(1) பக்கங்களின் எண்ணிக்கை 16

(2) புதுக்கித் திருப்பிய நாள் 4/90

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

(75)

தமிழ்நாடு அரசு

P.W.D. துறை

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N-S-W

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—the following paper :—

From H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Madras, 19th August 1889, No. 6962.

I have the honor to submit, for the information of Government, copy of my Proceedings, No. 6690, dated 10th August 1889, reviewing report on the College of Engineering, Madras, for the year 1888-89. Since reviewing the report I have received a communication from the Principal showing the strength of the different classes as it stands at present. This I submit for the information of Government. It will be observed that the strength of the college has increased appreciably, and I have reason to think that this increase will be continued during the year.

ENCLOSURES.

PROCEEDINGS of the Director of Public Instruction, dated 10th August 1889, No. 6690.

Read the following letter from the Principal, College of Engineering, Madras, to the Director of Public Instruction, dated 20th May 1889, No. 152-C :—

I have the honor to submit the following report on the working of the college during the second-half of 1888, and on the results of the examinations which were held in December of that year. The annual report hitherto submitted has covered the twelve months terminating 31st May, that date having been the end of the session for the majority of the classes under the old rules. Under the new rules, the session terminates in December for all the classes, and the annual report will, in future, cover the calendar year. The present interim report is required to connect the two systems.

2. *Changes in Establishment.*—The new Professors of Engineering and Mathematics, Messrs. A. Chatterton, B.SC., and E. W. Middlemast, B.A., reported their arrival from England on 26th July and 29th August, respectively. Consequent on Mr. Middlemast's assumption of duties, Mr. T. R. Scott, B.A., First Assistant Master, sub. *pro tem.*, was transferred to the Government College, Mangalore.

Mr. H. W. Hyde, Instructor in Surveying and Drawing, resigned with effect from 6th November 1888. Consequent on his resignation, the following promotions were provisionally made :—

Mr. J. Hamilton, Instructor in Surveying and Drawing, sub. *pro tem.*
Sergeant W. H. Goddard, Assistant Instructor in Surveying and Drawing, sub. *pro tem.*
Mr. A. W. J. Tims, Assistant Instructor in Surveying, sub. *pro tem.*
Mr. J. R. Sivasubrahmanya Aiyar was appointed Acting Assistant Instructor in Surveying on 21st August, but resigned on 28th September to take up the duties of Local Fund Overseer, Salem.
Mr. S. Gopala Chari, B.C.E., was nominated Second Assistant in Surveying from 25th August 1888.
Mr. A. Krishnama Chari was confirmed as Vernacular Assistant from 31st January *vice* Mr. H. Narasinga Rau, B.A., appointed to the Revenue Department, Cuddapah.

3. *Re-organization of the College.*—The new buildings were completed and handed over in August, and they form a very handsome and much-need addition to the college. They comprise three lecture rooms, a small chemical laboratory, a museum and a large drawing office which will serve also as an examination hall. The two new Professors having joined early in the half-year, it became possible then to afford complete instruction in the new courses. The new rules were first introduced under the orders of Government in January 1886, and since that

time, owing partly to the want of space, but mainly to the delay in the appointment of the professorial staff, the working of the college was conducted at great and gradually increased disadvantage. The college is now well provided as regards establishment and accommodation, but it must be remembered that the full effect of a proper equipment cannot be made apparent until two and-a-half or three years from the date on which full instruction was commenced.

4. *Numbers.*—The average numbers on the rolls during the period were—

Engineer class	20
Do. Subordinates' class	42
Draftsmen's class	27
Surveyors' class	13
Total	102

The numbers arranged by classes of the community were—

Europeans and Eurasians	13
Brahmans	55
Hindus other than Brahmans	28
Native Christians	6
Mussulmans	..
Total	102

The average number on the rolls in 1887-88 was 117, so that the total number of students has diminished by 15. To understand the progress of the diminution in numbers, which has been observed since the introduction of the new rules, the class numbers for the last three years should be compared. They are —

—	1885-86.	1886-87.	1887-88.	Period under review.
Engineer class	18	16	17	20
Do. Subordinates' class	62	63	43	42
Draftsmen's class	55	50	36	27
Surveyors' class	40	37	21	13
Total	175	166	117	102

The decrease has taken place in the Engineer Subordinates' class and in the Draftsmen's and Surveyors' classes. I attribute it partly to the higher fees and the extended duration of the courses required by the new scheme, but mainly to the rigorous manner in which the certificate examinations have recently been conducted. The change in the standard of examinations involved by the new rules was effected suddenly instead of gradually, and no allowance was made for the imperfect instruction in the new subjects which resulted from the delay in the appointment of the Professors of Engineering and Mathematics. These gentlemen commenced work in August 1888, and full instruction may be said to have been imparted only from that date. Prior to their arrival, the Acting Principal exerted himself to the utmost in the instruction of the classes, but he was naturally unable to do the work of two professors besides his own. He did not, however, represent the desirableness of temporarily modified standards of examination, and the result was that the number of failures in December 1887 and December 1888 was unprecedently high. This re-acted on candidates for admission, and the check sustained is likely to be felt for some time to come.

5. *Attendance.*—The average daily attendance was 92 per cent. of the number on the rolls for the College department and 89 per cent. for the School department.

