E.

# Educational (1906) Department.

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G.O., No. 383, 384

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[Despatch Abstract.]

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# Government of Madras.

EDUCATIONAL DEPARTMENT.

*Recd.* } 1906. *Enclosures*

*Regd.* *Spare copies*

**G.O., &c., Nos. 383, 384, 1st June 1906.**

N. P.

**College of Engineering.**

Recording the Proceedings of the Director of Public Instruction reviewing the report on the working of the —, Madras, during the year 1905 : and forwarding a copy to the Under Secretary of State for India.

GOVERNMENT OF MADRAS.

## EDUCATIONAL DEPARTMENT.

Read—the following paper :—

*Letter*—from the Hon'ble Mr. A. G. Bourne, D.Sc., F.R.S., Director of Public Instruction.
*To*—the Secretary to Government, Educational Department.
*Dated*—Madras, the 10th May 1906.
*No.*—C. 3645.

I have the honour to submit herewith a copy of my Proceedings, Dis. No. 2830, dated 2nd May 1906, reviewing the report on the working of the College of Engineering during 1905.

Enclosure.

*Proceedings of the Director of Public Instruction, Dis. No.* 2830, *dated 2nd May* 1906.

*Read*—the following paper :—

*Letter*—from Col. H. D. Love, R.E., Principal, College of Engineering, Madras.
*To*—the Director of Public Instruction, Madras.
*Dated*—the 9th March 1906.
*No.*—2565-C.

I have the honour to submit the Administration Report of the College of Engineering for the year 1905.

2. *Staff.*—I returned from furlough and assumed charge of the office of Principal from Mr. H. T. Keeling on the forenoon of the 20th March 1905. The second Professorship of Engineering, which was sanctioned by the Secretary of State in 1900, was filled for the first time by the appointment from England of Mr. C. L. T. Griffith, who entered on his duties on the 23rd January. On the 5th June following Mr. Griffith was permitted to resign in order to take up the post of Engineer to the Madras Corporation, and the second Engineering chair remained vacant until the 25th October when Mr. R. A. Ryves, who was appointed by the Secretary of State, assumed charge. In the meantime the duties of the Professor were carried out, at the cost of some inconvenience, by distribution among the senior members of the staff. M.R.Ry. B. Hanumanta Rau, Professor of Mathematics, proceeded on three months' privilege leave from 11th September 1905, his place being filled by M.R.Ry. P. V. Seshu Aiyar, acting Second Assistant Lecturer, Kumbakónam College.

Mr. W. H. Goddard, Instructor in Surveying and Drawing, who had been granted sick leave during the preceding year, expired in England on the 27th January. By his death the College lost a most capable and devoted public servant, a man who never spared himself, and with whom duty was the guiding principle of life. Mr. B. O. Reynolds, Instructor in Civil Engineering, returned from sick leave on the 1st November 1905, when the incumbents of the various appointments made during his absence, reverted to their permanent posts. Sub-Conductor R. Cuthbert on being relieved by Mr. Reynolds was appointed Instructor in Surveying and Drawing. Under orders passed by Government in June the services of Mr. J. Webster, Instructor in Mechanical Engineering, were re-engaged for a further term of five years to commence from 30th January 1906.

M.R.Ry. R. A. Bhakya Mudaliyar, Assistant Instructor in Surveying, who was on combined privilege leave and leave on medical certificate, died on the 16th April 1905. He was a member of the staff of many years' standing, and was a steady and conscientious worker. The vacancy caused by his decease was filled by M.R.Ry. C. V. Narayanaswami Aiyar, additional Assistant Instructor. M.R.Ry. O. S. Ramaswami Aiyar, a first-grade Overseer, was on the 1st July brought in from the Public Works Department to act as Assistant Instructor in Surveying and Drawing,



while Mr. Littlewood was on other duty as Instructor in Surveying and Drawing, *i.e.*, until 1st November, M.R.Ry. K. Srinivasa Aiyangar, a temporary Overseer, Public Works Department, was on 1st July appointed to the post of Vernacular Assistant, and on 1st November to that of additional Assistant Instructor. M.R.Ry. K. Narasimham, B.A., L.T., who joined on the 13th February, was permanently appointed to the post of Second Assistant Instructor in Drawing. M.R.Ry. P. K. Anantanarayana Aiyar, M.A., L.T., who was appointed Vernacular Assistant, sub. *pro tem.* joined on the 10th February and acted as additional Assistant Instructor until the 31st October, when he reverted to the post of Vernacular Assistant.

M.R.Ry. V. Balasundara Mudaliyar, Accountant of the College, retired on superannuation pension from 1st April 1905, and was succeeded by M.R.Ry. M. Raman. M.R.Ry. T. M. Satakopachari, Head clerk, having been transferred as Sub-Assistant Inspector of Schools, M.R.Ry. A. Sivasankara Mudaliyar, first assistant clerk, was appointed to fill his place. The second assistant clerk, J. Narayanaswami Aiyar, was promoted to the post of first assistant clerk, the vacancy being filled by P. Muthuswami Aiyar, B.A., from the Collector's office at Cuddapah. M.R.Ry. S. Parthasarathi Aiyangar, B.A., Librarian and Storekeeper, was transferred to the School of Arts and M.R.Ry. T. Paranjoti Pillai, B.A., was appointed to his place.

3. *Numbers.*—The numbers on the rolls at the end of the year were—

| Class. | Practical course. | In College. | | | Total. |
|---|---|---|---|---|---|
| | | Third year. | Second year. | First year. | |
| Engineer class | 11 | * 15 | 19 | 19 | 64 |
| ,, Subordinate class | 20 | † 40 | 32 | 34 | 126 |
| Sub-Overseer and Surveyor class | .. | .. | ‡ 43 | 31 | 74 |
| Draftsman class | .. | .. | § 29 | 31 | 60 |
| Total | 31 | 55 | 123 | 115 | 324 |

* Includes 2 casual students. ‡ Includes 4 casual students.
† ,, 8 ,, ,, § ,, 1 ,, student.

Excluding the students on their practical courses, the total number actually in the College on the 31st December 1905 was 293. The corresponding totals for the last five years were—

| Years. | Nos. |
|---|---|
| 1905 | 293 |
| 1904 | 271 |
| 1903 | 292 |
| 1902 | 297 |
| 1901 | 307 |

The distribution of the students by classes of the community, by districts, by wealth and occupation of parents is given in appendices A, B and C. Of the total number 71·3 per cent. were Brahmans, 19·7 per cent. non-Brahman Caste Hindus, 3·7 per cent. Native Christians, 2·4 per cent. Europeans and Eurasians and 2·7 per cent. Muhammadans. The percentages of Brahmans and non-Brahman Caste Hindus are practically the same as last year, but the percentage of Muhammadans has doubled. As regards districts, Tanjore was represented by 29·4 per cent., Trichinopoly 9·2 per cent., Madura 6·1 per cent., Kistna 5·8 per cent., Chingleput and Travancore 5·1 per cent. each, and Madras 4·4 per cent. of the total number.

4. *Entrance Examinations.*—The numbers offering for admission were—

| Class. | Examined. | Passed. | Admitted. |
|---|---|---|---|
| Engineer class | * 52 | 33 | 21 |
| ,, Subordinate class | † 188 | 157 | ‡ 34 |
| Sub Overseer and Surveyor class | § 291 | 67 | 41 |
| Draftsman class | 170 | 47 | 35 |

* Of these, 19 had passed or appeared for the B.A. Degree examination.
† ,, 28 had passed the First in Arts Examination.
‡ ,, 1 was a Military student.
§ ,, 24 had passed the Matriculation examination.

The number of applicants for the Engineer Subordinate class shows a marked increase.

5. *Examinations of December* 1905—(*a*) *Engineer Class.*—The third year division contained 13 students, exclusive of 2 casual students. Of these 12 passed the final examination. The average percentage of the total marks was 57. One independent candidate presented himself for the examination, but he failed. The two casual students who had failed in the College total in the previous year and who were specially permitted to rejoin, were successful. The second and first year divisions of the class, each containing 19 students, appeared for the term examinations and obtained 51·3 and 56·1 per cent. respectively of the total marks.

(*b*) *Engineer Subordinate Class.*—The senior division of 32 students, exclusive of 8 casual students, appeared for the final examination and 27 were successful. The average percentage of marks gained was 54·9. Four of the casual students who had failed in the College total in the previous year passed the examination. The remaining four, who had failed in both College and Board totals, presented themselves as independent candidates together with four outside candidates. None were successful. The intermediate and junior divisions of 32 and 34 students respectively appeared for the term examinations and secured 32·9 and 47·9 of the total marks.

(*c*) *Sub-Overseer and Surveyor Class.*—In the senior division, 39 students, exclusive of 4 casual students, appeared for the final examination and 27 passed. The average marks obtained were 55·4 per cent. Two of the casual students who had failed in the College total in the previous year and who were specially permitted to rejoin, qualified for certificates. The remaining two, who had failed in both College and Board totals last year, presented themselves for the examination as independent candidates with 9 ex-students, but only two of the latter passed. The junior division of the class containing 31 students appeared for the term examination and secured an average of 51·6 per cent. of the total marks.

(*d*) *Draftsman Class.*—In the senior division, 28 students, exclusive of one casual pupil, appeared for the final examination, and 13 passed. The average percentage of marks gained was 51·8. The casual student, who had failed in both College and Board totals in the previous year, presented himself for examination as an independent candidate together with 14 ex-students. None of these were successful. The junior division of the class containing 31 students appeared for the term examination and obtained an average of 47·3 per cent. of the total marks.

At the examination of December 1904, 17 students failed in College marks, notwithstanding that several of them had qualified on the Board's total. These candidates were permitted to rejoin the College during the second session of 1905, and 15 of them did so, becoming the casual students referred to above. At the examination of 1905 they all secured the College minimum.

The students of the intermediate division of the Engineer Subordinate class and the senior division of the Draftsman class were granted the option of being re-examined in 1905 in Geometrical and Perspective Drawing, as the paper set for them in that subject in the previous year was held to be unsuitable.

