

Government of Madras.

EDUCATIONAL DEPARTMENT.

Recd.

Regd.

} 1912.

Enclosures

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G.O. No. 525 14th June 1912.

DESPATCHED

College of Engineering, Madras

Recording report on the working of the — during the year 1911-12.

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GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—the following paper :—

Letter—from the Hon'ble Mr. A. G. BOURNE, D.Sc., F.R.S., C.I.E., Director of Public Instruction, Madras.
To—the Secretary to Government, Educational Department.
Dated—the 24th May 1912.
No.—R.C. 3153.

I have the honour to submit herewith a copy of my Proceedings, Ref. on C. No. 3153, dated 17th May 1912, reviewing the report on the working of the Madras College of Engineering during the year 1911–12.

ENCLOSURE.

Proceedings of the Director of Public Instruction, R.C. No. 3153, dated 17th May 1912.

READ—the following paper :—

Letter—from W. H. JAMES, Esq., B.Sc., Principal, College of Engineering, Madras.
To—the Director of Public Instruction, Madras.
Dated—the 15th April 1912.
No.—77 C.

I have the honour to submit the administration report of the College of Engineering for the academic year 1911–12.

2. Staff.—Mr. C. L. T. Griffith, temporary Professor of Civil Engineering, was made permanent in that appointment with retrospective effect from August 14th 1910, on the transfer of Mr. A. Chatterton to the appointment of Superintendent of Industrial Education.

Mr. J. Webster who had filled the post of Instructor in Mechanical Engineering temporarily for two successive periods each of five years, was confirmed in that appointment with retrospective effect from January 30th, 1901.

M.R.Ry. T. G. Krishna Aiyar, temporary Overseer, Presidency Division, joined the College on October 12th, 1911, as temporary additional Assistant Instructor in place of M.R.Ry. B. Lakshminarayana Rao, who secured the appointment of Municipal Engineer, Trichinopoly.

The pay of the appointment of the additional Assistant Instructor on the permanent staff was raised from Rs. 75—2½—100 to Rs. 125 and M.R.Ry. R. S. Rajan-gam Aiyar, Overseer, first grade, Public Works Department, was appointed to the post temporarily with effect from the 4th November 1911.

M.R.Ry. M. Ganapati Aiyar, Overseer, first grade, Public Works Department, resumed charge of the Revenue officers' class on the 15th July 1911 and reverted to the Public Works Department on the 4th February 1912. He was on privilege leave on full pay for 13 days from 25th July 1911.

K. V. Kunhiraman, Workshop clerk, was appointed sub. *pro tem.* Librarian and Storekeeper on April 18th, 1911, on the transfer of M.R.Ry. T. Paranjoti Pillai to educational work as Sub-Assistant Inspector, Tuticorin range.

A. Subba Rao was appointed sub. *pro tem.* Workshop clerk on the 18th April 1911 in place of K. V. Kunhiraman, promoted.

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

Class.	Practical course.	In College.			Total.
		Third year.	Second year.	First year.	
Engineer	21	20	22	23	86
Upper Subordinate	26	19	31	33	109
Lower Subordinate	..	31	52	..	83
Probationary Subordinate	..	..	..	77	77
Total ..	47	70	105	133	355

Excluding the students taking their practical courses the total number of students actually on the rolls of the College on the 31st March 1912 was 308.

The corresponding totals for the five preceding years were—

Year.	Number.
1910–1911	272
1909	213
1908	256
1907	315
1906	292

The increase in the total for the year under report is due to the somewhat larger number admitted to the Probationary Subordinate class, the first constituted under the new rules.

The distribution of the students by classes of community, districts, wealth and occupation of parents is given in appendices A, B and C.

Of the total number 71·4 per cent. were Brahmans, 14·9 per cent. non-Brahman Hindus, 5·8 per cent. Indian Christians, 6·8 per cent. Europeans and Eurasians and 0·6 per cent. Muhammadans.

The percentage of Brahmans has fallen a little this year whilst that for non-Brahman Hindus has nearly doubled. The figures for Indian Christians and Muhammadans have risen slightly. The percentage of Europeans and Eurasians is almost unchanged.

As regards districts, 22·0 per cent. of the total numbers belonged to Tanjore; 8·4 and 8·1 per cent. to Kistna and Godāvāri; 7·8 and 7·1 per cent. to Trichinopoly and Malabar; 5·5 per cent. to Tinnevely; 4·2 per cent. each to Madura and Mysore; 3·5 per cent. each to Guntur and Coimbatore; 3·2 per cent. to Travancore; 2·9 per cent. to Madras; 1·9 per cent. each to South Arcot and South Canara and 0·6 per cent. each to Vizagapatam, Salem, Pudukōttai and Ceylon.