6. *Military Students.*—The total number of military students was six, viz., one in the first division, one in the second division and two in the third division of the Engineer Subordinates' class, besides two probationers.

7. *Board of Examiners.*—Major Coaker, R.E., Mr. F. B. Hanna, M.A., and Mr. J. A. Jones, having served three years, retired and were succeeded by Captain Baddeley, R.E., Mr. E. W. Stoney, and Mr. G. H. Stuart, M.A. These gentlemen conducted the final and term examinations of December 1888 under the new rules, as well as examinations of independent candidates for certificates as Draftsman and Surveyor under both old and new rules. They were assisted by Mr. W. N. Pogson, Dr. J. L. VanGeyzel (for Science), and Mr. P. Viziaranga Mudaliar (for Vernacular language).

8. *Examinations.*—The marks awarded by the Board at the December examinations form an appendix to this report, and it is requested that these detailed statements may, as on previous occasions, be printed with the report. The general results of the examinations may be summarised as follows:—

(*a*) *Engineer class—Final Examination.*—Out of eight candidates, four, viz.—

(1) R. Srinivasa Aiyangar, B.A.,
(2) J. M. Lacey,
(3) C. Kanakasuriyan Pillai,
(4) V. Daivasikhamani Pillai,

qualified as Assistant Engineers pending the completion of their practical course. The first three candidates joined the Public Works Workshops, Madras, early in 1889, and the fourth the Public Works Workshops at Dowlaishweram. R. Srinivasa Aiyangar, B.A., and J. M. Lacey will receive the appointments to the Engineer establishment of the Public Works Department guaranteed by Government in their Proceedings, No. 89, Educational Department, dated 3rd February 1888. The former student is awarded the gold medal for the Engineers' class. The average marks obtained by these students were 58 per cent. The remaining four passed in all subjects, but failed in the total, averaging 47 per cent. of the marks. The Board have accordingly recommended them for certificates as Engineer Subordinates, provided they undergo the practical training laid down for the class so designated.

The average marks secured by the whole class were 53 per cent.

(*b*) *Engineer class—Term Examinations.*—The second division of nine students, and the third division of three students, obtained average percentages of 48 and 64, respectively, of the total marks.

(*c*) *Engineer class—Entrance Examination.*—Nine candidates appeared for this examination, all of whom qualified. Six joined the college early in the following year, but one of these subsequently resigned.

(*d*) *Engineer Subordinates' class—Final Examination.*—Out of twenty-two students who appeared for the final examination, fourteen satisfied the examiners and will receive certificates on the completion of their practical course. They are—

(1) U. Venkata Rau.
(2) G. Narayana Rau.
(3) G. Srinivasa Aiyangar.
(4) A. Arulanandam Pillai.
(5) Sergeant E. Price.
(6) L. S. Panchapakesa Sarma.
(7) M. R. Subrahmanya Aiyar.
(8) P. V. Ramaswami Aiyar
(9) C. J. Plummer.
(10) P. M. Swaminatha Aiyar.
(11) P. S. Krishnaswami Aiyar.
(12) T. Venkatarama Aiyar.
(13) R. Srinivasa Raghava Aiyangar.
(14) P. Sivasubrahmanya Pillai.

All these, with the exception of No. 11, have since joined the Public Works Workshops, Nos. 7, 10 and 13 volunteering for Dowlaishweram, while the remainder proceeded to the Madras shops. The first man on the list, U. Venkata Rau, received the college gold medal for this class. The average marks obtained by the successful students were 55 per cent.

Of the eight unsuccessful candidates, all failed in total marks, and in addition one in Mathematics and two in Engineering.

The average marks of the whole class were 51 per cent.

(*e*) *Engineer Subordinates' class — Term Examinations.* — The second division of nine students averaged only 45 per cent. of the total marks, while the third division, also of nine students, obtained the high average of 68 per cent.

(*f*) *Draftsmen's class—Final Examination.*—Out of fifteen students who appeared for this examination only five were successful, viz.—

(1) H. Narayanayya. A. S. Visvanatha Aiyar.
(3) A. K. Subrahmanya Sarma.
(4) T. A. Sandanam Pillai.
(5) T. Narasinga Rau.

The first two on the list obtained equal marks and second-class certificates. The silver medal for the Draftsmen's class was issued to each. The other three men secured third-class certificates. The average marks of these candidates were 70 per cent.

Of the ten unsuccessful candidates, the majority failed in total marks and in the two subjects—*Free-hand, Model and Perspective Drawing* and *Architectural and Topographical Drawing.* The average marks of the whole class were 55 per cent.

Four independent candidates appeared for the examination, and all were unsuccessful.

(*g*) *Draftsmen's class—Term Examination.*—The second division of ten students obtained an average of 58 per cent. of the total marks assigned to their examination.

(h) *Surveyors' class—Final Examination.*—Out of seven students, five were successful in gaining third-class certificates, viz :—

(1) E. A. Ramaswami Aiyar.
(2) G. Gopalakrishna Aiyar.
(3) K. R. Krishnaswami Aiyar.
(4) G. Nageswara Rau.
(5) P. Rama Rau.

The first on the list received the silver medal awarded to this class. The average marks of these candidates were 56 per cent.

The average for the whole class was 52 per cent. Two independent candidates appeared for this examination, but both were unsuccessful.

(i) *Surveyors' class—Term Examination.*—The second division of four students obtained 57 per cent. of the marks assigned.

