

Government  of Madras

LAW (EDUCATION) DEPARTMENT

G.O. No. 1737, <sup>28</sup> 5th December 1921

College of Engineering, Madras—Report

1920-21—Recorded.

1737/28

no.

ORIGINAL

# Government of Madras

LAW (EDUCATION) DEPARTMENT

G.O. No. 1737, 5th December 1921

College of Engineering, Madras—Report

1920-21—Recorded.

READ—the following paper :—

*Letter*—from R. LITTLEHAILES, Esq., M.A., M.L.C., Director of Public Instruction.  
*To*—the Secretary to Government, Law (Education) Department.  
*Dated*—the 19th November 1921.  
*No.*—Ref. on Cur. 6446.

I have the honour to submit herewith for the information of Government two copies of my Proceedings Ref. on Cur. No. 6446 of 1921, dated 14th November 1921 reviewing the annual report of the College of Engineering, Guindy, for 1920-21.

ENCLOSURE

*Proceedings of the Director of Public Instruction, Ref. on Cur. No. 6446/21, dated 14th November 1921.*

READ—the following paper :—

*Letter*—from C. L. CARTWRIGHT, Esq., Acting Principal, College of Engineering, Guindy.  
*To*—the Director of Public Instruction, Madras.  
*Dated*—the 23rd June 1921.  
*No.*—C. 753.

I have the honour to submit herewith the Administration Report of the College of Engineering, Guindy, for the academic year 1920-21.

1. *Staff*.—Mr. W. H. James, the Principal, proceeded on furlough for 16 months in continuation of the summer vacation of 1920, and Mr. H. B. Matthews, Professor of Higher Electrical Engineering, was placed in charge of the College till 5th July 1920, when I returned after the expiry of my leave and was appointed Acting Principal.

2. Mr. H. W. Barker was on privilege leave out of India for three months in continuation of the summer vacation and was permitted to resign his appointment with effect from 4th October 1920.

3. The post of Professor of Civil Engineering remained vacant the whole of the year under report. M.R.Ry. M. S. Venkatarama Ayyar, Assistant Engineer, Public Works Department, was appointed as Additional Instructor in Civil Engineering. He was on duty from 5th July 1920 to 3rd January 1921, when he was transferred to the Public Works Department, his place being taken by M.R.Ry. S. Siva Rao as Assistant Instructor of the College.

4. Mr. H. B. Matthews, Professor of Higher Electrical Engineering, proceeded home on combined leave for six months from 18th February 1921 on account of ill health, and no one has yet been appointed to fill the vacancy.

5. The Professorship of Mechanical Engineering has been vacant since July 17th, 1919, the date of the commencement of my furlough. M.R.Ry. S. Subrahmanya Ayyar, Sub-Engineer, who was appointed as Additional Instructor in Mechanical Engineering during my absence on furlough, was relieved of his duties on the forenoon of the 23rd April 1920. On the reopening of the College on July 5th, 1920, his place was taken by Mr. S. Nataraja Ayyar, Supervisor, first grade, and Assistant Instructor of the College.



6. The following additional staff was sanctioned in G.O. No. 243, Home (Education), dated 24th February 1920 :—

Two Professors in Indian Educational Service (one additional Professor of Civil Engineering and one Professor of Technical Chemistry, the latter to be recruited from England).

Three Assistant Instructors (to be recruited from the Upper Subordinate Establishment of the Public Works Department).

Three Laboratory Assistants on Rs. 100 each.  
Four Mechanics for Laboratory on Rs. 30 each.  
One Workshop Instructor (senior on Rs. 400).  
Three Maistries on Rs. 40 each.  
One Sergeant on Rs. 50.  
One Assistant Accountant on Rs. 25.  
One Storekeeper on Rs. 30.  
One Assistant Librarian on Rs. 20.  
Four Peons on Rs. 9 each.  
One Peon on Rs. 8.  
One Sub-Assistant Surgeon on Rs. 50—120 + Charge allowance.  
One Compounder.  
One Ward Attendant.  
One Peon for Hospital.

7. *Professors in Indian Educational Service.*—During the year under report, the post of the Principal was included in the Indian Educational Service, in G.O. No. 1532, Home (Education), dated 18th December 1920.

M.R.Ry. G. Nagaratnam Ayyar Avargal, B.A., B.E., District Board Engineer, Cocanada, was appointed temporary Additional Professor of Civil Engineering and he joined duty on 16th August 1920. He was confirmed in the appointment with effect from 24th December 1920.

(The post of Professor of Technical Chemistry remained vacant the whole of the year).

The post of Professor of Mathematics was included in the cadre of Indian Educational Service, and M.R.Ry. K. R. Ramaswami Ayyangar Avargal, M.A., the present incumbent, was promoted temporarily to it from 1st September 1920 and was confirmed in the post from 23rd February 1921 in G.O. No. 446, Home (Education), dated 22nd March 1921.

8. *Assistant Instructors.*—M.R.Ry. V. C. Govindarajulu Nayudu, Supervisor, first grade, Public Works Department, and Assistant Instructor, was transferred to the Public Works Department in May last and he was relieved on 10th May 1920, afternoon. The transfer of this Assistant Instructor, and the promotion of M.R.Ry. S. Nataraja Ayyar and M.R.Ry. S. Siva Rao together with the three additional Assistant Instructors sanctioned caused altogether six vacancies. These were filled by transfers from the Public Works Department as follows :—

M.R.Ry. T. M. Ratnasabapathi Pillai,  
" O. Rangaswami Ayyangar,  
" V. Sambasiva Ayyar,  
" S. J. Balraj,  
" B. Ramaswami Ayyangar,  
" N. R. Raghunatha Rao,

who joined duties respectively on 4th August 1920 forenoon, 29th July 1920 afternoon, 29th July 1920 forenoon, 30th July 1920 forenoon, 20th December 1920 forenoon and 24th January 1921 afternoon.

M.R.Ry. R. N. Sarma, Assistant Instructor, was granted combined leave for one and a half years from 3rd January 1921 in continuation of the Christmas holidays of 1920. His place was filled by the appointment of M.R.Ry. K. Sukumaran who had just been relieved of his duties as Instructor of the Salt officers' class to which he had been appointed since 7th October 1920.

Sanction for the retention of four temporary Assistant Instructors was renewed for another year from 1st July 1920. [Vide G.O. No. 750, Home (Education), dated 28th June 1920.]

9. M.R.Ry. P. Subba Rao, Electrical Laboratory Assistant, was confirmed in his appointment with effect from 1st December 1918.

Mr. A. Gilks, the Workshop Instructor on Rs. 200, was on reorganization made the temporary Senior Workshop Instructor on Rs. 400 and in his place Mr. B. E. Jones was appointed on probation for three months, from 27th September 1920. His work not having been satisfactory, his services were terminated and Mr. J. P. Foley was appointed in his place from 20th January 1921 forenoon.

M.R.Ry. S. Krishnaswami Nayakar, Foreman Carpenter, was confirmed in his appointment with effect from 18th August 1918. Mr. L. D. Vaz, Acting Instrument Repairer's services were terminated on account of old age on the afternoon of 7th November 1920 and Mr. M. C. Chinmaswami Mudali was appointed in his place on 1st December 1920 forenoon on the revised scale of pay of Rs. 40 per mensem.

Muhammad Qadir Hussain, sub. *pro tem.* Gymnastic Instructor, was transferred to the Government Arts College, Rajahmundry, and T. Parthasarathi Nayudu, who was appointed to act for him, joined duty on 1st October 1920 forenoon.

The following additional staff joined duty on the dates noted against them :—

|                                                          |                           |                  |
|----------------------------------------------------------|---------------------------|------------------|
| Mr. D. Lysdale, Laboratory Assistant,                    | 19th January 1921.        | Forenoon.        |
| Mr. B. G. James                                          | Do.                       | 21st March 1921. |
| " N. Viraswami Nayakar, Foundry Maistri,                 | 27th September 1920.      | "                |
| " R. Shanmugam, Blacksmith Maistri,                      | 18th October 1920.        | "                |
| " O. Govindarajulu, Mechanic Maistri,                    | 27th September 1920.      | "                |
| Ibrahim Khan, Mechanic Strength of Materials Laboratory, | 13th October 1920.        | "                |
| Mr. T. Chinnappa Nayakar, Mechanic, Laboratory           |                           | "                |
| E. Manicka Nayakar, Electrical Laboratory,               | 13th October 1920.        | "                |
| Zainaluddin, Hydraulic Laboratory,                       | 7th February 1921.        | "                |
| From Singh, Sergeant,                                    | 21st July 1920, forenoon. | "                |
| E. J. Chelliah, Storekeeper,                             | 1st July 1920, forenoon.  | "                |
| N. Raghava Achari, Assistant Accountant,                 | 17th July 1920, forenoon. | "                |
| V. Natesa Ayyar, Assistant Librarian,                    | 1st July 1920, forenoon.  | "                |

10. In G.O. No. 1471, Home (Education), dated 27th November 1919, the following additional staff were sanctioned for two years for the Power House :—

|                           |          |
|---------------------------|----------|
| One driver superintendent | Rs. 120  |
| One assistant driver      | 40       |
| Four stokers              | 25 each. |
| Three cleaners            | 15       |

Mr. A. Edmonds joined duty as driver superintendent on 18th May 1920, but he reverted to his permanent appointment at the Government Press, as his work was unsatisfactory. Mr. Joseph Frank, who was first appointed as assistant driver on Rs. 40 per mensem from 17th September 1920, was promoted to the post of driver superintendent from 6th October 1920.

11. *Sub-Assistant Surgeon.*—M.R.Ry. C. Manicka Mudaliyar was appointed Sub-Assistant Surgeon in charge of the College dispensary from 16th July 1920 forenoon to 5th October 1920 and Mr. Arthur Andrews Pillai, appointed in his place, continues from 6th October 1920.

12. *Clerical staff.*—M.R.Ry. S. A. Sessa Ayyar, sub. *pro tem.* accountant, went on privilege leave for three months from 1st June 1920 and in his place M.R.Ry. N. Sadagopachariar, B.A., L.T., sub. *pro tem.* head clerk, Presidency College, was appointed and he joined duty on the afternoon of 31st May 1920.

M.R.Ry. S. A. Sessa Ayyar having on the expiry of his leave reverted to his permanent appointment in the Presidency College, M.R.Ry. N. Sadagopachariar was confirmed as accountant from 1st September 1920.

M.R.Ry. H. Rangaswami Ayyar, acting head clerk, was transferred to the office of the Inspector of Schools, VII Circle, and M.R.Ry. G. C. Duraiswami Ayyangar, the Permanent Librarian, who had been acting head clerk of the office of Inspector of European Schools, was appointed as head clerk, sub. *pro tem.*, with effect from the afternoon of 5th June 1920.

The lien of M.R.Ry. K. V. Kunhiraman, the permanent head clerk, was transferred to the Teachers' College and M.R.Ry. K. Venkatarama Sastri was appointed to the post without prejudice to his officiating appointment in the Government College, Kumbakonam.

T. V. Kuppuswami Madali, Acting Librarian, who was on privilege leave for one month from 25th February 1920, extended his leave by another month and

V. K. Ramachandra Ayyar, acting first assistant clerk, acted for him. The librarian again went on sick leave for two months from 15th June 1920. During part of this period, V. K. Ramachandra Ayyar acted for him and for the remaining part, P. Subrahmanya Ayyar, second assistant clerk and typist, who had just then returned after a deputation of nearly two years in the office of the Director of Civil Supplies, was appointed to act for him.

13. *Number on the rolls.*—The number of students on the rolls at the end of the academic year was 453 excluding the students on practical course—

| Class.                                 | Practical course. | In college.  |             |              |             | Total. |
|----------------------------------------|-------------------|--------------|-------------|--------------|-------------|--------|
|                                        |                   | Fourth year. | Third year. | Second year. | First year. |        |
| Engineer class .. .. .                 | 42                | 30           | 28          | 33           | 53          | 186    |
| Upper subordinate class .. .. .        | 41                | ..           | ..          | 42           | 51          | 134    |
| Lower do. .. .. .                      | ..                | ..           | ..          | ..           | 55          | 55     |
| Probationary subordinate class .. .. . | ..                | ..           | ..          | 97           | 54          | 151    |
| Total .. .. .                          | 83                | 30           | 28          | 172          | 223         | 536    |

\* Three in each year are holders of Electrical Engineering Scholarships.

The corresponding totals for the last five years were —

| Year.           | Number. |
|-----------------|---------|
| 1918-20 .. .. . | 496     |
| 1918-19 .. .. . | 513     |
| 1917-18 .. .. . | 526     |
| 1916-17 .. .. . | 511     |
| 1915-16 .. .. . | 491     |

The distribution of students by classes of community, districts, wealth and occupation of parents or guardians are given in Appendix A, B and C. Of the total number 73·3 per cent were Brahmans, 19·4 per cent Non-Brahman Hindus, 5·3 per cent Indian Christians, 1·1 per cent Europeans and Anglo-Indians, and about ·9 per cent Muhammadans. In regard to districts, Tanjore was represented by 18·2 per cent, Kistna 7·8 per cent, Guntur 7·1 per cent, Godavari 6·7 per cent, Tinnevely and Chingleput 6·2 per cent each, Trichinopoly and Malabar 5·3 per cent each, Travancore 4·5 per cent, North Arcot 3·8 per cent, Madura 3·6 per cent, Ganjam, South Kanara and Cochin 2·89 per cent each, Madras 2·7 per cent, South Arcot and Coimbatore 1·8 per cent each, Vizagapatam and Nellore 1·34 per cent each, Ramnad and Chittoor 1·11 per cent each, Salem and Coorg ·9 per cent each, Kurnool, Pudukottah and Hyderabad ·7 per cent each, Bellary ·4 per cent, Nilgiris, Anantapur, Cuddapah, Mysore and Ceylon ·2 per cent each.