6. *Examination Results.*—The percentages of marks secured under the various subject heads by the senior divisions of the classes are compared in Appendix D with the average results of the preceding four years. The percentages are generally below the average, a result which I attribute mainly to the frequent changes in the staff and the consequent want of continuity in the system of teaching.

7. *Practical Courses.*—Eleven Engineer and 20 Engineer Subordinate students were under practical instruction from February 1905. Seven of the Engineer students who elected to become Mechanical Engineers attended a workshop course—4 in the Madras Railway Locomotive shops at Perambúr and 3 in the Public Works Workshops at Madras. Four who desired to become Civil Engineers worked in Public Works Divisions. The course of two of the Mechanical Engineer students was extended by 49 and 69 days respectively on account of absence and unsatisfactory progress and they were transferred to the Public Works Workshop at Dowlaishweram. The course of one of the Civil Engineer students also was extended by one month in consequence of his absence on sick leave.



The Engineer Subordinate pupils, including two Military students, went through the course in Public Works Divisions. The reports received from Executive Engineers were generally favourable. Five students, who had been unsuccessful in the College practical examination in Surveying, attended the survey camp held in July 1905 for one month, their practical course being extended by a corresponding period.

Both the Engineers and Subordinates, attended the Body Guard Riding school for the equitation course. One Subordinate, however, for whom accommodation could not be found, will attend the school during 1906.

8. *Military Students.*—The number of Military students at the end of the year was 6, distributed as follows:—

| | |
|---|---|
| Practical course ... ... ... ... ... ... ... ... | 2 |
| Engineer Subordinate class, senior division ... ... ... ... | 2 |
| Do. do. intermediate division... ... ... ... | 1 |
| Do. do. junior division... ... ... ... ... | 1 |

The two students who appeared for the final examination of 1905 were unsuccessful, and they will revert to regimental duty.

9. *Survey camp.*—A survey camp was formed near Pallávaram in July and maintained for four weeks. A temporary Drawing office was erected at Gollanchavadi, and two bungalows in the Cantonment were rented for the same purpose. The work done was on the whole satisfactory. The number of students in camp was 236 and the total cost was Rs. 2,067. The camp was directed by Sub-Conductor Cuthbert under the supervision of Mr. W. H. James, Professor of Engineering.

10. *Inspections.*—The senior division of the Engineer class visited the Cordite factory at Wellington, the Karteri Power Station, and other works in the vicinity. The intermediate division of the Engineer class, the senior and intermediate divisions of the Engineer Subordinate classes, and the senior division of the Sub-Overseer and Surveyor class inspected the Irrigation works of the Sangam project in the Nellore district. The junior divisions of the Engineer, Engineer Subordinate, and Sub-Overseer and Surveyor classes, and the senior division of the Draftsman class visited the Irrigation works connected with the Pálár Anicut system in North Arcot. The total cost of the tours, in which 262 students took part, was Rs. 1,320.

11. *Workshop and Laboratories.*—The Professor of Engineering in charge of the Workshops and Laboratories, Mr. W. H. James, reports as follows:—

"The numbers of students in the classes attending the workshop during the year were as follows:—

| | |
|---|---|
| Engineer students ... ... ... ... ... ... ... ... | 53 |
| Engineer Subordinate students ... ... ... ... ... ... | 109 |
| Sub-Overseer and Surveyor students ... ... ... ... ... | 77 |
| Draftsman students ... ... ... ... ... ... ... | 61 |

"It is only possible with our limited accommodation to take each student once a week for two hours; and considering the small amount of practice they get, the progress made by the students on the whole was satisfactory.

"The only addition to the machine tools was a Pittler lathe. We are able to find space for this tool by the removal of some of the testing apparatus to the rooms which were formerly occupied by the Superintendent of Military students. This extra accommodation has been of the utmost value, and has made it possible for us to carry out some protracted investigations for the Public Works Department regarding mortars in connection with the Tungabhadra Project. At present we are engaged on some other mortars and on a series of experiments for the determination of quantities connected with building materials.

"Research of this sort means much labour, and I wish to bring to your notice the ready help I have always received from the Instructors in Civil and Mechanical Engineering and their Assistants, who devoted a good deal of their spare time and holidays to it, without which it would have been almost impossible to carry out the tests. I can only again this year emphasize our urgent need of more accommodation for workshop and laboratory purposes. Our classes are becoming larger year by year

and with extra facilities we might develop the teaching still more on practical and experimental lines with the result that our students would be better trained and more useful men when they leave the college."

I am entirely in accord with Mr. James in regarding the provision of new workshops and laboratories as a pressing necessity. The same view was expressed by the Acting Principal in the report for 1904. Two years ago the matter was practically settled, but the inquiry made by the Committee on the college (which is dealt with in another paragraph) was so extended in its scope, and opened up such large considerations, that the question of new buildings was postponed until orders could be passed on the Committee's report.

12. *Physical Training and Recreation.*—Instruction in gymnastics and drill was given as usual, and better results were obtained at the examination held in December. In view of the diminishing number of military students, the desirableness of appointing a European Drill Sergeant is again, as in last year, brought to notice.

The Honorary Secretary of the Recreation Club, Mr. W. H. James, reports as follows:—

"The Cricket, Football and Hockey Clubs were all fairly well supported, and the attendance of students on the recreation ground was much as in previous years. In the competitions of the Madras Athletic Association, the college took second place for the Pennycuick Trophy, but a somewhat lower position than the year before for the Professor's Trophy. We were second in Athletics for the Travancore Shield. The inter-class matches were fairly well contested. The Engineer class managed to retain the Football cup, the senior division of the Sub-Overseer and Surveyor class secured the Cricket cup, and the senior division of the Engineer Subordinate class the Hockey cup.

"Very successful sports were held in the last week of September, which were financed and managed to a great extent by the students themselves. I have again to acknowledge the assistance I have received from Mr. Webster and M.R.Ry. S. Subrahmanya Aiyar in conducting the affairs of the club."

13. *Library.*—The re-arrangement of the library books and the preparation of a fresh catalogue were commenced. During the year under review 93 books were added to the Library which now contains 4,473 volumes. The books issued to students numbered 1,906 and to the staff 545 against 2,313 and 467, respectively, in the previous year, while 1,039 references were made to the Consulting Library. The present annual grant for the Library does not suffice to procure the new issues of important professional works which are essential to a well-equipped institution. Although the college has developed greatly in late years, the allotment remains as it was in the past. A separate communication has been made on this subject.

14. *Attendance and Conduct.*—The percentage of numbers present to numbers on the rolls was 93·4 for the College Department and 94·7 for the School Department. Particulars are given in Appendix E. The conduct of the students during the year was generally satisfactory. A case of malpractice on the part of a student of the Sub-Overseer and Surveyor class during the final examination was met by his being debarred from presenting himself for any examination controlled by the Educational Department.

The year 1905 was abnormally unhealthy, and although the college did not suffer directly from the epidemic of cholera which prevailed in Madras, there were several casualties from other causes. I regret to have to report the loss of four students by death, viz., one in the Engineer class, one in the Engineer Subordinate class and two in the Sub-Overseer and Surveyor class.

15. *University Examinations.*—Six students of the senior division of the Engineer class appeared for the B.E. Degree Examination in January 1905 and three were successful, viz., one in the Civil and two in the Mechanical Branch. Seven ex-students also presented themselves for the examination, but only one passed in the Mechanical Branch.

Twenty candidates offered themselves for the First Examination in Engineering, of whom thirteen were second-year students and seven third-year. Six were successful in all, of whom four were second-year students and two third-year. Six ex-students also appeared for this examination and all of them failed.



16. *Employment of Passed Students of* 1904.—Of the nine Engineers who completed their practical course early in 1905, the senior, R. Narasimha Aiyangar, B.A, was appointed Assistant Engineer in the Provincial Service of the Public Works Department on Rs. 250; four accepted appointments as temporary Upper Subordinates in the Public Works Department, Madras; one obtained employment as Assistant Engineer under the Gódávari District Board; one joined the Revenue Department as Supervisor of experimental pumping stations. No information has been received regarding the remaining two.

Of the thirty Engineer Subordinates who completed their practical course, the senior, R. Venkatesa Aiyar, was appointed a permanent Upper Subordinate, third grade, in the Public Works Department on Rs. 60, while the two military men were posted as Upper Subordinates, first grade, on Rs. 100 each. Of the remainder, twenty-one accepted appointments as temporary Upper Subordinates in the Public Works Department, Madras; one obtained employment as Sub-Overseer on Rs. 50; one became a Delta Superintendent; and one entered the Public Works Department of the Cochin State. Regarding the remaining three no information has been received.

Of the seventeen Sub-Overseers and Surveyors who passed out in December 1904, sixteen obtained employment as follows:—

| | | |
|---|---|---|
| Sub-Overseer, Public Works Department | ... ... ... ... ... | 3 |
| Do. | Military Works Service ... ... ... ... ... | 1 |
| Do. | Revenue Department (Minor Irrigation Sub-Overseer) ... | 3 |
| Do. | Local Boards and Municipalities ... ... ... ... | 3 |
| Do. | Court of Wards ... ... ... ... ... ... | 2 |
| Surveyor, Public Works Department | ... ... ... ... ... | 2 |
| Do. | Madras Railway Company ... ... ... ... ... | 1 |
| Channel Superintendent, Public Works Department | ... ... ... | 1 |

No information has been received regarding the remaining man.

Of the seventeen Draftsmen who obtained certificates in December 1904, eleven obtained employment as under:—

| | | |
|---|---|---|
| Draftsman, Public Works Department | ... ... ... ... ... | 4 |
| Do. | Survey Department ... ... ... ... ... ... | 1 |
| Do. | Sanitary Engineer's Office ... ... ... ... ... | 2 |
| Do. | Mysore Public Works Department ... ... ... ... | 1 |
| Do. | South Indian Railway ... ... ... ... ... ... | 1 |
| Do. | Kolar Gold Fields ... ... ... ... ... ... | 1 |
| Channel Superintendent, Public Works Department | ... ... ... | 1 |

Of the remainder, one joined the Sub-Overseer and Surveyor class, three remained unemployed and two failed to furnish information.