4. Admission of students.—The numbers registered and admitted during the year were :—

Class.	Number of candidates registered.	Number of candidates admitted.	Remarks.
<i>Engineer.</i>			
Qualified candidates	* 23	* 20	* Includes a qualified candidate sent by Cochin Government.
Qualified but overage candidates	6	† 1	† Resigned subsequently.
Unqualified candidates	15	‡ 3	‡ Includes an unqualified candidate sent by the Ceylon Government.
Total ..	44	24	
<i>Upper Subordinate.</i>			
Qualified candidates	11	7	
Qualified but overage candidates	2	2	
Unqualified candidates	68	§ 17	§ One resigned subsequently.
Military students	..	6	Five from the Military probationers' class and one belonging to the previous year's batch.
Civil students who failed at the Sessional examination held in April 1911.	..	¶ 3	¶ One resigned subsequently.
Total ..	81	35	
<i>Probationary Subordinate.</i>			
Qualified candidates	** 210	†† 68	** 13 Matriculates and 197 holders of completed Secondary School Leaving certificates.
Qualified but overage candidates	†† 13	§§ 2	†† 10 Matriculates and 58 holders of completed Secondary School Leaving certificates.
Unqualified but overage candidates	18	1	‡‡ 4 Matriculates and 9 holders of completed Secondary School Leaving certificates.
Military students	21	5	§§ Holders of Secondary School Leaving certificates.
Students who failed at the Sessional examination held in April 1911.	..	1	
Total ..	262	77	

5. *Revenue officers' class.*—This class resumed at the commencement of the session, the first batch of officers joining for the two months' course on July 17, the second batch joined the college on September 18 and the third on November 20th. This completed the list of officers the Board of Revenue desired to send for the time being and the class has been temporarily discontinued.

Observation of the work done by these men inclines me to the opinion that it would be advisable in future to extend the period of training to three months, as the majority of the officers have little notion how to set about their work to start with and it is only towards the end of the time that they really begin to pick up any useful knowledge.

6. *Examinations.*—In the month of April 1911 sessional examinations were held as usual for all classes.

Engineer class—Senior division.—The Civil branch consisted of nine regular and nine casual students, and three of the latter only failed to pass the examination. The average percentages of marks gained were 58.6 and 50.8, respectively.

The six students constituting the Mechanical branch all passed the examination, one with honours, gaining 58.8 per cent. of the total marks.

Intermediate division.—The Civil and Mechanical branches of this division consisted of seventeen and three students, respectively, and all but one Civil student qualified for promotion. The unsuccessful student continued his studies in the same division.

Junior division.—Twenty-one qualified for promotion out of the twenty-three students constituting the division. One of the failed students resigned and the other rejoined the class for a second year.

Of the passed students two elected to prosecute their studies in the Mechanical and the remaining eighteen in the Civil branch. In this connection I can only repeat my remark of last year that it is unlikely there will be a much larger proportion taking Mechanical Engineering until it is quite certain there is urgent demand for the services of highly trained Mechanical Engineers.

Upper Subordinate class—Senior division.—This division contained twenty-seven students and all except one passed the Final Examination, five with honours. The unsuccessful student stayed on in the same division for another year.

Intermediate division.—Eighteen students constituted this division and all qualified for promotion.

Junior division.—This division consisted of thirty-five students. Out of these, 31 students obtained the requisite marks for promotion. Three of the unsuccessful students rejoined the division and one withdrew from the College.

The average marks obtained by the three divisions of the Upper Subordinate class were 61.8, 62.4 and 56.4 per cent., respectively.

Lower Subordinate class.—The Senior, Intermediate and Junior divisions of this class consisted of 30, 33 and 55 students, respectively. All the students of the senior division passed the final examination, two with honours. Two students belonging to the intermediate division failed and they rejoined the same division. Four students of the junior division were not promoted and of these, one elected to join the Probationary Subordinate class and three left the College.

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

7. *Honours and distinctions—Medals.*—The College medals for the session were awarded to the undernamed final year students :—

<i>Engineer class.</i>				
Gold medal	...	...	...	B. S. Ramaswami Aiyar.
<i>Upper Subordinate class.</i>				
Silver medal	...	...	...	P. S. Viswanatha Aiyar.
<i>Lower Subordinate class.</i>				
Bronze medal	...	...	...	K. Shiva Rao.

The Harris' gold medal for proficiency in Electrical Engineering was awarded for the first time to B. S. Ramaswami Aiyar, and the DeWinton gold medal for Hydraulic Engineering to V. R. Subrahmanya Aiyar of the Engineer class.

The University "Rao Bahadur S. Subbaraya Chariar Gold Medal" was gained by V. Harihara Aiyar.

8. *Prizes.*—The special College prizes were awarded as follows :—

Engineer class.

The Colonel Love Prize for Proficiency in Applied Mechanics	} To J. D. B. David.
The University J. A. Jones' prize for Hydraulic Engineering	
	To D. Narayanaiya.

Upper Subordinate class.

