as Home Study Report. The Home Study Report would have details like family background, relationship between the family members, employment status of the couple, health details of the family, economic status, reasons for wanting to adopt an Indian child etc.,
3. Once the Home Study report is prepared, the Home Study Report along with the original application, will be sent to a recognised Indian Placement Agency from the Social Welfare Agency of your country directly. After receiving your application, the recognised Indian Agency will examine the Home Study Report and match the Home Study Report with the child study report (Child Study Report is nothing but the details about the child like age, sex, name, how the child was brought etc.,)
4. Once the Indian Agency is able to match the home study report and child study

report, they will send the details of the child with the photograph and the medical report to the agency of your country. The photograph and other details will be shown to you and once you give your approval to adopt the child, the Indian Placement Agency after getting clearance from Government of India, will process the case with the competent court for awarding the guardianship of the child to you. The competent court within the stipulated time will award the guardianship of the child to you.

5. After getting the court order, the Indian Agency will obtain the Indian passport and Visa for the child and the child will leave the country either with the prospective adoptive parent or with an escort to his or her new home.
6. No money will be charged by the adoption agency for giving the baby to you in adoption except the maintenance charges which the agency might have incurred in keeping the child in the agency. These charges also will be fixed by the court, on the basis of the representations made by the recognised agency.
7. Once the child reaches the family of the adoptive parents, the child will be adopted by the parents under the prevailing laws of that country.

#### IN-COUNTRY ADOPTION

1. You should apply to either Voluntary Co-ordinating Agency whose address is given below or to any one of the recognised Placement Agencies whose addresses have also been mentioned above:

Address of the  
Voluntary Co-ordinating Agency:  
**No. 5, 3rd Main Road,  
West Shenoy Nagar, Chennai-600 040.**

2. Once the Agency receives your application, they will ask a Social Worker of their Institute to visit your home to meet you and your family members. The Social Worker will ask you questions about your family, about your married life, about your family members, economic status of the family etc., This is essential to ensure that the future of the adopted child is in safe hands. The Social Worker will also ask you to mention your preferences for the child you are going to adopt-like age of the child etc.,
3. Once the Social Worker has visited your home, she will prepare a Home Study Report about your family. According to your preferences the concerned agency will then match a child to you. You will be sent a Photograph of the child along with other details. Once you express your willingness to adopt the child you will be asked to visit the agency and see the child. Once the child is liked by you, the agency will process your case in the concerned court of law to make the adoption legal. After the court clears the child for adoption, you can take the child home.
4. All Hindus, Buddhists, Jains, or Sikhs can legally adopt under the 'Hindu Adoption and Maintenance Act 1956' whereas the Muslims, Christians and others can take a child in guardianship under the 'Guardians and Wards Act of 1890'.

Source : <http://www.tn.gov.in./adoption>

\* \* \*

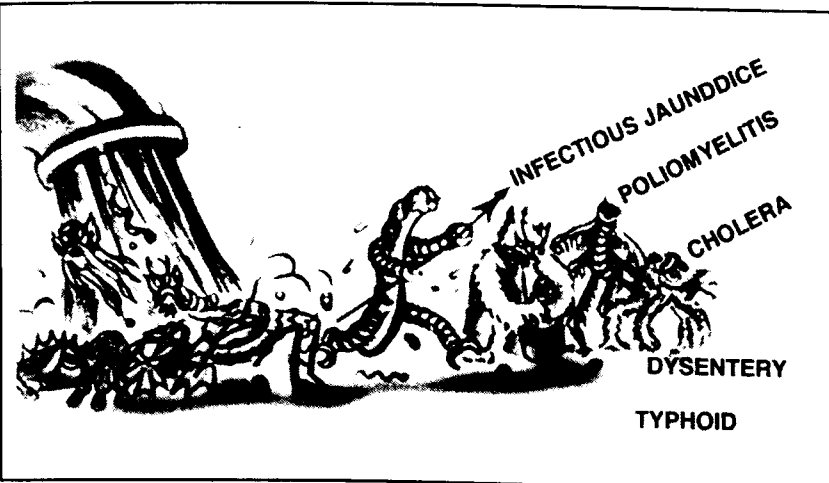
# SAFE WATER

*A vital need for healthy life*

**W**ater is a resource of primary necessity now strongly adversed by bacteriological pollutants. To avoid any enemy or epidemy, it is imperative to disinfect the water before you drink.

### Water and Life

Without water, there is no life. The human body contains about 70% water. All body



mechanisms in animals and plants depend on water as the media. Some of the salts naturally present in water serve as nutrients and are essential for the functions and growth of body. About 97% of water available on the earth's crust are saltish and non-potable and another 2% are available as Polar ice.

Water if contaminated causes illness and disease. About 80% of human diseases are related to water.

### Water Quality

Water may contain (1) Suspended matter (2) Dissolved substances and (3) Micro organisms.

### Water Quality Parameters

Parameters deciding the quality of water may be classified as follows :

- (1) Physical (2) Chemical
- (3) Bacteriological (4) Biological and (5) Radioactivity.

### Substances Dissolved in Water

- About 2,000 chemical contaminants have been so far found in water.
- Water may naturally contain about 15 to 20 parameters only.

- "Total Dissolved Solids (TDS)" is the sum of all dissolved chemicals present in water.

### Total Dissolved Solids (TDS)

- About 97-99% of TDS in natural water is contributed only by six major ions i.e., calcium, magnesium, sodium, bicarbonate, chloride and sulfate.
- The balance TDS is contributed by a number of contaminants like iron,



Malaria

manganese, potassium, ammonia, nitrite, nitrate, fluoride, phosphate, trace metals and organic substances.

The permissible limit for TDS is 500 mg/L. However, in the absence of better alternative source, it may be relaxed upto 2000 mg/L.

### Total Dissolved Solids in Some Waters

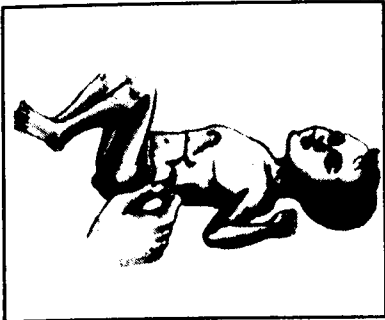
- Rain water - 1-50 mg/L.
- Surface water in hills - 10-100 mg/L
- Surface water - 100-1000 mg/L in plains
- Ground water - 500-5000 mg/L
- Ground water - 10000-20000 mg/L polluted by tannery
- Sea water - 35000 mg/L
- Bottled (mineral) water - 100-300 mg/L
- Permissible limit - 500 mg/L
- Maximum allowable limit - 2000 mg/L

### Water Quality in Water Sources

- Ground water has :
  - high TDS
  - low turbidity
  - less bacteria.
- Surface water has :
  - low TDS
  - high turbidity
  - more bacteria.

### Significance of Water Quality Parameters

A number of chemical substances may be present in water. If these substances are present in high level, the health is affected. To indicate the permissible limit of water quality parameters, guideline values have been prescribed by Bureau of Indian Standards. Sometimes the water works structures, distribution pipe lines and storage structures may also be affected. Other problems are also caused due to poor quality of water. Some health problems like fluorosis, methemoglobinemia (blue baby disease, etc.) are associated with chemical parameters. Some other diseases like diarrhoea, dysentery, cholera, typhoid, jaundice etc. are related to micro-organisms present in water.



Dehydrated Child

**Guidelines of Bureau of Indian Standards (BIS) and Significance / Health Effects of Chemical Parameters**

| Parameters                         | BIS Guideline value (maximum allowable) | Significance / Health effects                                                                                                                                          |
|------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Colour in Pt/Co scale              | 25                                      | Consumer acceptance decreases                                                                                                                                          |
| Turbidity                          | 10NTU                                   | Consumer acceptance decreases                                                                                                                                          |
| Total dissolved solids             | 2000 mg/L                               | Undesirable taste; gastro intestinal irritations; corrosion or incrustation.                                                                                           |
| pH                                 | 6.5-8.5                                 | Beyond this range, mucous membranes affected; bitter taste; corrosion; aquatic life affected.                                                                          |
| Alkalinity as 'CaCO <sub>3</sub> ' | 600 mg/L                                | Taste becomes unpleasant, boiled rice is yellowish.                                                                                                                    |
| Hardness as CaCO <sub>3</sub>      | 600 mg/L                                | Poor lathering with soap; deterioration of clothes; scale forming; Encrustation in water supply structure; skin irritation; boiled meat, food becomes poor in quality. |
| Calcium as 'Ca'                    | 200 mg/L                                | Poor lathering and deterioration of clothes; Encrustation in water supply structure; scale formation.                                                                  |
| Magnesium as 'Mg'                  | 100 mg/L                                | Poor lathering and deterioration of clothes; with sulfate laxative; encrustation in water supply structure.                                                            |
| Iron as 'Fe'                       | 1.0 mg/L                                | Poor or sometimes bitter taste, colour and turbidity; staining of materials; iron bacterial causing slime.                                                             |
| Manganese as 'Mn'                  | 0.3 mg/L                                | Poor taste, colour and turbidity; staining; black slime.                                                                                                               |
| Aluminium as 'Al'                  | 0.2 mg/L                                | Neurological disorders; Alzheimer's disease (causes dementia).                                                                                                         |
| Copper as 'Cu'                     | 1.5 mg/L                                | Astringent taste; opalescence in water, gastro intestinal irritation; vomiting, dehydration, abdominal pain, nausea and dizziness.                                     |

|                               |            |                                                                                                                                                                             |
|-------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Zinc as 'Zn'                  | 15 mg/L    | Astringent taste; opalescence in water, gastro intestinal irritation; vomiting, dehydration, abdominal pain, nausea and dizziness.                                          |
| Ammonia as 'NH <sub>3</sub> ' | -          | Indicates pollution; growth of algae                                                                                                                                        |
| Nitrite as 'NO <sub>2</sub> ' | -          | Forms nitrosoamines which are carcinogenic.                                                                                                                                 |
| Nitrate as 'NO <sub>3</sub> ' | 100 mg/L   | Blue baby disease (methemoglobinemia); algal growth                                                                                                                         |
| Sulfate as 'SO <sub>4</sub> ' | 400 mg/L   | Taste affected; laxative effect; gastro intestinal irritation.                                                                                                              |
| Chloride as 'Cl'              | 1000 mg/L  | Taste affected; corrosive.                                                                                                                                                  |
| Fluoride as 'F'               | 1.5 mg/L   | Dental and skeletal fluorosis; non-skeletal manifestations.                                                                                                                 |
| Phosphate as *PO/             | -          | Algal growth.                                                                                                                                                               |
| Arsenic as 'As'               | 0.05 mg/L  | Toxic; bio-accumulation; central nervous system affected; carcinogenic.                                                                                                     |
| Mercury as 'Hg'               | 0.001 mg/L | Highly toxic; causes 'minamata' disease (neurological impairment and renal disturbances); mutagenic.                                                                        |
| Cadmium as 'Cd'               | 0.01 mg/L  | Highly toxic; causes 'itai-itai' disease (painful rheumatic condition); cardio vascular system affected; gastro intestinal upsets and hyper-tension.                        |
| Lead as W                     | 0.05 mg/L  | Causes plumbism (tiredness), lassitudes, abdominal discomfort, irritability, anaemia; bio-accumulation; impaired neurological and motor development, and damage to kidneys. |
| Chromium as 'Cr'              | 0.05 mg/L  | Carcinogenic; ulcerations, respiratory problems and skin complaints.                                                                                                        |
| Cyanide as *CN"               | 0.05 mg/L  | Highly toxic.                                                                                                                                                               |
| Pesticide                     | 0.001 mg/L | Affects central nervous system.                                                                                                                                             |
| Anionic Detergent (as MB AS)  | 1.0 mg/L   | Undesirable froth, foaming.                                                                                                                                                 |

## Infectious diseases caused by water

The infectious diseases are frequently classified, not according to the causative organism, but to the water-related mechanism whereby they are spread among communities.

### 1) Water borne diseases (fecal-oral)

#### (a) by Bacterial organisms

Cholera, Typhoid, Paratyphoid, Dysentery, Diarrhoea, Weil's disease (Leptospirosis), Tuberculosis.

#### (b) by phage virus or Bacteriophages

Infectious hepatitis, Jaundice, Poliomyelitis.

#### (c) by Protozoan

Amoebic dysentery, Ascaris, Amoebic meningo- cephalitis (fatal encephalitis usually acquired while swimming in ponds).

#### Preventive measures :

Improve quality of drinking water, prevent casual use of the unhygienic sources.

### 2) Water washed diseases

Scabies, Skin diseases, Typhus fever. Leprosy, Trachoma, Conjunctivitis, Bacillary dysentery.

#### Preventive measures :

Increase water quantity for (washing / cleaning) use. Improve accessibility and reliability of domestic water supply.



Filaria

### 3) Water based diseases

Schistosomiasis (liver fluke), Dracunculosis (Guinea worm disease).

**Preventive measures :** Control snail populations; filter the water through a fine mesh cloth to remove larvae / cyclops / snail. Disinfect contaminated water.

### 4) Water related diseases (by vector organisms)

Malaria, Filaria, Dengue Fever, Sleeping sickness (African sleeping sickness).

#### Preventive measures :

Destroy breeding sites of insects. Decrease need to visit breeding sites. Use mosquito nets.

By boiling or addition of bleaching powder, the disease causing bacteria and other organisms can be killed and the water could be made safe.

#### Doubts on Water Quality

##### • Water is saltish :

Chlorides give water a salty taste, but the intensity of the taste depends upon the ionic composition. Thus in some waters the salty

taste is detected at about 200 mg cl/L, but if the water contains high concentrations of calcium and magnesium, the salty taste is not noticed even at 1000 mg/L.

##### • Water on standing becomes turbid and brownish yellow :

Normally some ground water may contain ferrous iron in the form of its bicarbonate, which is in dissolved condition. On exposure to air, ferrous iron is oxidized to insoluble ferric iron hydroxide and is seen in the form of brownish yellow precipitate.

**Soap is not lathering :** This is due to the property of excessive hardness in water. Hardness is mainly contributed by calcium and magnesium.