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

17. *Revision of Rules.*—By G.O., No. 511, Educational, dated 26th July 1905, a modification was made in article 55 of the College Rules, and it was provided that military students who qualify at the final examination but who do not pass sufficiently high for immediate appointment to the Public Works Department shall proceed to the practical course; and on its completion, either revert to their corps pending selection in any subsequent year in which less than two military students qualify, or if the Chief Engineer approves, take up employment on the temporary subordinate staff.

18. *College Committee.*—In December 1904, Government appointed a Committee consisting of Mr. J. P. Davidson, President, Mr. F. J. E. Spring, C.I.E., Mr. H. T. Keeling, Mr. R Ll. Jones, Captain W. Carew Smyth, R.E., Mr. W. H. James and M.R.Ry. A. V. Ramalinga Aiyar, B.A., B.C.E., to revise the syllabuses and curriculum of the college. The Committee was also desired to consider whether additional laboratories and other buildings for the accommodation of students and staff are necessary,

and if so, whether the present site affords the requisite space for extension. The Committee submitted its report on the 31st March 1905, and dealt not only with the revision of the syllabuses and the accommodation required, but also with the connected subjects of staff and administration. Government passed preliminary orders in October 1905, approving the following changes:—

The Engineer Subordinate class, to be called the Upper Subordinate class, is to have a course of three years in the College. The Sub-Overseer and Surveyor and Draftsman classes are to be amalgamated into a Lower Subordinate class. The standards of general education for admission to the Engineer, Upper Subordinate and Lower Subordinate classes are to be the B.A. degree, the First Examination in Arts, and the Matriculation Examination respectively. The rules for military students are to be assimilated to those in vogue at Roorkee.

The questions of the extension of buildings, the revision of the syllabuses, and the recruitment of the staff were referred back to the Committee for further consideration and report. When the final orders of Government are received the necessary revision of the code of rules will be undertaken.

19. *Financial Details.*—On reference to Appendix H, it will be found that the receipts of the College amounted to Rs. 30,921 and the charges to Rs. 98,371. The net cost of the Institution to Government was therefore Rs. 67,450. Dividing this sum by the average number of students on the rolls, it appears that the net cost of educating each student was Rs. 229. Full financial details for the official year 1904–1905 were submitted with the annual returns. An abstract of receipts and charges for the last five calendar years is given in Appendix K.

20. *General.*—I desire to acknowledge the co-operation of the Professors, and the assistance I have received from the Instructors and the members of the staff generally. To Mr. James, the Senior Professor of Engineering, I am especially indebted. Although over-burdened with work during the period in which the second Professorship of Engineering remained vacant, he was able to superintend the workshops and laboratories, to control the Survey Camp, to make an extensive series of experiments on the strength of building materials for the Public Works Department, and as Honorary Secretary of the Recreation Club to organise the students' games. He has in fact been my right hand in all matters connected with the College. I specially mention also Mr. J. Webster, and M.R.Rys. Narayanaswami Aiyar and Subrahmanya Aiyar who willingly undertook experimental testing work in addition to their ordinary duties. The members of the staff who were prominent on the recreation ground are mentioned in Mr. James' report quoted in an earlier paragraph.

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## APPENDIX A.

*Distribution of Students according to Classes of Community on the* 31*st December* 1905.

| Classes. | Europeans and Eurasians. | Native Christians. | Muhammadans. | Hindus. | | | Total. |
|---|---|---|---|---|---|---|---|
| | | | | Brahmans. | Non-Brahman caste Hindus. | Panchamas. | |
| Engineer classes .. .. .. .. | .. | 4 | 1 | 45 | 3 | .. | 53 |
| Engineer Subordinate classes .. .. | 7 | 1 | 4 | 83 | 11 | .. | 106 |
| Sub-Overseer and Surveyor classes .. | .. | 2 | 3 | 44 | 25 | .. | 74 |
| Draftsman classes .. .. .. | .. | 4 | .. | 37 | 19 | .. | 60 |
| Total .. | 7 | 11 | 8 | 209 | 58 | .. | 293 |



## APPENDIX B.

*Distribution of Students by Districts on the* 31*st December* 1905.

| Districts. | Engineer class. | Engineer Subordinate class. | Sub-Overseer and Surveyor class. | Draftsman class. | Total. |
|---|---|---|---|---|---|
| Ganjám .. .. .. .. .. .. .. .. | .. | .. | .. | .. | .. |
| Vizagapatam .. .. .. .. .. .. .. .. | .. | 2 | 1 | 1 | 4 |
| Gódávari .. .. .. .. .. .. .. .. | 2 | 3 | 4 | 3 | 12 |
| Kistna .. .. .. .. .. .. .. .. | 1 | 5 | 8 | 3 | 17 |
| Kurnool .. .. .. .. .. .. .. .. | .. | .. | .. | 1 | 1 |
| Nellore .. .. .. .. .. .. .. .. | .. | 2 | 2 | .. | 4 |
| Madras .. .. .. .. .. .. .. .. | .. | 3 | 4 | 6 | 13 |
| Chingleput .. .. .. .. .. .. .. .. | 1 | 2 | 5 | 7 | 15 |
| Cuddapah .. .. .. .. .. .. .. .. | .. | .. | 1 | .. | 1 |
| North Arcot .. .. .. .. .. .. .. .. | 3 | 1 | 3 | 1 | 8 |
| South Arcot .. .. .. .. .. .. .. .. | .. | 2 | 3 | 1 | 6 |
| Tanjore .. .. .. .. .. .. .. .. | 12 | 36 | 21 | 17 | 86 |
| Trichinopoly .. .. .. .. .. .. .. .. | 4 | 7 | 6 | 10 | 27 |
| Madura .. .. .. .. .. .. .. .. | 5 | 7 | 4 | 2 | 18 |
| Tinnevelly .. .. .. .. .. .. .. .. | 2 | 7 | 1 | 2 | 12 |
| Coimbatore .. .. .. .. .. .. .. .. | 1 | 8 | 1 | 1 | 11 |
| Salem .. .. .. .. .. .. .. .. | 3 | 5 | 3 | 2 | 13 |
| Malabar .. .. .. .. .. .. .. .. | 2 | 3 | .. | .. | 5 |
| South Canara .. .. .. .. .. .. .. .. | 2 | 4 | .. | .. | 6 |
| Pudukkóttai .. .. .. .. .. .. .. .. | 1 | 2 | .. | .. | 3 |
| Cochin .. .. .. .. .. .. .. .. | 1 | 1 | 1 | .. | 3 |
| Travancore .. .. .. .. .. .. .. .. | 9 | .. | 5 | 1 | 15 |
| Mysore .. .. .. .. .. .. .. .. | 3 | 1 | .. | .. | 4 |
| Pondicherry .. .. .. .. .. .. .. .. | .. | .. | .. | 2 | 2 |
| Hyderabad (Deccan) .. .. .. .. .. .. .. .. | 1 | .. | 1 | .. | 2 |
| Military Students .. .. .. .. .. .. .. .. | .. | 4 | .. | .. | 4 |
| Burmah .. .. .. .. .. .. .. .. | .. | 1 | .. | .. | 1 |
| Total .. | 53 | 106 | 74 | 60 | 293 |

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## APPENDIX C.

*Distribution of Students by Wealth and Occupation of Parents on the* 31*st December* 1905.

| Classes in the College. | Wealth. | | | | Occupation. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Richer class. | Middle class. | Poorer class. | Total. | Officials. | Petty officials. | Traders. | Landholders. | Artisans. | Mendicants. | Others. | Total. |
| Engineer class— | | | | | | | | | | | | |
| Third year .. .. .. | .. | 15 | .. | 15 | 7 | 1 | .. | 7 | .. | .. | .. | 15 |
| Second year .. .. .. | .. | 18 | 1 | 19 | 8 | 1 | 1 | 9 | .. | .. | .. | 19 |
| First year .. .. .. | .. | 16 | 3 | 19 | 9 | 2 | .. | 8 | .. | .. | .. | 19 |
| Engineer Subordinate class— | | | | | | | | | | | | |
| Third year .. .. .. | 1 | 34 | 5 | 40 | 16 | 1 | 3 | 20 | .. | .. | .. | 40 |
| Second year .. .. .. | .. | 27 | 5 | 32 | 12 | 1 | 4 | 15 | .. | .. | .. | 32 |
| First year .. .. .. | .. | 29 | 5 | 34 | 12 | 1 | .. | 15 | 1 | .. | 5 | 34 |
| Sub-Overseer and Surveyor class— | | | | | | | | | | | | |
| Second year .. .. .. | .. | 38 | 5 | 43 | 19 | 3 | 4 | 16 | 1 | .. | .. | 43 |
| First year .. .. .. | 2 | 26 | 3 | 31 | 12 | 1 | 3 | 12 | .. | .. | 3 | 31 |
| Draftsman class— | | | | | | | | | | | | |
| Second year .. .. .. | .. | 28 | 1 | 29 | 14 | .. | 1 | 11 | 2 | .. | 1 | 29 |
| First year .. .. .. | 1 | 25 | 5 | 31 | 13 | 2 | .. | 11 | 1 | .. | 4 | 31 |
| Total .. | 4 | 256 | 33 | 293 | 122 | 13 | 16 | 124 | 5 | .. | 13 | 293 |

## APPENDIX D.

*Results of Examinations of December* 1905.