14. *Admission of students.*—Two hundred and forty-nine candidates applied for admission to the Engineer class, and two hundred and sixteen for the subordinate class, and of these, fifty-one to the former, and sixty-five to the latter were admitted. For the three Electrical Engineering Scholarships thirty-one applications were received. With the opening of the School of Engineering, Trichinopoly, and owing to the abolition of the Upper Subordinate class consequent on the introduction of the scheme relating to the reorganization of the Public Works Department the pressure for admission to the Subordinate class was not so great as was in previous years, and the number admitted was accordingly lower than for the last few years.

15. *Examinations—Engineer class (Senior division).*—The Civil Branch contained 24 students. All but one passed the final examination with an average of 58·6 per cent for the class of the total marks. The one that failed continued in the same class this year. The ten students belonging to the Mechanical Branch passed the final examination, two with honours gaining 58·9 per cent of the total marks. Four students (three Civil and one Mechanical) failed in the Survey examination but three passed after having obtained further practice.

*Second division (third year) Civil.*—There were 15 students in this division, and all appeared for the Sessional examinations, one failed to qualify for promotion and continued in the class this year.

*Mechanical.*—There were 15 students in this division including the three Electrical Scholars. All passed the Sessional examination.

*Third division (second year).*—This was a class of twenty-nine students with three Electrical Engineering Scholarship holders. All appeared for the Sessional examination and qualified for promotion except one who discontinued his studies at the College. Of those qualified for promotion, 17 joined Civil Branch, and 11 the Mechanical branch.

*Fourth class (first year).*—All the thirty-three students of the class passed on in accordance with the rules to the second year of the Course.

*Upper Subordinate class (second division).*—There were 41 students in this class. All passed the final examination, seven with honours. The average percentage of marks obtained was 61·3 per cent.

*Upper Subordinate class (junior division).*—This class was 41 strong. All qualified for promotion.

*Lower Subordinate class.*—Of the 83 students constituting this class, 53 passed the examination, one with honours and eight failed. Of those who passed, 31 failed in practical surveying but all qualified later on in the year on re-examination after obtaining further practice. The average of marks gained was 57·7 per cent.

*Probationary subordinate class (second year division).*—The strength of this class was 119, and of these 11 failed to qualify for proceeding to higher courses of study.

A common examination was held for the students of the Probationary Subordinate class, second year division, of this College and of the School of Engineering, Vizagapatam, in accordance with the instructions contained in G.O. No. 332, Home (Education), dated 23rd April 1918. Of those who passed, 40 at the head of the list of students from the College and 10 from the School of Engineering, Vizagapatam, were with the approval of the Chief Engineer promoted to the Upper Subordinate class, and the remainder went on to complete their course in the Lower Subordinate class. Of the latter, two from the College were selected early in the session to undergo a special course of training in the Consulting Architect's office, to qualify themselves to become architectural draughtsmen.

*Probationary Subordinate class (first year division).*—This division contained 93 students, and in accordance with the rules all passed on to the second-year of study.

Particulars of marks obtained by classes to the several branches of the examinations are given in appendix D.

16. *Honours and distinctions.*—The College medals for the session were awarded to the undermentioned final-year students:—

*Gold medal*—M. S. Thirumalai Ayyangar, Engineer class.

*Silver medal*—J. V. Srinivasulu, Upper Subordinate class.

*Bronze medal*—D. Subba Rao, Lower Subordinate class.

The Harris Gold medal for proficiency in Electrical Engineering was awarded to M. S. Thirumalai Ayyangar. The DeWinton gold medal was not provided for by the donor and consequently there was no award.

17. *Prizes.*—The Special College prizes were awarded as follows:—

*Engineer class.*—The Colonel Love prize for proficiency in Applied Mechanics was awarded to V. Srinivasan, while the Madhava Rao prize for Practical Surveying was gained by D. H. Ramachandra Rao.

*Upper Subordinate class.*—The Roger's prize went to the Silver medalist, J. V. Srinivasulu, who gained also the Colonel Love prize for Hydraulic Engineering and the prizes for Engineering and Drawing. The H. J. Thomson prize for Construction, Building Drawing and Estimating was secured by A. Rangaswami.

The Colonel Love prize was awarded to the senior student, D. Subba Rao.

The Madhava Rao prize to a Mahratta Brahman for skill in Workshop practice was not awarded for want of a qualified candidate.

18. *University examination.*—Twenty-seven Engineer students from the College and twelve ex-students presented themselves for the B.E. Degree examination and of these, 12 passed in the Civil Branch and 6 in the Mechanical Branch.

For the F.E. examination 51 appeared, of whom 30 were second-year students, 18 third-year students, and 3 final-year students. In all, 23 were successful, 13



second-year students, 10 third-year students. The University Rao Bahadur S. Subbaraya Achariyar's Gold medal was awarded to P. Y. Ramabhadran; the J. A. Jones prize for Hydraulic Engineering to G. S. Lamech and the A. T. Mackenzie Memorial prizes to M. S. Sitaram Rao and S. Kamesam.

19. *Practical courses*.—Thirty-two Engineer and forty-one Upper Subordinate students entered on the usual courses of practical training about the middle of June last.

Of the Mechanical Engineer students, four went to the Public Works Workshops, two joined the Madras and Southern Mahratta Railway Workshops, Perambore, one elected to join the South Indian Railway Workshops, Trichinopoly, and two in the Madras Harbour Works.

20. *Military students*.—The number of Military students on the rolls at the beginning of the session was four distributed as follows:—

|                                            |     |     |     |     |     |   |
|--------------------------------------------|-----|-----|-----|-----|-----|---|
| Upper Subordinate class first year         | ... | ... | ... | ... | ... | 1 |
| Upper Subordinate class second year        | ... | ... | ... | ... | ... | 2 |
| Probationary Subordinate class second year | ... | ... | ... | ... | ... | 1 |

No new military students were admitted during the year owing to the discontinuance of the Upper Subordinate class consequent on the re-organization of the Public Works Department.

21. *Revenue officers class*.—Fourteen officers underwent the usual course of training from the 5th October 1920 to 17th December 1920. During the course two officers reverted to the Department. Of the remaining twelve, ten passed the examination.

22. *Architectural draftsman*.—The arrangement for the training of architectural draughtsman which was introduced in 1919 continued during the year. Two students of the Lower Subordinate class were selected in July in consultation with the Consulting Architect. They joined the office of the Consulting Architect on the 17th August and continue to work there.

23. *Survey camp*.—All the classes except the third and fourth year Mechanical Engineering classes went into camp for survey field work practice in January 1921. The first year Engineers, Lower Subordinates and Subordinates numbering 172 in all were out from 3rd to 22nd January. The final-year Engineers and Upper Subordinates 57 in number, the second and third year Civil Engineers, the second-year Upper Subordinates and Probationary Subordinates 199 in number, were in camp till 22nd January. The work done by the several classes was of the same kind and on the same lines as in previous years, and was carried out in accordance with a previously prepared programme. The usual practice hitherto was for the students to do field work both morning and afternoon. A change was made this year and the field work was confined to the mornings only, the working hours being however increased. The work turned out this year compared favourably both as regards quality and quantity with that of previous years. Members of staff worked hard and earnestly and showed a high sense of duty. The number of students in attendance was 428 and the total cost to Government Rs. 1,954-14-0 including the batta for students. Our thanks are due to the Military Authorities at St. Thomas' Mount and Pallavaram for permitting the students to survey within cantonment limits and for kindly allowing us the use of a portion of the Barracks.

24. *Workshops, Laboratories and Power-house workshops*.—During the early part of the year, work was largely handicapped owing to the new buildings not being completed, the removal from Chepauk and re-erection of the old plant and the want of power for driving the machinery. During the year, new machinery selected by me when on deputation in England in the early part of the year, arrived at intervals. Most of this was surplus war material supplied from stock. Very little of the new machinery for which orders were then placed has up to the present been delivered, owing to the abnormal conditions of trade. Under the circumstances, it was difficult to give the senior classes as much machine work as they usually have, but owing to shortness of staff and the difficulties under which we were working in the early part of the session, most of them had the opportunity of gaining very useful experience in the erection and running of machinery.

25. *Mechanical Engineering laboratory*.—Since the Mechanical Engineering department has been without a Professor since I went on leave in July 1919, the work in this Department has necessarily suffered both as regards Lecture and Laboratory work. During the year under report my time as Acting Principal has been so fully occupied on office work and in endeavouring to get the new college and hostel organised, that I have had very little time left to devote to Lecturing and Laboratory work.

26. *Electrical Engineering Laboratory*.—The work in the Electrical Engineering Laboratory has been seriously handicapped owing to the unfinished state of the building which is even now incomplete. During the latter part of the year, a more serious check still occurred owing to the break down in health of Mr. H. B. Matthews, Professor of Electrical Engineering, who was obliged to go home on sick leave. No appointment has as yet been made in his place.

27. *Hydraulic Laboratory*.—Nothing has been done up to the present as regards the equipment of this laboratory owing partly to lack of funds and partly to the fact that a Professor of Civil Engineering to fill Mr. Barker's place has not yet been appointed.

*Power-house*.—The only equipment we have at present in the power-house is the steam plant obtained from the Government Press and two small internal combustion engines removed from the College at Chepauk. New machinery is, however, on order though not to the full amount required. It is hoped that the machinery now ordered will be received and erected before the end of the year.

*Visit to works*.—The senior divisions of the Engineer (Civil) and the Upper Subordinate classes accompanied by the Professor of Civil Engineering assisted by two assistant instructors proceeded to Godāvāri early in September for a tour round some of the irrigation works of the Godāvāri and Kistna deltas. After inspecting the water-works at Cocanada the party proceeded to Samalkota where they were shown round the double lock, the aqueduct, the farm and the artesian wells. The party then went on to Bezvada visiting on their way the head works at Vizeswaram, Bobberlanka, the Ellore water-works, the storage reservoir and pumping station. At Bezvada the party were shown round the Kistna bridge, the eastern and western delta head works. The party finished up the tour with a visit to the Divi pumping installation and returned to Madras on the 19th September.

At about the same time two parties of students were taken to the south for a tour round some of the works in the Cauvery delta—the one party consisting of 70 students belonging to Engineering (ii) Civil and Upper Subordinates (ii) classes and three Military students under the charge of the instructor in surveying assisted by two assistant instructors and the other 57 students of the Lower Subordinate class accompanied by the instructor in Civil Engineering and two assistant instructors. The first party started with the inspection of Cauvery at Erode and Bhavani and the Kalingarayan channel and head works. They next proceeded to Elamanur and on their way the river conservancy works, scouring sluices, cross drainage works and super passages across the Puthur channel were inspected. At Elamanur, they marched on to the Cauvery bank and inspected the Ayyan and Puvalur channel, head sluice and also the screw pile bridge. The 150 yards kalingula, a surplus work on the left bank of the Cauvery, three miles below the Cauvery dam, was next visited. The officer in charge of the gauging operations explained to the students the details of the electric current meters and their working and the working of the automatic recorders and the advantage of their use in gauging operations. The party then proceeded to Trichinopoly and after inspecting the grand anicut, the Cauvery and Vennar regulators, the pumping station and the head works of the Trichinopoly water-works—returned to Saidapet on the 19th September.

The second party toured round the place in the opposite direction.

The students of the first and second divisions of the Engineer class, Mechanical branch were taken by the instructor in Mechanical Engineering on a visit of inspection over a week in September to Mysore. After visiting the Hydro Electric Power station at Sivagamudram, the Kannambadi dam and the Sandal-oil factory at Mysore, the party proceeded to Kolar Gold Fields inspecting the Tata institute at Bangalore on their way. At Kolar Gold Fields, the party were given every facility by the authorities in charge for inspecting the Champion Reef mine, the jewel filters and the

pumping engines of the water-works at Bettamangalam. The party returned to Madras on the 18th September. The total number of students who took part in these tours was 158 and the expenditure was Rs. 3,358-8-9.

During the session, visits were paid as usual by all classes to local engineering works including the Madras Corporation water-supply including the Red Hills tank, Madras Harbour works, Government Brickfields, Madras Cement works and Carnatic Mills. The students were also taken out for instructional purposes to buildings under construction such as improvements to new Council Chamber, Government House and Penitentiary bridge works, expansions to Queen Mary's College and to the Chemical wing of the Presidency College and Monegar Choultry new hospital, Rayapuram.

*Attendance and conduct.*—The percentage of attendances to numbers on the rolls of the College was 94.3 per cent. Detailed particulars for the several classes are given in appendix E. The conduct of the students during the year was satisfactory.

*Library.*—During the year under report about 190 books were added to the Library which now contains 6,747 volumes.

The number of books issued on loan to the staff and students were 875 and 2,750, respectively, and about 450 references were made in the Library.

The new catalogue according to the reclassification of books is under print and will shortly be published.

The annual check of the books in the Library has just been completed and a few books reported missing are being traced.

*Reading-room.*—The reading-room attached to the Library was kept open from 7-30 a.m. to 8 p.m. every day and a large percentage of the students made use of the facilities thus afforded to them, during their leisure hours to the best advantage.

28. *Athletic club.*—Mr. W. C. Old, instructor in surveying, kindly undertook the duties of Honorary Secretary and he reports as follows:—

"*Football.*—The College maintained its longstanding reputation in this game by winning the Governor's cup in the inter-collegiate knock-out competition.

"*Cricket.*—This year also as in the last, we tried with the Medical College for the first place in the M.C.A.A. League competition. In the deciding game of two innings we met the Medicals but unfortunately lost the match.

"*Hockey.*—Owing to the fact that we had no grounds ready for useful practice of the game throughout the year we could not fulfil many of the engagements with the other colleges.

"*Tennis.*—We have no tennis court at all since the estimate sent up for the laying of seven tennis courts many months ago has not yet been sanctioned. Owing, however, to the interest taken by M.R.Ry. S. Krishnaswami Ayyar a selected number of students were given some practice in the Tennis court attached to the Saidapet Club and the College was thus represented in the M.C.A.A. tournament both in the singles and in the doubles.

"*Athletic sports.*—In the inter-collegiate sports we were prominent in almost all the events though our representatives were successful only in the three items, viz., swimming where we carried off both the first and second prizes and high jump and one mile flat race in each of which we got the second prize. We can, however, congratulate ourselves on the circumstances that we were second only to the Medical College in the total number of points won.