##### • Boiled rice is hard and yellow in colour :

This is due to the property of high alkalinity in water. Alkalinity is mainly contributed by bicarbonate.

##### • Dhal becomes hard on cooking :

This is due to high alkalinity of water.

##### • Boiled meat / food becomes poor in quality :

This may be due to the high hardness of water.

##### • Nuisance of algae :

Trace levels of phosphorous and nitrogen aid for algae growth. Sunlight or stray light can help this process.

##### • White deposits in vessels (when water is stored / boiled):

The scales are due to precipitation of calcium carbonate from water. Scale formation is notable when the water has temporary hardness. The water after filtration can be used without any harm.

##### • Oily suspensions noted on the surface of water in wells :

This is also due to precipitation of calcium carbonate in water.

##### • White deposits blocking the PVC pipes

This is due to deposition of calcium carbonate scales. This is found particularly when compressor pumps are used.

##### • Horizontal brownish or brownish-black streaks in teeth :

This is caused in children due to excess fluoride in water. The horizontal streaks formed are permanent and cannot be treated or removed.

##### • Rotten egg smell from water :

In the absence of sufficient air and under anaerobic conditions, hydrogen sulfide is formed due to putrefaction of organic matter in water. This causes rotten egg smell in water.

##### • Brownish or brownish-black slimes in water conveying pipes:

May be due to growth of iron bacteria in water.

• **Death of infants due to blue baby disease:**

High nitrate in water causes blue baby disease. The blood of the children affected by the disease turns blue and the children die of asphyxiation. The disease affects only infants below six months age. Adults are not affected. Breast fed children are not affected by this disease.

• **Clothes loose their shining and become dirty after some washings :**

This is due to presence of high hardness and iron in water used for washing. Good lathering can occur with detergents but the cleaning action in hard water will not be always satisfactory.

• **Slime formation in classet in toilets and in the floors of bathroom :**

This happens due to microbial growth or scale deposition.

• **Diseases like cholera, jaundice, diarrhoea, dysentery etc.**

These are caused due to presence of disease causing micro-organisms (called pathogens) in water.

**Frequently asked questions**

• **Can we use alum or permanganate for water purification ?**

Except bleaching powder, no other

chemical is recommended for use by the public at household level.

• **Can we use 'nellikattai (emblica species) for reduction of salt and improvement of taste of water ?**

'Nellikattai' may improve the taste but cannot reduce the salt content or other harmful effects of water.

• **Can we use 'thethankottai (strychnous potatorium)' for water purification ?**

'Thethankottai' is a natural coagulant and removes only turbidity and can be used for removal of turbidity.

• **Whether the presence of septic tank may affect the quality of water in nearby wells?**

If the seepage from septic tank mixes with well water, it can definitely affect the quality of water and can cause water borne diseases. Mixing of septic tank waste or sewage in drinking water can be easily identified by testing for ammonia, phosphate and fecal coliform. There should be sufficient distance (at least 20-50') between the septic tank and a well.

**Testing facilities in TWAD Board Laboratories**

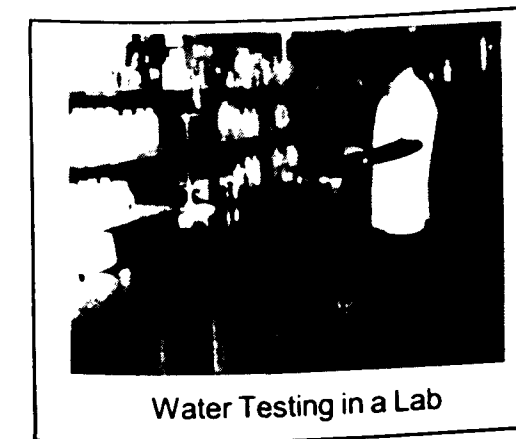
- 1) **Physical Examinations** : Colour, odour, turbidity, electrical conductivity, total dissolved solids, suspended solids.
- 2) **Chemical Examinations** : pH, alkalinity, hardness, sodium, potassium, iron, manganese, ammonia, nitrite, nitrate, chloride,

fluoride, sulfate, phosphate, Bio-chemical oxygen demand (BOD), Chemical oxygen demand (COD), Total Kjeldahl nitrogen (TKN), oil & grease, aluminium, chromium, arsenic, residual chlorine.

3) **Bacteriological Examination** : Standard plate count, total coliform, fecal coliform, fecal streptococci.

4) **Water for construction purpose:** Fitness.

5) **Bleaching Powder and Alum** : Quality analysis.



Water Testing in a Lab

**Testing Charges**

- 1) Physical and Chemical Examination of water (for domestic / other use): Rs. 250/- (Single Test Rs. 25/-).
  - 2) Bacteriological Examination : Rs. 250/- (Single Test Rs. 100/-).
  - 3) Sewage / Waste water testing : Rs. 600/- (Single Test Rs. 100/-).
  - 4) Water for Construction purpose : Rs.300/-
  - 5) Alum Testing : Rs.500/-
  - 6) Bleaching Powder : Rs.10/-
  - 7) Fluoride Testing alone : Rs.5/-
- Payment should be made along with samples.

**Sampling Procedures**

**Sampling for Chemical Examination**

- Water for chemical examination should be collected in a clean, white 2 litre polythene container.
- The source from where water is collected should be in regular use. Before sampling, the source should be adequately flushed. For hand pump sources, the water should be pumped and wasted for at least three to five minutes to clear all dirt, slime and turbidity. Water from wells should be taken in the middle at mid depth. For lakes, rivers and dams, the water should be collected near the off-take point.
- Before collection of sample, the container should be washed with the water to be sampled for at least two or three times.
- The water should then be filled completely in the container without leaving any air space.
- Place the inner cap. Place a polythene sheet (10 x 10 cm.) in between the inner and outer caps. Screw the outer cap. Place another polythene sheet of same size over the outer cap and tie the neck with a rubber band or twine thread.
- Label the container with all required source particulars.
- The sample collected for physical and chemical examination should be delivered to the lab within 24 hours from the time of collection.

### Sampling for Bacteriological Examination

- For bacteriological examination, the water should be collected only in a pre-sterilized 250 ml. glass bottle which has to be received from any of the TWAD Board laboratories.
- The sample collection procedures for bacteriological samples will be explained in the laboratory when the sample bottles are delivered to the customer.
- The sample should reach the laboratory within 6 hours from the time of collection. However, when preserved in ice box, the sample can be delivered within 24 hours.
- The sample collected for bacteriological examination should be labelled properly furnishing the source particulars before it is despatched.

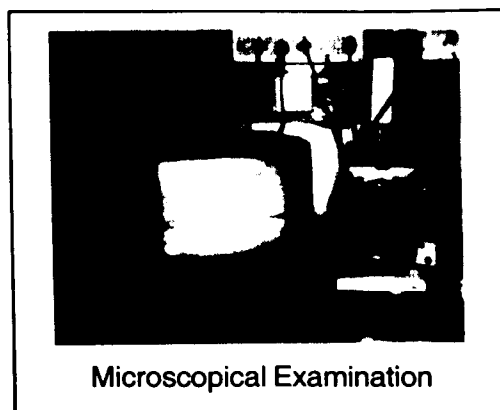
### Source particulars for samples

The following source particulars should be furnished for each sample :

Location & address of sampling, locations of source (if it is away from the sampling point), type of source, date of collection, pollution to source if any, tests to be conducted, purpose of testing etc.

### Public water treatment systems

The water supplied to big cities is usually derived from surface water sources like lakes, rivers, dams, reservoirs etc. or from ground water (bore well) sources.



The water from surface water sources may be turbid and will have high bacterial contamination. The turbidity is removed by coagulation with alum. This is done in a mechanical unit called clariflocculator. The water is then filtered through filter beds; it is disinfected with chlorine or bleaching powder and then supplied to the public.

The water from ground water sources may have high salinity and in such cases desalination may be followed. For removal of specific salts like fluoride or iron, defluoridation or iron removal plants may be used.

### Simple treatment for water containing turbidity and iron

Water containing iron will be turbid and brownish. On standing, the turbidity settles within 2 to 12 hrs. depending on the form in which iron is present (inorganic or organic iron). The water after settling can be filtered and directly used. Addition of bleaching powder and alum (at a dosage level of 10-20 g. and 30-50 g. respectively per 1000 litres) can quicken the settling of iron and the water can become clear within 1 to 2 hours. The correct dosing level may be determined in a laboratory.

### Protection of Public Drinking Water Systems

- Drinking water sources should be fenced and well protected.
- No defecation should be permitted near these sources.
- Pollution from domestic, industrial and agricultural wastes should not find access to these sources.
- Drainage carrying sewage and other waste water should be diverted away from drinking water sources.
- Solid wastes should not be dumped near these sources.
- Formation of cesspools, allowing the cattle to graze near the drinking water source, tying cattle around the water structures etc. should be prevented.
- Bathing, washing etc, should not be practiced near wells, hand pumps and other drinking water sources.
- Ponds and lakes used as drinking water sources should not be used for bathing or washing of cattle and vehicles.
- Open wells and hand pumps should have platforms. The waste water should be drained out into soak pits located at some distance from the source.
- Leakage and bursts in pipelines should be attended to immediately.
- Pit taps should not be permitted in the distribution.

- Sand quarrying in riverbeds near the infiltration / collector wells can affect the water source.
- It is the duty of every citizen to extend necessary help for the protection of public drinking water systems in their neighbourhood.

### Protected Borewell

### Protection of Domestic Water Sources

- Open wells and storage tanks in the houses should be provided with cover slabs and kept in closed condition.
- Overhead tanks and sumps should be periodically cleaned. After cleaning, the inner walls may be coated with lime to prevent algal growth.
- Periodical desilting may be required for open wells.
- Culturing some local varieties offish (like Katla Katla) in wells can avoid breeding of insects and larvae.
- Bleaching powder at a dosage level of 2.0 g /1000 litres of water may be added daily to overhead tanks. When fish is not cultured, the same dosage level may be applied to wells once in a week in normal seasons and daily during rainy seasons.
- The best method of disinfection is to boil, cool and filter the water. This has to be followed particularly during rainy seasons. Addition of bleaching powder is not necessary if the water is boiled and used.
- Water filters (reliable brands) available in the market may be used; however, proper

maintenance and cleaning is necessary. The filters will be useful for removal of turbidity and suspended matter.

- The units available in the filter have the following functions :

Silver / Iodine / UV light - disinfection. Micro filters / candles - removal of suspended matter. Activated Carbon - removal of odour and taste. Above all, good hygienic practice should be followed by every individual.

#### Abstraction Rate and Water Quality

- Water quality can be improved by reduced rate of pumping even though the pumping period is increased. Smaller capacity pump, which is operated more continuously rather than a larger pump operated at infrequent intervals, can help for improvement of water quality. By this practice, incrustation in pipes can also be minimized.

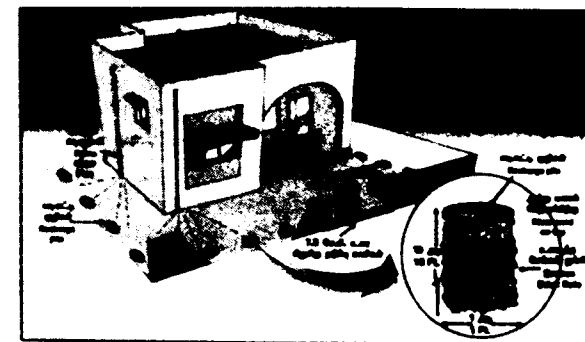
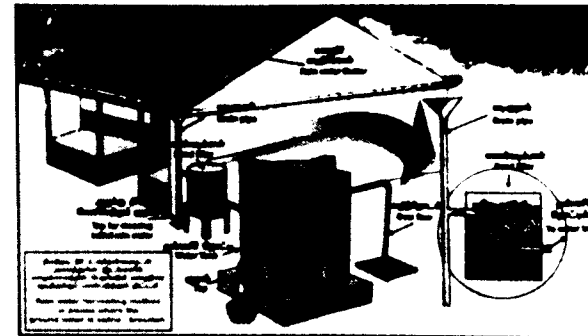
#### Rain Water Harvesting and Quality Improvement

Due to over abstraction of water, water quality deteriorates and the quantity also depletes. It is necessary that all private and public buildings including individual houses should be provided with rainwater harvesting structures.

Rainwater harvesting can be done either by roof water harvesting or harvesting of surface run-off. The roof harvested rainwater may be directly collected or may be used to recharge the wells / bore wells.

- Recharging of water source by rainwater harvesting can improve the quality of water.

- Quality of rainwater will not deteriorate on standing.



- Rain water may be blended with ordinary water (4 parts rain water+1 part ordinary water) and can be used for drinking after disinfection.

#### Behaviours for Better Hygiene

##### Water Source

- Water sources should be protected from contamination from nearby latrines, wastewater drainage, cattle wastes or agricultural run-off.
- For drinking and cooking only safe water sources should be used.

- Use of adequate water for latrine, bathing, household cleaning and clothe washing can ensure better hygiene.
- Waste water should be disposed off safely.

#### Water Treatment

- Disinfection should be invariably included as one of the processes in treatment.
- A filter system will always be useful for removal of suspended material, worms and other micro organisms.

#### Water Collection and Storage

- Water for drinking should be collected and stored in clean vessels without getting into contact with hands and other materials.
- Water should be stored in vessels that are covered and regularly cleaned.
- Drinking water should be stored in separate containers and water for other uses should be stored separately.

#### Drinking Water

- Drinking water should be taken from the storage vessel without touching by hands or contaminated vessels or objects.

#### Water Use

- Better water quality and sanitation facilities can have positive impact on health only when there is appropriate behaviour for use of water.
- Adequate amounts of water should be available and used for personal and domestic hygiene (it is estimated that a minimum of 30 to 40 litres per person per day are needed for personal and domestic hygiene).

#### Food handling

- Hands should be washed with soap before food is prepared or eaten.
- Vegetables and fruits should be washed with safe water, and food after preparation should be properly covered.

#### Excreta disposal

- All men, women and children should use latrines at home, at work and at school.
- The stools of infants and young children should be safely disposed off.
- Household latrines should be sited in such a way that the pit contents do not enter water sources or ground water table.
- Latrines should be regularly cleaned.
- Hand should be always washed with soap after defecation and after helping babies and small children for the same.