(j) *Special examination under old rules.*—Two independent candidates appeared for the Draftsmen's examination and two for the Surveyors' under the old rules, but all were unsuccessful.

9. *Examination Results.*—The general results of the examination cannot be regarded as satisfactory, the percentage of failures being far higher than it should be. The direct cause of the want of success was the condition of the staff. The Professors of Engineering and Mathematics did not commence work until August, the Instructor in Engineering was on furlough and the Instructor in Surveying, who resigned in November, had not been thoroughly efficient for a considerable period. Under these circumstances it is needless to say that the attempted instruction of the classes, prior to the period under review, in a variety of new subjects, could not have been efficient, and the consequence is seen in the results of the December examinations. I consider that the Acting Principal must have been well supported by Mr. Scott and the junior members of the staff to achieve the results he has. The staff has since been made up to full, or nearly full, strength, and I hope to see a marked improvement in the proportion of passes in the Engineers', Draftsmen's and Surveyors' classes at the next final examination. The present first division of the Engineer Subordinates' class contains little good material, and I do not anticipate a high rate of success from it. Careful attention has been given towards remedying the special faults pointed out by the different members of the Board of Examiners.

10. *General Remarks.*—Although the number of passes is small, there is ground for satisfaction in the fact that the successful students have higher attainments than the average of those who obtained certificates under the old rules. The successful Engineers and Engineer subordinates are now working steadily in the Public Works shops from 9 A.M. to 5 P.M. daily. After a year's course they will be employed on works for an equal period, and will then be sent forth fully equipped to become useful members of any Engineering establishment. Formerly they were launched out in the world after a two years' theoretical course at the college with no practical knowledge whatever save in Surveying, and employers of labor naturally found that at the outset they were almost useless. The first batches of students under the new rules will not receive their diplomas until the beginning of 1891, and it will be some years later before the effect of the revised system can be appreciably felt by the country. The successful Draftsmen and Surveyors will be found capable of intelligent work. By increasing the class hours and by assigning the work to be done and plans to be drawn during the course, the outturn of these classes has been made double what it was under the old scheme. Instruction has been given to the Draftsmen in Mechanical drawing, Topographical drawing, Free-hand and Perspective, in addition to the Building drawing and Estimating originally taught. The Surveyors have been taught Triangulation, Contouring, and the use of the Plane Table in addition to the Surveying and Levelling of the old course. For field work the classes have been broken up into small squads which worked independently.

11. *Employment.*—Very little is known regarding the employment of passed men. Students are encouraged to correspond with the college after they leave, but when, as is usual, they obtain employment through their own exertions, they rarely communicate. The absence of information may be taken to indicate that little difficulty is experienced in securing employment. With regard to the students who passed out in 1887, it is known that eight Engineer Subordinates, three Draftsmen and seven Surveyors received appointments in the Public Works Department, in Local Fund Boards and in Native States. With reference to the desirableness of obliging Local and Municipal bodies to employ no engineering subordinates, but such as are technically qualified, it is stated in the Secretary of State's despatch on the college report for 1887-88, that before any such regulation is made, the sufficiency of the technical education given at the college should be assured. I would observe on this point that the Public Works Department binds itself to appoint only men who are certificate holders, and I submit that a system which satisfies the department might be advantageously adopted by Local Boards.

12. *Library.*—During the period under review 72 books were added to the library, which now contains 2,506 volumes. The sum of Rs. 81 was spent on binding. The number of books taken out by masters and students during the half-year was 1,067.

13. *Apparatus.*—On the arrival of the Professor of Engineering, a supply of laboratory apparatus was obtained from the Medical Stores; and a special requisition for a further quantity, costing about £40, was made on England through a local firm. The last-mentioned stores are expected early in 1889.

A number of drawing boards and of T and set squares were made for the college at the Public Works Workshops.

14. *Conduct.*—The conduct of the students was quite satisfactory.

From the President of the Board of Examiners, College of Engineering, Madras, to the Director of Public Instruction, dated Chepâk, 12th March 1889.

I have the honor to forward a report containing the views of the Board on the results of the examinations conducted by them in the College of Engineering during December 1888.

2. The Board was composed as follows :—

Captain W. L. C. Baddeley, R.E., *President.*
Mr. G. H Stuart, M.A., } *Members.*
„ E. W. Stoney, M.E., M. INST. C.E., }
„ W. N. Pogson, F.S.A., }

3. Dr. VanGeyzel and Mr. P. Viziaranga Mudaliar also assisted in the examinations; the former examined the Engineer class, first division, in Physics and Geology, and the latter examined the Engineer class, first division, and the Engineer Subordinates' class, first division, in Tamil and Telugu.

4. The results of the examinations are of more than usual interest, as four classes of students completed their final course of study in the college under the new rules which came into effect from 1st January 1886.