"*College sports.*—This year the College sports were held in connexion with the College day under the distinguished presidency of His Excellency the Governor of Madras and were competed for by a large number of students and excited much enthusiasm.

"*Inter-class competitions.*—Inter-class competitions were held as usual, but on the knock-out system and resulted as follows:—

"*Cricket.*—Second year Engineer students.

"*Football.*—Third and fourth year Engineer students.

*General remarks.*—With the removal of the College to Guindy and its transformation into a purely residential institution, it has become a matter of no inconsiderable importance and difficulty to arrange for the physical education and recreation

of so many as nearly 450 students. Every evening and on mornings also during the week end holidays, we have to provide for the out-door recreation of this large number of collegiate students, if we desire to direct them along proper channels of conduct and to maintain discipline without effort. This clearly means a variety of games; and this again cannot be had without proper provision for preparing the grounds, laying out the courts, tracks, etc., in a practically wild country. All this again means money, money promptly and liberally sanctioned by Government. My experience of this year is rather painful. When we moved here in July, none of the grounds had been got ready and I had to beg for and rush the preparation of the football grounds and the cricket pitch which were still not made ready before the end of August 1920. The hockey grounds have not yet been prepared. For the College sports the running track had to be specially prepared by us at extra cost. The grounds are even now not in perfect condition and money will have to be spent on them liberally for at least two years more.

I cannot but refer to the valuable and willing services rendered by M.R.Ry. S. Krishnaswami Ayyar, M.A., L.T., Instructor in Mathematics, year after year, in connexion with the Athletic club in general and the tennis branch in particular. His residence in the premises, if arranged for, would be of great help to me to cope with the growing volume of work in connexion with the Athletic club."

29. *Employment of passed students.*—Of the twenty-one Engineer students who completed their practical courses in 1920, the senior in the Mechanical branch was appointed to the permanent establishment of the Public Works Department as Assistant Engineer and others obtained employment as follows:—

|                                                                 |    |
|-----------------------------------------------------------------|----|
| District Board Assistant Engineers                              | 2  |
| Temporary Upper Subordinates, Public Works Department, Madras   | 10 |
| Assistant Engineer, Irrigation branch, Nizam's State, Hyderabad | 1  |
| Assistant Engineer, Works Department, Corporation of Madras     | 1  |
| Assistant Engineer, Public Works Department, Trivandrum         | 1  |
| Lecturer in Technology, Technical section, Trivandrum           | 1  |
| Mechanical Engineer, Tinnevely Textiles Company, Kolpatti       | 1  |
| Assistant Spinning Master, Tinnevely Textiles Company           | 1  |

Two of the Engineer students after completing their Practical courses have proceeded to England for the study of Electrical Technology.

Forty Upper Subordinates satisfactorily completed their practical training and the senior among them was appointed as permanent overseer, third grade, Public Works Department. The one Military student joined the Military Works Service. Reports have been received from thirty-seven students having been appointed Temporary Upper Subordinates and one as Superintendent in the Standard Furniture Company, Malabar.

Seventy-three students of the Lower Subordinate class completed the College course in 1920. Of these, 59 reported employment as follows:—

|                                      |    |
|--------------------------------------|----|
| Sub-overseers (P.W.D.)               | 20 |
| Surveyor                             | 1  |
| Draftsmen                            | 11 |
| Section Officer                      | 1  |
| Overseers, District Board            | 15 |
| Draftsmen, District Board            | 3  |
| Surveyor, Corporation of Madras      | 1  |
| Surveyors, State Railways            | 2  |
| Sub-overseers, Corporation of Madras | 3  |
| Assistant Inspector of Railway       | 1  |
| Overseer, Madras Port Trust          | 1  |

59



30. *First-aid lectures.*—The local Honorary Secretary of the St. John Ambulance Association deputed M.R.Ry. P. Narasimham, L.M.S., Assistant Surgeon, Ophthalmic Hospital, Madras, to conduct the Ambulance classes for the Engineer first-year, Upper Subordinate first-year and Lower Subordinate classes. Six lectures were delivered commencing from Monday, the 15th November 1920. Examinations for the above classes in first aid were held in March 14 and 15 the results of which are not yet to hand.

31. *College hospital.*—A dispensary for the use of the students and members of staff was opened on the 16th July 1920 and is in charge of a Sub-Assistant Surgeon with a compounder and a ward boy. M.R.Ry. C. Manikka Mudaliyar, third-grade Sub-Assistant Surgeon, was in charge of the hospital from the 16th July to 5th October 1920 and was transferred to the hospital at Royapetta, his place being taken by M.R.Ry. Andrew Pillai, senior grade Sub-Assistant Surgeon. The number of patients treated during the year was 6,743 with a daily average of 26.65. The general health is considered to be good.

32. Particulars of the vacancies notified during the year are given in Appendix F.

*Casualties.*—I regret to have to record the death of one student P. S. Somayajulu of the Upper Subordinate class; first-year division.

33. *Financial details.*—These are furnished in Appendix G. The receipts for 1920-21 amounted to Rs. 48,069 and the charges to Rs. 2,19,255 resulting in a net cost to Government of Rs. 1,71,216. The average number of students on the rolls was 457 and the net cost per student, Rs. 375.

The above figures are subject to modifications when particulars of adjustments, if any, are communicated by the Accountant-General.

An abstract of receipts and charges for the last five years is given in Appendix H.

34. *Hostel.*—The hostel which is fully residential was opened in the new premises at Guindy on the 3rd July 1920 and M.R.Ry. N. Ramanuja Achariyar, a Government pensioner, was in charge of it as full-time Manager throughout the session.

The strength was 446 students distributed as follows:—

|                                               |     |     |     |     |
|-----------------------------------------------|-----|-----|-----|-----|
| (1) Anglo-Indians                             | ... | ... | ... | 5   |
| (2) Brahmans                                  | ... | ... | ... | 315 |
| (3) Non-Brahmans including Vaisyas and Nayars | ... | ... | ... | 101 |
| (4) Indian Christians                         | ... | ... | ... | 23  |
| (5) Muhammadans                               | ... | ... | ... | 2   |

In addition to this number, 28 members of staff and 16 students were boarders as casual members so that the total strength was 490 at the end of the college session. The average number of daily guests was 20.

The above 490 students were distributed in 13 sections, 7 for Brahmans and 6 for other communities and they were formed chiefly according to sects. The nature of the meals prepared in the several sections was also slightly different.

The boarding charges per member per month including cost of establishment varied from Rs. 18 to Rs. 19 for the vegetarian sections and from Rs. 19 to Rs. 20 for the non-vegetarian sections—the Anglo-Indian section excepted. During the months of January, February and March of the current year, the rates were somewhat lower owing to the fall in the prices of some of the chief articles of food such as rice, dholl and ghee.

The total expenditure of the hostel for the session was Rs. 82,320, of which the cost of establishment was Rs. 8,320 and the cost of stores was Rs. 74,000. This amount was divided among the students of the several sections, according to the strength in each. The accommodation at present provided for the Hostel is not sufficient for the purpose. A hot water-shed, a fuel room and three more kitchens are urgently required. The dining hall of the non-Brahman section is too small for the number of students in it and in view of the larger number of students who are expected to join the college in July next it requires to be extended immediately.

Thirty-one students were exempted from residence at the hostel, twenty-eight being granted permission to live with their families and three to be inmates of the Ramakrishna Students' Home.

Attached to the College hostel there is an 'Emporium' in which all the students' requisites are kept for sale, a coffee hotel which provides 'Chotahazari' for the students and a barber's shed in which six men are working.

35. *College day.*—The first college day was held on the 24th February. Past students, many of whom attended, were entertained at dinner in the hostel in the morning. The college sports were held in the afternoon followed by a prize giving and a short play acted by the students. His Excellency the Governor of Madras and Her Excellency Lady Willingdon were present at the sports and His Excellency very kindly consented to distribute both the college prizes and those won at the sports and afterwards gave the students some very useful advice with regard to the non-co-operation movement.

36. During the year the college was visited by the Hon'ble Khan Bahadur M. Muhammad Shafi, C.I.E., Member of Council in charge of Education, also by the Hon'ble Rao Bahadur B. N. Sarma, Member of the Viceroy's Council and the Hon'ble Mr. J. A. Ritchie, C.I.E., Educational Commissioner with the Government of India. A meeting of the Board of Visitors was held in January to consider the revision of the College rules necessitated by the reorganization of the Public Works Department and various other matters in connexion with the organization of the college.

In conclusion I wish to emphasize the importance of filling up the vacant appointments in the Indian Educational Service at the earliest possible moment. At present out of six sanctioned professors, only two are at present on duty, one is on sick leave, one on other duty and two have not yet been appointed. It is obviously impossible to maintain the teaching up to the University standard with two-thirds of the senior staff absent. A great deal of credit is due to the members of the staff for their efforts in carrying on the work of the college this year under adverse conditions and I wish to place on record my high appreciation of their cordial co-operation with me in this respect. No slight praise is due also to the office staff whose work has been so largely increased since the removal of the college to Guindy, that it was found necessary to extend the usual office hours by an hour a day in order to cope with it. The accounts section of the office is at present insufficient and it is to be hoped that the recommendation of the Board of Visitors for increased staff will be sanctioned without delay.

## APPENDIX A.

| Class.                                       | Europeans and Eurasians. | Indian Christians. | Muhammadans. | Hindus.   |               |            |         | Total. |
|----------------------------------------------|--------------------------|--------------------|--------------|-----------|---------------|------------|---------|--------|
|                                              |                          |                    |              | Brahmans. | Non-Brahmans. | Panchmans. | Others. |        |
| Engineer Class, fourth year                  | ..                       | 5                  | ..           | 21        | 4             | ..         | ..      | 30     |
| Do. do. third year                           | ..                       | 2                  | 1            | 16        | 9             | ..         | ..      | 28     |
| Do. do. second year                          | ..                       | 2                  | 1            | 20        | 10            | ..         | ..      | 33     |
| Do. do. first year                           | ..                       | 3                  | 2            | 38        | 14            | ..         | ..      | 57     |
| Upper Subordinate Class, second year         | ..                       | 1                  | ..           | 31        | 10            | ..         | ..      | 42     |
| Do. do. first year                           | ..                       | 2                  | ..           | 40        | 9             | ..         | ..      | 51     |
| Lower do. do.                                | ..                       | 2                  | ..           | 44        | 9             | ..         | ..      | 55     |
| Probationary Subordinate Class, second year. | ..                       | 1                  | 4            | 76        | 16            | ..         | ..      | 97     |
| Subordinate Class, first year                | ..                       | 5                  | ..           | 52        | 7             | ..         | ..      | 64     |
| Total                                        | 5                        | 28                 | 4            | 333       | 88            | ..         | ..      | 453    |

## APPENDIX B.

| Districts.            | Engineer class. | Upper Subordinate class. | Lower Subordinate class. | Probationary and Subordinate classes. | Total.        |
|-----------------------|-----------------|--------------------------|--------------------------|---------------------------------------|---------------|
| Ganjam .. .. .        | 5               | 6                        | 1                        | 2                                     | 13            |
| Vizagapatam .. .. .   | 3               | 1                        | 1                        | 1                                     | 6             |
| Godavari .. .. .      | 7               | 6                        | 4                        | 11                                    | 30            |
| Kistna .. .. .        | 5               | 7                        | 4                        | 19                                    | 35            |
| Guntur .. .. .        | 4               | 10                       | 1                        | 17                                    | 32            |
| Nellore .. .. .       | 2               | 1                        | 1                        | 2                                     | 6             |
| Bellary .. .. .       | 1               | ..                       | ..                       | 1                                     | 2             |
| Anantapur .. .. .     | 2               | ..                       | 1                        | ..                                    | 3             |
| Kurnool .. .. .       | 1               | 1                        | ..                       | 3                                     | 5             |
| Cuddapah .. .. .      | 1               | 1                        | ..                       | 5                                     | 12            |
| Chittoor .. .. .      | 1               | 3                        | ..                       | 12                                    | 28            |
| Madras .. .. .        | 4               | 6                        | 5                        | 17                                    | 28            |
| Chingleput .. .. .    | 3               | 4                        | 5                        | 8                                     | 20            |
| North Arcot .. .. .   | 2               | 2                        | 11                       | 10                                    | 24            |
| South Arcot .. .. .   | 18              | 20                       | 1                        | 8                                     | 47            |
| Tanjore .. .. .       | 6               | 7                        | 1                        | 16                                    | 30            |
| Tiruchinopoly .. .. . | 5               | 2                        | 1                        | 5                                     | 13            |
| Madurai .. .. .       | 2               | 1                        | 6                        | 2                                     | 11            |
| Ramanad .. .. .       | 5               | 1                        | 4                        | 1                                     | 11            |
| Tinnevely .. .. .     | 3               | 1                        | ..                       | ..                                    | 4             |
| Coimbatore .. .. .    | 3               | 1                        | ..                       | ..                                    | 4             |
| Salem .. .. .         | 10              | 5                        | 3                        | 6                                     | 24            |
| Malabar .. .. .       | 11              | ..                       | 1                        | 1                                     | 13            |
| South Kanara .. .. .  | 4               | 2                        | 1                        | 6                                     | 13            |
| Cochin .. .. .        | 17              | 1                        | ..                       | 2                                     | 20            |
| Travancore .. .. .    | 2               | ..                       | ..                       | 1                                     | 3             |
| Pudukkottai .. .. .   | 1               | ..                       | ..                       | ..                                    | 1             |
| Mysore .. .. .        | 1               | ..                       | ..                       | ..                                    | 1             |
| Hyderabad .. .. .     | 3               | ..                       | ..                       | ..                                    | 3             |
| Ceylon .. .. .        | 1               | ..                       | ..                       | ..                                    | 1             |
| Coorg .. .. .         | 4               | ..                       | ..                       | ..                                    | 4             |
| Nilgiris .. .. .      | 1               | ..                       | ..                       | ..                                    | 1             |
| Total ..              | 144             | 90 (3 Mily.)             | 65                       | 160 (1 Mily.)                         | 449 (4 Mily.) |