| | PER CENT. | Average of preceding four years PER CENT. |
|---|---|---|
| *Engineer class, 1st division—* | | |
| Mathematics | 55·7 | 60 |
| Science | 52·9 | 50 |
| Engineering | 54·5 | 58 |
| Drawing | 55·2 | 63 |
| Surveying | 62·1 | 64 |
| Language | 61·9 | 63 |
| Gymnastics | 64·7 | 54 |
| Board Total | 55·6 | ... |
| College Total | 59 5 | ... |
| Grand Total | 56·5 | 59 |
| *Engineer Subordinate class, 1st division—* | | |
| Mathematics | 53·2 | 57 |
| Engineering | 49·9 | 59 |
| Drawing | 55·1 | 60 |
| Surveying | 61·1 | 62 |
| Language | 59 5 | 65 |
| Physical Exercise | 61·7 | 54 |
| Board Total | 53·9 | ... |
| College Total | 58·2 | ... |
| Grand Total | 54·9 | 60 |
| *Sub-Overseer and Surveyor class, 1st division—* | | |
| Surveying | 60·1 | 62 |
| Engineering | 49·7 | 58 |
| Drawing | 51·5 | 60 |
| Physical Exercise | 58·6 | 51 |
| Board Total | 51·5 | ... |
| College Total | 63·1 | ... |
| Grand Total | 55·4 | 60 |
| *Draftsman class, 1st division—* | | |
| Geometrical, etc., Drawing | 38·4 | 55 |
| Building Construction and Drawing | 52·4 | 62 |
| Machine Drawing | 61·8 | 63 |
| Estimating | 50·2 | 59 |
| Physical Exercise | 66·7 | 47 |
| Board Total | 47·2 | ... |
| College Total | 65·9 | ... |
| Grand Total | 51·8 | 59 |



## APPENDIX E.

*Average Numbers and Attendance in* 1905.

| | Average number on rolls. | Average daily attendance. |
|---|---|---|
| *College Department—* | | |
| Engineer class, third year | 14·6 | 13·6 |
| Do. second year | 20·0 | 18·2 |
| Do. first year | 19·6 | 18·8 |
| Engineer Subordinate class, third year | 37·2 | 35·0 |
| Do. second year | 32·8 | 29·0 |
| Do. first year | 34·0 | 33·0 |
| Total | 158·2 | 147·6 |
| *School Department—* | | |
| Sub-Overseer and Surveyor class, second year | 41·9 | 39·3 |
| Do. do. first year | 32·8 | 31·2 |
| Draftsman class, second year | 28·6 | 27·1 |
| Do. first year | 32·3 | 30·2 |
| Total | 135·6 | 127·8 |
| Grand Total | 293·8 | 275·4 |
| Percentage of numbers present to number on rolls— | | |
| College Department | | 93·4 |
| School do. | | 94·7 |

## APPENDIX F.

*Government Technical Examination of* 1905.

No candidates presented themselves from the College of Engineering.

## APPENDIX G.

*Classification of Vacancies notified during* 1905.

| — | Government. | | | | Local Board and Municipality. | | | | Railways. | | | | Native States. | | | | Private employés. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Total. |
| Engineer or Assistant .. | .. | 1 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 |
| Supervisor .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Overseer .. | .. | .. | .. | .. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 |
| Sub-Overseer .. | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 |
| Draftsman .. | .. | .. | 3 | 7 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 12 |
| Surveyor .. | .. | .. | 57 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 59 |
| Anicut or Conservancy Superintendent .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total .. | .. | 1 | 60 | 10 | 3 | .. | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 84 |

## APPENDIX H.

*Financial Details for* 1905.

| | | RS. | A. | P. | RS. | A. | P. |
|---|---|---|---|---|---|---|---|
| *Receipts*— | | | | | | | |
| Tuition fees— | | | | | | | |
| College Department ... ... ... | | 10,997 | 8 | 0 | | | |
| School Department ... ... ... | | 9,121 | 8 | 0 | | | |
| | | | | | 20,119 | 0 | 0 |
| Entrance and Final Examination fees ... ... ... | | | | | 10,388 | 0 | 0 |
| Miscellaneous Receipts ... ... ... ... ... | | | | | 414 | 0 | 11 |
| | Total ... | | | | 30,921 | 0 | 11 |
| *Charges*— | | | | | | | |
| Principal ... ... ... ... ... ... ... | | | | | 16,869 | 3 | 5 |
| Professors, masters and teachers ... ... ... ... | | | | | 44,415 | 1 | 3 |
| Clerks, librarian and servants ... ... ... ... | | | | | 5,723 | 4 | 10 |
| Board of Examiners ... ... ... ... ... | | | | | 4,904 | 8 | 0 |
| Library and Prize allowances ... ... ... ... | | | | | 794 | 5 | 0 |
| Books and Instruments ... ... ... ... ... | | | | | 2,562 | 1 | 4 |
| Other Europe stores ... ... ... ... ... | | | | | 2,418 | 11 | 3 |
| Other heads of contingent charges ... ... ... | | | | | 13,767 | 14 | 2 |
| Travelling allowances ... ... ... ... ... | | | | | 690 | 4 | 6 |
| Scholarships ... .. ... ... ... ... ... | | | | | 4,296 | 0 | 0 |
| Exchange compensation allowance ... ... ... | | | | | 1,929 | 11 | 0 |
| House-rent ... ... ... ... ... ... ... | | | | | ... | | |
| | Total ... | | | | 98,371 | 0 | 9 |
| Net cost to Government ... ... | | Rs. | | | 67,449 | 15 | 10 |
| Average number of students on rolls 294 | | | | | | | |
| Net cost per student ... ... | | Rs. | | | 229 | 6 | 9 |
| Average tuition fees paid per student per annum— | | | | | | | |
| College Department ... ... | | Rs. | | | 69 | 9 | 8 |
| School do. ... ... | | „ | | | 67 | 1 | 1 |

## APPENDIX K.

*Comparative Financial details.*

| — | 1905. | 1904. | 1903. | 1902. | 1901. |
|---|---|---|---|---|---|
| | RS. | RS. | RS. | RS. | RS. |
| Receipts .. .. .. .. .. .. .. | 30,921 | 29,408 | 29,490 | 28,656 | 28,366 |
| Charges .. .. .. .. .. .. .. | 98,371 | 95,162 | 96,040 | 94,731 | 90,046 |
| Net cost to Government .. .. .. .. | 67,450 | 65,754 | 66,550 | 66,075 | 61,680 |
| | NO. | NO. | NO. | NO. | NO. |
| Average number of students .. .. .. | 294 | 274 | 292 | 300 | 314 |
| | RS. | RS. | RS. | RS. | RS. |
| Net cost per student .. .. .. .. .. | 229 | 240 | 228 | 220 | 196 |



8

### Proceedings Dis. No. 2830 of 1906.

Recorded.

2. In spite of several unavoidable changes in the staff which interfered with the continuity of teaching the work done during the year was on the whole successful.

3. The Director should be addressed in a separate communication on the subject of more accommodation for the workshop and the laboratory; and also on the appointment of a European Drill Sergeant.

4. The final orders of Government on the proposed reorganization of the college are awaited.

A. G. Bourne,
*Director of Public Instruction.*

To the Principal, College of Engineering, with a spare copy.
„ Principals of other Government Colleges.
„ Inspectors of Schools.
„ the Superintendent, School of Arts.

Copy to the President, Board of Examiners, College of Engineering.
„ „ Chief Engineer, Public Works Department, for information.
„ „ Editors, Indian Journal of Education and Educational Review.
„ „ Government, with C.L.

### Order—No. 383, Educational, dated 1st June 1906.

Recorded.

(True Extract.)

A. Butterworth,
*Ag. Secretary to Government.*

To the Director of Public Instruction.
„ Public Works Department.

### Letter—from A. BUTTERWORTH, Esq., I.C.S., Ag. Secretary to the Government of Madras, Educational Department.
### To—the Under Secretary of State for India.
### Dated—Ootacamund, the 1st June 1906.
### No.—384, Educational.

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 during the year 1905.

2. Final orders have not been passed as yet on the report of the Committee referred to in paragraph 2 of Mr. Taylor's letter, No. 381, Educational, dated 5th June 1905.

# NOTES CONNECTED WITH G.O., Nos. 383, 384, EDUCATIONAL, DATED 1ST JUNE 1906.

[SUBJECT.—*Report of the College of Engineering for the year* 1905.]

*From the Director of Public Instruction, dated* 10*th May* 1906, *No.* 3645.

From the percentages of marks obtained by the students at the examinations in December 1905, given in Appendix D, it is evident that the work done during 1905 as gauged by the results was much poorer than usual.

The Director of Public Instruction says it was on the whole satisfactory.

C. A. SOUTER.

2. Final orders have not yet been passed on the report of the Committee appointed to consider the question of re-organizing the college. In their Order No. 655, Educational, dated 3rd October 1905, the Government called for further remarks on the proposals on the subjects of the revision of the syllabuses and of the recruitment of the staff. These remarks have been received and are still under consideration — the file is with the Honourable Member. A decision has also to be arrived at regarding the removal of the college from its present locality. Until this decision is arrived at the provision of more accommodation for the workshop and the laboratory has to be held in abeyance.

3. The drafts placed below are submitted for approval.

P. T. THARYAN—13-5-06.

C. A. SOUTER—14-5-06.

Issue.

A. BUTTERWORTH—15-5-06.

[G.O., Nos. 383, 384, Educational, dated 1st June 1906.]

[ E. No ]

1,500—12-12-

EDUCATIONAL DEPARTMENT.

# CURRENT FILE.

## CONTENTS.

| From | Number. | Date. | Pages. |
|---|---|---|---|
| [281] D. P. I. | 3645 | 6-5-06 | 1 to 3. |

[P. T. O. FOR PUT UP PAPERS.

PAPERS PUT UP WITH CURRENT No. _____

Papers of the department to which the current belongs.

| Number. | Date. | Original (=O) or spare copy (=S. C.). | Remarks. (In this column such of the papers as have been removed for copying, printing, &c., should be marked with a cross.) | Initials of Referencer with date in token of return to Reference department. |
|---|---|---|---|---|
| 655 | 3.10.05 | | | |
| 380 & 81 | 5.6.05 | | | |
| 511. | 26.7.05 | | | |
| 754. | 21.12.04 | | | |
| 723. | 12.12.04 | | | |
| 101 | 21.6.1882. | | | |

Papers of other departments.

| Department. | Number. | Date. | Original (=O) or spare copy (=S. C.). | Despatcher to note the return of the papers to the departments concerned. |
|---|---|---|---|---|
| | | | | |

Stock Form No. 135
5,700—17-6-05.