5. The classes referred to in the preceding paragraph, the numbers in each class, and the number who passed and failed are detailed below :—

	No. in class.	Passed.	Failed.
(1) Engineer class, first division	8	4	4
(2) Do. Subordinates' class, first division ..	22	14	8
(3) Draftsmen's class, first division	15	5	10
(4) Surveyors' class, first division	7	5	2

6. In addition to these classes, four batches of independent candidates (men unconnected with the college at the time the examination was held) were examined with the following results :—

	Number.	Passed.	Failed.
Independent candidates for Draftsmen's certificates under the old rules	4	..	4
Independent candidates for Surveyors' certificates under the old rules	2	..	2
Independent candidates for Draftsmen's certificates under the new rules	4	..	4
Independent candidates for Surveyors' certificates under the new rules	2	..	2

7. The term examinations for six classes were also conducted by the Board, but as these results (except in the cases of men who have disqualified in an entire subject) will be modified by succeeding examinations, it is not necessary to give the results in detail.

8. It will be seen that the Board had to arrange for the examination of 14 classes or batches of students, necessitating a total of 76 question papers, of which only 5 could be set by the Assistant Examiners. In the opinion of the Board, the very large number of examination papers required is out of all proportion to the total number of students, and they consider that the rules should be carefully revised to enable the examinations to be conducted by means of a moderate number of question papers.

9. With regard to the general conclusions to be drawn from the results of the examinations, Mr. Stuart remarks: "On the whole, as far as concerns the purely mathematical subjects in which I have examined, I think the work done in the college classes may be considered satisfactory."

Mr. Viziaranga Mudaliar is of opinion that the results of the Vernacular examination are good.

The reports by Mr. Stoney and Mr. Pogson on the examinations conducted by them, respectively, in Engineering and Drawing are attached *in extenso*, because they relate to the most important portions of the course of technical instruction of the students, and I feel that it

would be impossible for me, by means of extracts, to place their opinions clearly before Government. I may add that the results of the final examinations in Surveying are not satisfactory, as very few papers contained really good work; the majority were slovenly and inaccurate and showed a want of knowledge of general principles.

10. In consideration of the fact that the four students in the Engineer class, who have failed to qualify, have obtained the qualifying minimum in each subject and within a small number of the qualifying total, the Board would recommend that they be allowed to go through the practical course laid down for the Upper Subordinates' class, and, on the satisfactory completion of this course, they be granted certificates as overseers.

11. The Board are also of opinion that the scales of pay for draftsmen in the Public Works Department should be raised, as the present rates are not sufficient to attract men of intelligence and general education to join the college. The course of instruction laid down for this class is very comprehensive and none but intelligent men can satisfactorily go through it. The importance to the Public Works Department of good draftsmen cannot be over-estimated; but as matters now stand, it cannot be expected that able men will join the drawing class.

REPORT ON EXAMINATIONS, COLLEGE OF ENGINEERING, MADRAS, 1888-89.

ENGINEER CLASS, FIRST DIVISION.

1. J. M. Lacey is far ahead of all others in this class in every respect, his papers being first-rate, well and concisely expressed, neatly written and his arithmetical results *accurate*; if there is any fault it is that he has in some cases cut his work rather too short; it is a pleasure to read his papers, and he evidently quite understands what he is writing about. Ramchandra Iyer is next, and after him Daivasikamani Pillai, both of whose papers are neatly written.

2. In contrast to these is Sundram Iyer, a most confused, careless and slovenly worker, his arithmetical work being almost always incorrect and his results consequently wrong.

ENGINEER CLASS, SECOND DIVISION.

3. In this class Rungasawmy Iyer and Everard are far the best.

4. The last man Vencatasooba Aiyar's paper is extremely bad in every way.

5. In question 2, Hydraulics, some men did not send in the map given with the catchment area marked by them, and simply guessed at its area; in other cases they determined this, but, instead of taking the data as to rainfall given in the question, used Captain Ryves' empirical formula; in question 2, Buildings and Bridges, no one thought of specifying for the mortar to be used in the bridge masonry—a very important omission.

6. The sketches and working drawings were, as a rule, distinctly bad, and in many cases no attention was paid to the instructions given in the questions to draw to *scale*, and in very few instances was the scale used stated in the sketch.

Pencil-drawings and sketches were specially asked for to test the accuracy of the knowledge of the candidates.

ENGINEER SUBORDINATES, FIRST DIVISION.

7. On the whole a bad class, some of the papers on the steam engine being particularly bad; several of the papers in this class were most carelessly written; they could hardly be worse, Nos. 19 and 12 being worst.

8. Plummer and Price answered the most intelligently of the class what they knew.

The answers of this class to the paper on the steam engine were worst. Some of these showed complete confusion of ideas.

ENGINEER SUBORDINATES, SECOND DIVISION.

9. Also a bad class with the exception of Nos. 3, 6, 8; No. 6, C. J. Mani, being far the best of this class in every way. The papers sent in by No. 7 were very slovenly.

GENERAL REMARKS.

10. The chief faults, I notice, which are more marked in the lower class, are—

1*st.*—The questions asked are not carefully read and answered, the result being that

2*nd.*—Imaginary questions *not asked* are answered and pages of totally irrelevant matter (often nonsense) written, thus wasting both the candidate's and examiner's time.

3*rd.*—Where questions are divided up into two or more parts, no attention is paid to this division, and the answers, instead of being given in the order of the question, are mixed up anyhow.

4*th.*—No attention is often paid to the directions given to draw to scale, any sort of rough sketch being given instead of a scale one, and when a scale is used, what it is not stated.

5*th.*—The writing, &c., is often most slovenly and careless, and no pains are taken to do arithmetical work correctly; it would seem as if the candidates thought, if the method adopted be correct, the result obtained is of no consequence.