## APPENDIX C.

| Class.                                            | Wealth.       |               |               |        | Occupation. |                  |          |              |            |             |         |        |
|---------------------------------------------------|---------------|---------------|---------------|--------|-------------|------------------|----------|--------------|------------|-------------|---------|--------|
|                                                   | Richer class. | Middle class. | Poorer class. | Total. | Officials.  | Petty officials. | Traders. | Landholders. | Aristians. | Mendicants. | Others. | Total. |
| Engineer class, fourth year ..                    | 5             | 23            | 2             | 30     | 21          | ..               | 5        | 3            | ..         | ..          | 1       | 30     |
| Do. third year ..                                 | 3             | 25            | ..            | 28     | 15          | 1                | 5        | 7            | ..         | ..          | ..      | 28     |
| Do. second year ..                                | 2             | 31            | ..            | 33     | 24          | ..               | 4        | 5            | ..         | ..          | ..      | 33     |
| Do. first year ..                                 | 1             | 47            | 5             | 53     | 30          | ..               | 2        | 21           | ..         | ..          | ..      | 53     |
| Upper Subordinate class, second year ..           | ..            | 39            | 2             | 41     | 18          | ..               | 3        | 20           | ..         | ..          | ..      | 41     |
| Upper Subordinate class, second year, Military .. | ..            | ..            | ..            | 1      | ..          | ..               | ..       | ..           | ..         | ..          | ..      | 1      |
| Upper Subordinate class, first year ..            | 2             | 40            | 7             | 49     | 25          | ..               | 2        | 21           | ..         | 1           | ..      | 49     |
| Upper Subordinate class, first year, Military ..  | ..            | ..            | ..            | 2      | ..          | ..               | ..       | ..           | ..         | ..          | ..      | 2      |
| Lower Subordinate class ..                        | 10            | 41            | 4             | 55     | 17          | 6                | 3        | 28           | ..         | 1           | ..      | 55     |
| Probationary Subordinate class, second year ..    | 9             | 55            | 32            | 96     | 22          | 17               | 6        | 50           | ..         | 1           | ..      | 96     |
| Probationary Subordinate class, Military ..       | ..            | ..            | ..            | 1      | ..          | ..               | ..       | ..           | ..         | ..          | ..      | 1      |
| Subordinate class, first year ..                  | 7             | 35            | 21            | 64     | 23          | 1                | 4        | 35           | ..         | ..          | ..      | 64     |
| Total ..                                          | 39            | 337           | 73            | 463    | 195         | 25               | 34       | 191          | ..         | 2           | 2       | 453    |

## APPENDIX D.

Percentage of marks gained in the session 1919-20.

*Engineer class, fourth year, Civil branch.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 59.4 |
| II. Engineering .. .. .                   | 58.4 |
| Physical exercises .. .. .                | 59.4 |
| Average .. .. .                           | 58.6 |

*Engineer class, fourth year, Mechanical branch.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 50.7 |
| II. Engineering .. .. .                   | 60.6 |
| Physical exercises .. .. .                | 61.8 |
| Average .. .. .                           | 58.9 |

*Engineer class, third year, Civil branch.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 53.9 |
| II. Engineering .. .. .                   | 56.2 |
| Physical exercises .. .. .                | 54.3 |
| Average .. .. .                           | 55.3 |

*Engineer class, third year, Mechanical branch.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 59.2 |
| II. Engineering .. .. .                   | 63.1 |
| Physical exercises .. .. .                | 59.3 |
| Average .. .. .                           | 61.8 |

*Engineer class, second year division.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 61.6 |
| II. Engineering .. .. .                   | 56.4 |
| Physical exercises .. .. .                | 55.8 |
| Average .. .. .                           | 58.4 |

*Engineer class, first year division.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 60.3 |
| II. Engineering .. .. .                   | 58.6 |
| Physical exercises .. .. .                | 61.4 |
| Average .. .. .                           | 59.7 |

*Upper Subordinate class, second year.*

|                               |      |
|-------------------------------|------|
| Branch I. Mathematics .. .. . | 72.3 |
| II. Engineering .. .. .       | 60.9 |
| Physical exercises .. .. .    | 66.2 |
| Average .. .. .               | 61.3 |

*Upper Subordinate class, first year.*

|                               |      |
|-------------------------------|------|
| Branch I. Mathematics .. .. . | 62.1 |
| II. Engineering .. .. .       | 60.8 |
| Physical exercises .. .. .    | 66.2 |
| Average .. .. .               | 55.9 |

*Lower Subordinate class.*

|                                |      |
|--------------------------------|------|
| Branch II. Engineering .. .. . | 56.5 |
| Physical exercises .. .. .     | 68.1 |
| Average .. .. .                | 57.7 |

*Probationary Subordinate class, second year.*

|                               |      |
|-------------------------------|------|
| Branch I. Mathematics .. .. . | 69.1 |
| II. Engineering .. .. .       | 56.6 |
| Physical exercises .. .. .    | 65.1 |
| Average .. .. .               | 59.7 |

*Subordinate class, first year division.*

|                               |      |
|-------------------------------|------|
| Branch I. Mathematics .. .. . | 75.8 |
| II. Engineering .. .. .       | 57.5 |
| Physical exercises .. .. .    | 66.6 |
| Average .. .. .               | 62.4 |



## APPENDIX E.

|                                                 | Average number on rolls. | Average daily attendance. |
|-------------------------------------------------|--------------------------|---------------------------|
| Engineer class, First division                  | 30.00                    | 28.8                      |
| Do. Second do.                                  | 28.10                    | 26.4                      |
| Do. Third do.                                   | 33.00                    | 31.5                      |
| Do. Fourth do.                                  | 53.20                    | 50.6                      |
| Upper Subordinate class, First division         | 49.50                    | 47.9                      |
| Do. Second do.                                  | 42.00                    | 40.0                      |
| Lower Subordinate class do.                     | 58.00                    | 58.7                      |
| Probationary Subordinate class, second division | 98.10                    | 90.4                      |
| Subordinate class, first year division          | 65.00                    | 61.7                      |
| Total                                           | 456.90                   | 431.0                     |

Percentage of numbers present to number on rolls ... 94.3

## APPENDIX F.

Classification of vacancies notified during the year 1920-21.

|                                 | Government.    |                     |                    | Local boards and municipalities. |                | Railways.           |                    | Native States. |                | Private employees.  |                    | Total.        |
|---------------------------------|----------------|---------------------|--------------------|----------------------------------|----------------|---------------------|--------------------|----------------|----------------|---------------------|--------------------|---------------|
|                                 | Above Rs. 200. | Rs. 100 to Rs. 200. | Rs. 50 to Rs. 100. | Under Rs. 50.                    | Above Rs. 200. | Rs. 100 to Rs. 200. | Rs. 50 to Rs. 100. | Under Rs. 50.  | Above Rs. 200. | Rs. 100 to Rs. 200. | Rs. 50 to Rs. 100. | Under Rs. 50. |
| Engineer or Assistant Engineer. | 1              | ..                  | ..                 | ..                               | ..             | ..                  | ..                 | ..             | ..             | ..                  | ..                 | 1             |
| Supervisor                      | ..             | ..                  | ..                 | ..                               | ..             | ..                  | ..                 | ..             | ..             | ..                  | ..                 | ..            |
| Overseer                        | ..             | ..                  | ..                 | ..                               | ..             | ..                  | ..                 | ..             | ..             | ..                  | ..                 | ..            |
| Sub-Overseer                    | ..             | ..                  | 3                  | 18                               | ..             | ..                  | ..                 | ..             | ..             | ..                  | ..                 | 1             |
| Draughtsman                     | ..             | 2                   | 5                  | 23                               | ..             | ..                  | ..                 | ..             | ..             | ..                  | ..                 | 22            |
| Surveyor                        | ..             | ..                  | 13                 | 7                                | ..             | ..                  | 1                  | ..             | ..             | ..                  | ..                 | 30            |
| Channel Superintendent.         | ..             | ..                  | ..                 | ..                               | ..             | ..                  | ..                 | ..             | ..             | ..                  | ..                 | 21            |
| Total                           | 1              | 2                   | 21                 | 48                               | ..             | ..                  | 1                  | ..             | ..             | 1                   | ..                 | 75            |

## APPENDIX G.

Financial details for 1920-21.

|                                     | RS.    | A. | P. |
|-------------------------------------|--------|----|----|
| Tuition registration fees and fines | 38,317 | 10 | 2  |
| Miscellaneous                       | 587    | 3  | 7  |
| Hostel rent                         | 7,835  | 0  | 0  |
| Electric lighting charges           | 1,329  | 6  | 0  |
| Total                               | 48,069 | 3  | 9  |

## Charges.

| Salaries—                                                                         | RS.      | A. | P. |
|-----------------------------------------------------------------------------------|----------|----|----|
| Principal                                                                         | 28,590   | 0  | 6  |
| Professors and instructors including Presidency and house-rent allowances         | 1,03,328 | 4  | 7  |
| Allowance to Deputy-warden, College of Engineering                                | 120      | 0  | 0  |
| Accountant, Librarian, clerks and servants local and grain compensation allowance | 12,533   | 14 | 0  |
| Library prize books and medals                                                    | 1,996    | 1  | 0  |
| Travelling allowance of officers and establishment                                | 4,097    | 1  | 9  |
| Europe stores and laboratory charges                                              | 15,627   | 6  | 4  |
| Workshop materials                                                                | 16,218   | 9  | 10 |
| Survey camp and inspection tour charges                                           | 5,869    | 8  | 3  |
| Printing maps and diagrams at the Survey office                                   | 750      | 0  | 0  |
| Riding and workshop fees                                                          | 153      | 15 | 0  |
| Exchange compensation allowance                                                   | 19,893   | 14 | 11 |
| Office contingencies and games                                                    | 8,956    | 11 | 9  |
| Scholarships and stipends                                                         | 1,150    | 0  | 0  |
| Honorarium                                                                        | 2,10,285 | 7  | 11 |
| Total                                                                             | 1,71,216 | 4  | 2  |
| Net cost to Government                                                            | 457      | 0  | 0  |
| Average number of students on rolls                                               | 375      | 0  | 0  |
| Net cost per student                                                              | 83       | 14 | 0  |
| Average tuition fee paid by student per annum                                     |          |    |    |

## APPENDIX H.

Comparative financial details.

|                                     | 1916-17.     | 1917-18. | 1918-19. | 1919-20. | 1920-21. |
|-------------------------------------|--------------|----------|----------|----------|----------|
| Receipts                            | Rs. 37,578   | 38,844   | 38,898   | 39,028   | 48,069   |
| Charges                             | Rs. 1,47,738 | 1,69,352 | 1,78,742 | 1,74,156 | 2,19,285 |
| Net cost to Government              | Rs. 1,10,162 | 1,21,708 | 1,37,846 | 1,36,128 | 1,71,216 |
| Average number of students on rolls | 612          | 628      | 618      | 499      | 457      |
| Net cost per student                | Rs. 215      | 230      | 269      | 271      | 375      |

Ref. on Cur. No. 6446/21, dated 14th November 1921.

Recorded.

2. There was a decrease in the strength of the college.

3. The results of the several examinations held during the year were very fair.

4. The Director notes with pleasure that the college has maintained a state of general efficiency during the year.

5. The college has been labouring under difficulties during the past year due to insufficiency of staff and equipment and removal of the college to its new premises. When these deficiencies are made good, as the Director trusts they soon will be, and when the college settles down in its new buildings, a more hopeful report will be expected.

R. LITTLEHAILES,  
Director of Public Instruction.

To the Principal, College of Engineering, Guindy, with spare copies.  
" Principals of other Government Colleges.  
" Inspectors of Schools.  
" Superintendent, School of Arts, Madras.  
" Superintendents, Schools of Engineering, Vizagapatam and Trinopoly.  
Copy to the Director of Industries, Madras.  
" Government for information with covering letter.  
" Chief Engineer, Public Works Department, with covering letter.



Order--No. 1737, Law (Education), dated 5th December 1921.

Recorded.

(By order of the Government, Ministry of Education)

P. C. DUTT,  
*Acting Secretary to Government.*

To the Director of Public Instruction.  
" Public Works Department.  
" Accountant-General.  
" Publicity Officer.  
Editors' Table.

10  
**FORT SAINT GEORGE**

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LAW (EDUCATION) (1921) DEPARTMENT

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(Copy)

LETTER to the Under Secretary of State for India

No. 1738, dated 5th December 1921

COLLEGE OF ENGINEERING, Madras—Report on the working —1920-21—  
Forwarded to the Under Secretary of State for India.

LAW (EDUCATION) DEPARTMENT

LETTER—to

THE UNDER SECRETARY OF STATE FOR INDIA.

MY LORD,

With reference to the instructions conveyed in Lord Hartington's despatch No. 9 (Public Works), dated the 18th May 1882, I am directed to forward a copy of the Proceedings of the Madras Government recording the report on the working of the College of Engineering, Guindy, during the academic year 1920-21.

I have the honour to be,

My Lord,

Your Lordship's most obedient servant,

P. C. DUTT,  
*Acting Secretary to Government.*

FORT ST. GEORGE,  
5th December 1921.



| Date. | Initials. |
|-------|-----------|
|-------|-----------|

READ AGAIN G.O. No. ...., dated ..... 192

READ ALSO:—

C. No. 5657A, From the D.P. I, - RAC No. 6448, dated 6.11.1921

ORDER.

Press

No. 1737, dated 5-12-1921

Jo

The D.P.G.  
P.W.D.  
Q.G.  
R.D.  
F.J.

Reto on 3/12



Law (Im.) DEPARTMENT.

College of Engineering, Madras - Report

Ср 20. 21 — учред. 1000

Recorded

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Lettera no 1738, d. la 5-12-21

~~To~~  
The Sec. of State for India

My Lord,

With refc. to the instructions

Casey in das Hartington Despatch

No 9 (Pub. Wks.), D. K. 18.5.1882. I am  
directed to forward 7 copy of the

Proceedings of the Madras Govt.  
concerning the report on the working  
of the College of Engineering, Guindy,  
during the academic year 1920-21.

Government of Madras

LAW (EDUCATION) DEPARTMENT

G.O. No. 1737, 5th December 1921

College of Engineering, Madras—Report

1920-21—Recorded.