CURRENT No. 781

EDUCATIONAL DEPARTMENT.

LOCAL & MUNICIPAL SECRETARIAT. 11 MAY 1906

Received ..... 190 , Registered 11-5- 190 6

*Subject.*

Submitting a copy of Proceedings Dis. No. 2330 dated 2nd May 1906 reviewing the report on the working of the College of Engineering during 1905.

ENCLOSURES.
No. 1
Spare copies

G. No. 3645/06.

*Station* Madras , *Dated the* 10th May 1906.

*From (Name)* The Hon'ble Mr. A.G. Bourne, D.Sc., F.R.S.,

*(Designation)* Director of Public Instruction.

*To The Secretary to the Government of Madras,*
*Educational Department.*

*Sir,*

I have the honour to submit herewith a copy of my Proceedings Dis. No. 2330 dated 2nd May 1906, reviewing the report on the working of the College of Engineering during 1905.

I have the honour to be,
Sir,
Your most obedient servant,

For Director of Public Instruction.

K.P.D.

# Proceedings of the Director of Public Instruction.

## *Dis. No. 2830, 2nd May 1906.*

| | | |
|---|---|---|
| **Despatched** | **1906.** | **Enclosures** |
| **Received** | | **Spare copies** |

**Subject:**

*College of Engineering, Madras.*—Reviewing the report on the working of the — for 1905.

Dis. No. 2830.

PROCEEDINGS OF THE DIRECTOR OF PUBLIC INSTRUCTION, dated 2nd May 1906.

**College of Engineering.**

Read the following letter from Colonel H. D. LOVE, R.E., Principal, College of Engineering, Madras, to the Director of Public Instruction, Madras, dated 9th March 1906, No. 2565-C :—

I have the honour to submit the Administration Report of the College of Engineering for the year 1905.

2. *Staff.*—I returned from furlough and assumed charge of the office of Principal from Mr. H. T. Keeling on the forenoon of the 20th March 1905. The second Professorship of Engineering, which was sanctioned by the Secretary of State in 1900, was filled for the first time by the appointment from England of Mr. C. L. T. Griffith, who entered on his duties on the 23rd January. On the 5th June following Mr. Griffith was permitted to resign in order to take up the post of Engineer to the Madras Corporation, and the second Engineering chair remained vacant until the 25th October when Mr. R. A. Ryves, who was appointed by the Secretary of State, assumed charge. In the meantime the duties of the Professor were carried out, at the cost of some inconvenience, by distribution among the senior members of the staff. M.R.Ry. B. Hanumanta Rau, Professor of Mathematics, proceeded on three months' privilege leave from 11th September 1905, his place being filled by M.R.Ry. P. V. Seshu Aiyar, acting Second Assistant Lecturer, Kumbakónam College.

Mr. W. H. Goddard, Instructor in Surveying and Drawing, who had been granted sick leave during the preceding year, expired in England on the 27th January. By his death the College lost a most capable and devoted public servant, a man who never spared himself, and with whom duty was the guiding principle of life. Mr. B. O. Reynolds, Instructor in Civil Engineering, returned from sick leave on the 1st November 1905, when the incumbents of the various appointments made during his absence, reverted to their permanent posts. Sub-Conductor R. Cuthbert on being relieved by Mr. Reynolds was appointed Instructor in Surveying and Drawing. Under orders passed by Government in June the services of Mr. J. Webster, Instructor in Mechanical Engineering, were re-engaged for a further term of five years to commence from 30th January 1906.

M.R.Ry. R. A. Bhakya Mudaliyar, Assistant Instructor in Surveying, who was on combined privilege leave and leave on medical certificate, died on the 16th April 1905. He was a member of the staff of many years' standing, and was a steady and conscientious worker. The vacancy caused by his decease was filled by M.R.Ry. C. V. Narayanaswami Aiyar, additional Assistant Instructor. M.R.Ry. O. S. Ramaswami Aiyar, a first-grade Overseer, was on the 1st July brought in from the Public Works Department to act as Assistant Instructor in Surveying and Drawing, while Mr. Littlewood was on other duty as Instructor in Surveying and Drawing, *i.e.*, until 1st November M.R.Ry. K. Srinivasa Aiyangar, a temporary Overseer, Public Works Department, was on 1st July appointed to the post of Vernacular Assistant, and on 1st November to that of additional Assistant Instructor. M.R.Ry. K. Narasimham, B.A., L.T., who joined on the 13th February, was permanently appointed to the post of Second Assistant Instructor in Drawing. M.R.Ry. P. K. Anantanarayana Aiyar, M.A., L.T., who was appointed Vernacular Assistant, sub. *pro tem.* joined on the 10th February and acted as additional Assistant Instructor until the 31st October, when he reverted to the post of Vernacular Assistant.



M.R.Ry. V. Balasundara Mudaliyar, Accountant of the College, retired on superannuation pension from 1st April 1905, and was succeeded by M.R.Ry. M. Raman. M.R.Ry. T. M. Satakopachari, Head clerk, having been transferred as Sub-Assistant Inspector of Schools, M.R.Ry. A. Sivasankara Mudaliyar, first assistant clerk, was appointed to fill his place. The second assistant clerk, J. Narayanaswami Aiyar, was promoted to the post of first assistant clerk, the vacancy being filled by P. Muthuswami Aiyar, B.A., from the Collector's office at Cuddapah. M.R.Ry. S. Parthasarathy Aiyangar, B.A., Librarian and Storekeeper, was transferred to the School of Arts and M.R.Ry. T. Paranjoti Pillai, B.A., was appointed to his place.

3. *Numbers.*—The numbers on the rolls at the end of the year were—

| Class. | Practical course. | In College. | | | Total. |
|---|---|---|---|---|---|
| | | Third year. | Second year. | First year. | |
| Engineer class | 11 | * 15 | 19 | 19 | 64 |
| Subordinate class | 20 | † 40 | 32 | 34 | 126 |
| ,, Sub-Overseer and Surveyor class | .. | .. | ‡ 43 | 31 | 74 |
| Draftsman class | .. | .. | § 29 | 31 | 60 |
| Total | 31 | 55 | 123 | 115 | 324 |

* Includes 2 casual students. † ,, 8 ,, ,, ‡ Includes 4 casual students. § ,, 1 ,, student.

Excluding the students on their practical courses, the total number actually in the College on the 31st December 1905 was 293. The corresponding totals for the last five years were—

| Years. | NOS. |
|---|---|
| 1905 | 293 |
| 1904 | 271 |
| 1903 | 292 |
| 1902 | 297 |
| 1901 | 307 |

The distribution of the students by classes of the community, by districts, by wealth and occupation of parents is given in appendices A, B and C. Of the total number 71·3 per cent. were Brahmans, 19·7 per cent. non-Brahman Caste Hindus, 3·7 per cent. Native Christians, 2·4 per cent. Europeans and Eurasians and 2·7 per cent. Muhammadans. The percentages of Brahmans and non-Brahman Caste Hindus are practically the same as last year, but the percentage of Muhammadans has doubled. As regards districts, Tanjore was represented by 29·4 per cent., Trichinopoly 9·2 per cent., Madura 6·1 per cent., Kistna 5·8 per cent., Chingleput and Travancore 5·1 per cent. each, and Madras 4·4 per cent. of the total number.

4. *Entrance Examinations.*—The numbers offering for admission were—

| Class. | Examined. | Passed. | Admitted. |
|---|---|---|---|
| Engineer class | * 52 | 33 | 21 |
| Subordinate class | † 188 | 157 | ‡ 34 |
| ,, Sub-Overseer and Surveyor class | § 291 | 67 | 41 |
| Draftsman class | 170 | 47 | 35 |

* Of these, 19 had passed or appeared for the B.A. Degree examination.
† ,, 28 had passed the First in Arts Examination.
‡ ,, 1 was a Military student.
§ ,, 24 had passed the Matriculation examination.

The number of applicants for the Engineer Subordinate class shows a marked increase.

5. *Examinations of December* 1905—(*a*) *Engineer Class.*—The third year division contained 13 students, exclusive of 2 casual students. Of these 12 passed the final examination. The average percentage of the total marks was 57. One independent candidate presented himself for the examination, but he failed. The two casual

students who had failed in the College total in the previous year and who were specially permitted to rejoin, were successful. The second and first year divisions of the class, each containing 19 students, appeared for the term examinations and obtained 51·3 and 56·1 per cent. respectively of the total marks.

(*b*) *Engineer Subordinate Class.*—The senior division of 32 students, exclusive of 8 casual students, appeared for the final examination and 27 were successful. The average percentage of marks gained was 54·9. Four of the casual students who had failed in the College total in the previous year passed the examination. The remaining four, who had failed in both College and Board totals, presented themselves as independent candidates together with four outside candidates. None were successful. The intermediate and junior divisions of 32 and 34 students respectively appeared for the term examinations and secured 32·9 and 47·9 of the total marks.

(*c*) *Sub-Overseer and Surveyor Class.*—In the senior division, 39 students, exclusive of 4 casual students, appeared for the final examination and 27 passed. The average marks obtained were 55·4 per cent. Two of the casual students who had failed in the College total in the previous year and who were specially permitted to rejoin, qualified for certificates. The remaining two, who had failed in both College and Board totals last year, presented themselves for the examination as independent candidates with 9 ex-students, but only two of the latter passed. The junior division of the class containing 31 students appeared for the term examination and secured an average of 51·6 per cent. of the total marks.

(*d*) *Draftsman Class.*—In the senior division, 28 students, exclusive of one casual pupil, appeared for the final examination, and 13 passed. The average percentage of marks gained was 51·8. The casual student, who had failed in both College and Board totals in the previous year, presented himself for examination as an independent candidate together with 14 ex-students. None of these were successful. The junior division of the class containing 31 students appeared for the term examination and obtained an average of 47·3 per cent. of the total marks.

At the examination of December 1904, 17 students failed in College marks, notwithstanding that several of them had qualified on the Board's total. These candidates were permitted to rejoin the College during the second session of 1905, and 15 of them did so, becoming the casual students referred to above. At the examination of 1905 they all secured the College minimum.