The Colonel Love prize for Proficiency in Hydraulic Engineering	} To P. S. Visvanatha Aiyar.
The Colonel Roger's prize to silver medalist	
The H. J. Thompson prize for Construction, Building Drawing and Estimating	To Corpl. J. E. Foulkes.

Lower Subordinate class.

The Colonel Love prize to the senior student	... To K. Shiva Rao.
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9. *University examinations.*—Five Engineer students under practical training and 15 ex-students presented themselves for the B. E. Degree examination held in April last and of these, eight passed, three in the Mechanical branch and five in the Civil branch.

Thirty-five candidates appeared for the F.E. examination of whom nine were third year students, nineteen, second year students, two students under practical training and five ex-students. Twelve were successful in all—four third year students, seven second year students and one ex-student.

10. *Practical courses.*—The first batch of fifteen Engineer students completing their theoretical courses of instruction under the revised rules together with six passed casual students entered upon the course of practical training at the beginning of June 1911.

Of the six Mechanical Engineer students, three joined the Public Works Department Workshops in Madras, one went to Dowlaiswaram, and two to the Madras and Southern Mahratta Railway Workshops at Perambore.

The Civil Engineer students were posted as usual to Public Works Department divisions, and also the twenty-six qualified Upper Subordinate students.

The practical courses of four Upper Subordinate students of the previous year who attended the survey camp of 1911 for further instruction and practice, were extended by one month to make up the period lost by them from practical training.

Both Engineer and Upper Subordinate students attended the Body Guard Riding school for instruction in riding.

11. *Military students.*—The number of Military students on the rolls of the College at the end of the year was twenty-three distributed as follows :—

Practical course	...	...	...	...	4
Upper Subordinate class.	Senior division	...	...	...	6
	Intermediate division	...	...	...	2
	Junior division	...	...	...	6
Probationary Subordinate class	...	...	...	...	5
Total					23

12. *Inspections.*—The senior division of the Upper and Lower Subordinate classes together with the Military students of the intermediate and junior divisions of the Upper Subordinate class under the charge of the instructor in Civil Engineering accompanied by the instructor in Mechanical Engineering and an assistant

instructor proceeded to Rajahmundry about the beginning of October last for inspection of the irrigation works in the Godāvari and Kistna deltas. In the course of the tour the party also visited the water-works at Cocanada and the sugar factory at Samalkota.

At about the same time the Professor of Civil Engineering with the three assistant instructors took the intermediate divisions of the Engineer, Upper and Lower Subordinate classes to Elamanur on a visit of inspection of the irrigation works in the Cauvery delta. From Elamanur the party proceeded *via* Trichinopoly to the Grand anicut and thence to Nidamangalam and Coriar head. They also visited the South Indian Railway Workshop at Negapatam on their way back to Madras.

The senior and junior divisions of the Engineer class and the junior division of the Upper Subordinate class accompanied by the instructor in Surveying and two assistant instructors made a short tour of the irrigation works in the Nellore district.

In the same month the Professor of Mechanical Engineering with the Mechanical Engineering students of the Engineer classes visited the Sivasamudram Power Station and halted at Bangalore to inspect the Central Power Station and Railway Workshops.

The cost of the tours in which 231 students took part aggregated Rupees 1,770-9-9.

13. *Survey camp*.—The annual survey camp was held from January 3rd to February 3rd at Tinnalore, Poonamallee and Pallavaram, during which time 316 students were engaged on practical work under the Professor of Civil Engineering assisted by the instructors in Surveying and Mechanical Engineering, and eight assistant instructors.

The work at the first camp covered the preparation of water-supply schemes for Tinnalore or for certain tanks, the source of supply in all cases being the Cooum. The method adopted last year of making the senior classes in a general way responsible for directing the levelling and plane table squads was again followed and worked on the whole very well. With information very kindly supplied by Mr. Gompertz of the Survey Department it was found possible this year to locate the village trijunction stones and thus automatically check the work.

At Poonamallee the work was more concentrated and of the nature of town-plan making. The surveys here were checked from a recent survey made by the G.T.S. for the Military Department.

At Pallavaram the theodolite surveyors were engaged on trigonometrical surveying and advantage was taken of the hills in the neighbourhood to enable the levellers to gain experience of working on somewhat steep slopes. The junior classes continued their practice in chain, compass and plane table work. The Professor remarks that he finds Pallavaram a most suitable place to practise in geodesy. The natural features are good, and the proximity of the Guindy (G.T.S.) base has resulted in the points for a number of moderate size triangles being known with the utmost precision. The accuracy of the work done by the students was very good and they showed considerable interest in what they were doing. A limited amount of astronomical work was also undertaken. Acknowledgment is due to the Bishop of Mylapore for his kindness in allowing a signal to be erected over the St. Thomas' Mount G.T.S. station.

The camp was honoured with a visit from His Excellency the Governor on January 30th.