READ—the following paper :—

Letter—from R. LITTLEHAILES, Esq., M.A., M.L.C., Director of Public Instruction.  
To—the Secretary to Government, Law (Education) Department.  
Dated—the 19th November 1921.  
No.—Ref. on Cur. 6446.

I have the honour to submit herewith for the information of Government two copies of my Proceedings Ref. on Cur. No. 6446 of 1921, dated 14th November 1921 reviewing the annual report of the College of Engineering, Guindy, for 1920-21.

ENCLOSURE

Proceedings of the Director of Public Instruction, Ref. on Cur. No. 6446/21,  
dated 14th November 1921.

SUBJECT.—Reviewing the report on the working of the College of Engineering,  
Guindy, for 1920-21.

READ—the following paper :—

Letter—from C. L. CARTWRIGHT, Esq., Acting Principal, College of Engineering,  
Guindy.  
To—the Director of Public Instruction, Madras.  
Dated—the 23rd June 1921.  
No.—C. 758.

I have the honour to submit herewith the Administration Report of the College of Engineering, Guindy, for the academic year 1920-21.

1. Staff.—Mr. W. H. James, the Principal, proceeded on furlough for 16 months in continuation of the summer vacation of 1920, and Mr. H. B. Matthews, Professor of Higher Electrical Engineering, was placed in charge of the College till 5th July 1920, when I returned after the expiry of my leave and was appointed Acting Principal.

2. Mr. H. W. Barker was on privilege leave out of India for three months in continuation of the summer vacation and was permitted to resign his appointment with effect from 4th October 1920.

3. The post of Professor of Civil Engineering remained vacant the whole of the year under report. M.R.Ry. M. S. Venkatarama Ayyar, Assistant Engineer, Public Works Department, was appointed as Additional Instructor in Civil Engineering. He was on duty from 5th July 1920 to 3rd January 1921, when he was transferred to the Public Works Department, his place being taken by M.R.Ry. S. Siva Rao as Assistant Instructor of the College.

4. Mr. H. B. Matthews, Professor of Higher Electrical Engineering, proceeded home on combined leave for six months from 13th February 1921 on account of ill health, and no one has yet been appointed to fill the vacancy.

5. The Professorship of Mechanical Engineering has been vacant since July 17th, 1919, the date of the commencement of my furlough. M.R.Ry. S. Subrahmanya Ayyar, Sub-Engineer, who was appointed as Additional Instructor in Mechanical Engineering during my absence on furlough, was relieved of his duties on the forenoon of the 23rd April 1920. On the reopening of the College on July 5th, 1920, his place was taken by Mr. S. Nataraja Ayyar, Supervisor, first grade, and Assistant Instructor of the College.



6. The following additional staff was sanctioned in G.O. No. 243, Home (Education), dated 24th February 1920 :—

Two Professors in Indian Educational Service (one additional Professor of Civil Engineering and one Professor of Technical Chemistry, the latter to be recruited from England).

Three Assistant Instructors (to be recruited from the Upper Subordinate Establishment of the Public Works Department).

Three Laboratory Assistants on Rs. 100 each.  
Four Mechanics for Laboratory on Rs. 30 each.  
One Workshop Instructor (senior on Rs. 409).  
Three Maistries on Rs. 40 each.  
One Sergeant on Rs. 50.  
One Assistant Accountant on Rs. 25.  
One Storekeeper on Rs. 30.  
One Assistant Librarian on Rs. 20.  
Four Peons on Rs. 9 each.  
One Peon on Rs. 8.  
One Sub-Assistant Surgeon on Rs. 50—120 + Charge allowance.  
One Compounder.  
One Ward Attendant.  
One Peon for Hospital.

7. *Professors in Indian Educational Service.*—During the year under report, the post of the Principal was included in the Indian Educational Service, in G.O. No. 1532, Home (Education), dated 18th December 1920.

M.R.Ry. G. Nagarathnam Ayyar Avargal, B.A., B.E., District Board Engineer, Cocanada, was appointed temporary Additional Professor of Civil Engineering and he joined duty on 16th August 1920. He was confirmed in the appointment with effect from 24th December 1920.

(The post of Professor of Technical Chemistry remained vacant the whole of the year).

The post of Professor of Mathematics was included in the cadre of Indian Educational Service, and M.R.Ry. K. R. Ramaswami Ayyangar Avargal, M.A., the present incumbent, was promoted temporarily to it from 1st September 1920 and was confirmed in the post from 23rd February 1921 in G.O. No. 416, Home (Education), dated 22nd March 1921.

8. *Assistant Instructors.*—M.R.Ry. V. C. Govindarajulu Nayudu, Supervisor, first grade, Public Works Department, and Assistant Instructor, was transferred to the Public Works Department in May last and he was relieved on 10th May 1920, afternoon. The transfer of this Assistant Instructor, and the promotion of M.R.Ry. S. Nataraja Ayyar and M.R.Ry. S. Siva Rao together with the three additional Assistant Instructors sanctioned caused altogether six vacancies. These were filled by transfers from the Public Works Department as follows :—

M.R.Ry. T. M. Ratnasabapathi Pillai,  
" C. Rangaswami Ayyangar,  
" V. Sambasiva Ayyar,  
" S. J. Balraj,  
" B. Ramaswami Ayyangar,  
" N. R. Raghunatha Rao,

who joined duties respectively on 4th August 1920 forenoon, 29th July 1920 afternoon, 29th July 1920 forenoon, 30th July 1920 forenoon, 20th December 1920 forenoon and 24th January 1921 afternoon.

M.R.Ry. R. N. Sarma, Assistant Instructor, was granted combined leave for one and a half years from 3rd January 1921 in continuation of the Christmas holidays of 1920. His place was filled by the appointment of M.R.Ry. K. Sukumaran who had just been relieved of his duties as Instructor of the Salt officers' class to which he had been appointed since 7th October 1920.

Sanction for the retention of four temporary Assistant Instructors was renewed for another year from 1st July 1920. [Vide G.O. No. 750, Home (Education), dated 28th June 1920.]

9. M.R.Ry. P. Subba Rao, Electrical Laboratory Assistant, was confirmed in his appointment with effect from 1st December 1918.

Mr. A. Gilks, the Workshop Instructor on Rs. 200, was on reorganization made the temporary Senior Workshop Instructor on Rs. 400 and in his place Mr. B. E. Jones was appointed on probation for three months, from 27th September 1920. His work not having been satisfactory, his services were terminated and Mr. J. P. Foley was appointed in his place from 20th January 1921 forenoon.

M.R.Ry. S. Krishnaswami Nayakar, Foreman Carpenter, was confirmed in his appointment with effect from 18th August 1918. Mr. L. D. Vaz, Acting Instrument Repairer's services were terminated on account of old age on the afternoon of 7th November 1920 and Mr. M. C. Chinnaswami Mudali was appointed in his place on 1st December 1920 forenoon on the revised scale of pay of Rs. 40 per mensem.

Muhammad Qadir Hussain, sub. *pro tem.* Gymnastic Instructor, was transferred to the Government Arts College, Rajahmundry, and T. Parthasarathi Nayudu, who was appointed to act for him, joined duty on 1st October 1920 forenoon.

The following additional staff joined duty on the dates noted against them :—

|                                                                             |           |
|-----------------------------------------------------------------------------|-----------|
| Mr. D. Lynsdale, Laboratory Assistant, 19th January 1921.                   | Forenoon. |
| Mr. B. G. James Do. 21st March 1921.                                        | "         |
| " N. Viraswami Nayakar, Foundry Maistri, 27th September 1920.               | "         |
| " R. Shanmugam, Blacksmith Maistri, 13th October 1920.                      | "         |
| " C. Govindarajulu, Mechanic Maistri, 27th September 1920.                  | "         |
| Ibrahim Khan, Mechanic Strength of Materials Laboratory, 13th October 1920. | "         |
| Mr. T. Chinnappa Nayakar, Mechanic, Laboratory.                             | "         |
| P. Manicka Nayakar, Electrical Laboratory, 13th October 1920.               | "         |
| Zainulabidin, Hydraulic Laboratory, 7th February 1921.                      | "         |
| Frem Singh, Sergeant, 21st July 1920, forenoon.                             | "         |
| P. J. Chelliah, Storekeeper, 1st July 1920, forenoon.                       | "         |
| N. Raghava Achari, Assistant Accountant, 17th July 1920, forenoon.          | "         |
| V. Natesa Ayyar, Assistant Librarian, 1st July 1920, forenoon.              | "         |

10. In G.O. No. 1471, Home (Education), dated 27th November 1919, the following additional staff were sanctioned for two years for the Power House :—

|                           |          |
|---------------------------|----------|
| One driver superintendent | Rs. 120  |
| One assistant driver      | 40       |
| Four stokers              | 25 each. |
| Three cleaners            | 15 "     |

Mr. A. Edmonds joined duty as driver superintendent on 18th May 1920, but he reverted to his permanent appointment at the Government Press, as his work was unsatisfactory. Mr. Joseph Frank, who was first appointed as assistant driver on Rs. 40 per mensem from 17th September 1920, was promoted to the post of driver superintendent from 6th October 1920.

11. *Sub-Assistant Surgeon.*—M.R.Ry. C. Manicka Mudaliyar was appointed Sub-Assistant Surgeon in charge of the College dispensary from 16th July 1920 forenoon to 5th October 1920 and Mr. Arthur Andrews Pillai, appointed in his place, continues from 6th October 1920.

12. *Clerical staff.*—M.R.Ry. S. A. Sessa Ayyar, sub. *pro tem.* accountant, went on privilege leave for three months from 1st June 1920 and in his place M.R.Ry. N. Sadagopachariar, B.A., L.T., sub. *pro tem.* head clerk, Presidency College, was appointed and he joined duty on the afternoon of 31st May 1920.

M.R.Ry. S. A. Sessa Ayyar having on the expiry of his leave reverted to his permanent appointment in the Presidency College, M.R.Ry. N. Sadagopachariar was confirmed as accountant from 1st September 1920.

M.R.Ry. H. Rangaswami Ayyar, acting head clerk, was transferred to the office of the Inspector of Schools, VII Circle, and M.R.Ry. G. C. Duraiswami Ayyangar, the Permanent Librarian, who had been acting head clerk of the office of Inspector of European Schools, was appointed as head clerk, sub. *pro tem.*, with effect from the afternoon of 5th June 1920.

The lien of M.R.Ry. K. V. Kunhiraman, the permanent head clerk, was transferred to the Teachers' College and M.R.Ry. K. Venkatarama Sastri was appointed to the post without prejudice to his officiating appointment in the Government College, Kumbakonam.

T. V. Kuppuswami Madali, Acting Librarian, who was on privilege leave for one month from 25th February 1920, extended his leave by another month and



V. K. Ramachandra Ayyar, acting first assistant clerk, acted for him. The librarian again went on sick leave for two months from 15th June 1920. During part of this period, V. K. Ramachandra Ayyar acted for him and for the remaining part, P. Subrahmanya Ayyar, second assistant clerk and typist, who had just then returned after a deputation of nearly two years in the office of the Director of Civil Supplies, was appointed to act for him.

13. *Number on the rolls.*—The number of students on the rolls at the end of the academic year was 453 excluding the students on practical course—

|                                        |                   | In college.  |             |              |             |        |  |
|----------------------------------------|-------------------|--------------|-------------|--------------|-------------|--------|--|
| Class.                                 | Practical course. |              |             |              |             | Total. |  |
|                                        |                   | Fourth year. | Third year. | Second year. | First year. |        |  |
| Engineer class .. .. .                 | 42                | * 30         | * 28        | * 33         | * 53        | 186    |  |
| Upper subordinate class .. .. .        | 41                | ..           | ..          | 42           | 51          | 184    |  |
| Lower do. .. .. .                      | ..                | ..           | ..          | 55           | 56          | ..     |  |
| Probationary subordinate class .. .. . | ..                | ..           | ..          | 97           | 94          | 161    |  |
| Total ..                               | 83                | 30           | 28          | 172          | 223         | 536    |  |

\* Three in each year are holders of Electrical Engineering Scholarships.

The corresponding totals for the last five years were —

| Year.           | Number. |
|-----------------|---------|
| 1919-20 .. .. . | 496     |
| 1918-19 .. .. . | 514     |
| 1917-18 .. .. . | 526     |
| 1916-17 .. .. . | 511     |
| 1915-16 .. .. . | 491     |

The distribution of students by classes of community, districts, wealth and occupation of parents or guardians are given in Appendix A, B and C. Of the total number 7.3 per cent were Brahmans, 19.4 per cent Non-Brahman Hindus, 5.3 per cent Indian Christians, 1.1 per cent Europeans and Anglo-Indians, and about .9 per cent Muhammadans. In regard to districts, Tanjore was represented by 18.2 per cent, Kistna 7.3 per cent, Guntur 7.1 per cent, Godavari 6.7 per cent, Tinnevely and Chingleput 6.2 per cent each, Trichinopoly and Malabar 5.3 per cent each, Travancore 4.5 per cent, North Arcot 3.8 per cent, Madras 3.6 per cent, Ganjam, South Kanara and Cochin 2.89 per cent each, Madras 2.7 per cent, South Arcot and Coimbatore 1.8 per cent each, Vizagapatam and Nellore 1.34 per cent each, Ramnad and Chittoor 1.11 per cent each, Salem and Coorg .9 per cent each, Kurnool, Pudukottah and Hyderabad .7 per cent each, Bellary .4 per cent, Nilgiris, Anantapur, Cuddapah, Mysore and Ceylon .2 per cent each.

14. *Admission of students.*—Two hundred and forty-nine candidates applied for admission to the Engineer class, and two hundred and sixteen for the subordinate class, and of these, fifty-one to the former, and sixty-five to the latter were admitted. For the three Electrical Engineering Scholarships thirty-one applications were received. With the opening of the School of Engineering, Trichinopoly, and owing to the abolition of the Upper Subordinate class consequent on the introduction of the scheme relating to the reorganization of the Public Works Department the pressure for admission to the Subordinate class was not so great as was in previous years, and the number admitted was accordingly lower than for the last few years.