#### Community Hygiene

- The community water supply systems should be properly protected and used.
- Leakage in pipelines should be attended to immediately.
- Defecation in open places should be prevented.
- Stagnation of water, dumping of solid waste, open defecation, bathing, clothe washing, cattle washing etc. should not be allowed near hand pumps, wells and public fountains.
- Tying the cattle around/near hand pumps, public fountains and overhead tanks should be avoided. The cattle dung and

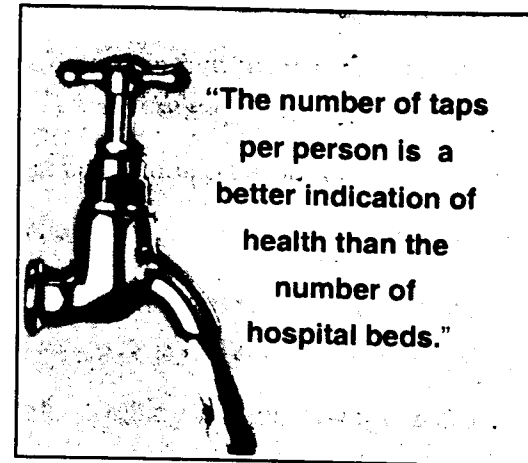
cattle urine should not get access to the water source.

### Water Testing

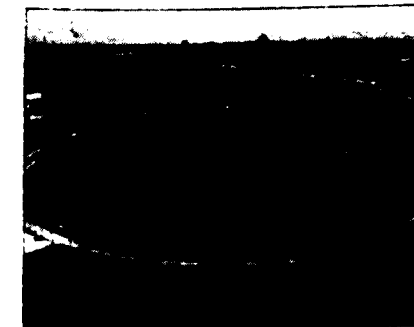
- 'Fecal coliform' test can indicate the level of safety of water with respect to hygiene and sanitation.
- The water for fecal coliform test should be collected in pre-sterilized bottles supplied by a lab.

### Addresses of TWAD Board's Water Testing Laboratories :

- No. 31, Kamarajar Salai, Chepauk, Chennai - 600 005. Ph.: (044) 28412098
- No. 14, Mettu Street, Periakuppam, near Tiruvallur Railway Station, Tiruvallur - 602 001.
- No. 5, Kottampalayam Street, Kancheepuram - 631 501. Ph.:(04112) 225449.
- Opp. to Muthu Mandapam, Old Katpadi Road, Vellore - 632 004. Ph.: (0416) 2215168
- No. 189/2, Kanchi Road, Vengikkal, Tiruvannamalai. Ph.: (04175) 232300.
- IB Campus, Salem Main Road, Collectorate Post, Oddapatty, Dharmapuri - 636 705. Ph. : (04342) 221533.
- Netaji Street, Next to Collector's Camp Bungalow, Cuddalore - 607 002. Ph.: (04142) 221528.
- Veeranam Illam, G.S.T. Road. Tindivanam - 604 002.
- Near OHT. North Palpannaichery, Nagoor - 611 002. Ph.: (04365) 251011.
- Perumal Koil North Street, Madappuram, Thiruvavur. Ph.: (04366) 220138.
- Elizanagar Service Reservoir, Near Sarafoji College, Thanjavur - 631 005. Ph. : (04362) 227387.
- Santhaipettai, North Gate. Pudukottai. Ph.: (04322) 222428.
- Bharathidasan Salai, Behind TWAD Board Inspection Bungalow, Tiruchy - 620 001. Ph. : (0431) 2400868.
- Uma Illam, Vadakkutheru, Thurai mangalam, Perambalur - 621 212. Ph.: (04328) 225250.
- No. 20/2, Pugalur Road, Kamadhenu Nagar, Karur - 639 006. Ph.: (04324) 221455.
- Anbu Nagar, Gorimedu Post, Salem - 636 008. Ph.: (0427) 2405687.
- No. 5E, Gandhi Nagar, Mohanur Road, Namakkal - 637 002. Ph.: (04286) 220281.
- Jaouli Nagar, Near Suriyampalayam Town Panchayat Office, Ramanathapuram Pudur Post, Erode - 638 005. Ph.: (0424) 234594.



### Water Treatment Technologies



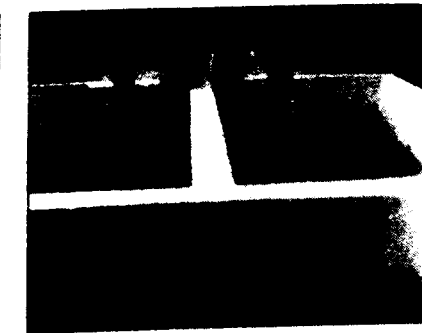
Conventional Treatment Plant



Desalination (RO membrane)



Defluoridation Plant



Iron removal Plant

- Siruvani Nagar Campus, No. 2, Bharathi Park Road, Coimbatore - 641 043. Ph.: (0422) 2437863.
- Sewage Treatment Plant, Kandal, Uthagamandalam. Ph.: (0423) 252465.
- Ganesh Nagar, Near Law College Students' Hostel, Melur Road, Madurai - 625 007. Ph.: (0452) 2583633.
- No. 62, Anna Nagar, 1st Floor, Dindigul - 624 005. Ph.: (0451) 2429867.
- No. 5, Madurai Main Road, Kunoor, Theni - 625 531. Ph.: (04546) 253893.
- Flat No. AI, Housing Board, Collector's Office Complex, Sethupathy Nagar, Ramanathapuram - 628 503. Ph.: (04567) 232219.
- Weekly Market, Municipal Building, Sivagangai - 623 561. Ph. : (04575) 243178.
- No. 1/4389, R.V.R. Nagar, Mallankinaru Road, Virudhunagar - 626 002. Ph.: (04562) 2346159.
- 20 MGD Treatment Plant, Manjaneerkayal, (via) Palayakayal, Tuticorin District - 628 152. Ph.: (04630) 2475224
- Seevalaperi Road, Adjacent to TWAD Board Circle Office, Tirunelveli - 627 002. Ph. : (0462) 2542576.
- No. 6, Vellala Colony (West), Ramavarmapuram, Nagercoil - 629 001. Ph. : (04652) 2229898.

TWAD Board

### Important slogans about Water

- Water Quality for better health.
- Water is life, if pure.
- Water is precious; water quality is more precious.
- Appearance, taste and odour alone do not decide the quality of water.
- Life depends on water, water depends on purity.
- Water is...the world's most precious resource.
- Boiling the water is the best way of disinfection.
- Boiling cannot remove the salts from water.
- High fluoride in water causes dental and skeletal fluorosis.
- Nitrate causes blue baby disease - mother's feeding prevents it.
- Right dose of a substance differentiates it from a poison and remedy.
- For healthy and happy life ensure water quality.
- Good sanitation is the first measure to protect the water.
- Protection of water sources prevents you from diseases.
- Clean water is our friend; impure water is our enemy.
- Test water atleast twice a year.
- 'TDS' is an indicator to judge the basic quality of water.
- Certain chemicals in water are carcinogenic.
- Water may cause corrosion, scaling and slime formation.
- Pesticides have adverse effects in foe and friend alike.
- Storing, settling and filtering can purify turbid water.
- Test water to lengthen your life.
- We do not know the value of water till the well is dry.



**T**he Environmental Management agency is entrusted with the implementation of major projects like pollution abatement in the river Cauvery, Vaigai and Tamiraparani; Pollution abatement in Chennai City waterways; National Lake Conservation Programme and all aspects of Environment other than those dealt with by Tamil Nadu Pollution Control Board.

Recycling of solid and liquid wastes, bio-composting, rainwater harvesting, tree planting, etc., are important in achieving environmental conservation. Environmental conservation requires attitudinal change and generation of awareness among the people. This is best done by infusing these ideals in the young minds of school children.

- Implementation of National River Conservation Plan, for the abatement of pollution in River Cauvery, Vaigai and Tamiraparani and Chennai city waterways.

- Implementation of National Lake Conservation Programme for the abatement of pollution in the selected lakes
- To carry out various environmental awareness programmes through National Green Corps and Eco-Clubs
- To enforce the provisions of the Coastal Regulation Zone Notification.
- To provide web-based information through Environmental Information System (ENVIS) on the Status of Environment Tamil Nadu, the Biodiversity profile and the status of river cleaning activities in the state.
- To deal with all aspects of environment other than those dealt with by Tamil Nadu Pollution Control Board from time to time.

Environment Management Agency is effectively monitoring the implementation works carried out under National River Conservation Programme, National Lake Conservation Programme. EMAT is having their headquarters at Chennai and Tiruchirapalli. The "Environment Management Agency" will monitor the project works of Chennai City Waterways, besides projects at Madurai, Tirunelveli, Rameswaram, Erode, Thanjavur, Kumbakonam, Karur and Mayiladuthurai besides abatement of pollution in river Cauvery. The functions and advantages of the Environment Management Agency are as Follows:

#### Functions:

- Implementation of River Cleaning Programmes under NRCP.
- Liaison with National River Conservation Directorate, MoEF and Gol and get funds from Government of India Projects.
- Co-ordinate with Tamil Nadu Water supply and Drainage Board, CMWSSB/ Municipalities/ Corporations/ NGO's in the implementation of ongoing schemes.
- Implementation of new lake conservation programme under National Lake Conservation Project.
- Coastal Zone Conservation,
- Implementation of Environmental Awareness Programmes in Schools with NGO's.

#### Advantages:

- Effective implementation of Environment agenda of DoE such as abatement of pollution.
- To attract more funds from Gol.
- Being an autonomous Agency it will facilitate more effective net working with the Government and Non Governmental Agencies.

#### I. Combating desertification of land

Desertification of land is a major environmental problem, which has direct impact on the livelihood of the inhabitants by way of declining food output, adverse environmental and socio-economic conditions. "Desertification" can be termed as a process by which the productive potential of the soil and vegetation they support gets reduced at a fixed level of inputs. The main factors responsible for desertification are wind erosion, runoff induced erosion, increase in soil salinity etc. The major concern related to desertification is the loss of natural ability of renewable resources to renew themselves and thereby impairing the livelihood security of the people in the area. Desertification also leads to scarcity of drinking water and reduction in irrigation potential.

Tamil Nadu has about 3.7 million ha. of lands under various stages of degradation. The main areas in the districts of Ramanathapuram, Erode, Theni, Sivagangai

and Nagapattinam face this problem. Initially, a pilot project is proposed to be taken up in Ramanathapuram district, which will include Oasis Plantation for stabilization of sand dunes, construction of check dams and percolation ponds for soil and moisture. The scheme will also involve planting of legumes and grasses to support animal husbandry in these areas. This project may become a model for tackling larger areas in future under the "United Nation Convention for Combating Desertification Programme".

#### II. Eco-city plan for Tiruvannamalai

The Eco-city concept is comprehensive to make cities economically vibrant, socially equitable and environmentally supportive. In this direction the first task is to translate this conceptional framework into "Environmental

Management Plan" (EMP). This will lead to preparation of implementable, time bound action plan in respect of towns and cities. The overall objective of the programme is to incorporate environment considerations into Urban Planning and prepare an Environmental Management Plan for improving the quality of environment.

The objective of the programme is to map the environmental profile of study area and to identify the environmental pollution hotspots. Preparation of environmental management plan includes rehabilitation and mitigation measures and to recommend guidelines for environmentally compatible land use planning. Tiruvannamalai, being a temple city attracting lot of tourists, special emphasis must be given to the carrying capacity of the city.



### III. Aesthetic Amelioration of Temple Hillock at Palani

Reversal of loss of ecology has been included as one of the components under Tenth Five Year Plan. There are number of temples located on the top of hillocks in Tamil Nadu. Most of these hillocks are barren. Similarly most of the compostible waste generated in the temple premises and its environs is not being put to proper use at present. This could be composted and used as manure in the process of revegetation. The sullage water could also be used for watering the saplings. Better environmental management of the surrounding areas of the temple is also warranted. This will be undertaken in coordination with the local body and Hindu Religious and Charitable Endowment department. The Environmental Management of the temple premises and its environs will include establishment of a "Nandavanam" comprising of flowering trees and shrubs of relevance to the temple hillock. This will include planting of "Sthalavriksham" viz. Kadamba (Anthocaphalas cadamba) or temple trees of the Palani temple, planting of tree saplings and construction of stone wall tree guards, application of manure prepared from the locally available solid waste, etc. Sowing of hardy legumes and grasses will also assist early eco restoration. Few mini check dams will be constructed for soil and moisture conservation and for providing water to the planted saplings. Deepening and desilting of the existing temple tank will also be taken up. A pilot project has already been undertaken in Sholingur Temple in Vellore District.

### IV. Eco-restoration plan for selected lakes in Chennai City

There are about forty six lakes in Chennai city. Most of these lakes are polluted with sewage and garbage and are environmentally degraded. Being in and around the city, these lakes are also prone for encroachment. Chennai being a water scarce city, the eco-restoration of these lakes will go a long way in augmenting the water requirements of the city and also will be recharging the dwindling ground water table. During the monsoon season the residential areas around these lake areas get inundated due to blockages in the natural drains to the lakes. In order to alleviate these problems, a comprehensive eco-restoration plan for selected city lakes is proposed to be formulated.

### V. Greening of Sholingur temple hillock

Aesthetic amelioration of Sholingur Temple Hillock in Vellore district was carried out as a Pilot project by the Forest Department with the participation of HR&CE Department. Planting of tree saplings and legumes such as "Stylo", planting of "Sthalavriksham", establishment of "Nandavanam" were taken up in 50 ha. Afforestation of over 50 ha, maintenance of greenery already planted and desilting of the temple tank at the foothills and creating a Nandavanam around it are proposed to be taken up.

Source: <http://www.tn.nic.in>

# FIRE

## AND SAFETY TIPS

### Fire Rescue Services

★ The motto of Fire Rescue Service is: "We Serve to Save". To achieve this motto, it is always our endeavour to go promptly to the spot of fire or other accidents and strive to save life and property.

★ To endeavour to prevent fire accidents by spreading fire-safety awareness.

★ To rescue people affected by floods, earthquake or other natural calamities.