The students of the intermediate division of the Engineer Subordinate class and the senior division of the Draftsman class were granted the option of being re-examined in 1905 in Geometrical and Perspective Drawing, as the paper set for them in that subject in the previous year was held to be unsuitable.

6. *Examination Results.*—The percentages of marks secured under the various subject heads by the senior divisions of the classes are compared in Appendix D with the average results of the preceding four years. The percentages are generally below the average, a result which I attribute mainly to the frequent changes in the staff and the consequent want of continuity in the system of teaching.

7. *Practical Courses.*—Eleven Engineer and 20 Engineer Subordinate students were under practical instruction from February 1905. Seven of the Engineer students who elected to become Mechanical Engineers attended a workshop course—4 in the Madras Railway Locomotive shops at Perambúr and 3 in the Public Works Workshops at Madras. Four who desired to become Civil Engineers worked in Public Works Divisions. The course of two of the Mechanical Engineer students was extended by 49 and 69 days respectively on account of absence and unsatisfactory progress and they were transferred to the Public Works Workshop at Dowlaishweram. The course of one of the Civil Engineer students also was extended by one month in consequence of his absence on sick leave.

The Engineer Subordinate pupils, including two Military students, went through the course in Public Works Divisions. The reports received from Executive Engineers were generally favourable. Five students, who had been unsuccessful in the College practical examination in surveying, attended the survey camp held in July 1905 for one month, their practical course being extended by a corresponding period.



Both the Engineers and Subordinates, attended the Body Guard Riding school for the equitation course. One Subordinate, however, for whom accommodation could not be found, will attend the school during 1906.

8. *Military Students.*—The number of Military students at the end of the year was 6, distributed as follows:—

| | | | |
|---|---|---|---|
| Practical course | | | 2 |
| Engineer Subordinate class, | senior division | | 2 |
| Do. | do. | intermediate division | 1 |
| Do. | do. | junior division | 1 |

The two students who appeared for the final examination of 1905 were unsuccessful, and they will revert to regimental duty.

9. *Survey camp.*—A survey camp was formed near Pallávaram in July and maintained for four weeks. A temporary Drawing office was erected at Gollanchavadi, and two bungalows in the Cantonment were rented for the same purpose. The work done was on the whole satisfactory. The number of students in camp was 236 and the total cost was Rs. 2,067. The camp was directed by Sub-Conductor Cuthbert under the supervision of Mr. W. H. James, Professor of Engineering.

10. *Inspections.*—The senior division of the Engineer class visited the Cordite factory at Wellington, the Karteri Power Station, and other works in the vicinity. The intermediate division of the Engineer class, the senior and intermediate divisions of the Engineer Subordinate classes, and the senior division of the Sub-Overseer and Surveyor class inspected the Irrigation works of the Sangam project in the Nellore district. The junior divisions of the Engineer, Engineer Subordinate, and Sub-Overseer and Surveyor classes, and the senior division of the Draftsman class visited the Irrigation works connected with the Pálár Anicut system in North Arcot. The total cost of the tours, in which 262 students took part, was Rs. 1,320.

11. *Workshop and Laboratories.*—The Professor of Engineering in charge of the Workshops and Laboratories, Mr. W. H. James, reports as follows:—

"The numbers of students in the classes attending the workshop during the year were as follows:—

| | |
|---|---|
| Engineer students | 53 |
| Engineer Subordinate students | 109 |
| Sub-Overseer and Surveyor students | 77 |
| Draftsman students | 61 |

"It is only possible with our limited accommodation to take each student once a week for two hours; and considering the small amount of practice they get, the progress made by the students on the whole was satisfactory.

"The only addition to the machine tools was a Pittler lathe. We are able to find space for this tool by the removal of some of the testing apparatus to the rooms which were formerly occupied by the Superintendent of Military students. This extra accommodation has been of the utmost value, and has made it possible for us to carry out some protracted investigations for the Public Works Department regarding mortars in connection with the Tungabhadra Project. At present we are engaged on some other mortars and on a series of experiments for the determination of quantities connected with building materials.

"Research of this sort means much labour, and I wish to bring to your notice the ready help I have always received from the Instructors in Civil and Mechanical Engineering and their Assistants, who devoted a good deal of their spare time and holidays to it, without which it would have been almost impossible to carry out the tests. I can only again this year emphasize our urgent need of more accommodation for workshop and laboratory purposes. Our classes are becoming larger year by year and with extra facilities we might develop the teaching still more on practical and experimental lines with the result that our students would be better trained and more useful men when they leave the college."

I am entirely in accord with Mr. James in regarding the provision of new workshops and laboratories as a pressing necessity. The same view was expressed by the Acting Principal in the report for 1904. Two years ago the matter was practically settled, but the inquiry made by the Committee on the college (which is dealt with in another paragraph) was so extended in its scope, and opened up such large considerations, that the question of new buildings was postponed until orders could be passed on the Committee's report.

12. *Physical Training and Recreation.*—Instruction in gymnastics and drill was given as usual, and better results were obtained at the examination held in December. In view of the diminishing number of military students, the desirableness of appointing a European Drill Sergeant is again, as last year, brought to notice.

The Honorary Secretary of the Recreation Club, Mr. W. H. James, reports as follows :—

"The Cricket, Football and Hockey Clubs were all fairly well supported, and the attendance of students on the recreation ground was much as in previous years. In the competitions of the Madras Athletic Association, the college took second place for the Pennycuick Trophy, but a somewhat lower position than the year before for the Professor's Trophy. We were second in Athletics for the Travancore Shield. The inter-class matches were fairly well contested. The Engineer class managed to retain the Football cup, the senior division of the Sub-Overseer and Surveyor class secured the Cricket cup, and the senior division of the Engineer Subordinate class the Hockey cup.

"Very successful sports were held in the last week of September, which were financed and managed to a great extent by the students themselves. I have again to acknowledge the assistance I have received from Mr. Webster and M.R.Ry. S. Subrahmanya Aiyar in conducting the affairs of the club."

13. *Library.*—The re-arrangement of the library books and the preparation of a fresh catalogue were commenced. During the year under review 93 books were added to the Library which now contains 4,473 volumes. The books issued to students numbered 1,906 and to the staff 545 against 2,313 and 467, respectively, in the previous year, while 1,039 references were made to the Consulting Library. The present annual grant for the Library does not suffice to procure the new issues of important professional works which are essential to a well-equipped institution. Although the college has developed greatly in late years, the allotment remains as it was in the past. A separate communication has been made on this subject.

14. *Attendance and Conduct.*—The percentage of numbers present to numbers on the rolls was 93·4 for the College Department and 94·7 for the School Department. Particulars are given in Appendix E. The conduct of the students during the year was generally satisfactory. A case of malpractice on the part of a student of the Sub-Overseer and Surveyor class during the final examination was met by his being debarred from presenting himself for any examination controlled by the Educational Department.

The year 1905 was abnormally unhealthy, and although the college did not suffer directly from the epidemic of cholera which prevailed in Madras, there were several casualties from other causes. I regret to have to report the loss of four students by death, viz., one in the Engineer class, one in the Engineer Subordinate class and two in the Sub-Overseer and Surveyor class.

15. *University Examinations.*—Six students of the senior division of the Engineer class appeared for the B.E. Degree Examination in January 1905 and three were successful, viz., one in the Civil and two in the Mechanical Branch. Seven ex-students also presented themselves for the examination, but only one passed in the Mechanical Branch.

Twenty candidates offered themselves for the First Examination in Engineering, of whom thirteen were second-year students and seven third-year. Six were successful in all, of whom four were second-year students and two third-year. Six ex-students also appeared for this examination and all of them failed.



16. *Employment of Passed Students of* 1904.—Of the nine Engineers who completed their practical course early in 1905, the senior, R. Narasimha Aiyangar, B.A, was appointed Assistant Engineer in the Provincial Service of the Public Works Department on Rs. 250 ; four accepted appointments as temporary Upper Subordinates in the Public Works Department, Madras ; one obtained employment as Assistant Engineer under the Gódávari District Board ; one joined the Revenue Department as Supervisor of experimental pumping stations. No information has been received regarding the remaining two.

Of the thirty Engineer Subordinates who completed their practical course, the senior, R. Venkatesa Aiyar, was appointed a permanent Upper Subordinate, third grade, in the Public Works Department on Rs. 60, while the two military men were posted as Upper Subordinates, first grade, on Rs. 100 each. Of the remainder, twenty-one accepted appointments as temporary Upper Subordinates in the Public Works Department, Madras ; one obtained employment as Sub-Overseer on Rs. 50 ; one became a Delta Superintendent ; and one entered the Public Works Department of the Cochin State. Regarding the remaining three no information has been received.

Of the seventeen Sub-Overseers and Surveyors who passed out in December 1904, sixteen obtained employment as follows :—

| | | |
|---|---|---|
| Sub-Overseer, Public Works Department | ... | 3 |
| Do. Military Works Service | ... | 1 |
| Do. Revenue Department (Minor Irrigation Sub-Overseer) | ... | 3 |
| Do. Local Boards and Municipalities | ... | 3 |
| Do. Court of Wards | ... | 2 |
| Surveyor, Public Works Department | ... | 2 |
| Do. Madras Railway Company | ... | 1 |
| Channel Superintendent, Public Works Department | ... | 1 |

No information has been received regarding the remaining man.

Of the seventeen Draftsmen who obtained certificates in December 1904, eleven obtained employment as under :—

| | | |
|---|---|---|
| Draftsman, Public Works Department | ... | 4 |
| Do. Survey Department | ... | 1 |
| Do. Sanitary Engineer's Office | ... | 2 |
| Do. Mysore Public Works Department | ... | 1 |
| Do. South Indian Railway | ... | 1 |
| Do. Kolar Gold Fields | ... | 1 |
| Channel Superintendent, Public Works Department | ... | 1 |

Of the remainder, one joined the Sub-Overseer and Surveyor class, three remained unemployed and two failed to furnish information.