6*th.*—Arithmetical work is often cut so short as to render it difficult to follow the various steps, and labor is thus entailed on the examiner working out the results.

7*th.*—The meaning of the symbols used in formulæ is, as a rule, never stated, as they should be. In conclusion, I would suggest that the students be taught to observe method, order, and neatness in their answering and to—

(1) Read the questions asked carefully.
(2) Answer only what *is asked* and not waste their own and the examiner's time by writing irrelevant matter on the chance of its somehow containing a partial answer.
(3) When questions are divided, to answer these in the order they are put.
(4) To arrange the sheets of each reply in order, and not leave them scattered anyhow, and before handing up papers to arrange all answers in their numerical order, and so save the examiner time and trouble.
(5) Each candidate to put his name and number on his papers.
(6) To make neat, clean and accurate sketches and pencil-drawings, and when these are drawn to scale, to state what this is.
(7) To write briefly and to the point, to answer a few questions well, instead of trying to cover pages with mere guesses at many.
(8) Sketches and pencil-drawings are specially asked for to test the accuracy of the candidate's knowledge, so that sending up bad sketches to conceal ignorance is mere waste of time.
(9) For each answer, to write the data and formula used, with the meaning of symbols in it, and to show clearly each step in the arithmetical works, to take care that this is correctly done, so as to obtain the proper result.

It cannot be too much impressed on Engineer students that method, neatness and accuracy are of all things essential to success in engineering.

KONDAPURAM,
13*th January* 1889.

(Signed) E. W. STONEY, M.E., M. INST. C. E.

REPORT ON EXAMINATIONS, COLLEGE OF ENGINEERING, MADRAS, 1888-89.

ENGINEERS' CLASS, FIRST DIVISION.

Free-hand Model and Perspective.—The questions set in perspective have been very fairly answered, showing a good knowledge of the subject. In the model-drawing, I notice a great want of decision as to the position of retiring lines. The students seem to have laid aside their rules of perspective entirely and sketched the model as a novice unacquainted with perspective would do. I consider that they all lack the knowledge of applying the rules of perspective to sketching natural objects. Had they studied the model perspectively before they commenced to put pencil to paper, the result would have been far more satisfactory.

Machine-drawing.—The question set in the examination papers has been most creditably answered. Five of the students are fully entitled to the maximum marks.

ENGINEERS' CLASS, SECOND DIVISION.

Estimating.—The results of this paper are all creditably prepared as far as accuracy is concerned, the worst being only 2 per cent. below the correct price. There is a want of neatness in all the papers submitted; this fault in a large estimate is of considerable importance.

Designing and Specification.—In designing, the results are for the most part poor, and especially so, considering that the general style of the building was so clearly set forth in the question paper and plan. Many of the students have failed to produce anything in harmony with the subject given. The specifications in all cases are good, clear and concise; hence the high value of the marks allotted.

ENGINEERS' CLASS, THIRD DIVISION.

Geometrical Drawing.—Only three students submit papers in this division, one of which answers very creditably, the remaining two not having grasped the nature of the question.

Architectural Drawing.—Moderate. I would suggest the adoption of a thicker line so as to obtain more effect. There is also a great want of more careful drawing in the ornamental details; many parts that could have been drawn with bow compasses have been put in by hand in a rather careless manner.

ENGINEER SUBORDINATES' CLASS, FIRST DIVISION.

Free-hand Drawing.—Moderate. None of the students were entitled to full marks, as the subjects given were very easy, and I consider the best submitted shows an inability to draw reverse sides of the same object alike.

Estimating.—Very good. In this subject, as before in Engineers' class, second division, there is a great want of neatness, especially in the measurement sheets. This fault causes considerable inconvenience when it becomes necessary to refer back from the abstract to the dimensions.

ENGINEER SUBORDINATES' CLASS, SECOND DIVISION.

Architectural Drawing.—Only one of the students is entitled to full marks. I notice a considerable want of knowledge of carpentry, many of the students having adopted an iron-work construction instead of one of timber-work. A better knowledge of the various joints used in wood-work and their functions in different positions is much needed. Considering the very excellent details of construction set them during the session, I am surprised that they have profited so little. It is evident that many of them merely copy their studies without inquiring into, or studying, the method of construction.

ENGINEER SUBORDINATES' CLASS, THIRD DIVISION.

Geometrical Drawing.—Very good, three students having obtained full marks, and with the exception of one, all the papers were answered fairly and neatly drawn.

DRAFTSMEN'S CLASS, FIRST DIVISION.

Free-hand, Model and Perspective.—In free-hand model drawing the results are very bad. The model given was extremely simple and for the most part contained only rectangular lines, but the results are nothing but distortion. Here also, as in the Engineers' class, first division, the students seem to have ignored all rules of perspective. It is surprising that students with such a good knowledge of the rules of perspective should not know how to apply them to sketching ordinary objects.

The deficiency in marks for free-hand and model drawing is made up by their marks in perspective, which latter in most cases is excellently answered.

Machine-drawing.—Very good and neatly prepared.

Estimating.—The students' papers show great accuracy and care in taking out and cubing dimension. It is to be regretted that greater neatness is not practised in preparing their estimates. A better and more careful spacing out of the various items in the dimension sheets would facilitate the constant necessity of referring back from abstract to measurements.