★ To provide standby fire-safety arrangements at large gatherings and important public and private functions by charging a nominal amount for the service rendered.

★ To provide Ambulance service for rushing the sick and the injured to hospital. Services specially requisitioned for this purpose are given at a nominal charge for the service rendered.

★ To educate and train people in fire prevention and fire-fighting in order to reduce risk by fire.



★ To promote voluntarism in fire - prevention and fire - fighting by promoting the growth of the Safety Volunteers Organisation.

★ To strive for attainment of the highest peaks of professional excellence. For this purpose, build up a climate conducive to exchange experiences and discussions within the Department.

#### WHAT TO DO IN CASE OF FIRE ?

| Type of fire              | What to do                                                                                                                                                                                                                                                                                             |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| On wood, paper or clothes | - Pour water.<br>- Cover thick woolen cloth.                                                                                                                                                                                                                                                           |
| On oil in a frying        | - Shut out the heat source and cover the pan with a lid.                                                                                                                                                                                                                                               |
| Electric fire             | - Switch off the main and put sand on the fire.                                                                                                                                                                                                                                                        |
| Big fire                  | - Raise an alarm and run out of the house immediately.<br>- Do not wait to collect your possessions.<br>- Never hide inside a bed or in a cupboard.<br>- If you are in a multi-storied building use the stairs to run down and do not use the lift.<br>- Call the fire brigade (It is a FREE SERVICE). |

#### FIRE SAFETY IN HOMES AND OTHER PLACES

##### KITCHEN :

Usage of match boxes :

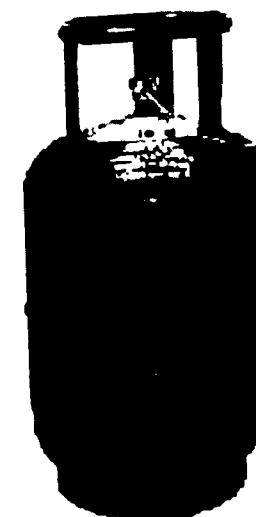
★ Strike matches away from the body.



- ★ Keep a lighted match ready before turning the knob of a gas burner.
- ★ Stoves should be placed on a raised platform and not on the ground.
- ★ Connect only one electric plug in a socket.
- ★ Storage shelves should be away from the burner so that you do not have to lean over the flame to fetch the items.
- ★ Never play with children or allow children to play in the kitchen.
- ★ Do not keep a lighted stove or burner near a gas cylinder.
- ★ Always close the regulator when the gas is not used.
- ★ Replace the rubber tubes regularly, so that it does not leak.
- ★ Never place the cylinder in a horizontal position. Keep it vertical.
- ★ Good house keeping with proper arrangement of furniture, vessels and kitchen arrangements itself is a good fire safety measure.

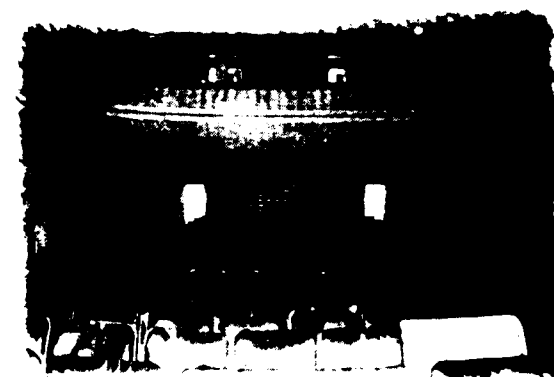
#### In case of a gas leak from the LPG Cylinder :

- ★ Do not take any naked flame or allow a spark if you smell a gas leak.
- ★ Do not operate any electrical switch.
- ★ Open the doors and windows and allow the gas to escape (LPG is heavier than air and so it tends to settle down on the ground or floor level).
- ★ If it is possible, try to remove the leaking cylinder to a safe and open place, so that the gas goes out and escapes.



#### In case of a fire in a Cinema Hall :

- ★ When you enter the auditorium, check where the normal exits and where the emergency exits are.
- ★ Rush out as soon as possible, through the exits and reach a place of safety.



- ★ Do not panic.
- ★ If there is smoke, lie on the floor as smoke is usually lighter than air and tends to float.
- ★ Use the stairs while running down.
- ★ Do not smoke in the auditorium, toilet, refreshment halls, etc.
- ★ See where the fire extinguishers are and use them to put out the fire.

#### Safety tips against fire in Hotels:

- ★ Ask the porter / room boy about the ordinary as well as emergency passages, particularly the escape routes in the event of fire.
- ★ Find out the nearest escape route from your room.
- ★ Carrying and using liquids which are inflammable constitute fire hazard.
- ★ Electrical equipment must not be adjusted or altered without the permission of the management.
- ★ Do not smoke in the bed.
- ★ In case you smell smoke, raise an alarm.
- ★ On the outbreak of fire, do not panic. You may sometimes be safer in your room.
- ★ Leave the hotel by the staircase.
- ★ Do not walk through smoke, but crawl on the floor and keep moving along the wall on the exit side.
- ★ Read fire safety instructions / fire plan, if available.

Source : <http://www.tnfrs.tn.nic.in/>

# ROAD SAFETY

The increase in the number of accidents is mainly due to non observance of traffic rules by drivers and carelessness and negligence on the part of road users. It is also due to enormous increase in the number of vehicles on road.

## Road Safety Council

A Road Safety Council has been established under Section 215 of Motor Vehicles Act, 1988. The Chief Minister is the Chairman of this Committee. District Road Safety Councils have also been constituted for each district under the Chairmanship of the Collector. These Councils discuss measures to reduce accidents and make their suggestions to Government. These Committees are to meet atleast once in three months.

## Road Safety Commissioner

During the year 2000, the Government of Tamil Nadu has nominated the Transport Commissioner as Road Safety Commissioner for the State to co-ordinate the different departments/agencies directly and indirectly involved in the road safety programme. The Road Safety Commissioner performs the following functions: -

- i) Advise the Government on road safety policies to be followed in the State;

- ii) Implement the decisions of the State Road Safety Council;
- iii) Oversee the functioning of District Road Safety Councils;
- iv) Collect and analyse statistics relating to road accidents, take up case studies and identify causes for accidents. Identify accident-prone spots and take up measures through the relevant agency to improve safety. Recommend and monitor implementation of engineering measures to improve road conditions. Take up measures like installing traffic lights, providing road medians where necessary etc.
- v) Consider better methods of training and testing of drivers and prepare instructional material; take up strong road safety education campaigns to educate drivers, passengers, pedestrians, cyclists and other road users. Campaigns should be designed for specific target audiences and should be large enough to convey the message effectively.
- vi) Organise facilities to inform drivers in advance about traffic diversions due to accidents, damage to road due to floods or other causes. Monitor working of the Highways patrol and arrangements for clearing the highway after an accident;

- vii) Coordinate the work of Non-Government Organisations engaged in road safety. Consider suggestions received from members and others to improve road safety and take appropriate action after due deliberations.
- viii) Suggest and recommend specific schemes for financial assistance under Road Safety Fund.
- ix) Speed up relief to accident victims available under the Government Schemes and cases pending in the Motor Vehicles Accident Tribunals.
- x) Coordinate the activities of the Pollution Control Board, Police and Transport Departments in the matter of controlling vehicle pollution besides creating awareness about the danger of pollution among road users.

Further to ensure effective coordination between various agencies, the Road Safety Commissioner will conduct periodical meeting with the heads of department of Police, Civil Supplies, Highways (both National Highways and Highways and Rural works Departments), Transport Corporations, Pollution Control Board, Local Bodies, besides Non-Government Officials and other experts in the field.

## Road Safety Fund

Government have created a Road Safety Fund during the year 2000 to fund Road Safety Activities. Allocations will be made to the fund from Compounding Fees and Spot Fines collected by Transport and Police Departments. The fund will be administered by a Committee chaired by the Home Secretary.

## Relief to Victims of Accidents Compensation by the vehicle owner causing the accident

The Motor Vehicles Act 1988 has provisions for payment of compensation to victims of road accidents or their legal heirs, by the owner of the vehicle which caused the accident or his insurer. Under the Act, the State Government have constituted Motor Accident Claims Tribunals, Section 166 of the Act prescribes the procedure for claiming compensation which will be determined by the Tribunal under Section 168 taking note of responsibility for the accident, the damage suffered, age of the victim, his income and other relevant factors.

## No fault liability

For speedy disposal of the claims, the Act provides for payment of certain amounts without the need to prove the fault of the vehicle owner. Section 140 of the Act provides that compensation of Rs.50,000/- shall be paid to the victim's family in case of death. Similarly an amount of Rs.25,000/- shall be paid to the victim in case, he is a permanently disabled. Compensation under Section 140 has to be claimed before the Motor Accidents Claims Tribunal, (MACT). The amount awarded under Section 140 will be adjusted out of the total compensation to be paid in due course under Section 168.

## Structured formula:

Section 163 A provides a structured formula for determining the compensation. The Claimant can claim either under Section 140 or under Section 163.B before the Motor Accidents Claims Tribunal, (MACT).

### Hit and Run cases

Section 161, 163 and Appendix III of the Motor Vehicles Act provide for payment of compensation of Rs.25,000/- in case of death and Rs.12,500/- in case of grievous hurt due to a hit and run accident. The amount shall be paid by one of the General Insurance Companies nominated by the General Insurance Corporation of India for each district. In our State the United India Insurance Corporation has been nominated for all districts. Claim in such cases has to be preferred to the Taluk Tahsildar.

### Duty of Police Officer

Any Police Officer not below the rank of a Sub-Inspector of Police, who is entrusted with the investigation of the motor vehicles accident, shall, without waiting for the result of the investigation or prosecution and as expeditiously as possible get an application in Forms I and II appended to these rules from the party injured in the accident or all or any of the legal representatives of the deceased, as the case may be, and forward the same to the Claims Tribunal, who shall treat it an application for the purpose of Section 140 and 166 of the Act. The said Police Officer shall also gather full particulars of Insurance Certificate in respect of the motor vehicle involved in the accident and furnish them to the injured party or to the legal representatives of the deceased. The party concerned shall, before the Tribunal passes the award, pay the fee prescribed.

Court fee for compensation of Rs.1,00,000/- is only Rs.372.50 and for more than one lakh, it is Rs.372.50 plus one percent of the remaining claim amount. Thus the court fee payable is very nominal.

An officer investigating into an accident shall, after a case is registered forward copies of the First Information Report relating to the accident to (i) the Claims Tribunal having jurisdiction; and (ii) the President of the District Committee for Legal Aid and Advice concerned constituted by the TamilNadu State Legal Aid and Advice Board.

An officer investigating into an accident shall, immediately after an accident is registered, also furnish the particulars to the nearest Legal Aid Committee or Centre constituted by the Tamil Nadu State Legal Aid and Advice Board. One can file claim for compensation under Section 166 of the Motor Vehicle Act at the place of his residence or at the place where accident took place.

### Gratuitous relief by the Government of Tamil Nadu

Government of TamilNadu have a scheme called the 'Chief Minister's Accident Relief Fund'. Under this Scheme, relief is provided to victims of road accidents or their families on the following scale

|    |                             |             |
|----|-----------------------------|-------------|
| 1. | Death                       | Rs.10,000/- |
| 2. | Total Disability            | Rs. 6,000/- |
| 3  | Loss of one eye or one limb | Rs. 4,000/- |
| 4. | Other cases                 | Rs. 500/-   |

Under this scheme, no application is required. Immediately after an accident, the Deputy Superintendent of Police will send a report to the Revenue Divisional Officer listing the details of the accident, the victims and the fatality or nature of injury. The Revenue Divisional Officer will sanction relief as per the

above scale. This scheme is intended to provide immediate relief to the victims of road accidents, even before they can receive statutory compensation under the Act. The amount granted under this scheme will not be set off against the compensation awarded by the Motor Accidents Claims Tribunal, (MACT).

In addition, families of persons who die in accidents involving State Transport Undertaking buses are considered for relief at Rs.50,000/- per case of death under the Chief Minister's Relief Fund. Orders are passed by Government on a case to case basis depending on the tragic circumstances of the accident. The amount of Rs.10,000/- awarded by the Revenue Divisional officer will be adjusted out of the sum of Rs.50,000/- sanctioned by Government.

### Highway Patrol:

Highway patrol force will be reorganised by integrity with traffic accident post and

linking with Emergency Accident Relief Centres. 80 stretches have been identified for Highway Patrol with 160 teams by the Police department and a concurrent team to co-ordinate with the Highway Patrol Team is being formed.

### Emergency Accident Relief Centres

To provide immediate medical attention to the accident victims on major highways in Tamil Nadu Government has set up Emergency Accident Relief Centre at a gap of each 50 km on all the National Highways in the state. These centers can be conducted by dialing the toll free number 1033 from any landline phone near the accident spot. A fully equipped ambulance with a trained paramedic is always on stand by to respond to such calls. Victims are transported to the nearest hospitals free of charge.