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

17. *Revision of Rules.*—By G.O., No. 511, Educational, dated 26th July 1905, a modification was made in article 55 of the College Rules, and it was provided that military students who qualify at the final examination but who do not pass sufficiently high for immediate appointment to the Public Works Department shall proceed to the practical course ; and on its completion, either revert to their corps pending selection in any subsequent year in which less than two military students qualify, or if the Chief Engineer approves, take up employment on the temporary subordinate staff.

18. *College Committee.*—In December 1904, Government appointed a Committee consisting of Mr. J. P. Davidson, President, Mr. F. J. E. Spring, C.I.E., Mr. H. T. Keeling, Mr. R. Ll. Jones, Captain W. Carew Smyth, R.E., Mr. W. H. James and M.R.Ry. A. V. Ramalinga Aiyar, B.A., B.C.E., to revise the syllabuses and curriculum of the college. The Committee was also desired to consider whether additional laboratories and other buildings for the accommodation of students and staff are necessary,

and if so, whether the present site affords the requisite space for extension. The Committee submitted its report on the 31st March 1905, and dealt not only with the revision of the syllabuses and the accommodation required, but also with the connected subjects of staff and administration. Government passed preliminary orders in October 1905, approving the following changes:—

The Engineer Subordinate class, to be called the Upper Subordinate class, is to have a course of three years in the College. The Sub-Overseer and Surveyor and Draftsman classes are to be amalgamated into a Lower Subordinate class. The standards of general education for admission to the Engineer, Upper Subordinate and Lower Subordinate classes are to be the B.A. degree, the First Examination in Arts, and the Matriculation Examination respectively. The rules for military students are to be assimilated to those in vogue at Roorkee.

The questions of the extension of buildings, the revision of the syllabuses, and the recruitment of the staff were referred back to the Committee for further consideration and report. When the final orders of Government are received the necessary revision of the code of rules will be undertaken.

19. *Financial Details.*—On reference to Appendix H, it will be found that the receipts of the College amounted to Rs. 30,921 and the charges to Rs. 98,371. The net cost of the Institution to Government was therefore Rs. 67,450. Dividing this sum by the average number of students on the rolls, it appears that the net cost of educating each student was Rs. 229. Full financial details for the official year 1904–1905 were submitted with the annual returns. An abstract of receipts and charges for the last five calendar years is given in Appendix K.

20. *General.*—I desire to acknowledge the co-operation of the Professors, and the assistance I have received from the Instructors and the members of the staff generally. To Mr. James, the Senior Professor of Engineering, I am especially indebted. Although over-burdened with work during the period in which the second Professorship of Engineering remained vacant, he was able to superintend the workshops and laboratories, to control the Survey Camp, to make an extensive series of experiments on the strength of building materials for the Public Works Department, and as Honorary Secretary of the Recreation Club to organise the students' games. He has in fact been my right hand in all matters connected with the College. I specially mention also Mr. J. Webster, and M.R.Rys. Narayanaswami Aiyar and Subrahmanya Aiyar who willingly undertook experimental testing work in addition to their ordinary duties. The members of the staff who were prominent on the recreation ground are mentioned in Mr. James' report quoted in an earlier paragraph.

## APPENDIX A.

*Distribution of Students according to Classes of Community on the 31st December 1905.*

| Classes. | Europeans and Eurasians. | Native Christians. | Muhammadans. | Hindus. | | | Total. |
|---|---|---|---|---|---|---|---|
| | | | | Brahmans. | Non-Brahman caste Hindus. | Panchamas. | |
| Engineer classes .. .. .. .. | .. | 4 | 1 | 45 | 3 | .. | 53 |
| Engineer Subordinate classes .. .. | 7 | 1 | 4 | 83 | 11 | .. | 106 |
| Sub-Overseer and Surveyor classes .. | .. | 2 | 3 | 44 | 25 | .. | 74 |
| Draftsman classes .. .. .. | .. | 4 | .. | 37 | 19 | .. | 60 |
| Total .. | 7 | 11 | 8 | 209 | 58 | .. | 293 |



## APPENDIX B.

*Distribution of Students by Districts on the 31st December 1905.*

| Districts. | Engineer class. | Engineer Subordinate class. | Sub-Overseer and Surveyor class. | Draftsman class. | Total. |
|---|---|---|---|---|---|
| Ganjám .. .. .. .. .. .. .. .. | .. | .. | .. | .. | .. |
| Vizagapatam .. .. .. .. .. .. .. .. | .. | 2 | 1 | 1 | 4 |
| Gódávari .. .. .. .. .. .. .. .. | 2 | 3 | 4 | 3 | 12 |
| Kistna .. .. .. .. .. .. .. .. | 1 | 5 | 8 | 3 | 17 |
| Kurnool .. .. .. .. .. .. .. .. | .. | .. | .. | 1 | 1 |
| Nellore .. .. .. .. .. .. .. .. | .. | 2 | 2 | .. | 4 |
| Madras .. .. .. .. .. .. .. .. | .. | 3 | 4 | 6 | 13 |
| Chingleput .. .. .. .. .. .. .. .. | 1 | 2 | 5 | 7 | 15 |
| Cuddapah .. .. .. .. .. .. .. .. | .. | .. | 1 | .. | 1 |
| North Arcot .. .. .. .. .. .. .. .. | 3 | 1 | 3 | 1 | 8 |
| South Arcot .. .. .. .. .. .. .. .. | .. | 2 | 3 | 1 | 6 |
| Tanjore .. .. .. .. .. .. .. .. | 12 | 36 | 21 | 17 | 86 |
| Trichinopoly .. .. .. .. .. .. .. .. | 4 | 7 | 6 | 10 | 27 |
| Madura .. .. .. .. .. .. .. .. | 5 | 7 | 4 | 2 | 18 |
| Tinnevelly .. .. .. .. .. .. .. .. | 2 | 7 | 1 | 2 | 12 |
| Coimbatore .. .. .. .. .. .. .. .. | 1 | 8 | 1 | 1 | 11 |
| Salem .. .. .. .. .. .. .. .. | 3 | 5 | 3 | 2 | 13 |
| Malabar .. .. .. .. .. .. .. .. | 2 | 3 | .. | .. | 5 |
| South Canara .. .. .. .. .. .. .. .. | 2 | 4 | .. | .. | 6 |
| Pudukkóttai .. .. .. .. .. .. .. .. | 1 | 2 | .. | .. | 3 |
| Cochin .. .. .. .. .. .. .. .. | 1 | 1 | 1 | .. | 3 |
| Travancore .. .. .. .. .. .. .. .. | 9 | .. | 5 | 1 | 15 |
| Mysore .. .. .. .. .. .. .. .. | 3 | 1 | .. | .. | 4 |
| Pondicherry .. .. .. .. .. .. .. .. | .. | .. | .. | 2 | 2 |
| Hyderabad (Deccan) .. .. .. .. .. .. .. .. | 1 | .. | 1 | .. | 2 |
| Military Students .. .. .. .. .. .. .. .. | .. | 4 | .. | .. | 4 |
| Burmah .. .. .. .. .. .. .. .. | .. | 1 | .. | .. | 1 |
| Total .. | 53 | 106 | 74 | 60 | 293 |

## APPENDIX C.

*Distribution of Students by Wealth and Occupation of Parents on the 31st December 1905.*

| Classes in the College. | Wealth. | | | | Occupation. | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Richer class. | Middle class. | Poorer class. | Total. | Officials. | Petty officials. | Traders. | Landholders. | Artisans. | Mendicants. | Others. | Total. |
| Engineer class— | | | | | | | | | | | | |
| Third year .. .. .. | .. | 15 | .. | 15 | 7 | 1 | .. | 7 | .. | .. | .. | 15 |
| Second year .. .. .. | .. | 18 | 1 | 19 | 8 | 1 | 1 | 9 | .. | .. | .. | 19 |
| First year .. .. .. | .. | 16 | 3 | 19 | 9 | 2 | .. | 8 | .. | .. | .. | 19 |
| Engineer Subordinate class— | | | | | | | | | | | | |
| Third year .. .. .. | 1 | 34 | 5 | 40 | 16 | 1 | 3 | 20 | .. | .. | .. | 40 |
| Second year .. .. .. | .. | 27 | 5 | 32 | 12 | 1 | 4 | 15 | .. | .. | .. | 32 |
| First year .. .. .. | .. | 29 | 5 | 34 | 12 | 1 | .. | 15 | 1 | .. | 5 | 34 |
| Sub-Overseer and Surveyor class— | | | | | | | | | | | | |
| Second year .. .. .. | .. | 38 | 5 | 43 | 19 | 3 | 4 | 16 | 1 | .. | .. | 43 |
| First year .. .. .. | 2 | 26 | 3 | 31 | 12 | 1 | 3 | 12 | .. | .. | 3 | 31 |
| Draftsman class— | | | | | | | | | | | | |
| Second year .. .. .. | .. | 28 | 1 | 29 | 14 | .. | 1 | 11 | 2 | .. | 1 | 29 |
| First year .. .. .. | 1 | 25 | 5 | 31 | 13 | 2 | .. | 11 | 1 | .. | 4 | 31 |
| Total .. | 4 | 256 | 33 | 293 | 122 | 13 | 16 | 124 | 5 | .. | 13 | 293 |

## APPENDIX D.

*Results of Examinations of December* 1905.