15. *Examinations—Engineer class (Senior division).*—The Civil Branch contained 24 students. All but one passed the final examination with an average of 58.6 per cent for the class of the total marks. The one that failed continued in the same class this year. The ten students belonging to the Mechanical Branch passed the final examination, two with honours gaining 58.9 per cent of the total marks. Four students (three Civil and one Mechanical) failed in the Survey examination but three passed after having obtained further practice.

*Second division (third year) Civil.*—There were 15 students in this division, and all appeared for the Sessional examinations, one failed to qualify for promotion and continued in the class this year.

*Mechanical.*—There were 15 students in this division including the three Electrical Scholars. All passed the Sessional examination.

*Third division (second year).*—This was a class of twenty-nine students with three Electrical Engineering Scholarship holders. All appeared for the Sessional examination and qualified for promotion except one who discontinued his studies at the College. Of those qualified for promotion, 17 joined Civil Branch, and 11 the Mechanical branch.

*Fourth class (first year).*—All the thirty three students of the class passed on in accordance with the rules to the second year of the Course.

*Upper Subordinate class—(second division).*—There were 41 students in this class. All passed the final examination, seven with honours. The average percentage of marks obtained was 61.3 per cent.

*Upper Subordinate class (junior division).*—This class was 41 strong. All qualified for promotion.

*Lower Subordinate class.*—Of the 83 students constituting this class, 53 passed the examination, one with honours and eight failed. Of those who passed, 31 failed in practical surveying but all qualified later on in the year on re-examination after obtaining further practice. The average of marks gained was 57.7 per cent.

*Probationary subordinate class (second year division).*—The strength of this class was 109, and of these 11 failed to qualify for proceeding to higher courses of study.

A common examination was held for the students of the Probationary Subordinate class, second year division, of this College and of the School of Engineering, Vizagapatam, in accordance with the instructions contained in G.O. No. 332, Home (Education), dated 23rd April 1918. Of those who passed, 40 at the head of the list of students from the College and 10 from the School of Engineering, Vizagapatam, were with the approval of the Chief Engineer promoted to the Upper Subordinate class, and the remainder went on to complete their course in the Lower Subordinate class. Of the latter, two from the College were selected early in the session to undergo a special course of training in the Consulting Architect's office, to qualify themselves to become architectural draughtsmen.

*Probationary Subordinate class (first year division).*—This division contained 93 students, and in accordance with the rules all passed on to the second-year of study.

Particulars of marks obtained by classes to the several branches of the examinations are given in appendix D.

16. *Honours and distinctions.*—The College medals for the session were awarded to the undermentioned final-year students:—

*Gold medal*—M. S. Thirumalai Ayyangar, Engineer class.

*Silver medal*—J. V. Srinivasulu, Upper Subordinate class.

*Bronze medal*—D. Subba Rao, Lower Subordinate class.

The Harris Gold medal for proficiency in Electrical Engineering was awarded to M. S. Thirumalai Ayyangar. The DeWinton gold medal was not provided for by the donor and consequently there was no award.

17. *Prizes.*—The Special College prizes were awarded as follows:—

*Engineer class.*—The Colonel Love prize for proficiency in Applied Mechanics was awarded to V. Srinivasan, while the Madhava Rao prize for Practical Surveying was gained by D. H. Ramachandra Rao.

*Upper Subordinate class.*—The Roger's prize went to the Silver medalist, J. V. Srinivasulu, who gained also the Colonel Love prize for Hydraulic Engineering and the prizes for Engineering and Drawing. The H. J. Thomson prize for Construction, Building Drawing and Estimating was secured by A. Rangaswami.

The Colonel Love prize was awarded to the senior student, D. Subba Rao.

The Madhava Rao prize to a Maharratta Brahman for skill in Workshop practice was not awarded for want of a qualified candidate.

18. *University examination.*—Twenty-seven Engineer students from the College and twelve ex-students presented themselves for the B.E. Degree examination and of these, 12 passed in the Civil Branch and 6 in the Mechanical Branch.

For the F.E. examination 51 appeared, of whom 30 were second-year students, 18 third-year students, and 3 final-year students. In all, 23 were successful, 13

second-year students, 10 third-year students. The University Rao Bahadur S. Subbaraya Achariyar's Gold medal was awarded to P. Y. Ramabhadran; the J. A. Jones prize for Hydraulic Engineering to G. S. Lamech and the A. T. Mackenzie Memorial prizes to M. S. Sitaram Rao and S. Kamesam.

19. *Practical courses.*—Thirty-two Engineer and forty-one Upper Subordinate students entered on the usual courses of practical training about the middle of June last.

Of the Mechanical Engineer students, four went to the Public Work Workshops, two joined the Madras and Southern Maharata Railway Workshops, Perambore, one elected to join the South Indian Railway Workshops, Trichinopoly, and two in the Madras Harbour Works.

20. *Military students.*—The number of Military students on the rolls at the beginning of the session was four distributed as follows:—

|                                            |     |     |     |     |   |
|--------------------------------------------|-----|-----|-----|-----|---|
| Upper Subordinate class first year         | ... | ... | ... | ... | 1 |
| Upper Subordinate class second year        | ... | ... | ... | ... | 2 |
| Probationary Subordinate class second year | ... | ... | ... | ... | 1 |

No new military students were admitted during the year owing to the discontinuance of the Upper Subordinate class consequent on the re-organization of the Public Works Department.

21. *Revenue officers class.*—Fourteen officers underwent the usual course of training from the 5th October 1920 to 17th December 1920. During the course two officers reverted to the Department. Of the remaining twelve, ten passed the examination.

22. *Architectural draftsman.*—The arrangement for the training of architectural draughtsman which was introduced in 1919 continued during the year. Two students of the Lower Subordinate class were selected in July in consultation with the Consulting Architect. They joined the office of the Consulting Architect on the 17th August and continue to work there.

23. *Survey camp.*—All the classes except the third and fourth year Mechanical Engineering classes went into camp for survey field work practice in January 1921. The first year Engineers, Lower Subordinates and Subordinates numbering 172 in all were out from 3rd to 22nd January. The final-year Engineers and Upper Subordinates 57 in number, the second and third year Civil Engineers, the second-year Upper Subordinates and Probationary Subordinates 199 in number, were in camp till 22nd January. The work done by the several classes was of the same kind and on the same lines as in previous years, and was carried out in accordance with a previously prepared programme. The usual practice hitherto was for the students to do field work both morning and afternoon. A change was made this year and the field work was confined to the mornings only, the working hours being however increased. The work turned out this year compared favourably both as regards quality and quantity with that of previous years. Members of staff worked hard and earnestly and showed a high sense of duty. The number of students in attendance was 428 and the total cost to Government Rs. 1,954-14-0 including the batta for students. Our thanks are due to the Military Authorities at St. Thomas' Mount and Pallavaram for permitting the students to survey within cantonment limits and for kindly allowing us the use of a portion of the Barracks.

24. *Workshops, Laboratories and Power-house workshops.*—During the early part of the year, work was largely handicapped owing to the new buildings not being completed, the removal from Chepauk and re-erection of the old plant and the want of power for driving the machinery. During the year, new machinery selected by me when on deputation in England in the early part of the year, arrived at intervals. Most of this was surplus war material supplied from stock. Very little of the new machinery for which orders were then placed has up to the present been delivered, owing to the abnormal conditions of trade. Under the circumstances, it was difficult to give the senior classes as much machine work as they usually have, but owing to shortness of staff and the difficulties under which we were working in the early part of the session, most of them had the opportunity of gaining very useful experience in the erection and running of machinery.

25. *Mechanical Engineering laboratory.*—Since the Mechanical Engineering department has been without a Professor since I went on leave in July 1919, the work in this Department has necessarily suffered both as regards Lecture and Laboratory work. During the year under report my time as Acting Principal has been so fully occupied on office work and in endeavouring to get the new college and hostel organised, that I have had very little time left to devote to Lecturing and Laboratory work.

26. *Electrical Engineering Laboratory.*—The work in the Electrical Engineering Laboratory has been seriously handicapped owing to the unfinished state of the building which is even now incomplete. During the latter part of the year, a more serious check still occurred owing to the break down in health of Mr. H. B. Matthews, Professor of Electrical Engineering, who was obliged to go home on sick leave. No appointment has as yet been made in his place.

27. *Hydraulic Laboratory.*—Nothing has been done up to the present as regards the equipment of this laboratory owing partly to lack of funds and partly to the fact that a Professor of Civil Engineering to fill Mr. Barker's place has not yet been appointed.

*Power-house.*—The only equipment we have at present in the power-house is the steam plant obtained from the Government Press and two small internal combustion engines removed from the College at Chepauk. New machinery is, however, on order though not to the full amount required. It is hoped that the machinery now ordered will be received and erected before the end of the year.

*Visit to works.*—The senior divisions of the Engineer (Civil) and the Upper Subordinate classes accompanied by the Professor of Civil Engineering assisted by two assistant instructors proceeded to Godavari early in September for a tour round some of the irrigation works of the Godavari and Kistna deltas. After inspecting the water-works at Cocanada the party proceeded to Samalkota where they were shown round the double lock, the aqueduct, the farm and the artesian wells. The party then went on to Bezvada visiting on their way the head works at Vizeswaram, Bobberlanka, the Ellore water-works, the storage reservoir and pumping station. At Bezvada the party were shown round the Kistna bridge, the eastern and western delta head works. The party finished up the tour with a visit to the Divi pumping installation and returned to Madras on the 19th September.

At about the same time two parties of students were taken to the south for a tour round some of the works in the Cauvery delta—the one party consisting of 70 students belonging to Engineering (ii) Civil and Upper Subordinates (ii) classes and three Military students under the charge of the instructor in surveying assisted by two assistant instructors and the other 57 students of the Lower Subordinate class accompanied by the instructor in Civil Engineering and two assistant instructors. The first party started with the inspection of Cauvery at Erode and Bhavani and the Kalingarayan channel and head works. They next proceeded to Elamalur and on their way the river conservancy works, scouring sluices, cross drainage works and super passages across the Puthur channel were inspected. At Elamalur, they marched on to the Cauvery bank and inspected the Ayyan and Puvalur channel, head sluice and also the screw pile bridge. The 150 yards kalingula, a surplus work on the left bank of the Cauvery, three miles below the Cauvery dam, was next visited. The officer in charge of the gauging operations explained to the students the details of the electric current meters and their working and the working of the automatic recorders and the advantage of their use in gauging operations. The party then proceeded to Trichinopoly and after inspecting the grand ancient, the Cauvery and Vennar regulators, the pumping station and the head works of the Trichinopoly water-works—returned to Saidapet on the 19th September.

The second party toured round the place in the opposite direction.

The students of the first and second divisions of the Engineer class, Mechanical branch were taken by the instructor in Mechanical Engineering on a visit of inspection over a week in September to Mysore. After visiting the Hydro Electric Power station at Sivasamudram, the Kannambadi dam and the Sandal-oil factory at Mysore, the party proceeded to Kolar Gold Fields inspecting the Tata Institute at Bangalore on their way. At Kolar Gold Fields, the party were given every facility by the authorities in charge for inspecting the Champion Reef mine, the jewel filters and the



pumping engines of the water-works at Bettamangalam. The party returned to Mr. dras on the 18th-September. The total number of students who took part in these tours was 158 and the expenditure was Rs. 3,358-8-9.

During the session, visits were paid as usual by all classes to local engineering works including the Madras Corporation water-supply including the Red Hills tank, Madras Harbour works, Government Brickfields, Madras Cement works and Carnatic Mills. The students were also taken out for instructional purposes to buildings under construction such as improvements to new Council Chamber, Government House and Penitentiary bridge works, expansions to Queen Mary's College and to the Chemical wing of the Presidency College and Monegar Choultry new hospital, Rayapuram.

*Attendance and conduct.*—The percentage of attendances to numbers on the rolls of the College was 94.3 per cent. Detailed particulars for the several classes are given in appendix E. The conduct of the students during the year was satisfactory.

*Library.*—During the year under report about 190 books were added to the Library which now contains 6,747 volumes.

The number of books issued on loan to the staff and students were 875 and 2,750, respectively, and about 450 references were made in the Library.

The new catalogue according to the reclassification of books is under print and will shortly be published.

The annual check of the books in the Library has just been completed and a few books reported missing are being traced.

*Reading-room.*—The reading-room attached to the Library was kept open from 7-30 a.m. to 8 p.m. every day and a large percentage of the students made use of the facilities thus afforded to them, during their leisure hours to the best advantage.

28. *Athletic club.*—Mr. W. C. Old, instructor in surveying, kindly undertook the duties of Honorary Secretary and he reports as follows:—

*Football.*—The College maintained its longstanding reputation in this game by winning the Governor's cup in the inter-collegiate knock-out competition.

*Cricket.*—This year also as in the last, we tried with the Medical College for the first place in the M.C.A.A. League competition. In the deciding game of two innings we met the Medicals but unfortunately lost the match.

*Hockey.*—Owing to the fact that we had no grounds ready for useful practice of the game throughout the year we could not fulfil many of the engagements with the other colleges.

*Tennis.*—We have no tennis court at all since the estimate sent up for the laying of seven tennis courts many months ago has not yet been sanctioned. Owing, however, to the interest taken by M.R.Ry. S. Krishnaswami Ayyar a selected number of students were given some practice in the Tennis court attached to the Saidapet Club and the College was thus represented in the M.C.A.A. tournament both in the singles and in the doubles.

*Athletic sports.*—In the inter-collegiate sports we were prominent in almost all the events though our representatives were successful only in the three items, viz., swimming where we carried off both the first and second prizes and high jump and one mile flat race in each of which we got the second prize. We can, however, congratulate ourselves on the circumstances that we were second only to the Medical College in the total number of points won.

*College sports.*—This year the College sports were held in connexion with the College day under the distinguished presidency of His Excellency the Governor of Madras and were competed for by a large number of students and excited much enthusiasm.

*Inter-class competitions.*—Inter-class competitions were held as usual, but on the knock-out system and resulted as follows:—

*Cricket.*—Second year Engineer students.

*Football.*—Third and fourth year Engineer students.