### II Location of Functional EARCs

### III Proposed Locations

### LOCATION OF FUNCTIONAL EMERGENCY ACCIDENT RELIEF CENTRES

| Sl.No | NH & Km      | Location      | Sponsoring Hospital                         |
|-------|--------------|---------------|---------------------------------------------|
| 1     | NH 45 64/8   | Mamandoor     | Miot Hospital, Chennai                      |
| 2     | NH 4, 44/4   | Sriperumbudur | Appollo Hospital, Chennai                   |
| 3.    | NH 46, 132/2 | Rathinagiri   | Rathinagiri Rural Hospital, Rathinagiri     |
| 4.    | NH 7, 88/5   | Krishnagiri   | Gokulam Hospital, Salem                     |
| 5.    | NH 7, 49/2   | Hosur         | Kovai Medical Centre & Hospital, Coimbatore |
| 6.    | NH 4, 124/8  | Thiruvallam   | Sundaram Medical Foundation, Chennai        |
| 7.    | NH 45, 261/8 | Perambalur    | Kaveri Medical Centre, Trichy.              |

| Sl.No | NH & Km                | Location      | Sponsoring Hospital                       |
|-------|------------------------|---------------|-------------------------------------------|
| 8.    | NH 45, 213/0           | Iranchi       | Kaveri Medical Centre, Trichy             |
| 9.    | NH 45, 114/0           | Saram         | Miot Hospital, Chennai-89                 |
| 10.   | NH 4, 99/0             | Kaveripakkam  | Ramu Nursing Home, Walajapet              |
| 11.   | NH 46, 96/8            | Pallikonda    | Christian Medical College, Vellore.       |
| 12.   | NH 46, 46/2            | Puthukovil    | Bethesta Hospital, Ambur                  |
| 13.   | NH 45, 164/8           | Villupuram    | Jayasankara Mission Hospital, Villupuram. |
| 14    | Pamman                 | NH 47, 599/0  | Manju Nursing Home, Marthandam            |
| 15    | Kayathar               | NH 7, 122/4   | Sundaram Arul Raj Hospital, Tuticorin     |
| 16    | Vagaikulam             | NH 7A, 32/0   | Sundaram Raul Raj Hospital Tuticorin      |
| 17    | Eppothumvendran        | NH 45B, 232/8 | Sundaram Raul Raj Hospital Tuticorin      |
| 18    | Kasipalayam            | NH 7, 348/2   | City Hospital, Dindigul                   |
| 19    | Pushpagiri             | NH 7, 382/2   | City Hospital, Dindigul                   |
| 20    | Paravai                | NH 7, 433/0   | Vadamalaiyan Hospital                     |
| 21    | Thirumangalam          | NH 7, 29/0    | Jawahar Hospital, Madurai                 |
| 22    | Manamadurai            | NH 49         | Jawahar Hospital, Madurai                 |
| 23    | Melur                  | NH 45 B, 97/2 | Meenakshi Mission Hospital, Madurai       |
| 24    | Thricampuliyur (Karur) | NH 67, 218/2  | Amaravathi Nurshing Home, Karur           |
| 25    | Walayar                | NH 47, 181/6  | Ganga Hospital, Coimbatore                |
| 26    | Karumathampatti        | NH 47, 127/2  | United Hospital, Coimbatore               |
| 27    | Perundurai             | NH 47, 82/0   | Lotus Hospital, Erode                     |
| 28    | Sulur,                 | NH 67, 326/8  | KG Hospital, Coimbatore                   |
| 29    | Echanari               | NH 209, 149/0 | Abiharami Hospital, Coimbatore            |

| Sl.No | NH & Km               | Location            | Sponsoring Hospital                     |
|-------|-----------------------|---------------------|-----------------------------------------|
| 30    | Kottaram              | NH 47, 648/0        | Dr. Jeyasekaran Hospital, Nagercoil     |
| 31    | Valliyur              | NH 7, 189/8         | Dr. Thiravium Hospital, Nagercoil       |
| 32    | Sathur                | NH 7, 73/0          | Pamaprabha Hospital, Kovilpatti         |
| 33    | Andipatti             | NH 49 Extension,    | 56/2 Seva Nilayam Trust, Andipatti      |
| 34    | Ramanathapuram        | NH-49, 104/6        | Syed Ammal Trust, Ramanathapuram        |
| 35    | Kamalapuram           | NH-7, 184/5         | Shanmuga Hospital, Salem                |
| 36    | Kattukottai           | NH-68, 58/4         | SKS, Hospital, Salem.                   |
| 37    | Valapadi              | NH-68, 28/4         | SPMM Hospital, Salem                    |
| 38    | Sivagripettai         | NH-209, 52/8        | KV Hospital, Palani                     |
| 39    | Singarampettai        | NH -66, 158/2       | S.S. Hospital Harur                     |
| 40    | Aralvaimozhi          | NH -7, SH Jn        | Dr. Thiraviam Hospital, Nagercoil       |
| 41    | Pandiyan Nagar        | NH-208, 181/8       | Jawahar Trauma Care Centre, Rajapalayam |
| 42    | Sathyamangalam        | NH-209, 226/4       | Satyamangalam Peoples Association       |
| 43    | Kottur (Theni-Kumili) | NH-210, 88/8        | Mani Trust, Theni                       |
| 44    | Kulithalai            | NH -67, 175/0       | I.S. Nurshing Home, Karur               |
| 45    | Kovilpatti            | NH 45-B, 39/2       | Maruthi Hospital, Trichy                |
| 46    | Sankagiri             | NH 47, 85/0         | M/s Lotus Hospital, Erode               |
| 47    | Cholavaram            | NH 5, 22/6          | M/s DRJ Hospital, Chennai               |
| 48    | P.K.Akram             | NH 45, 290/4,       | M/s Maruthi Hospital, Trichy            |
| 49    | NH 45, 311/8          | Tollgate            | Kaveri Medical Centre, Trichy           |
| 50    | NH 68, 100/2          | Kallakurichi        | Vijaya Poly Clinic, Kallakurichi        |
| 51    | NH 210, 46/5          | Pudukottai (Mathur) | ABC Hospital, Trichy                    |

| Sl.No | NH & Km            | Location                                         | Sponsoring Hospital                                       |
|-------|--------------------|--------------------------------------------------|-----------------------------------------------------------|
| 52    | NH 67, 111/6       | Thuvakudi (Pudukottai)                           | ABC Hospital, Trichy                                      |
| 53    | NH 7, 131/4        | Gundalapatti                                     | Ohm Sakthi Hospital, Dharmapuri                           |
| 54    | NH 45 A(Extn)101/1 | Thambikku Nallan Pattinum                        | M/s Annamalai Univercity, Chidambaram                     |
| 55    | NH 45 A, 307/6     | Panankuppam                                      | M/s Jaisankara Mission Hospital, Villupuram               |
| 56    | NH 205, 32/5       | Palayanur                                        | M/s Sridevi Hospital, Chennai-107                         |
| 57    | NH7, 228/3         | Andagalur gate (Muthalaipatti)                   | Surya Hospital, Namakkal                                  |
| 58    | NH 66, 59/6        | Shervilagam Village 10 Km before Gingee          | M/s Mercy Medical Trust, Villupuram                       |
| 59    | NH 5, 35/0         | Paramattiveur                                    | M/s C.M.Hospital,Namakkal                                 |
| 60    | SH 363/2 Km        | Coimbatore-Mettupalayam (Periyamayacken palayam) | M/s K.G.Hospital, Coimbatore                              |
| 61    | NH4, 307/0         | Poonamallee                                      | M/s Sri Devi Hospital Chennai-107                         |
| 62    | NH 45,383/8        | Vadamadurai pirivu                               | Kaveri Medical Centre, Trichy                             |
| 63    | NH 45, 190/0       | Pandalkudi                                       | M/s Padmaprabha Hospital Kovilpatti                       |
| 64    | NH 67,8/0          | Aliyur                                           | Indian Para Medical collage, (Akarakodamalur)nagapattinam |
| 65    | NH 45A,151/0       | Akkur (NH 45 A near Myladuthurai)                | M/s Kalaimahal Para Medical College, Kumbakonam           |
| 66    | NH 67, 100/2       | Anthiyur                                         | M/s J.B.Hospital, Pollachi                                |
| 67    | NH 67,265/4        | Olāpalayam                                       | Maruthi Medical Centre, Erode-11                          |
| 68    | NH 209,183/6       | Telugupalayam (Kariyam Palayam)                  | M/s Kovai medical Centre & Hospital, Coimbatore           |

| Sl.No | NH & Km      | Location                                 | Sponsoring Hospital                      |
|-------|--------------|------------------------------------------|------------------------------------------|
| 69    | NH 49,24/0   | Karumattur (Usilampatti)                 | M/s Appollo Hospital, Madurai            |
| 70    | SH 67,27/7   | Tuticorin-Thiruchendur Road, (Sakupuram) | M/s Sundaram Arulraj Hospital, Tuticorin |
| 71    | SH 36, 64/6  | Theni –Periyakulam Road(Lashimipuram)    | M/s Sairam Hospital, Periyakulam         |
| 72    | SH 36, 15/4  | Chellayeeapuram                          | M/s Raja Rajeeswari Home Dindigul        |
| 73    | NH 67, 89/0  | Thanjavur                                | M/s Arun Memorial Trust Tanjavore        |
| 74    | NH 45, 32/0  | Penkalathur (near Vandalur)              | M/s.Sri Devi Hospital, Chennai – 107     |
| 75    | NH 209, 13/2 | Reddiyarchatram (Dindigul)               | M/s.J.J.Hospital, Dindigul.              |

#### PROPOSED LOCATIONS

| Sl.No | NH & Km                   | Location                                               | Sponsoring Hospital                     |
|-------|---------------------------|--------------------------------------------------------|-----------------------------------------|
| 1     | Tenersampattu             | 98/8, NH 66                                            | M/s.LIONS CLUB, Thiruvannamalai         |
| 2     | Avinachipalayam           | NH 67 Extn (Tiruppur – Palladam – Tharapuram Junction) | M/s.KMCH Hospital, Coimbatore           |
| 3     | Mandapam                  | NH 49, 152/0                                           | M/s.Vedanta Clinic                      |
| 4     | Devakottai                | NH 210, 99/2                                           | Visweswaraya Health Centre, Karaikudi   |
| 5     | Chintamani                | NH 208, 131/1                                          | Jawahar Trauma Care Centre, Rajapalayam |
| 6     | Salaipudur                | NH 209, 24/2                                           | City Hospital, Dindigul                 |
| 7     | Thalaiyuthu (near Palani) | NH 209, 69/0                                           | Priya Hospital, Palani                  |

Source : [www.tn.gov.in/sta/roads.htm](http://www.tn.gov.in/sta/roads.htm)

| Sl.No | NH & Km            | Location                                         | Sponsoring Hospital                                       |
|-------|--------------------|--------------------------------------------------|-----------------------------------------------------------|
| 52    | NH 67, 111/6       | Thuvakudi (Pudukottai)                           | ABC Hospital, Trichy                                      |
| 53    | NH 7, 131/4        | Gundalapatti                                     | Ohm Sakthi Hospital, Dharmapuri                           |
| 54    | NH 45 A(Extn)101/1 | Thambikku Nallan Pattinum                        | M/s Annamalai Univercity, Chidambaram                     |
| 55    | NH 45 A, 307/6     | Panankuppam                                      | M/s Jaisankara Mission Hospital, Villupuram               |
| 56    | NH 205, 32/5       | Palayanur                                        | M/s Sridevi Hospital, Chennai-107                         |
| 57    | NH7, 228/3         | Andagalur gate (Muthalaipatti)                   | Surya Hospital, Namakkal                                  |
| 58    | NH 66, 59/6        | Shervilagam Village 10 Km before Gingee          | M/s Mercy Medical Trust, Villupuram                       |
| 59    | NH 5, 35/0         | Paramattiveur                                    | M/s C.M.Hospital,Namakkal                                 |
| 60    | SH 363/2 Km        | Coimbatore-Mettupalayam (Periyanayacken palayam) | M/s K.G.Hospital, Coimbatore                              |
| 61    | NH4, 307/0         | Poonamallee                                      | M/s Sri Devi Hospital Chennai-107                         |
| 62    | NH 45,383/8        | Vadamadurai pirivu                               | Kaveri Medical Centre, Trichy                             |
| 63    | NH 45, 190/0       | Pandalkudi                                       | M/s Padmaprabha Hospital Kovilpatti                       |
| 64    | NH 67,8/0          | Aliyur                                           | Indian Para Medical collage, (Akarakodamalur)nagapattinam |
| 65    | NH 45A,151/0       | Akkur (NH 45 A near Myladuthurai)                | M/s Kalaimahal Para Medical College, Kumbakonam           |
| 66    | NH 67, 100/2       | Anthiyur                                         | M/s J.B.Hospital, Pollachi                                |
| 67    | NH 67,265/4        | Olapalayam                                       | Maruthi Medical Centre, Erode-11                          |
| 68    | NH 209,183/6       | Telugupalayam (Kariyam Palayam)                  | M/s Kovai medical Centre & Hospital, Coimbatore           |

| Sl.No | NH & Km      | Location                                 | Sponsoring Hospital                      |
|-------|--------------|------------------------------------------|------------------------------------------|
| 69    | NH 49,24/0   | Karumattur (Usilampatti)                 | M/s Appollo Hospital, Madurai            |
| 70    | SH 67,27/7   | Tuticorin-Thiruchendur Road, (Sakupuram) | M/s Sundaram Arulraj Hospital, Tuticorin |
| 71    | SH 36, 64/6  | Theni -Periyakulam Road(Lashimipuram)    | M/s Sairam Hospital, Periyakulam         |
| 72    | SH 36, 15/4  | Chellayeeapuram                          | M/s Raja Rajeeswari Home Dindigul        |
| 73    | NH 67, 89/0  | Thanjavur                                | M/s Arun Memorial Trust Tanjavore        |
| 74    | NH 45, 32/0  | Penkalathur (near Vandalur)              | M/s.Sri Devi Hospital, Chennai - 107     |
| 75    | NH 209, 13/2 | Reddiyarchatram (Dindigul)               | M/s.J.J.Hospital, Dindigul.              |

#### PROPOSED LOCATIONS

| Sl.No | NH & Km                   | Location                                               | Sponsoring Hospital                     |
|-------|---------------------------|--------------------------------------------------------|-----------------------------------------|
| 1     | Tenersampattu             | 98/8, NH 66                                            | M/s.LIONS CLUB, Thiruvannamalai         |
| 2     | Avinachipalayam           | NH 67 Extn (Tiruppur - Palladam - Tharapuram Junction) | M/s.KMCH Hospital, Coimbatore           |
| 3     | Mandapam                  | NH 49, 152/0                                           | M/s.Vedanta Clinic                      |
| 4     | Devakottai                | NH 210, 99/2                                           | Visweswaraya Health Centre, Karaikudi   |
| 5     | Chintamani                | NH 208, 131/1                                          | Jawahar Trauma Care Centre, Rajapalayam |
| 6     | Salaipudur                | NH 209, 24/2                                           | City Hospital, Dindigul                 |
| 7     | Thalaiyuthu (near Palani) | NH 209, 69/0                                           | Priya Hospital, Palani                  |

Source : [www.tn.gov.in/sta/roads.htm](http://www.tn.gov.in/sta/roads.htm)

# TAMIL NADU TOURISM

## - A PROUD CULTURAL HERITAGE

### CHENNAI

Chennai, once a fishing village is now a sprawling metropolis and the capital of Tamil Nadu. Places to see include



Marina Beach - Chennai

Fort St. George, a former bastion of the British East India Company presently housing the Tamil Nadu State Legislature and the Secretariat; Marina, the second longest beach in the world, Anna and M.G.R. Memorials, Santhome Cathedral Basilica, a magnificent cathedral built over the tomb of St. Thomas; Planetarium & Theosophical Society, located on the banks of River Adyar founded by Annie Besant, Olcott and Blavatsky, the world head quarters of the Society of All Faith; Kalakshetra, where Bharatha Natyam and other classical dances of India are taught; National Deer Park, which includes a Children's Park and a Reptilium located within the metropolitan city;

Vandalur Zoo, Memorials to national leaders like Mahatma Gandhi, Kamaraj and Rajaji; Valluvar Kottam, built in memory of Saint Thiruvalluvar, who wrote the world famous couplets -

Thirukkural; Kapaleeswarar Temple, a fine example of Dravidian temple architecture dedicated to Lord Siva; Museum & Art Gallery, one of the oldest in the country, housing a superb collection of bronzes, etc. ACCESS: Chennai is well connected to all major cities in India, by road and rail. It is also a major port. As an international airport, Chennai is served by leading international airlines.