The total cost of the camp was Rs. 3,275.

14. *Workshop and Laboratories*.—The usual classes were held in workshop practice but with our larger number of students we are experiencing more and more difficulty in carrying on the work satisfactorily. I have remarked on this subject in previous reports and would only re-iterate now that for want of workshop and laboratory facilities we can do very little in the way of improving our courses of instruction.

We have added to our electrical laboratory equipment during the year a set of six large accumulator cells with charging generator for calibration purposes, and a number of subsidiary instruments and apparatus. The motor generator set consisting of a two-phase induction motor and two direct current generators all mounted on one base plate is now in working order.

15. *Library*.—The new catalogue of library books has been printed and issued. During the year 160 new books were added to the library bringing the total up to 5,230 volumes. The numbers of books issued to students and staff from 1st April 1911 to 31st March 1912 were 1,086 and 859, respectively, while 152 references were made to books in the reference library.

16. *Attendance and conduct*.—The percentage of the attendance to numbers on the rolls of the college was 97·3. Detailed particulars for the several classes are given in appendix E. The conduct of the students during the year was highly satisfactory.

17. *Athletic club*.—The duties of the Honorary Secretary and Treasurer were again kindly undertaken and efficiently performed by Mr. Cartwright.

A number of matches were arranged with other than collegiate teams during the early part of the year, but the college again took part in the tournaments of the M.C.A.A. from July onwards.

In the interclass competition, the second division of the Lower Subordinate class won the cricket, the second division of the Upper Subordinate class the football, and the third division of the Upper Subordinate class the hockey cup. A cup for tennis was very kindly presented to the club by the Honorary Secretary for interclass tennis, and this was won for the first time by the junior division of the Probationary Subordinate class. Arrangements were made for one or other member of the staff to be on duty at the athletic ground each afternoon to superintend the games and this has helped considerably in the smooth working of the club.

The annual college sports were held this year on Delhi Durbar day and considerable enthusiasm was shown by the students on the occasion. In the obstacle race thrown open to all colleges the first prize was won by the representative of Pachaiyappa's College.

It is reported that good use was made of the reading room. A larger variety of papers and periodicals has been made available at small increase in expenditure by obtaining papers a week old at reduced prices from the Kodaikanal club.

The financial position of the club is somewhat improved with the subscriptions from the larger number of students.

The Honorary Secretary acknowledges the valuable help he has received from members of the staff in conducting the affairs of the club, and particularly from Mr. Old and M.R.Ry. S. Subrahmanya Aiyar who devoted a good deal of their spare time to the interests of the students.

EMPLOYMENT OF PASSED STUDENTS.

18. *Engineers*.—Of the ten Engineer students who completed their practical courses early in 1911 the senior S. Krishnaswami Aiyar was appointed Assistant Engineer in the Provincial Service of the Public Works Department and the other nine students obtained the following appointments:—

Local Fund Assistant Engineers	...	...	...	...	...	4
Temporary Upper Subordinates, Public Works Department, Madras	...	...	...	...	...	4
First-class Local Fund Overseer	...	...	...	...	...	1
					Total	9

Upper Subordinates.—Fifteen Upper Subordinates satisfactorily completed their courses of practical training at about the end of July. Of these the senior G. G. Krishna Aiyar was appointed a permanent Upper Subordinate, third grade, and two

of the Military apprentices as Overseers, first grade, in the Public Works Department, Madras. One of the military apprentices whose services were not required for the Public Works Department, reverted to his regiment. The remaining eleven students secured appointments as under—

Temporary Upper Subordinates, Public Works Department, Madras	10
Overseer, Public Works Department, Travancore	1
Total	11

Lower Subordinates.—Twenty-three Lower Subordinates completed their courses of instruction on the 30th April 1911. Of these twenty-two secured employments as—

Acting Sub-Overseer, Public Works Department	1
Temporary draftsmen do.	9
Do. Sanitary Engineer's office, Madras	2
Temporary Local Fund Overseers	2
Do. Municipal Overseer	1
Minor Irrigation Sub-Overseers	2
Overseers, Native States	2
Local Fund Sub-Overseer	1
Overseer-draftsman, office of the District Medical and Sanitary Officer, Vellore	1
Temporary surveyor, Public Works Department	1
Total	22

One student furnished no information.

In this connection I may remark that the demand for qualified men seems greater than the supply, but it is difficult to assist prospective employers in obtaining subordinates, as the majority of the ex-students, particularly after the first year, cannot be induced to keep the college informed in regard to their employment. The matter is under consideration and I hope it will be possible to do something to make the agency of the college more efficient in this direction.

19. *Financial details.*—Information in this connection is given in appendix G. It will be noted that the receipts for 1911-1912 amounted to Rs. 24,098-6-10 and the charges to Rs. 1,17,162-13-6 resulting in a net cost to Government of Rs. 93,064-6-8. The average numbers of students on the rolls during the year was 308, and the net cost per student Rs. 302-2-6. The above figures are subject to modification after full particulars of all adjustments made by the Accountant-General are communicated to this office.