*General remarks.*—With the removal of the College to Guindy and its transformation into a purely residential institution, it has become a matter of no inconsiderable importance and difficulty to arrange for the physical education and recreation

of so many as nearly 450 students. Every evening and on mornings also during the week end holidays, we have to provide for the out-door recreation of this large number of collegiate students, if we desire to direct them along proper channels of conduct and to maintain discipline without effort. This clearly means a variety of games; and this again cannot be had without proper provision for preparing the grounds, laying out the courts, tracks, etc., in a practically wild country. All this again means money, money promptly and liberally sanctioned by Government. My experience of this year is rather painful. When we moved here in July, none of the grounds had been got ready and I had to beg for and rush the preparation of the football grounds and the cricket pitch which were still not made ready before the end of August 1920. The hockey grounds have not yet been prepared. For the College sports the running track had to be specially prepared by us at extra cost. The grounds are even now not in perfect condition and money will have to be spent on them liberally for at least two years more.

I cannot but refer to the valuable and willing services rendered by M.R.Ry. S. Krishnaswami Ayyar, M.A., L.T., Instructor in Mathematics, year after year, in connexion with the Athletic club in general and the tennis branch in particular. His residence in the premises, if arranged for, would be of great help to me to cope with the growing volume of work in connexion with the Athletic club."

29. *Employment of passed students.*—Of the twenty-one Engineer students who completed their practical courses in 1920, the senior in the Mechanical branch was appointed to the permanent establishment of the Public Works Department as Assistant Engineer and others obtained employment as follows:—

|                                                                 |     |     |     |     |     |    |
|-----------------------------------------------------------------|-----|-----|-----|-----|-----|----|
| District Board Assistant Engineers                              | ... | ... | ... | ... | ... | 2  |
| Temporary Upper Subordinates, Public Works Department, Madras   | ... | ... | ... | ... | ... | 10 |
| Assistant Engineer, Irrigation branch, Nizam's State, Hyderabad | ... | ... | ... | ... | ... | 1  |
| Assistant Engineer, Works Department, Corporation of Madras     | ... | ... | ... | ... | ... | 1  |
| Assistant Engineer, Public Works Department, Trivandrum         | ... | ... | ... | ... | ... | 1  |
| Lecturer in Technology, Technical section, Trivandrum           | ... | ... | ... | ... | ... | 1  |
| Mechanical Engineer, Tinnevely Textiles Company, Koilpatti      | ... | ... | ... | ... | ... | 1  |
| Assistant Spinning Master, Tinnevely Textiles Company           | ... | ... | ... | ... | ... | 1  |

Two of the Engineer students after completing their Practical courses have proceeded to England for the study of Electrical Technology.

Forty Upper Subordinates satisfactorily completed their practical training and the senior among them was appointed as permanent overseer, third grade, Public Works Department. The one Military student joined the Military Works Service. Reports have been received from thirty-seven students having been appointed Temporary Upper Subordinates and one as Superintendent in the Standard Furniture Company, Malabar.

Seventy-three students of the Lower Subordinate class completed the College course in 1920. Of these, 59 reported employment as follows:—

|                                      |     |     |     |     |     |    |
|--------------------------------------|-----|-----|-----|-----|-----|----|
| Sub-overseers (P.W.D.)               | ... | ... | ... | ... | ... | 20 |
| Surveyor                             | ... | ... | ... | ... | ... | 1  |
| Draftsman                            | ... | ... | ... | ... | ... | 11 |
| Section Officer                      | ... | ... | ... | ... | ... | 1  |
| Overseers, District Board            | ... | ... | ... | ... | ... | 15 |
| Draftsmen, District Board            | ... | ... | ... | ... | ... | 3  |
| Surveyor, Corporation of Madras      | ... | ... | ... | ... | ... | 1  |
| Surveyors, State Railways            | ... | ... | ... | ... | ... | 2  |
| Sub-overseers, Corporation of Madras | ... | ... | ... | ... | ... | 3  |
| Assistant Inspector of Railway       | ... | ... | ... | ... | ... | 1  |
| Overseer, Madras Port Trust          | ... | ... | ... | ... | ... | 1  |

59

80. *First-aid lectures.*—The local Honorary Secretary of the St. John Ambulance Association deputed M.R.Ry. P. Narasimham, L.M.S., Assistant Surgeon, Ophthalmic Hospital, Madras, to conduct the Ambulance classes for the Engineer first-year, Upper Subordinate first-year and Lower Subordinate classes. Six lectures were delivered commencing from Monday, the 15th November 1920. Examinations for the above classes in first aid were held in March 14 and 15 the results of which are not yet to hand.

81. *College hospital.*—A dispensary for the use of the students and members of staff was opened on the 16th July 1920 and is in charge of a Sub-Assistant Surgeon with a compounder and a ward boy. M.R.Ry. C. Manikka Mudaliyar, third-grade Sub-Assistant Surgeon, was in charge of the hospital from the 16th July to 5th October 1920 and was transferred to the hospital at Kovapetta, his place being taken by M.R.Ry. Andrew Pillai, senior grade Sub-Assistant Surgeon. The number of patients treated during the year was 6,743 with a daily average of 26.65. The general health is considered to be good.

82. Particulars of the vacancies notified during the year are given in Appendix F.

*Casualties.*—I regret to have to record the death of one student P. S. Somiyajula of the Upper Subordinate class, first-year division.

83. *Financial details.*—These are furnished in Appendix G. The receipts for 1920-21 amounted to Rs. 43,069 and the charges to Rs. 2,19,255 resulting in a net cost to Government of Rs. 1,71,216. The average number of students on the rolls was 457 and the net cost per student, Rs. 375.

The above figures are subject to modifications when particulars of adjustments, if any, are communicated by the Accountant-General.

An abstract of receipts and charges for the last five years is given in Appendix H.

84. *Hostel.*—The hostel which is fully residential was opened in the new premises at Guindy on the 3rd July 1920 and M.R.Ry. N. Ramanuja Achariyar, a Government pensioner, was in charge of it as full-time Manager throughout the session.

The strength was 446 students distributed as follows:—

|                                               |     |
|-----------------------------------------------|-----|
| (1) Anglo-Indians                             | 5   |
| (2) Brahmans                                  | 315 |
| (3) Non-Brahmans including Vaisyas and Nayars | 101 |
| (4) Indian Christians                         | 23  |
| (5) Muhammadans                               | 2   |
|                                               | 446 |

In addition to this number, 23 members of staff and 16 students were boarders as casual members so that the total strength was 490 at the end of the college session. The average number of daily guests was 20.

The above 490 students were distributed in 13 sections, 7 for Brahmans and 6 for other communities and they were formed chiefly according to sects. The nature of the meals prepared in the several sections was also slightly different.

The boarding charges per member per month including cost of establishment varied from Rs. 18 to Rs. 19 for the vegetarian sections and from Rs. 19 to Rs. 20 for the non-vegetarian sections—the Anglo-Indian section excepted. During the months of January, February and March of the current year, the rates were somewhat lower owing to the fall in the prices of some of the chief articles of food such as rice, dholl and ghee.

The total expenditure of the hostel for the session was Rs. 82,320, of which the cost of establishment was Rs. 8,320 and the cost of stores was Rs. 74,000. This amount was divided among the students of the several sections, according to the strength in each. The accommodation at present provided for the Hostel is not sufficient for the purpose. A hot water-shed, a fuel room and three more kitchens are urgently required. The dining hall of the non-Brahman section is too small for the number of students in it and in view of the larger number of students who are expected to join the college in July next it requires to be extended immediately.

Thirty-one students were exempted from residence at the hostel, twenty-eight being granted permission to live with their families and three to be inmates of the Ramakrishna Students' Home.

Attached to the College hostel there is an 'Emporium' in which all the students' requisites are kept for sale, a coffee hotel which provides 'Chotahazari' for the students and a barber's shed in which six men are working.

35. *College day.*—The first college day was held on the 24th February. Past students, many of whom attended, were entertained at dinner in the hostel in the morning. The college sports were held in the afternoon followed by a prize giving and a short play acted by the students. His Excellency the Governor of Madras and Her Excellency Lady Willingdon were present at the sports and His Excellency very kindly consented to distribute both the college prizes and those won at the sports and afterwards gave the students some very useful advice with regard to the non-co-operation movement.

36. During the year, the college was visited by the Hon'ble Khan Bahadur M. Muhammad Shafi, C.I.E., Member of Council in charge of Education, also by the Hon'ble Rao Bahadur B. N. Sarma, Member of the Viceroy's Council and the Hon'ble Mr. J. A. Ritchie, C.I.E., Educational Commissioner with the Government of India. A meeting of the Board of Visitors was held in January to consider the revision of the College rules necessitated by the reorganization of the Public Works Department and various other matters in connexion with the organization of the college.

In conclusion I wish to emphasize the importance of filling up the vacant appointments in the Indian Educational Service at the earliest possible moment. At present out of six sanctioned professors, only two are at present on duty, one is on sick leave, one on other duty and two have not yet been appointed. It is obviously impossible to maintain the teaching up to the University standard with two-thirds of the senior staff absent. A great deal of credit is due to the members of the staff for their efforts in carrying on the work of the college this year under adverse conditions and I wish to place on record my high appreciation of their cordial co-operation with me in this respect. No slight praise is due also to the office staff whose work has been so largely increased since the removal of the college to Guindy, that it was found necessary to extend the usual office hours by an hour a day in order to cope with it. The accounts section of the office is at present insufficient and it is to be hoped that the recommendation of the Board of Visitors for increased staff will be sanctioned without delay.

## APPENDIX A.

| Class.                                       | Europeans and Eurasians. | Indian Christians. | Muhammadans. | Hindus.   |               |            |         | Total. |
|----------------------------------------------|--------------------------|--------------------|--------------|-----------|---------------|------------|---------|--------|
|                                              |                          |                    |              | Brahmans. | Non-Brahmans. | Panchamas. | Others. |        |
| Engineer Class, fourth year .. ..            | 5                        | ..                 | ..           | 21        | 4             | ..         | ..      | 30     |
| Do. do. third year .. ..                     | 2                        | ..                 | ..           | 12        | 9             | ..         | ..      | 23     |
| Do. do. second year .. ..                    | 2                        | ..                 | ..           | 20        | 10            | ..         | ..      | 33     |
| Do. do. first year .. ..                     | 1                        | ..                 | ..           | 33        | 14            | ..         | ..      | 53     |
| Upper Subordinate Class, second year ..      | 1                        | ..                 | ..           | 31        | 10            | ..         | ..      | 42     |
| Do. do. do. first year .. ..                 | 9                        | ..                 | ..           | 40        | 9             | ..         | ..      | 51     |
| Lower do. do. .. ..                          | ..                       | 2                  | ..           | 44        | 9             | ..         | ..      | 66     |
| Probationary Subordinate Class, second year. | 1                        | 4                  | ..           | 76        | 16            | ..         | ..      | 97     |
| Subordinate Class, first year .. ..          | ..                       | 5                  | ..           | 62        | 7             | ..         | ..      | 64     |
| Total .. ..                                  | 5                        | 23                 | 4            | 333       | 88            | ..         | ..      | 453    |



## APPENDIX B.

| Districts.            | Engineer class. | Upper Subordinate class. | Lower Subordinate class. | Probationary and Subordinate classes. | Total.        |
|-----------------------|-----------------|--------------------------|--------------------------|---------------------------------------|---------------|
| Ganjam .. .. .        | 6               | 6                        | ..                       | 2                                     | 13            |
| Visakhapatnam .. .. . | 1               | 1                        | ..                       | 1                                     | 6             |
| Godavari .. .. .      | 7               | 6                        | 6                        | 11                                    | 30            |
| Kistna .. .. .        | 6               | 7                        | 1                        | 19                                    | 35            |
| Guntur .. .. .        | 4               | 10                       | 1                        | 17                                    | 32            |
| Nellore .. .. .       | 2               | 1                        | 1                        | 2                                     | 6             |
| Bellary .. .. .       | 1               | ..                       | ..                       | 1                                     | 2             |
| Anantapur .. .. .     | ..              | ..                       | ..                       | 1                                     | 1             |
| Kurnool .. .. .       | 1               | ..                       | ..                       | ..                                    | 1             |
| Cuddapah .. .. .      | 1               | 1                        | ..                       | 3                                     | 5             |
| Chittoor .. .. .      | 1               | 1                        | ..                       | 6                                     | 12            |
| Madras .. .. .        | 4               | 3                        | 6                        | 12                                    | 28            |
| Chingleput .. .. .    | 6               | 4                        | 6                        | 5                                     | 17            |
| North Arcot .. .. .   | 3               | ..                       | ..                       | 3                                     | 8             |
| South Arcot .. .. .   | 2               | 2                        | 1                        | 33                                    | 82            |
| Tanjore .. .. .       | 18              | 20                       | 11                       | 10                                    | 24            |
| Trichinopoly .. .. .  | 6               | 7                        | 1                        | 8                                     | 16            |
| Madurai .. .. .       | 5               | 2                        | 1                        | 2                                     | 8             |
| Ramanad .. .. .       | 2               | 3                        | 8                        | 28                                    | 39            |
| Tinnevely .. .. .     | 2               | 1                        | 4                        | 1                                     | 8             |
| Cumbaloor .. .. .     | ..              | ..                       | ..                       | ..                                    | ..            |
| Salem .. .. .         | 3               | 5                        | ..                       | 24                                    | 32            |
| Majabar .. .. .       | 10              | ..                       | 1                        | 1                                     | 13            |
| South Kanara .. .. .  | 11              | ..                       | 1                        | 6                                     | 18            |
| Cochin .. .. .        | 4               | 2                        | 1                        | 2                                     | 20            |
| Travancore .. .. .    | 17              | 1                        | ..                       | 3                                     | 21            |
| Pudukottai .. .. .    | 1               | ..                       | ..                       | ..                                    | 1             |
| Mysore .. .. .        | 1               | ..                       | ..                       | ..                                    | 1             |
| Hyderabad .. .. .     | 3               | ..                       | ..                       | ..                                    | 3             |
| Ceylon .. .. .        | 1               | ..                       | ..                       | ..                                    | 1             |
| Coorg .. .. .         | 4               | ..                       | ..                       | ..                                    | 4             |
| Nilgiris .. .. .      | 1               | ..                       | ..                       | ..                                    | 1             |
| Total ..              | 144             | 90 (3 Mily.)             | 55                       | 160 (1 Mily.)                         | 449 (4 Mily.) |