### KANCHEEPURAM

The city of thousand temples - Kancheepuram is one of the seven sacred



Kailasanathar Koil - Kancheepuram

cities of India. A former capital of the Pallavas, it is famous for its exquisitely woven silk sarees. Places to see include Ekambareshwarar Temple, Varadaraja Swamy Temple, Vaikundaperumal Temple, Kamakoti Mutt, Kailasanathar Temple, Kamakshi Amman Temple and the home of silk fabric weavers. ACCESS : Chennai, (70 kms) is the nearest airport and regular bus and rail services are available.

Accommodation: Hotel Tamil Nadu.

### MAMALLAPURAM

Once a flourishing port of the Pallavas of ancient India, this monument centre is today renowned as a major beach resort/holiday centre in South India. Places to see include the Shore Temple, the Five Rathas, Arjuna's



Penance and the Tiger's Cave. About 14 kms. north is a crocodile farm and 17 kms. west is Thirukazhukkundram, a pilgrim centre, known for its holy kites. There are boating facilities at Muttukkadu backwaters midway between Chennai and Mamallapuram. On the way to Mamallapuram, amusement parks viz, VGP Golden Beach, Little Folks and M.G.M. Dizzy World are situated. ACCESS : Nearest Airport at Chennai (50 kms). Nearest railway station is Chengalpattu on 34 kms. Chennai-Trichy section.

Accommodation : TTDC Beach Resort Complex.

### TIRUCHIRAPALLI

Tiruchirapalli is known for its Rock Fort Temple at a height of over 83 metres. Other renowned temples are Sri Ranganathaswamy Temple (Srirangam) the Siva Temple at Tiruvanaikaval and Samayapuram Mariamman Temple. Worthwhile excursions include Narthamalai, Sithannavasal, Kudumiyanmalai, Kodumbalur famous for their ancient monuments and Jain caves with intricate wall paintings. Grand Anicut, across the Cauvery river, built by the Chola King Karikalan in 2nd Century A.D. is an engineering marvel and a fine picnic spot. Avudaiyarkoil (110 kms) away, is known for its life-size sculptures. Mukkombu (20 kms) is another picnic spot. Viralmalai (28 kms) is famous for its Murugan Temple and Peacock Sanctuary. ACCESS : Tiruchi has an airport served by Air Lanka and Indian Airlines. Tiruchi is 320 kms. from Chennai on the National Highway. The town is also an important railway junction on Southern Railway. Daily express buses connect it with other major towns.

Accommodation: Hotel Tamil Nadu.



Tiruchirapalli

### CHETTINAD

Chettinad is the home of the enterprising Chettiar community. Chettinad is famous for its palaces and mansions and lip smacking food. Palaces and mansions surround this region. The palaces and mansions reflect a conglomeration of architecture and building styles. Burma teak motif, handmade tiles, stained glass windows, elaborate chandeliers and intricate carpentry are all unique ingredients of Chettinad mansions. Every home is an architectural splendour. **ACCESS:** A 80 Kms drive from Madurai, Karaikudi the main town has extensive bus and railway services.

**Accommodation:** 'The Bangla' guesthouse and other hotels in Karaikudi.

### COURTALLAM

Courtallam the 'Spa of the South' is situated at an elevation of 167 mts. in the Western Ghats. This is a popular health resort. Its waterfalls are known for their curative properties. Its bracing climate extends particularly from June to September. Excursions: Tiruchendur Murugan Temple (120 kms), Tirunelveli (65 kms), Krishnapuram (81 kms) Tenkasi (6 kms) and the Mundanthurai

Tiger Sanctuary (75 kms). Pleasure boat services available. **ACCESS:** Madurai (160 kms.) is the nearest airport; Tenkasi (6 kms) the nearest railhead. Regular bus services are available from other towns.

**Accommodation :** Hotel Tamil Nadu .

### KANNIYAKUMARI

Another famous pilgrim centre situated at the land's end of India, at the confluence of the Indian Ocean, the Bay of Bengal and the Arabian Sea. Places to see : The Kumari Amman Temple, the

Colossal 133 foot tall Tiruvalluvar Statue, Gandhi Memorial, the Beach and the Vivekananda Memorial. Nearby excursions include Suchindram Temple with musical pillars (13 kms), the palace and museum at Padmanabhapuram (32 kms.) the circular fort (Vattakottai) (6 kms.) and the Nagaraja Temple, Nagercoil (19 kms). **ACCESS:** Thiruvananthapuram (89 kms.) is the nearest airport. Kanniyakumari is the railway terminus on the Thiruvananthapuram Kanniyakumari section of the Southern Railway. Regular bus services are also available from other places.

**Accommodation:** Hotel Tamil Nadu & Youth Hostel.

### MADURAI

Once the capital city of Pandyas, Madurai is the second largest city in Tamil Nadu. It is famous for the Meenakshi Temple with its towering gopurams and rare sculptures. Other important attractions include Thirumalai Naicker Palace, Mariamman Tank, Koodal Azhagar Temple and the Gandhi Museum. Nearby excursions include the Murugan Temple at Thirupparankundram (8 kms.) Lord Azhagar Temple at Azhagarkoil (21 kms.) and Lord Subramanya Temple at Solaimalai



Meenakshi Amman Koil - Madurai

Mandapam (25 kms.) above Lord Azhagar Temple on a hillock; the Palani Temple (122 kms.), the Suruli Waterfalls (128 kms.), Courtallam Waterfalls (160 kms.) and Vaigai Dam (68 kms.) Across the border, in Kerala state, is the famous Periyar Wildlife Sanctuary (146 kms.). **ACCESS:** Madurai has an airport and is an important railway junction. It is also linked by excellent road network and served by express buses.

**Accommodation :** Hotel Tamil Nadu Unit I & Unit II.

### KODAIKANAL

Kodaikanal is one of India's most beautiful hill stations located at an altitude of 2133 mts. (7,000 feet) frequented by tourists in large numbers throughout the year. **PLACES OF INTEREST** include Bryant Park, Pillar Rocks, Lake, Solar Observatory, Perumal Peak, Silver Cascade, Telescope House at Coaker's Walk and Kurinji Andavar Temple, Bear Shola Falls, Berijam Lake, Museum and Orchidarium at Sacred Heart College, Shenbaganur. Very good trek routes are available. **ACCESS :** Madurai (120 Kms.) is the nearest airport and Kodai Road (80 kms.), the nearest railway station. Regular bus services to Madurai and other towns available.

**Accommodation:** Hotel Tamil Nadu & Youth Hostel.

### RAMESWARAM

One of the most sacred towns of India, it is well known for its temple corridor, the longest of its kind, the Bathing Ghat, Ganthamathana Parvatham, Kothandaramar temple, Kurusadai and other nearby islands. **ACCESS:** Madurai (173 kms.) is the nearest airport. Rail and Road links are available. **Accommodation:** Hotel Tamil Nadu.

### MUDUMALAI

This is a famous Wildlife Sanctuary located at a distance of 67 kms. from Ooty. Coimbatore is the nearest airport. Regular bus services are available. The nearest railhead is Udhagamandalam. The wildlife includes elephant, guar, tiger, panther, sambar, spotted deer, wild boar, bison, porcupine, etc. The avifauna is varied with minivets, horn bills, fairy blue birds, jungle fowl, flying lizard etc.

The Bandipur Wildlife Sanctuary (Karnataka) and the Wynad Wildlife Sanctuary (Kerala) abutting the Mudumalai Wildlife Sanctuary.

### UDHAGAMANDALAM

Popularly referred to as "Queen of Hill Stations", Ooty (Udhagamandalam) is located at a height of 2,286 mts. (7,500 feet). Popular tourist attractions include the Botanical Gardens, Lake, Doddabetta, Mukurti Peak, the Pykara Dam and sprawling tea plantations. Trek routes are available. TTDC has telescope house at Doddabetta. Mudumalai Wildlife Sanctuary is 60 kms. from here. Kotagiri is 29 kms. from here. Coonoor is located 19 kms. on Ooty - Coimbatore Road. **ACCESS:** Coimbatore (98 kms) is the nearest airport. Ooty and Coonoor are connected by mountain railway to Mettupalayam, a journey, that is a truly memorable experience. Regular bus services are available.

**Accommodation:** TTDC's Hotel Tamil Nadu.

## YERCAUD

Located in the Shervaroyan Hills in Salem District, Yercaud is a hill station visited by tourists, throughout the year. Altitude 1500 mts. (5000 feet). Places of Interest include the Lake, Anna Park, Orchidarium, Lady's Seat, Pagoda Point, Bear's Cave and the Shervaroyan Temple. ACCESS : Tiruchi (169 kms.) is the nearest airport. Salem junction (35 kms) is the nearest railhead. Regular bus services from Salem is available.

Accommodation : Hotel Tamil Nadu / Youth Hostel.

## HOGENAKKAL

A health resort known for its waterfalls with medicinal properties, Hogenakkal is set amidst lush green woods. 'Parisal' (a boat made of palm fibre) ride through River Cauvery will be a pleasant experience. Bangalore is the nearest airport, Dharmapuri is the nearest rail head on the Bangalore-Salem route. (130 kms.), Chennai is 350 kms. from here. Accommodation: Hotel Tamil Nadu / Youth Hostel.

Tours conducted by Tamil Nadu Tourism Development Corporation.

### 1) Chennai City Sight- Seeing Tour

Morning & Evening on all days from 8.00 a.m. to 1.00 p.m. and from 1.30 p.m. to 6.30 p.m.

### 2) Mamallapuram Tour (Round Trip)

On all days : Time 6:30 a.m. to 7:00p.m.  
**Places Covered:** Kancheepuram, Mamallapuram, Muttukadu Boat House and VGP Golden Beach.

### 3) Thirupati Tour (Day Trip)

Monday to Friday. Dep: 6.10 a.m. Arrl. on the same day after Darshan. By 11 pm.

**Places Covered :** Thirupati, Thirumala, Thiruchanur.

### 4) Thiruvannamalai Girivalam

Leaves Chennai every full moon day at 10.00 a.m. / 2.00 p.m. and return on the next day 6.00 a.m.

### 5) One Day Thiruthani - Kalahasti Tour

On every Sunday, Time 6.30 a.m. to 9.00 p.m.

**Places Covered :** Tiruthani - Nallathor (Anjaneyar) - Mathur (Mahishasuramardhini) - Kalahasti (Raghu Kala Pooja).



Hogenakkal

### 6) One Day Pondicherry Tour

On all days: From 6.30 a.m. to 9.00 p.m.  
**Places Covered :** Sri Aurobindo Ashram - Boating at Mudaliar Kuppam. Museum - Beach - Auroville.

### 7) 3 Days Navagraha Tour

Leaves Chennai every Friday at 10.30 p.m. and return on the following Monday by 5.00 a.m.

**Places Covered :** Vaitheeswaran Koil (Angaraha-Mars), Thiruvenkadu, (Budha-Mercury), Keezhperumpallam (Kethu), Thirunallaru (Sani - Saturn), Afangudi

Thirunageswaram (Raghu) Surianar Kovil (Surya-Sun) and Kanchanur (Sukra Venus).

### 8) 4 Days Arupadai Veedu Tour

Leaves Chennai on every Thursday at 7.00 a.m. and return by 10.00 p.m. on Sunday.

**Places Covered :** Thiruttani, Swamimalai, Thanjavur, Thiruchendur, Madurai, Solai Malai Mandapam, Thiruparankundram, Palani.

### 9) 6 Days South India Tour

Leaves Chennai every Saturday at 7.00 a.m. and return on the following Thursday by 5.00 p.m.

**Places Covered :** Bangalore, Hosur, Shrirangapatna, Brindhavan Gardens, Mysore, Mudumalai Wildlife Sanctuary, Udhagamandalam (Ooty), Perur Temple, Marudhamalai, Coimbatore, Hogenakkal, Thiruvannamalai.

### 10) 7 Days Andhra Tour

Leaves Chennai every Friday at 7.00 a.m. and return on the following Thursday by 8.00 p.m.

**Places Covered :** Narayanavanam, Konai Falls, Sri Kalahasthi, Nellore, Vijayawada, Mangalagiri, Hyderabad, Nagarjuna Sagar Dam, Srisailam and Nandyal.

### 11) 7 Days Mookambika Tour

Leaves Chennai every Sunday at 7.00 a.m. and return on the following Saturday by 6.00 p.m.

**Places Covered :** Bangalore, Hosur, Sharavanabelagola, Belur, Haleibed, Hassan, Sringeri, Mookambikai (Kollur), Udippi, Dharmastala, Subramanya, Mysore, Hogenakkal.

### 12) 8 Days Goa- Manthralayam Tour

Leaves Chennai every Saturday at 7.00 a.m. and return on the following Saturday by 8.00 p.m.

**Places Covered :** Ahobilam, Nandyal, Mahanandi, Srisailam, Manthralayam, Hampi, Hospet, Goa, Bangalore.

### 13) 8 Days Tamil Nadu Tour

Leaves Chennai every Saturday at 7.00 a.m. and return on the following Saturday by 6.00 p.m.