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

20. *Changes in the rules.*—The college rules were modified in the following important respects by the Government Order published in July last:—

(1) The course for the Engineer class is extended to four years and Intermediate examination of the Madras University substituted for the B.A. degree as the qualifying examination for entry.

(2) The probationary class is instituted to serve as a feeder for the Upper Subordinate and Lower Subordinate classes, and admission discontinued for these classes separately. After two years in the probationary class a selected number of students are to proceed on a further two years' theoretical and one year's practical course to qualify as Upper Subordinates, and the students not thus selected from the Lower Subordinate class for one year's additional training to prepare for the lower certificate

In order to prevent cumulation of scholarships it is also now laid down that holders of scholarships mentioned in rules 51 and 56 are ineligible for the Government scholarships ordinarily awarded to students taking the highest places in the class examinations.

21. In conclusion, I desire to acknowledge the assistance I have received from the members in carrying on the work of the college.

APPENDIX A.

DISTRIBUTION of students according to classes of community on the 31st March 1912.

Classes.	Europeans and Eurasians.	Indian Christians.	Muham-madans.	Hindus.			Others.	Total.
				Brahmans.	Non-Brahmans.	Panchamas.		
Engineer classes	1	7	..	49	7	..	1	65
Upper Subordinate classes	15	1	..	59	8	..	..	83
Lower Subordinate classes	..	2	1	68	12	..	..	83
Probationary Subordinate class.	5	8	1	44	19	..	..	77
Total	21	18	2	220	46	..	1	308

APPENDIX B.

DISTRIBUTION of students by districts on the 31st March 1912.

Districts.	Engineer class.	Upper subordinate class.	Lower subordinate class.	Probationary subordinate class.	Total.
Ganjam	..	1	..	..	1
Visagapatam	..	5	1	1	2
Godavari	..	2	8	10	25
Kistna	..	2	5	12	25
Guntur	..	..	..	2	11
Bellary	..	..	..	1	..
Anantapur	..	..	..	..	..
Kurnool	..	..	..	..	..
Nellore	2	1	2	4	9
Madras	2	..	1	1	4
Chingleput	..	..	1	..	1
Cuddapah	1	2	..	..	3
North Arcot	..	2	2	2	6
South Arcot	19	20	20	9	68
Tanjore	1	8	7	8	24
Trichinopoly	..	7	4	2	13
Madura	6	4	5	2	17
Tinnevely	1	1	7	2	11
Coimbatore	..	..	..	..	..
Nilgiris	..	..	1	1	2
Salem	2	7	5	8	22
Malabar	1	2	2	1	6
South Canara	1	1	..	..	2
Pudukottai	2	..	3	3	8
Cochin	5	2	1	2	10
Travancore	11	2	..	..	13
Mysore	..	..	..	..	..
Pondicherry	1	..	..	..	1
Hyderabad	..	14	..	..	14
Military students	..	..	..	5	5
Military probationers	1	..	..	..	1
Straits Settlements	1	..	..	1	2
Ceylon	..	..	..	..	..
Total	65	83	83	77	308

APPENDIX C.

DISTRIBUTION of students by wealth and occupation of parents on the 31st March 1912.

Class.	Wealth.				Occupation.							
	Richer class.	Middle class.	Poorer class.	Total.	Officials.	Petty officials.	Traders.	Landholders.	Artisans.	Mendicants.	Others.	Total.
Engineer class, third year ..	3	17	..	20	14	..	..	6	..	..	..	20
Do. second year ..	1	19	2	22	8	2	..	12	..	..	..	22
Do. first year ..	..	23	..	23	13	..	..	10	..	..	..	23
Upper subordinate class, third year.	..	11	2	13	4	1	..	8	..	..	..	13
Military students ..	..	..	..	6	..	..	..	..	..	..	..	6
Upper subordinate class, second year.	..	28	1	29	14	..	..	15	..	..	..	29
Military students ..	..	..	..	2	..	..	..	..	..	..	..	2
Upper subordinate class, first year.	..	26	1	27	15	..	3	9	..	..	..	27
Military students ..	..	..	..	6	..	..	..	..	..	..	..	6
Lower subordinate class, third year.	..	23	8	31	13	2	1	14	..	..	1	31
Lower subordinate class, second year.	1	50	1	52	16	1	3	32	..	..	..	52
Probationary subordinate class, first year.	1	69	2	72	31	4	..	33	2	1	1	72
Military students ..	..	..	..	5	..	..	..	..	..	..	..	5
Total ..	6	266	17	308	128	10	7	139	2	1	2	308

APPENDIX D.

RESULT of examinations of April 1911.