## APPENDIX C.

| Class.                                                   | Wealth.       |               |               |        | Occupation. |                  |          |               |                 |             |         |
|----------------------------------------------------------|---------------|---------------|---------------|--------|-------------|------------------|----------|---------------|-----------------|-------------|---------|
|                                                          | Richer class. | Middle class. | Poorer class. | Total. | Officials.  | Petty officials. | Traders. | Land-holders. | Agriculturists. | Mendicants. | Others. |
| Engineer class, fourth year ..                           | 5             | 23            | 2             | 30     | 21          | ..               | 6        | 8             | ..              | ..          | 1       |
| Do. third year ..                                        | 3             | 25            | ..            | 28     | 15          | 1                | 6        | 7             | ..              | ..          | 28      |
| Do. second year ..                                       | 2             | 31            | ..            | 33     | 24          | ..               | 4        | 5             | ..              | ..          | 83      |
| Do. first year ..                                        | 1             | 47            | 5             | 53     | 80          | ..               | 2        | 21            | ..              | ..          | 63      |
| Upper Subordinate class, second year ..                  | 39            | ..            | 41            | 18     | ..          | 3                | 20       | ..            | ..              | ..          | 41      |
| Upper Subordinate class, second year, Military ..        | ..            | ..            | 1             | ..     | ..          | ..               | ..       | ..            | ..              | ..          | 1       |
| Upper Subordinate class, first year ..                   | 2             | 40            | 7             | 49     | 25          | ..               | 2        | 21            | ..              | 1           | 49      |
| Upper Subordinate class, first year, Military ..         | ..            | ..            | 2             | ..     | ..          | ..               | ..       | ..            | ..              | ..          | 2       |
| Lower Subordinate class ..                               | 10            | 41            | 4             | 55     | 17          | 6                | 3        | 28            | ..              | 1           | 55      |
| Probationary Subordinate class, second year ..           | 9             | 55            | 32            | 96     | 22          | 17               | 6        | 50            | ..              | 1           | 96      |
| Probationary Subordinate class, second year, Military .. | ..            | ..            | 1             | ..     | ..          | ..               | ..       | ..            | ..              | ..          | 1       |
| Subordinate class, first year ..                         | 7             | 35            | 21            | 64     | 23          | 1                | 4        | 36            | ..              | ..          | 64      |
| Total ..                                                 | 39            | 337           | 73            | 463    | 195         | 25               | 34       | 191           | ..              | 2           | 463     |

## APPENDIX D.

Percentage of marks gained in the session 1919-20.

*Engineer class, fourth year, Civil branch.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 59.4 |
| II. Engineering .. .. .                   | 58.4 |
| Physical exercises .. .. .                | 59.4 |
| Average .. .. .                           | 58.6 |

*Engineer class, fourth year, Mechanical branch.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 50.7 |
| II. Engineering .. .. .                   | 60.6 |
| Physical exercises .. .. .                | 61.8 |
| Average .. .. .                           | 58.9 |

*Engineer class, third year, Civil branch.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 53.9 |
| II. Engineering .. .. .                   | 56.2 |
| Physical exercises .. .. .                | 54.3 |
| Average .. .. .                           | 55.3 |

*Engineer class, third year, Mechanical branch.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 59.2 |
| II. Engineering .. .. .                   | 63.1 |
| Physical exercises .. .. .                | 59.3 |
| Average .. .. .                           | 61.8 |

*Engineer class, second year division.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 61.6 |
| II. Engineering .. .. .                   | 56.4 |
| Physical exercises .. .. .                | 55.8 |
| Average .. .. .                           | 58.4 |

*Engineer class, first year division.*

|                                           |      |
|-------------------------------------------|------|
| Branch I. Mathematics and science .. .. . | 60.3 |
| II. Engineering .. .. .                   | 58.6 |
| Physical exercises .. .. .                | 61.4 |
| Average .. .. .                           | 59.7 |

*Upper Subordinate class, second year.*

|                               |      |
|-------------------------------|------|
| Branch I. Mathematics .. .. . | 72.3 |
| II. Engineering .. .. .       | 69.9 |
| Physical exercises .. .. .    | 66.2 |
| Average .. .. .               | 61.3 |

*Upper Subordinate class, first year.*

|                               |      |
|-------------------------------|------|
| Branch I. Mathematics .. .. . | 62.1 |
| II. Engineering .. .. .       | 60.8 |
| Physical exercises .. .. .    | 66.2 |
| Average .. .. .               | 55.9 |

*Lower Subordinate class.*

|                                |      |
|--------------------------------|------|
| Branch II. Engineering .. .. . | 56.5 |
| Physical exercises .. .. .     | 68.1 |
| Average .. .. .                | 57.7 |

*Probationary Subordinate class, second year.*

|                               |      |
|-------------------------------|------|
| Branch I. Mathematics .. .. . | 69.1 |
| II. Engineering .. .. .       | 56.6 |
| Physical exercises .. .. .    | 65.1 |
| Average .. .. .               | 59.7 |

*Subordinate class, first year division.*

|                               |      |
|-------------------------------|------|
| Branch I. Mathematics .. .. . | 75.8 |
| II. Engineering .. .. .       | 57.5 |
| Physical exercises .. .. .    | 66.6 |
| Average .. .. .               | 62.4 |

## APPENDIX E.

|                                                         | Average number on rolls. | Average daily attendance. |
|---------------------------------------------------------|--------------------------|---------------------------|
| Engineer class, First division ... ..                   | 30.00                    | 28.8                      |
| Do. Second do. ... ..                                   | 28.10                    | 26.4                      |
| Do. Third do. ... ..                                    | 33.00                    | 31.5                      |
| Do. Fourth do. ... ..                                   | 53.20                    | 50.6                      |
| Upper Subordinate class, First division ... ..          | 49.50                    | 47.9                      |
| Do. Second do. ... ..                                   | 42.00                    | 40.0                      |
| Lower Subordinate class do. ... ..                      | 58.00                    | 53.7                      |
| Probationary Subordinate class, second division ... ..  | 98.10                    | 90.4                      |
| Subordinate class, first year division ... ..           | 65.00                    | 61.7                      |
| Total ... ..                                            | 456.90                   | 431.0                     |
| Percentage of numbers present to number on rolls ... .. | 94.3                     |                           |

## APPENDIX F.

Classification of vacancies notified during the year 1920-21.

|                                 | Government.    |                     |                    |               | Local boards and municipalities. |                     |                    |               | Railways.      |                     |                    |               | Native States. |                     |                    |               | Private employees. |  |  |  |
|---------------------------------|----------------|---------------------|--------------------|---------------|----------------------------------|---------------------|--------------------|---------------|----------------|---------------------|--------------------|---------------|----------------|---------------------|--------------------|---------------|--------------------|--|--|--|
|                                 | Above Rs. 200. | Rs. 100 to Rs. 200. | Rs. 50 to Rs. 100. | Under Rs. 50. | Above Rs. 200.                   | Rs. 100 to Rs. 200. | Rs. 50 to Rs. 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to Rs. 200. | Rs. 50 to Rs. 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to Rs. 200. | Rs. 50 to Rs. 100. | Under Rs. 50. | Total.             |  |  |  |
| Engineer or Assistant Engineer. | 1              | ..                  | ..                 | ..            | ..                               | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | 1                  |  |  |  |
| Supervisor .. ..                | ..             | ..                  | ..                 | ..            | ..                               | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | 1                  |  |  |  |
| Overseer .. ..                  | ..             | ..                  | ..                 | ..            | ..                               | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | 1                  |  |  |  |
| Sub-Overseer .. ..              | ..             | ..                  | ..                 | ..            | ..                               | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | 22                 |  |  |  |
| Draughtsman .. ..               | ..             | ..                  | ..                 | ..            | ..                               | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | 30                 |  |  |  |
| Surveyor .. ..                  | ..             | 13                  | 2                  | 23            | ..                               | ..                  | ..                 | 1             | ..             | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | 21                 |  |  |  |
| Channel Superintendent .. ..    | ..             | ..                  | ..                 | ..            | ..                               | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | ..             | ..                  | ..                 | ..            | ..                 |  |  |  |
| Total .. ..                     | 1              | 5                   | 21                 | 48            | ..                               | ..                  | ..                 | 1             | ..             | ..                  | ..                 | ..            | ..             | 1                   | ..                 | ..            | 75                 |  |  |  |

## APPENDIX G.

Financial details for 1920-21.

|                                            | Rs.    | A. | P. |
|--------------------------------------------|--------|----|----|
| Tuition registration fees and fines ... .. | 38,317 | 10 | 2  |
| Miscellaneous ... ..                       | 587    | 3  | 7  |
| Hostel rent ... ..                         | 7,835  | 0  | 0  |
| Electric lighting charges ... ..           | 1,329  | 6  | 0  |
| Total ... ..                               | 48,069 | 3  | 9  |

## Charges.

|                                                                                          | Rs.      | A. | P. |
|------------------------------------------------------------------------------------------|----------|----|----|
| Salaries—                                                                                |          |    |    |
| Principal ... ..                                                                         | 28,590   | 0  | 6  |
| Professors and instructors including Presidency and house-rent allowances ... ..         | 1,03,328 | 4  | 7  |
| Allowance to Deputy warden, College of Engineering ... ..                                | 120      | 0  | 0  |
| Accountant, Librarian, clerks and servants local and grain compensation allowance ... .. | 12,533   | 14 | 0  |
| Library prize books and medals ... ..                                                    | 1,996    | 1  | 0  |
| Travelling allowance of officers and establishment ... ..                                | 4,097    | 1  | 9  |
| Europe stores and laboratory charges ... ..                                              | 15,627   | 6  | 4  |
| Workshop materials ... ..                                                                | 16,218   | 9  | 10 |
| Survey camp and inspection tour charges ... ..                                           | 5,869    | 8  | 3  |
| Printing maps and diagrams at the Survey office ... ..                                   | ..       | .. | .. |
| Riding and workshop fees ... ..                                                          | 750      | 0  | 0  |
| Exchange compensation allowance ... ..                                                   | 153      | 15 | 0  |
| Office contingencies and games ... ..                                                    | 19,893   | 14 | 11 |
| Scholarships and stipends ... ..                                                         | 8,956    | 11 | 9  |
| Honorarium ... ..                                                                        | 1,150    | 0  | 0  |
| Total ... ..                                                                             | 2,19,285 | 7  | 11 |
| Net cost to Government ... ..                                                            | 1,71,216 | 4  | 2  |
| Average number of students on rolls ... ..                                               | 457      | 0  | 0  |
| Net cost per student ... ..                                                              | 375      | 0  | 0  |
| Average tuition fee paid by student per annum ... ..                                     | 88       | 14 | 0  |

## APPENDIX H.

Comparative financial details.

|                                            | 1916-17.     | 1917-18. | 1918-19. | 1919-20. | 1920-21. |
|--------------------------------------------|--------------|----------|----------|----------|----------|
| Receipts ... ..                            | Rs. 37,576   | 38,544   | 38,896   | 39,018   | 48,069   |
| Charges ... ..                             | Rs. 1,47,788 | 1,80,362 | 1,76,742 | 1,74,155 | 2,19,285 |
| Net cost to Government ... ..              | Rs. 1,10,192 | 1,41,798 | 1,37,846 | 1,35,137 | 1,71,216 |
| Average number of students on rolls ... .. | 512          | 528      | 618      | 499      | 457      |
| Net cost per student ... ..                | Rs. 215      | 230      | 266      | 271      | 375      |

Ref on Cur. No. 6446/21, dated 14th November 1921.

Recorded.

- There was a decrease in the strength of the college.
- The results of the several examinations held during the year were very fair.
- The Director notes with pleasure that the college has maintained a state of general efficiency during the year.
- The college has been labouring under difficulties during the past year due to insufficiency of staff and equipment and removal of the college to its new premises. When these deficiencies are made good, as the Director trusts they soon will be, and when the college settles down in its new buildings, a more hopeful report will be expected.

R. LITTLEHAILES,  
Director of Public Instruction.

To the Principal, College of Engineering, Gaiindy, with spare copies.  
" Principals of other Government Colleges.

" Inspectors of Schools.  
" S. P. Principals, School of Arts, Madras.  
" Superintendents, Schools of Engineering, Vizagapatnam and Trichinopoly.  
Copy to the Director of Industries, Madras.  
" Government for information with covering letter.  
" Chief Engineer, Public Works Department, with covering letter.



No. 1737, LAW (EDUCATION), 5TH DECEMBER 1921

Order—No. 1737, Law (Education), dated 5th December 1921.

Recorded.

(By order of the Government, Ministry of Education)

P. C. Dutt,  
*Acting Secretary to Government.*

To the Director of Public Instruction.  
 „ Public Works Department.  
 „ Accountant-General.  
 „ Publicity Officer.  
 Editors' Table.

Forwarded to the

(By order)

*Superintendent,  
 Law Department.*

## FORT SAINT GEORGE

LAW (EDUCATION) DEPARTMENT

(Copy)

LETTER to the Under Secretary of State for India

No. 1738, dated 5th December 1921

COLLEGE OF ENGINEERING, Madras—Report on the working—1920-21—  
 Forwarded to the Under Secretary of State for India.

LAW (EDUCATION) DEPARTMENT

LETTER—to

THE UNDER SECRETARY OF STATE FOR INDIA.

MY LORD,

With reference to the instructions conveyed in Lord Hartington's despatch No. 9 (Public Works), dated the 18th May 1882, I am directed to forward a copy of the Proceedings of the Madras Government recording the report on the working of the College of Engineering, Guindy, during the academic year 1920-21.

I have the honour to be,

My Lord,

Your Lordship's most obedient servant,

P. C. DUTT,

*Acting Secretary to Government.*

FORT ST. GEORGE,  
5th December 1921.



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