Architectural Drawing.—The results produced are exceedingly poor. Their knowledge of elementary bricklaying and of the details of building construction is far below what ought to be expected. None of them have successfully been able to draw the plan of two courses of brickwork in ordinary bond. In the commonest details of ordinary buildings they show a great lack of constructional knowledge.

Less time and labor spent in producing neatly drawn and elaborately finished plans, and more in carefully studying constructional details, so as to understand what they do draw, would better fit them for useful men in the Public Works Departments.

DRAFTSMEN'S CLASS, SECOND DIVISION.

Free-hand Model and Perspective.—Perspective in general has been fairly answered.

Free-hand drawing is very bad. Here again the students seem to think that perspective rules are never to be applied to sketching natural objects. Had they sought out their vanishing points and other auxiliary guides before putting pencil to paper, they would not have produced the distortions they all present. They very evidently require to be taught how to analyse an object by the rules of perspective, or, in other words, "*how to see*" before they draw. It is surprising that students with such a good knowledge of perspective do not apply it to free-hand drawing.

Practical Geometry.—Fairly good and very neatly prepared.

INDEPENDENT CANDIDATES.

The previous remarks contained in the items under practical geometry, free-hand, architectural and machine drawing and estimating apply also to these students.

Finally.—In the whole set of answers, I find that there is too much labor spent in elaborate finish, such as labored lettering, scales, and lining out plans, and not enough care devoted to technical knowledge and construction. The former produces a mere copyist, the latter a useful and expert assistant. Neatness and good drawing is useless without technical knowledge of construction.

MADRAS,
18th January 1889.

(Signed) W. N. POGSON,

COLLEGE OF ENGINEERING, MADRAS.

SURVEYORS' CLASS, FIRST DIVISION.

Results of the Examination held in December 1888.

Number.	Names.	Surveying with Chain, Compass and Plane Table.	Levelling.	Theodolite Surveying.	Topographical Drawing.	Total.	Remarks.
		275	225	200	300	1,000	
1	E. A. Ramaswami Aiyar	184	133	155	145	617	Third-class certificate.
2	G. Gopalakrishna Aiyar	226	85	115	190	616	Do. do.
3	K. R. Krishnasawmi Aiyar	195	94	133	156	578	Do. do.
4	G. Nageswara Rau	113	110	140	137	500	Do. do.
5	P. Rama Rau	154	90	130	126	500	Do. do.
6	Samuel Lazarus	128	85	121	113	447	Failed in total.
7	E. P. Duraiswami Aiyar	102	76	85	100	363	Do. in II, IV and total.

DRAFTSMEN'S CLASS, FIRST DIVISION.

Results of the Examination held in December 1888.

Number.	Names.	Practical and Descriptive Geometry.	Free-hand Perspective and Model Drawing.	Architectural and Topographical Drawing.	Machine Drawing.	Estimating.	Grand Total.	Remarks.
		150	150	240	200	260	1,000	
1	H. Narayanayya	103	88	127	190	246	754	Second-class certificate.
2	A. S. Visvanatha Aiyar	90	103	143	176	242	754	Do. do.
3	A. K. Subrahmanya Surma ..	115	55	99	170	245	684	Third-class certificate.
4	T. A. Sandanam Pillai	90	78	91	170	245	674	Do. do.
5	T. Narasinga Rau	95	70	88	115	247	615	Do. do.
6	A. Ramayya	79	81	69	150	245	624	Failed in III.
7	O. Suriyanarayanaswami Naidu ..	98	33	75	165	241	612	Do. in II and III.
8	V. Nagalinga Achari	75	42	79	165	145	506	Do. do. do.
9	V. Damodara Mudali	110	33	97	85	165	490	Do. in II and total.
10	T. K. Gopala Chari	85	35	44	126	180	470	Do. in II, III and total.
11	V. Ponaranga Mudali	60	31	42	73	241	447	Do. do. do.
12	V. Kameswara Rau	60	25	58	58	240	441	Do. II, III, IV and total.
13	P. Amartalinga Mudali	105	55	66	185	10	421	Do. in III, V and total.
14	A. K. Subharaya Pillai	70	25	72	110	140	417	Do. in II, III and total.
15	R. Bhujanga Rau	65	31	50	100	152	398	Do. do. do.

ENGINEER SUBORDINATES' CLASS.

Final Statement of Results of Examination held in December 1888.