Engineer class, third year, Civil branch —			
Branch I Mathematics and Science ..	..	..	58.1
„ II Engineering ..	..	..	58.6
Physical exercises ..	..	..	60.3
Average ..	..	..	58.6
Engineer class, third year, Mechanical branch —			
Branch I Mathematics and Science ..	..	..	53.4
„ II Engineering ..	..	..	59.6
Physical exercises ..	..	..	62.7
Average ..	..	..	58.8
Engineer class, second year, Civil branch —			
Branch I Mathematics and Science ..	..	..	55.4
„ II Engineering ..	..	..	61.9
Physical exercises ..	..	..	58.5
Average ..	..	..	59.8
Engineer class, second year, Mechanical branch —			
Branch I Mathematics and Science ..	..	..	46.1
„ II Engineering ..	..	..	66.5
Physical exercises ..	..	..	57.1
Average ..	..	..	61.0
Engineer class, first year —			
Branch I Mathematics and Science ..	..	..	58.7
„ II Engineering ..	..	..	56.9
Physical exercises ..	..	..	63.2
Average ..	..	..	58.0

APPENDIX D—cont.

Results of examinations of April 1911—cont.

Upper Subordinate class, third year —			
Branch I Mathematics ..	..	..	68.3
„ II Engineering ..	..	..	60.4
Physical exercises ..	..	..	64.9
Average ..	..	..	61.8
Upper Subordinate class, second year —			
Branch I Mathematics ..	..	..	65.6
„ II Engineering ..	..	..	61.7
Physical exercises ..	..	..	58.1
Average ..	..	..	62.4
Upper Subordinate class, first year —			
Branch I Mathematics ..	..	..	56.9
„ II Engineering ..	..	..	55.3
Physical exercises ..	..	..	62.9
Average ..	..	..	56.4
Lower Subordinate class, third year —			
Drawing ..	..	..	66.1
Applied Mechanics ..	..	..	50.3
Construction ..	..	..	57.3
Surveying ..	..	..	60.0
Workshops ..	..	..	58.0
Physical exercises ..	..	..	62.3
Average ..	..	..	61.1
Lower Subordinate class, second year —			
Drawing ..	..	..	56.9
Applied Mechanics ..	..	..	48.5
Construction ..	..	..	60.5
Surveying ..	..	..	61.3
Workshops ..	..	..	53.0
Physical exercises ..	..	..	64.6
Average ..	..	..	58.4
Lower Subordinate class, first year —			
Drawing ..	..	..	54.3
Surveying ..	..	..	57.5
Workshops ..	..	..	55.7
Physical exercises ..	..	..	61.6
Average ..	..	..	56.1
APPENDIX E.			
		Average strength.	Average attendance.
Engineer class, third year ..	..	19.9	19.0
„ second year ..	..	22.0	21.6
„ first year ..	..	23.1	22.5
Upper Subordinate class third year ..	..	19.0	18.6
„ second year ..	..	31.0	30.2
„ first year ..	..	33.6	32.6
Lower Subordinate class, third year ..	..	31.0	30.4
„ second year ..	..	52.0	50.8
Probationary Subordinate class, first year ..	..	77.0	74.7
Total ..	308.6	300.4	
Percentage of numbers present to numbers on rolls ..	..	..	97.3

APPENDIX F.

CLASSIFICATION of vacancies notified during 1911-12.

	Government.				Local Board and Municipality.				Railways.			Native States.				Private employers.				Total.
	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.	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.	
Engineer or Assistant ..	3	..	..	..	2	5	..	..	..	..	..	1	..	..	..	..	..	..	..	11
Supervisor ..	..	..	..	..	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..	2
Overseer ..	..	2	2	1	..	..	3	..	..	..	..	..	..	1	1	..	..	..	..	10
Sub-Overseer ..	..	3	1	31	..	..	..	2	..	..	..	..	..	..	2	..	..	..	..	39
Draftsman ..	..	3	9	81	..	..	1	1	..	..	..	..	..	..	3	..	..	..	..	98
Surveyor ..	..	..	39	11	..	..	..	..	..	..	..	1	3	3	..	..	..	..	..	57
Anicut or Conservancy Superintendent.	..	..	..	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8
Total ..	3	8	51	132	2	6	5	3	..	..	..	1	1	4	9	..	..	..	..	225

APPENDIX G.

FINANCIAL details for the year 1911-12.

Receipts.

	RS.	A.	P.
1. Tuition and Registration fees ..	22,674	15	0
2. Miscellaneous ..	1,423	7	10
Total ..	24,098	6	10

Charges.