**Places Covered :** Pondicherry, Pitchavaram, Chidambaram, Vaitheesvarankoil, Nagore, Velankanni, Mannargudi, Thanjavur, Rameswaram, Kanniyakumari, Suchindram, Madurai, Kodaikanal, Tiruchirapalli.

### 14) 8 Days East -West Coast Tour

Leaves Chennai every Wednesday at 7.00 a.m. and return on the following Wednesday by 6.00 p.m.

**Places Covered :** Thiruvannamalai, Yercaud, Marudhamalai, Coimbatore, Guruvayur, Kaladi, Cochin, Alleppey, Thiruvananthapuram, Kovalam, Suchindram, Kanniyakumari, Courtallam, Madurai, Tiruchirapalli and Melmaruvathur.

### 15) 14 Days Sunny South Tour

Leaves Chennai at 7.00 am every Wednesday and return on the 14th day evening.

**Places Covered :** Thiruthani, Thirupathi, Thiruchanoor, Bangalore, Hosur, Mysore, Mudumalai Wildlife Sanctuary, Ooty, Marudhamalai, Coimbatore, Guruvayur, Cochin, Kovalam, Thiruvananthapuram, Suchindram, Kanniyakumari, Tiruchendur, Rameswaram, Thiruparankundram, Madurai, Palani, Tiruchirapalli, Thanjavur, Swamimalai, Poompuhar, Chidambaram, Pondicherry, Mamallapuram, Kancheepuram.

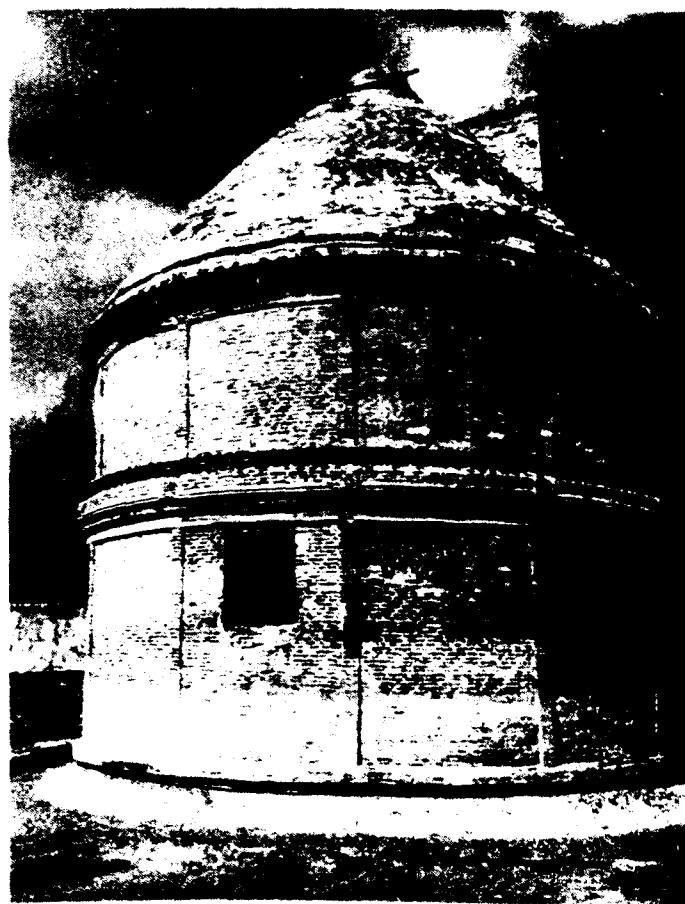
\* \* \*

Source : Department of Tourism,  
Government of Tamil Nadu.

# ANTIQUITIES

India is rich in its cultural heritage. Its civilization dates back to pre-historic age. Especially, Tamil Nadu is famous for its beautiful temples and richness in its antiquities like aesthetic bronze idols.

Generally antiquities can be classified as bronzes, stone sculptures, copper plates, paintings, coins and Terra-cottas figurines. Archaeological excavations have also yielded a variety of antiquities. Some antiquities are found as accidental findings as well as treasure trove. Some are noticed and some are



Giant Granary, Thanjavur

vanishing without any evidence out of the country.

## ACTIVITIES OF THE STATE DEPARTMENT OF ARCHAEOLOGY

The State Department of Archaeology was started in the year 1961 with the objectives of conservation and preservation of Ancient Monuments in Tamil Nadu and to conduct excavations at Historical sites. Subsequently its activities were expanded to include Epigraphy (copying and deciphering of stone inscriptions, printing and publishing them in book form) setting up of site Museums, Chemical preservation of art objects and Registration of Antiquities etc.

This is essentially a research department and aims to disseminate knowledge about Tamil Nadu's ancient cultural heritage through combination of field work, analysis and publications.

The department has 8 field offices, 14 site museums and a library with more than 11,000 books. The Government Oriental Manuscripts Library Research Centre is at University of Madras premises. Chemical laboratories at Chennai and Madurai, Photography section, printing section besides the Institute of Epigraphy are other branches of this department.



Brahmi Inscription Tiruvadavur

Various kinds of activities that are undertaken in different sections of this research oriented department are narrated below:-

### EPIGRAPHY WING:

The primary function of Epigraphy wing is to copy inscriptions found on boulders, stone pillars, hero stones, temple walls and on copper plates. The inscriptions are deciphered, edited and published. As many as 20,000 inscriptions are found in Tamil Nadu state alone. It is to be mentioned that in all India level, Tamil Nadu has maximum number of inscriptions.

An Intensive Campaign of copying of inscriptions was launched by this department about two years back. So far this department has copied 16,220 inscriptions and 2,968 inscriptions are edited and printed in modern characters.

Generally inscriptions are found inscribed in Tamil-Brahmi, Vattezhuthu script and Tamil characters. The scripts Nagari and Grantha are used for Sanskrit inscriptions. In addition,

inscriptions in Telugu, Kannada, Malayalam. Latin and English languages are also found in Tamil Nadu. Inscriptions are also found on coins, bronze idols, temple utensils and on musical instruments.

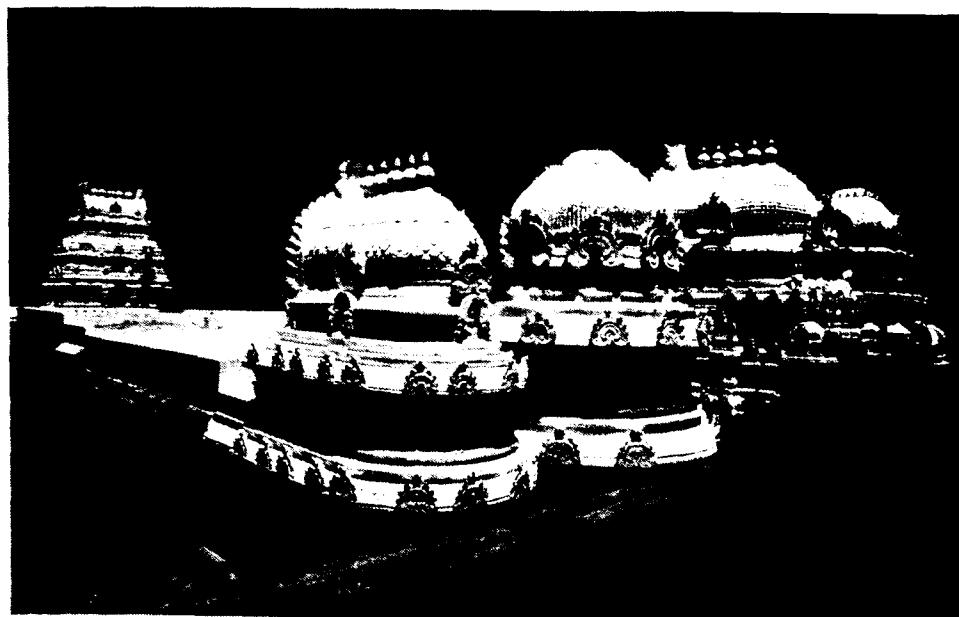
### EXCAVATION

The department identifies and carries out excavations at historically important sites. It has so far excavated 27 sites and

unearthed various artifacts. Geological study of the excavated area is also studied. Some of the excavated sites have been converted into the site museums. Under water Archaeological survey has been carried out in coordination with National Institute of Oceanography, Goa in four phases and a ship wreck and other important artifacts were found in Poompuhar region of Nagapattinam district. Excavations were carried out at Andipatti (Thiruvannamalai district) and Modur (Dharmapuri district) in the year 2005. The artifacts found in the excavations were



Terracotta - Bull - Andipatti



View of Jain Temple - 14th Century - Tirupparuthikundram - Kancheepuram

displayed for the benefit of public and to get opinion from experts.

During the current year, 2005-06 excavations at Parikulam in Tiruvallur district and at Marakkanam in Villupuram district have been started and the work is under progress.

#### SITE MUSEUMS

In all, there are 14 Archaeological site Museums opened mainly to create Archaeological awareness among the public especially heritage lovers. The excavated antiquities that are available in that area are exhibited in the site Museums.

To understand the Pre-History of Tamil Nadu as a whole and the Palaeolithic age in particular, the department has established a site Museum at Poondi for the benefit of the public, students and scholars. It is the only museum of its kind in India featuring the Pre-Historic heritage of this region.

The palace remains of chola period exposed during excavation at Gangaikonda cholapuram are preserved in site. The site museums are also located in Tirumalai Naicker Mahal, Madurai, Thanjavur Mahratta palace, Ramalingavilasam palace, Ramanathapuram and Tranquebar Danish Fort. Action is being taken to develop some of the Museums as 'Thematic Museums'. For example Epigraphy(Madurai), Chera history (Karur), Ancient Industries(Coimbatore), Islamic Culture (Arcot), Painting (Ramanathapuram), Under water Archaeology(Poompuhar), Hero stones (Dharmapuri) and Folk Art(Courtallam) are some of the Thematic Museums under development

#### MONUMENTS

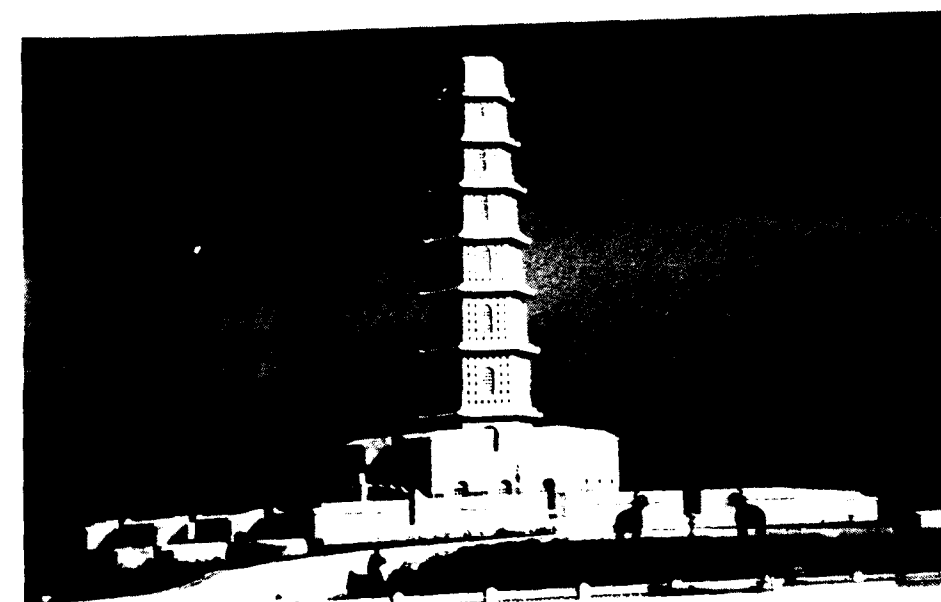
To preserve the regional history of Tamil Nadu, the department of Archaeology is protecting 87 Monuments spread all over the state. These monuments which contain historical inscriptions or have architectural

and artistic value, throw light on our ancient heritage. They provide cherishable wealth of information for the reconstruction of the state's history. The monuments are classified as Rock paintings, Tamil-Brahmi inscriptions, Temples, Palaces, Forts, Tanks and memorial buildings.

Under Eleventh Finance Commission grant, 26 monuments were preserved without

#### PHOTOGRAPHY SECTION

This section has photographed various temples, sculptures, murals and other antiquities. The various stages of excavations and all the excavated sites have been photographed. The conservation work of monuments has also been photographed and documented. From last year estampages of inscriptions, palm leaf manuscripts and other



Memorial Pillar - Maratha Period 18th Century - Manora

any change in its original form by adopting archaeological principles of conservation.

#### REGISTRATION OF ANTIQUITIES

The Government of India has enacted "The Antiquities and Art Treasures Act 1972" in order to curb the smuggling of Art treasures from India. This scheme is being implemented in Tamil Nadu from the year 1974. Till date 41,503 antiquities have been registered and certificates issued in Tamil Nadu. It is a matter of pride that Tamil Nadu stands first in the country in issuing registration certificates.

Archaeological works are digitized and documented with the help of computers. Till date 4,375 estampages and 3,471 palm leaf manuscripts have been digitized in this scheme.

#### CHEMICAL CONSERVATION SECTION

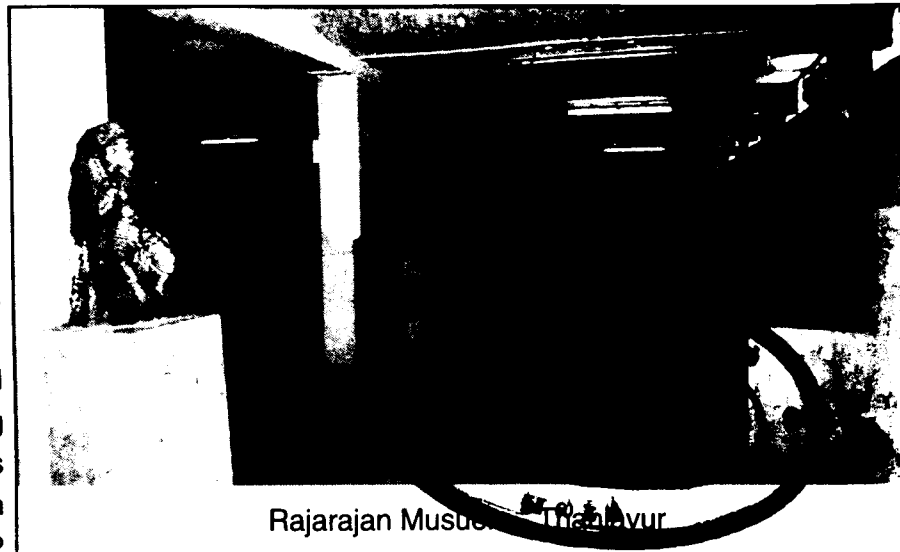
Antiquities are being cleaned and preserved by the chemical wing of this department located at Chennai and Madurai. The chemists are visiting periodically, cleaning and preserving the antiquities kept in the site Museums.