Number.	Names.	Mathematics, 370 marks.						Engineering, 600 marks.							Surveying, 350 marks.						Drawing, 400 marks.					Language, 180 marks.		Physique, 100 marks.	Grand total.	Remarks.
		Arithmetic and Geometry.	Algebra.	Plane Trigonometry.	Mensuration.	Elementary Statics.	Total.	Building Materials.	Strength of Materials.	Building and Bridge Construction.	Earthwork and Roads.	Hydraulics and Irrigation Works.	Elementary applied Mechanics.	Mechanism and Steam Engine.	Total.	Chain Surveying.	Compass and Plane Table.	Levelling.	Theodolite Surveying	Topographical Drawing.	Total.	Geometrical Drawing.	Free-hand Drawing.	Mechanical Drawing.	Estimating.	Total.	Tamil.	Telugu.			
		85	35	80	70	100	370	80	20	150	75	145	80	50	600	65	55	80	75	75	350	50	100	150	100	400	180		100	2,000	
1	U. Venkata Rau	65	31	57	53	53	259	44	1	104	40	60	33	31	313	57	50	49	45	35	236	37	50	97	85	269	..	127	60	1,264	Passed.
2	G. Narayana Rau	55	28	52	45	83	263	46	1	87	57	54	34	30	309	55	45	40	37	61	238	40	27	70	90	227	..	121	80	1,238	Do.
3	G. Srinivasa Aiyangar ..	64	29	44	55	42	234	64	16	80	42	60	13	13	288	47	32	63	53	26	221	32	28	81	80	221	..	113	73	1,150	Do.
4	A. Arulanandam Pillai ..	57	25	12	44	45	183	52	1	98	49	46	12	27	285	61	44	46	48	48	247	35	45	76	84	240	..	83	75	1,113	Do.
5	Sergeant E. Price	43	21	45	5	43	157	50	1	94	33	73	17	20	288	56	28	57	40	33	214	36	81	77	52	246	..	87	90	1,082	Do.
6	L. S. Panchapakesa Sarma .	52	27	64	36	23	202	48	1	77	27	79	19	17	268	60	47	26	46	55	234	36	23	81	79	219	..	95	60	1,078	Do.
7	M. R. Subrahmanya Aiyar .	52	24	45	26	50	197	60	..	57	45	64	32	25	283	53	46	25	45	57	226	28	67	71	83	249	..	71	44	1,070	Do.
8	P. V. Ramaswami Aiyar ..	60	34	71	31	54	250	41	..	60	15	68	26	10	220	52	26	22	37	24	161	33	63	72	89	267	..	103	75	1,066	Do.
9	C. J. Plummer	56	26	38	18	60	198	47	6	57	36	75	16	25	262	53	22	24	62	47	208	35	70	68	58	231	100	..	60	1,059	Do.
10	P. M. Swaminatha Aiyar ..	52	25	52	48	82	259	49	..	93	52	57	8	4	263	43	43	27	36	36	185	30	29	79	52	190	..	97	63	1,057	Do.
11	P. S. Krishnaswami Aiyar .	53	28	48	29	37	195	36	..	84	18	61	14	12	225	59	36	56	34	43	228	35	47	61	92	235	..	107	58	1,048	Do.
12	T. Venkatarama Aiyar ..	44	21	44	28	35	172	46	..	60	27	54	39	8	234	46	37	62	38	35	218	34	60	106	65	265	..	86	70	1,045	Do.
13	R. Srinivasa Raghava Aiyangar.	55	20	46	30	85	236	33	..	61	36	66	34	16	246	61	40	26	44	58	229	25	28	88	45	186	..	98	44	1,039	Do.
14	P. Sivasubrahmanya Pillai .	47	26	43	28	47	191	29	..	66	27	59	31	13	225	45	39	41	43	50	218	26	57	77	84	244	..	91	44	1,013	Do.
15	K. C. Sivaramakrishna Aiyar.	40	29	49	21	50	189	38	4	72	5	55	13	13	200	45	37	43	32	32	189	29	35	88	82	234	..	111	65	988	Failed in total.
16	P. Kanari	50	19	34	39	16	158	38	1	63	27	43	17	19	208	47	29	38	42	45	201	30	83	72	64	249	108	..	46	976	Do.
17	S. Kailasam Pillai	47	8	12	37	13	117	64	1	104	39	64	20	23	315	55	31	21	35	33	175	27	64	93	62	246	..	72	32	957	Failed in I and total.
18	P. Subrahmanya Aiyar ..	57	24	51	32	37	201	62	..	65	39	41	19	18	244	45	21	36	30	29	161	27	20	62	43	152	..	95	50	903	Failed in total.
19	O. Sankararama Aiyar ..	49	21	37	38	49	194	50	12	53	44	29	4	5	197	60	27	46	22	20	175	30	12	57	92	191	..	72	40	869	Failed in II and total.
20	V. Rajagopala Aiyangar ..	55	28	38	16	6	143	35	..	67	50	39	18	7	216	49	29	46	37	35	196	25	13	77	45	160	..	110	30	855	Failed in total.
21	D. Duraiswami Pillai ..	40	29	22	34	19	144	41	1	93	18	39	13	19	224	49	26	31	36	30	172	32	57	55	26	170	..	84	60	854	Do.
22	A. K. Subramanya Aiyar ..	44	20	31	10	44	149	42	..	29	15	38	21	14	159	50	27	20	35	26	158	25	25	64	85	199	..	92	35	792	Failed in II and total.

ENGINEER CLASS.

Final Statement of Results of Examination held in December 1888.