1. Principal ..	14,050	0	0
2. Professors and Instructors ..	63,265	1	1
3. Accountant, Librarian, clerks and servants ..	5,936	13	3
4. Library, prizes, books and medals ..	1,110	6	8
5. Travelling allowance ..	1,822	1	6
6. Europe stores and laboratory charges ..	7,477	13	2
7. Workshop materials ..	5,829	2	3
8. Survey camp and inspection tour charges ..	5,045	9	9
9. Office contingent charges ..	5,162	5	5
10. Scholarships of students ..	5,300	9	3
11. Exchange compensation allowance ..	1,377	1	0
12. Riding and workshop fees ..	292	0	0
13. Printing and preparation of maps at the survey office.	309	14	2
14. Coronation bonus ..	184	0	0
Total ..	1,17,162	13	6

Net cost to Government ..	Rs. 93,064	6	8
Average number of students on rolls ..	No. 308		
Net cost per student ..	Rs. 302	2	6
Average tuition fees paid by student <i>per annum</i> ..	Rs. 73	9	10

APPENDIX H.

COMPARATIVE financial details.

	1907.	1908.	1909.	January 1910 to March 1911 inclusive.	1911-12.
Receipts ..	Rs. 23,999	Rs. 19,830	Rs. 17,649	Rs. 24,814	Rs. 24,098
Charges ..	1,10,495	1,04,359	97,182	1,47,795	1,17,162
Net cost to Government ..	86,496	84,529	79,533	1,22,981	93,064
Average number of students on rolls ..	No. 313	No. 253	No. 204	No. 255	No. 308
Net cost per student ..	Rs. 276	Rs. 334	Rs. 390	Rs. 482	Rs. 302

Reference C. No. 3153 of 1912.

Recorded.

2. The noteworthy event of the year was the introduction of the revised rules, the salient features of which have been detailed in paragraph 20 of the report.

3. There was a further increase in the strength of the College due to the larger admissions in the probationary subordinate class constituted under the revised regulations referred to above.

4. The results of the sessional examinations continued to be satisfactory and those of the university examinations showed an improvement over last year's.

5. The suggestion contained in paragraph 5 of the report regarding the extension of the course for the Revenue officers' class will be commended for the consideration of the Board of Revenue.

6. The Principal is requested to be good enough to expedite the submission of the statement of accounts of the College for the last quarter of the year under report.

7. The administration of the College continued to be efficient.

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.
" Superintendent, School of Arts.
" Superintendent of Industrial Education.

Copy to the Chief Engineer, Public Works Department
Secretary to the Board of Revenue (Separate Revenue) } with C.L.
" Government

Order—No. 525, Educational, dated 14th June 1912.

Recorded.

(True Extract.)

L. DAVIDSON,
Ag. Secretary to Government.

To the Director of Public Instruction.
" Public Works Department.
" Revenue Department.
Editors' Table.

FORT SAINT GEORGE.

9

EDUCATIONAL (1912) DEPARTMENT.

(Copy.)

LETTER to the Under Secretary of State for India.

No. 526, dated 14th June 1912.

FORWARDING a copy of the Proceedings of the Government of Madras recording the report on the working of the College of Engineering, Madras, during the academic year 1911-1912.

EDUCATIONAL DEPARTMENT.

LETTER—to

THE UNDER SECRETARY OF STATE FOR INDIA.

SIR,

With reference to the instructions conveyed in Lord Hartington's Despatch No. 9 (Public Works), dated 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, Madras, during the academic year 1911-12.

I have the honour to be,

Sir,

Your most obedient servant,

L. DAVIDSON,

Ag. Secretary to Government.

OOTACAMUND,
14th June 1912.

EDUCATIONAL DEPARTMENT.

NOTES CONNECTED WITH G.O. No. 525, EDUCATIONAL, DATED
14TH JUNE 1912.

[SUBJECT.—*Report on the working of the College of Engineering during 1911-12.*]

From the Director of Public Instruction, No. 3153, dated 24th May 1912.

The report may be recorded, a copy being forwarded to the Revenue Department with reference to paragraph 5 of the Director of Public Instruction's Proceedings.

2. The drafts below are for approval.

T.R.—8-6-12.

C.R.—8-6-12.

His Excellency the Governor.

L. DAVIDSON—11-6-12.

M. H[AMMICK]—12-6-12.

[G.O. No. 525, Educational, dated 14th June 1912.]

19

19

20

1912

19

19

No. 5-25-, dated 14. 6. 1912

...19/2.

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2/2 14/6

The D.P.I

- P. W. 8

-- Rev. Sept

E.T.

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sup-3/7/12

Letter to - No 8-268 14.6.12

The Under Secy of State for India.

Deposited with
report -
18/7/12

Si

With ref- to the instructions

conveyed in Lord Hartington's Despatch
no. 9, Public Works, dated 18th May 1882, I am
directed to forward a copy of the Pro. of the
Madras Govt. recording the report on the
working of the College of Eng. - Madras, during the
academic year 1911-12.

TK CA
8-8-12 87612

Have re
D✓

Cf. Letter no. 472 Edl of 14-7-11 (X)

ORDINARY.

PREFERENCE.

URGENT (a).

EDUCATIONAL DEPARTMENT.