The departmental press is exclusively bringing out books on epigraphy, excavation reports, District Archaeological guides and about monuments. A quarterly journal 'Kalvettu' is also being printed; so far 68 issues have been published. In the last two years, 22

**INSTITUTE OF EPIGRAPHY**

The department of Archaeology has been recognized during the year 2003 as a centre for doing research in history and archaeology; the degree of Ph.D, will be awarded by the University of Madras. Some staffs are guiding Ph.D students.

**This is a treasure house of ancient knowledge housing 50,180 palm leaf manuscripts and 26,556 rare printed books. This library is the repository of rare manuscripts and books in various languages such as Tamil, Sanskrit, Telugu, Kannada, Marathi.**



Rajarajan Museum, Thiruvannamalai

Urdu, Arabic and Persian etc. covering subjects such as Mathematics, Astronomy, Siddha, Ayurveda, Unani, Veda, Agama, Architecture, Music, Fine Arts, History and many others. The splendid library with its treasure of collections in the world of rare, original palm leaf manuscripts numbering more than 72,000 has brought out more than 450 publications in south Indian languages, Sanskrit, Urdu, Arabic, Persian and Marathi languages.

To create awareness among students, public and heritage lovers 'heritage week' is organised every year in the month of November.

Thus the state department has carried out an active role to conserve our cultural heritage and to preserve them for posterity.

**Thiru. T.S.Sridhar I.A.S**  
**Special Commissioner**  
**Department of Archaeology**  
**Government of Tamil Nadu**  
**Chennai - 8.**

\* \* \*

|                              |      |                             |      |                               |       |                                  |       |                                 |       |
|------------------------------|------|-----------------------------|------|-------------------------------|-------|----------------------------------|-------|---------------------------------|-------|
| <b>1. CHENNAI DIST.</b>      |      | <b>6. VILLUPPURAM DIST.</b> |      | <b>12. COIMBATORE DIST.</b>   |       | <b>18. KARUR DIST.</b>           |       | <b>25. SIVAGANGA DIST.</b>      |       |
| 1. Royapuram                 | [1]  | 53. Melmalayanur            | [53] | 101. Mettupalayam             | [101] | 151. Aravakurichi                | [151] | 194. Tirupattur                 | [194] |
| 2. Harbour                   | [2]  | 54. Gingee                  | [54] | 102. Avanashi (SC)            | [102] | 152. Karur                       | [152] | 195. Karaikudi                  | [195] |
| 3. Dr. Radhakrishnan Nagar   | [3]  | 55. Tindivanam              | [55] | 103. Thondamuthur             | [103] | 153. Krishnarayapuram (SC)       | [153] | 196. Ilayangudi                 | [197] |
| 4. Park Town                 | [4]  | 56. Vanur (SC)              | [56] | 104. Singanallur              | [104] | 154. Kulithalai                  | [155] | 197. Sivaganga                  | [198] |
| 5. Perambur (SC)             | [5]  | 57. Kandanallur (SC)        | [57] | 105. Coimbatore (West)        | [105] | <b>19. PERAMBALUR DIST.</b>      |       | 198. Manamadurai (SC)           | [199] |
| 6. Purasawalkam              | [6]  | 58. Villupuram              | [58] | 106. Coimbatore (East)        | [106] | 155. Perambalur (SC)             | [160] | <b>26. RAMANATHAPURAM DIST.</b> |       |
| 7. Egmore (SC)               | [7]  | 59. Mugaiyur                | [59] | 107. Perur                    | [107] | 156. Varahur (SC)                | [161] | 199. Tiruvadanai                | [196] |
| 8. Anna Nagar                | [8]  | 60. Thirunavalur            | [60] | 108. Kinathukkadavu           | [108] | 157. Ariyalur                    | [162] | 200. Paramakudi (SC)            | [200] |
| 9. Theagarayanagar           | [9]  | 61. Ulundurpet (SC)         | [61] | 109. Pollachi                 | [109] | 158. Andimadam                   | [163] | 201. Ramanathapuram             | [201] |
| 10. Thousand Lights          | [10] | 62. Fishivandiam            | [71] | 110. Valparai (SC)            | [110] | 159. Jayankondam                 | [164] | 202. Kadaladi                   | [202] |
| 11. Chepauk                  | [11] | 63. Chinnasalem             | [72] | 111. Udumalpet                | [111] | <b>20. TIRUCHIRAPPALLI DIST.</b> |       | 203. Mudukulathur               | [203] |
| 12. Triplicane               | [12] | 64. Sankarapuram            | [73] | 112. Dharapuram (SC)          | [112] | 160. Marungapuri                 | [154] | <b>27. VIRUDHUNAGAR DIST.</b>   |       |
| 13. Mylapore                 | [13] | <b>7. CUDDALORE DIST.</b>   |      | 113. Pongalur                 | [113] | 161. Thottiam                    | [156] | 204. Aruppukottai               | [204] |
| 14. Saidapet                 | [14] | 65. Nellikuppam             | [62] | 114. Palladam                 | [114] | 162. Uppiliapuram (ST)           | [157] | 205. Sattur                     | [205] |
| <b>2. TIRUVALLUR DIST.</b>   |      | 66. Cuddalore               | [63] | 115. Tiruppur                 | [115] | 163. Musiri                      | [158] | 206. Virudhunagar               | [206] |
| 15. Gummidipundi             | [15] | 67. Panruti                 | [64] | <b>12. ERODE DIST.</b>        |       | 164. Lalgudi                     | [159] | 207. Sivakasi                   | [207] |
| 16. Ponneri (SC)             | [16] | 68. Kunnipadi               | [65] | 116. Vellakoil                | [113] | 165. Srirangam                   | [165] | 208. Srivilliputhur             | [208] |
| 17. Thiruvottiyur            | [17] | 69. Bhuvanagin              | [66] | 117. Kangayam                 | [117] | 166. Tiruchirappalli-1           | [166] | 209. Rajapalayam (SC)           | [209] |
| 18. Villivakkam              | [18] | 70. Kattumannar             | [67] | 118. Modakunchi               | [118] | 167. Tiruchirappalli-2           | [167] | <b>28. TOOTHUKUDI DIST.</b>     |       |
| 19. Poonamallee              | [28] | 71. Chidambaram             | [68] | 119. Perundurai               | [119] | 168. Thiruverambur               | [168] | 210. Vilathikulam               | [210] |
| 20. Tiruvallur               | [29] | 72. Vndhachalam             | [69] | 120. Erode                    | [120] | <b>21. NAGAPATTINAM DIST.</b>    |       | 211. Ottapidaram (SC)           | [211] |
| 21. Tiruttani                | [30] | 73. Mangalore (SC)          | [70] | 121. Bhavani                  | [121] | 169. Sirkali (SC)                | [169] | 212. Koilpatti                  | [212] |
| 22. Pallipet                 | [31] | <b>8. KRISHNAGIRI DIST.</b> |      | 122. Andhiyur (SC)            | [122] | 170. Poompuhar                   | [170] | 213. Sattankulam                | [224] |
| <b>3. KANCHEEPURAM DIST.</b> |      | 74. Hosur                   | [74] | 123. Gobichettipalayam        | [123] | 171. Mayiladuturai               | [171] | 214. Tiruchendur                | [225] |
| 23. Alandur                  | [19] | 75. Thali                   | [75] | 124. Bhavanisagar             | [124] | 172. Kuttalam                    | [172] | 215. Srivaikuntam               | [226] |
| 24. Tambaram                 | [20] | 76. Kavenpattinam           | [76] | 125. Sathyamangalam           | [125] | 173. Nagapattinam                | [175] | 216. Toothukudi                 | [227] |
| 25. Tiruppur (SC)            | [21] | 77. Krishnagin              | [77] | <b>14. THE NILGIRIS DIST.</b> |       | 174. Vedaranyam                  | [176] | <b>29. TIRUNELVELI DIST.</b>    |       |
| 26. Chengalpattu             | [22] | 78. Bargur                  | [78] | 126. Coonoor (SC)             | [126] | <b>22. THIRUVARUR DIST.</b>      |       | 217. Sankaranayanar             | [213] |
| 27. Maduranthakam            | [23] | <b>9. DHARMAPURI DIST.</b>  |      | 127. Ootacamund               | [127] | 175. Nannilam (SC)               | [173] | Koil (SC)                       |       |
| 28. Acharapakkam (SC)        | [24] | 79. Harur (SC)              | [79] | 128. Gudalur                  | [128] | 176. Tiruvarur (SC)              | [174] | 218. Vasudevanallur (SC)        | [214] |
| 29. Uthiramerur              | [25] | 80. Morappur                | [80] | <b>15. DINDIGUL DIST.</b>     |       | 177. Tiruthuraiipoondi (SC)      | [177] | 219. Kadayannallur              | [215] |
| 30. Kancheepuram             | [26] | 81. Palacode                | [81] | 129. Palani (SC)              | [129] | 178. Mannargudi                  | [178] | 220. Tenkasi                    | [216] |
| 31. Sriperumbudur (SC)       | [27] | 82. Dharmapuri              | [82] | 130. Oddanchatram             | [130] | <b>23. THANJAVUR DIST.</b>       |       | 221. Alangulam                  | [217] |
| <b>4. VELLORE DIST.</b>      |      | 83. Pennagaram              | [83] | 131. Nilakottai (SC)          | [131] | 179. Pattukkottai                | [1    |                                 |       |

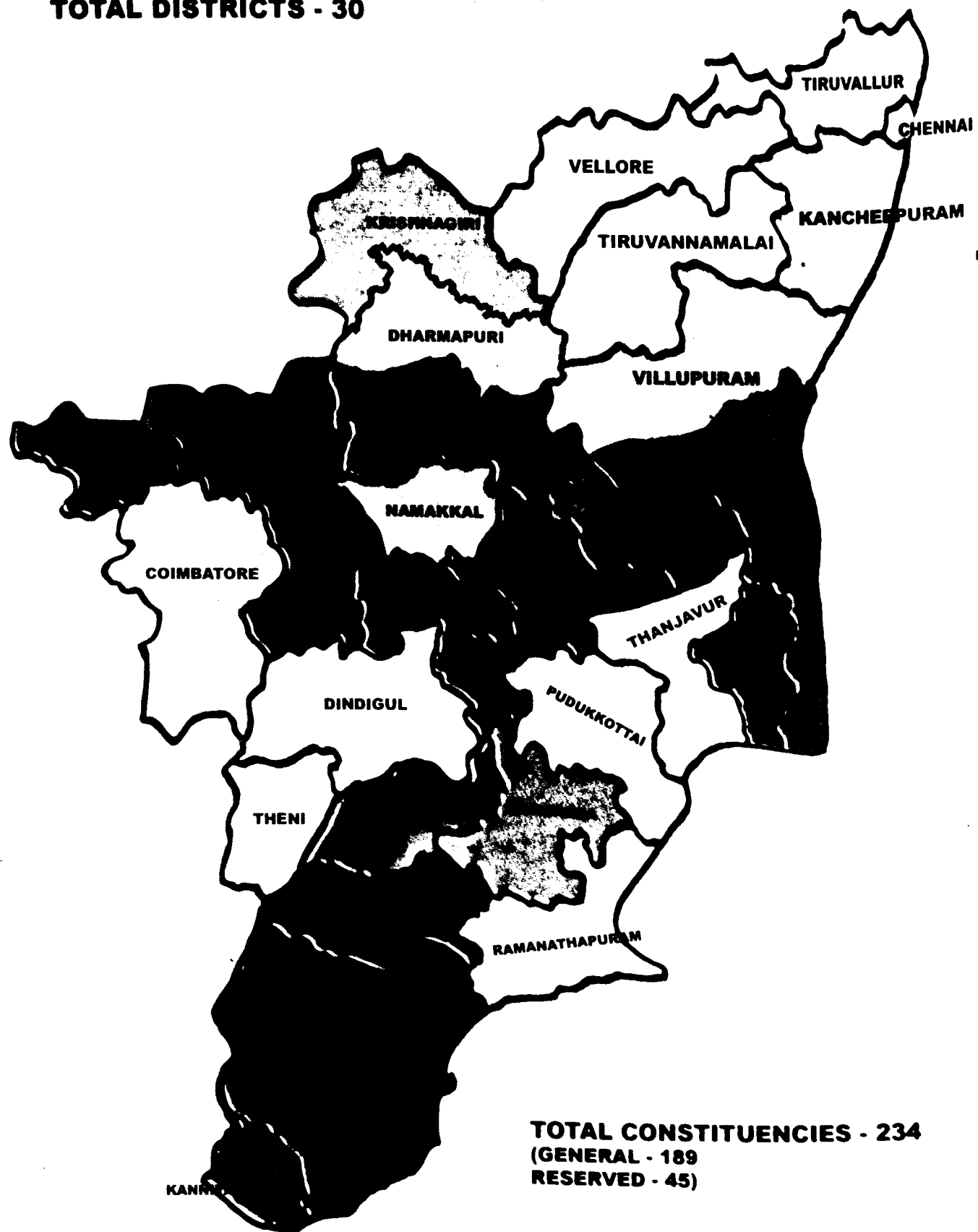
**Tamil Arasu**

R.N.I.No.21446/70

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# TAMIL NADU

**TOTAL DISTRICTS - 30**



**TOTAL CONSTITUENCIES - 234**  
(GENERAL - 189  
RESERVED - 45)