| | PER CENT. | Average of preceding four years. PER CENT. |
|---|---|---|
| *Engineer class, 1st division—* | | |
| Mathematics | 55·7 | 60 |
| Science | 52·9 | 50 |
| Engineering | 54·5 | 58 |
| Drawing | 55·2 | 63 |
| Surveying | 62·1 | 64 |
| Language | 61·9 | 63 |
| Gymnastics | 64·7 | 54 |
| Board Total | 55·6 | ... |
| College Total | 59·5 | ... |
| Grand Total | 56·5 | 59 |
| *Engineer Subordinate class, 1st division—* | | |
| Mathematics | 53·2 | 57 |
| Engineering | 49·9 | 59 |
| Drawing | 55·1 | 60 |
| Surveying | 61·1 | 62 |
| Language | 59·5 | 65 |
| Physical Exercise | 61·7 | 54 |
| Board Total | 53·9 | ... |
| College Total | 58·2 | ... |
| Grand Total | 54·9 | 60 |
| *Sub-Overseer and Surveyor class, 1st division—* | | |
| Surveying | 60·1 | 62 |
| Engineering | 49·7 | 58 |
| Drawing | 51·5 | 60 |
| Physical Exercise | 58·6 | 51 |
| Board Total | 51·5 | ... |
| College Total | 63·1 | ... |
| Grand Total | 55·4 | 60 |
| *Draftsman class, 1st division—* | | |
| Geometrical, etc., Drawing | 38·4 | 55 |
| Building Construction and Drawing | 52·4 | 62 |
| Machine Drawing | 61·8 | 63 |
| Estimating | 50·2 | 59 |
| Physical Exercise | 66·7 | 47 |
| Board Total | 47·2 | ... |
| College Total | 65·9 | ... |
| Grand Total | 51·8 | 59 |



## APPENDIX E.

*Average Numbers and Attendance in* 1905.

| | Average number on rolls. | Average daily attendance. |
|---|---|---|
| *College Department—* | | |
| Engineer class, third year | 14·6 | 13·6 |
| Do. second year | 20·0 | 18·2 |
| Do. first year | 19·6 | 18·8 |
| Engineer Subordinate class, third year | 37·2 | 35·0 |
| Do. second year | 32·8 | 29·0 |
| Do. first year | 34·0 | 33·0 |
| Total | 158·2 | 147·6 |
| *School Department—* | | |
| Sub-Overseer and Surveyor class, second year | 41·9 | 39·3 |
| Do. do. first year | 32·8 | 31·2 |
| Draftsman class, second year | 28·6 | 27·1 |
| Do. first year | 32·3 | 30·2 |
| Total | 135·6 | 127·8 |
| Grand Total | 293·8 | 275·4 |
| Percentage of numbers present to number on rolls— | | |
| College Department | | 93·4 |
| School do. | | 94·7 |

## APPENDIX F.

*Government Technical Examination of* 1905.

No candidates presented themselves from the College of Engineering.

## APPENDIX G.

*Classification of Vacancies notified during* 1905.

| — | Government. | | | | Local Board and Municipality. | | | | Railways. | | | | Native States. | | | | Private employés. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 60. | Above Rs. 200. | Rs. 100 to 200. | Rs. 50 to 100. | Under Rs. 50. | Total. |
| Engineer or Assistant | .. | 1 | .. | .. | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 4 |
| Supervisor | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Overseer | .. | .. | .. | .. | .. | .. | 5 | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 6 |
| Sub-Overseer | .. | .. | .. | 1 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 3 |
| Draftsman | .. | .. | 3 | 7 | .. | .. | .. | 1 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 1 | 12 |
| Surveyor | .. | .. | 57 | 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 59 |
| Anicut or Conservancy Superintendent | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| Total | .. | 1 | 60 | 10 | 3 | .. | 5 | 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 2 | 84 |

## APPENDIX H.

*Financial Details for* 1905.

| | | RS. | A. | P. | RS. | A. | P. |
|---|---|---|---|---|---|---|---|
| *Receipts*— | | | | | | | |
| Tuition fees— | | | | | | | |
| College Department ... ... ... | | 10,997 | 8 | 0 | | | |
| School Department ... ... ... | | 9,121 | 8 | 0 | | | |
| | | | | | 20,119 | 0 | 0 |
| Entrance and Final Examination fees ... ... ... | | | | | 10,388 | 0 | 0 |
| Miscellaneous Receipts ... ... ... ... ... | | | | | 414 | 0 | 11 |
| | | | | Total ... | 30,921 | 0 | 11 |
| *Charges*— | | | | | | | |
| Principal ... ... ... ... ... ... ... | | | | | 16,869 | 3 | 5 |
| Professors, masters and teachers ... ... ... ... | | | | | 44,415 | 1 | 3 |
| Clerks, librarian and servants ... ... ... ... | | | | | 5,723 | 4 | 10 |
| Board of Examiners ... ... ... ... ... | | | | | 4,904 | 8 | 0 |
| Library and Prize allowances ... ... ... ... | | | | | 794 | 5 | 0 |
| Books and Instruments ... ... ... ... ... | | | | | 2,562 | 1 | 4 |
| Other Europe stores ... ... ... ... ... | | | | | 2,418 | 11 | 3 |
| Other heads of contingent charges ... ... ... | | | | | 13,767 | 14 | 2 |
| Travelling allowances ... ... ... ... ... | | | | | 690 | 4 | 6 |
| Scholarships ... .. ... ... ... ... ... | | | | | 4,296 | 0 | 0 |
| Exchange compensation allowance ... ... ... | | | | | 1,929 | 11 | 0 |
| House-rent ... ... ... ... ... ... ... | | | | | ... | | |
| | | | | Total ... | 98,371 | 0 | 9 |
| Net cost to Government ... ... | Rs. | 67,449 | 15 | 10 | | | |
| Average number of students on rolls 294 | | | | | | | |
| Net cost per student ... ... | Rs. | 229 | 6 | 9 | | | |
| Average tuition fees paid per student per annum— | | | | | | | |
| College Department ... ... | Rs. | 69 | 9 | 8 | | | |
| School do. ... ... | „ | 67 | 1 | 1 | | | |

## APPENDIX K.

*Comparative Financial details.*

| — | 1905. | 1904. | 1903. | 1902. | 1901. |
|---|---|---|---|---|---|
| | RS. | RS. | RS. | RS. | RS. |
| Receipts .. .. .. .. .. .. .. | 30,921 | 29,408 | 29,490 | 28,656 | 28,366 |
| Charges .. .. .. .. .. .. .. | 98,371 | 95,162 | 96,040 | 94,731 | 90,046 |
| Net cost to Government .. .. .. .. | 67,450 | 65,754 | 66,550 | 66,075 | 61,680 |
| | NO. | NO. | NO. | NO. | NO. |
| Average number of students .. .. .. | 294 | 274 | 292 | 300 | 314 |
| | RS. | RS. | RS. | RS. | RS. |
| Net cost per student .. .. .. .. .. | 229 | 240 | 228 | 220 | 196 |



**Proceedings Dis. No. 2830 of 1906.**

Recorded.

2. In spite of several unavoidable changes in the staff which interfered with the continuity of teaching the work done during the year was on the whole successful.

3. The Director should be addressed in a separate communication on the subject of more accommodation for the workshop and the laboratory; and also on the appointment of a European Drill Sergeant.

4. The final orders of Government on the proposed reorganization of the college are awaited.

A. G. BOURNE,
*Director of Public Instruction.*

To the Principal, College of Engineering, with a spare copy.
„ Principals of other Government Colleges.
„ Inspectors of Schools.
„ the Superintendent, School of Arts.

Copy to the President, Board of Examiners, College of Engineering.
„ „ Chief Engineer, Public Works Department, for information.
„ „ Editors, Indian Journal of Education and Educational Review.
„ „ Government, with C.L.

(True Copy.)

*Personal Asst. to the Director of Public Instruction.*

Read

15 — 19 — 18

Educational Reports.

Notes connected with Go. No. 383, 384 dy 1st May 1906

Subject - Report of the College of Engineering for the year 1905.

~~Encl 781~~ - From the D.P.I. No 3645 dy 10th May 1906

From the percentages of marks obtained by the students at the examinations in December 1905, given in Appendix D on page 10 of the report, it is evident that the work done during 1905 as gauged by the results was much poorer than usual.

The D.P.I. says he was in the ~~enquiry~~ position to make satisfactory Govt. order

2. Final orders have not yet been passed in the report of the Committee appointed to consider the question of re-organizing the College. In their order No 655 E&L dy 3rd October 1905 the Govt. called for further remarks on the proposals in regard to revising the syllabuses and the recruitment of the staff. These remarks have been received and are still under consideration - the file is with the Hon. A decision has also to be arrived at regarding the removal of the College from its present locality. Until this decision is arrived at the provision of more accommodation for the workshop and the laboratory has to be held in abeyance.

E. Paras. 7 + 11

Para. 2.

3. The drafts placed below are submitted for approval.

PTJ 13/5/06

Lee Chas 14/5/06

Govt Dy 17/5

[Govt. No. 856 E&L dy 19 May 1906]

Read

[ E. 12 ]

1,000–24-9-05

16

EDUCATIONAL DEPARTMENT.

148

READ AGAIN G.O., No. , dated 190 .

" " " " , " 190 .

*READ ALSO:–*

C. No. 781 , From the D.P.I. , No 1045 , dated 10 – 5 – 1906.

" " , " " , " , " 190 .

" " , " " , " , " 190 .

**ORDER** No. 383 dated 1 – 6 – 1906.

Recorded.

2. It is to be regretted that the work done during the year was not as successful as in previous years.

3. Pending the issue of final orders on the report of the Committee appointed to consider the question of re-organizing the College the provision of more accommodation for the College workshop and laboratory will be deferred.

Letter 384 dt 1-6-06 to the Under Secretary of State for India

Sir

With reference to the instructions

Read

Govt of Mad. No 101 Edl dt 21st June 1882.

17 2 11 158

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 Govt recording the report on the working of the College of Engineering during the year 1905.

2. Final orders have not been passed as yet on the report of the Committee referred to in para. 2 of Mr. Taylor's letter No 381 Edl dt 5th June 1905.

PTJ 13/5/06

Ces 14 5 06

Ans 15/5

First copy sent to Press.

Returned for signature.

Despatched in print.

NUMBER OF COPIES REQUIRED. { Order complete. 50 copies / Letter only. 10 / Order complete with Letter. 25

2 copies of letter for signature

READ AGAIN G.O., No. 190 . DATED

CURRENT No. 781 A

ENCLOSURES TO C. No. 781 A

Please

ORDER OF GOVERNMENT .. .. .. .. A

LETTER OF GOVERNMENT.

STATEMENT WITH DI.. C.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH IN ORIGINAL.

*N.B.*—

A = Print in full.
B = Not to be printed.
P = Print abstract only.
Q = Print heading only.