Current No. 1546, dated 1912.

G.O., No. 525, dated 1912.

Number of MS. pages sent { Correspondence including order or orders (b) Notes (b¹)

Docket College of Eng. Madras

Receiving report on the working of the college during the year 1911-12.

Number (c) of copies required when struck off (not including copies for volumes and editors' table which are retained in the Press).

FOR RECORD.*			Complete Correspondence and orders.	Notes
Madras Records	...	...	25	12
Ooty Records	...	...	6	3
For filing with original	...	...	1	1
Total			27	16

FOR ISSUE.†

	Letter only.	Complete G.O.	Special issue copies of G.O. (b)		Notes.
			No.	Papers.	
Signature copies					
India Office	1				
Govt. of India					
Public Department					
Judicial Department					
Financial Department					
Revenue Department					
Public Works Department					
Local and Municipal Department					
Total					

	Letter only.	Complete G.O.	Special issue copies of G.O. (b)		Notes.
			No.	Papers.	
The Director of Public Instruction		10			
The Comr. for Govt. Examinations					
The Superintendent, Govt. Museum					
The Surgeon-General					
The Accountant-General					
The Collector of					
The P. D. B.					
The India Office		5			
The					
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The					
The					
Total			1	27	

INSTRUCTIONS FOR THE SECRETARIAT.

(a) If a paper is marked to be printed urgently, the Superintendent of the section concerned should sign the Press slip. The Superintendent should exercise a careful discretion in the matter.

(b) Each letter, memorandum, or order, or set of orders, in the file of correspondence should be headed in succession with the Roman numeral I, II, III, etc., the number being written in red ink or blue chalk above the item. The particular papers to be printed in the special issue-copies should be indicated by the Roman numeral (I, II, etc.) by which that item has been headed in the correspondence file. All matter, including marginal remarks or references, to be printed should be written in ink and matter which should not be printed should be encircled. Initials and signatures that are not quite legible should be re-written distinctly.

(b¹) For rules regarding printing of notes, see the rules in G.O., No. 1220, Public, dated 30th November 1900.

(c) The number of copies and the details of distribution should be filled in by the Superintendent or Referencer concerned.

(d) In the absence of special instructions to the Press to keep matter standing for a specified period, ordinary papers of 8 pages and under will be kept standing for one week, and larger papers for two weeks only. The type of notes and of all confidential papers is distributed immediately after striking.

(e) This slip, properly and completely filled in, should accompany every paper sent to Press; it will be returned by the Press when proofs are furnished; it should be sent to the Press when a call is made for revised proofs or when a corrected proof is sent for striking. When finally returned by Press it should be filed with the original order or letter.

INSTRUCTIONS FOR THE PRESS.

(a) If, in the opinion of the Superintendent of the Press, a paper has been marked urgent unnecessarily, he should send the Press slip to the Deputy Registrar with a remark to that effect.

(b) Unless a note to the contrary is made against the matter, pencil entries should not be printed. The Superintendent of the Press may bring to the notice of the Deputy Registrar any instance of incomplete or careless editing.

(c) Signature copies of letters to the Secretary of State or to the Government of India should be printed on hand-made paper.

(d) This slip should be returned by the Press to the Secretariat when proofs are furnished; it will be sent back to the Press when proofs are returned corrected and should be finally returned to the Secretariat when struck-off copies are supplied.

(e) The names of the Secretary and Members should be printed in full when they occur on the right hand side, but only the first time when they appear on the left side, the initials alone being printed later.

* Copies distributed on (Press Clerk.)

† Copies distributed on (Despatcher.)

To be initialed and dated.

TO PRESS, MADRAS.
OOTY.

A

B

C

Please send proof in triplicate. The papers have been carefully edited.

Proof returned corrected. Please strike off and send number of copies as indicated.

As the matter is clear manuscript and has been carefully edited, (b) proof need not be sent. Please print and supply number of copies as indicated.

Type may be released after usual interval
at once.

Type may be released after usual interval.

.....Clerk.

.....Clerk.

.....Clerk.

.....Supdt.

.....Supdt.

.....Supdt.

(b) Three copies of proof of all notes should be sent for approval, except when instructions are given to the contrary.

SPECIAL INSTRUCTIONS.

TO BE FILLED IN BY THE PRESS.

Diary.	Initials of Press official.
Received in Press on.....	17.6.12 <i>LB</i>
First proof furnished on.....	24.6.12 <i>LB</i>
Call for revised proof received on.....	
Revised proof furnished on.....	
Corrected proof received for striking on.....	28.6.12 <i>LB</i>
Final copies supplied on.....	2.7.12 <i>LB</i>

Account of copies.	Complete copies.	Notes.	Issue copies.
Supplied to Secretariat for Record.....	27		
" " " Issue.....	27		
For Volumes.....	16		
For E. T.....	76		
Total ...	146		