Number.	Names.	I. Mathematics, 675 marks.								II. Science, 325 marks.			III. Engineering, 800 marks.							
		Arithmetic and Algebra.	Euclid, Conics and Algebraic Geometry.	Mensuration and Plane Trigonometry.	Mechanics.	Hydro-Mechanics with Pneumatics.	Algebraic Geometry.	Differential and Integral Calculus.	Total.	Physics.	Geology.	Total.	Building Materials and Construction.	Building and Bridge Construction.	Hydraulics, Irrigation Works and Sanitary Engineering.	Roads and Railways.	Applied Mechanics.	Principles of Mechanism.	Steam Engine.	Total.
		60	60	70	215	90	50	130	675	200	125	325	150	100	120	60	200	70	100	800
1	R. Srinivasa Aiyangar, B.A.	58	55	68	123	62	47	87	500	147	67	214	121	67	38	57	77	39	42	441
2	J. M. Lacey	17	41	28	84	68	41	37	316	127	38	165	89	78	23	25	165	55	88	523
3	C. Kanakasuriyan Pillai	35	51	35	109	45	35	57	367	118	47	165	103	58	42	33	94	49	68	447
4	V. Daivasikhamani Pillai	38	39	26	51	32	27	33	246	125	66	191	98	61	50	20	76	48	54	407
5	P. Ramachendra Aiyar	40	35	44	42	30	25	30	246	96	47	143	74	59	..	27	122	29	34	345
6	V. Kunjukrishna Panikkar, B.A. ..	40	35	34	88	73	37	36	343	118	58	176	69	53	5	16	82	32	58	315
7	V. Anantanarayana Aiyar ..	17	37	50	69	30	21	27	251	100	43	143	104	62	9	31	84	29	42	361
8	R. Sundaram Aiyar	43	37	29	86	43	34	35	307	109	37	146	103	60	14	16	65	45	39	342

Number.	Names.	IV. Surveying, 400 marks.					V. Drawing, 500 marks.							VI. Language, 200 marks.	VII. Physique, 100 marks.	Grand Total.	Remarks.
		Chain Compass and Plane Table.	Levelling.	Theodolite Surveying.	Topographical Drawing	Total.	Geometrical Drawing.	Free-hand, Model and Perspective.	Architectural Drawing from Copies and Specification.	Machine Drawing.	Estimating.	Designing and Specification.	Total.				
		100	100	100	100	400	50	75	105	75	130	65	500	200	100	3,000	
1	R. Srinivasa Aiyangar, B.A.	72	73	61	75	281	32	47	58	70	83	15	305	148	85	1,974	Passed.
2	J. M. Lacey	68	45	83	83	279	40	65	52	75	84	30	346	100	85	1,814	Do.
3	C. Kanakasuriyan Pillai	58	58	53	27	196	38	54	47	68	43	30	280	99	80	1,634	Do.
4	V. Daivasikhamani Pillai	65	54	50	50	219	27	47	41	70	82	30	297	110	90	1,560	Do.
5	P. Ramachendra Aiyar	55	39	58	40	192	34	34	49	55	102	10	284	132	85	1,427	Failed in total.
6	V. Kunjukrishna Panikkar, B.A. ..	50	46	51	29	176	28	28	36	45	84	15	236	95	80	1,421	Do.
7	V. Anantanarayana Aiyar	52	68	50	37	207	35	50	35	70	41	10	241	118	90	1,411	Do.
8	R. Sundaram Aiyar	65	53	53	22	193	35	38	32	30	65	5	205	128	80	1,401	Do.

All the important arrangements for the re-organization of the College, sanctioned in G.O., No. 328, Educational, dated 27th May 1886, were completed before the close of the calendar year. Mr. Chatterton, the Professor of Engineering, joined in July 1888 and Mr. Middlemast, the Professor of Mathematics, in August. The new buildings recently completed supply ample accommodation for theoretical work, but for practical work, other than that performed in the chemical laboratory, an additional building, provided with the necessary apparatus, is still needed. Detailed proposals have been called for.

2. As under the new rules the sessions for all the classes terminated in December, the report submitted by the Principal covers the half-year ending 31st December 1888 only. The Director has no objection to future reports covering only the calendar year, so far as matters relating to class instruction are concerned, but the report must be brought up to the 31st March as in the case of Arts Colleges as regards matters relating to attendances, finances and results of University examinations, so that it may contain full information for the official year. This course is to be followed in the preparation of the report for 1889-90.

3. During the period covered by the report, the average attendance was 102 against 117 in 1887-88. In the Engineer class alone there was an increase from 17 to 20. In the Draftsmen's and Surveyors' classes there was a serious falling off in strength. The figures given below, relating to the official year, afford a more useful comparison :—

	Strength on 31st March	
	1888.	1889.
Engineers' classes	20	17
Do. Subordinates' classes	32	17
Military Probationers	..	2
Draftsmen's classes	27	18
Surveyors' do.	14	13
Sub-Overseers' class	..	26
Total ..	93	93

Leaving out the Sub-Overseers' class, which was only formed in the current year, the strength of the other classes shows a fall of 26 pupils, the decrease extending chiefly to the Engineer Subordinates' and Draftsmen's classes. In para. 4 of the report as well as in a separate communication reviewed by the Director in Proceedings No. 5738, dated 11th July 1889, which has been submitted to Government, Captain Love states fully what he considers to be the causes of decline in strength. He does not lay so much stress upon the difficulties experienced by successful candidates in securing employment as on the extended duration of the courses and the stringency of the examinations conducted under the new rules, which he considers to have been introduced rather abruptly before adequate provision was made for instruction being given to the students up to the standard required. In the case of the Engineers' and Engineer Subordinates' classes, it is stated that the students were examined in the full curriculum before they had completed one-fourth the course. The Director admits that the delay in the appointment of the two Professors resulted in the students of the several classes not receiving an adequate training, but this circumstance would not have justified the Board in applying a modified test. The Board had a definite standard to go by, and, judged by that standard, the results have been lamentably poor. Moreover, the Director does not agree with the Principal regarding the disastrous results of the examinations as the *chief* cause of the decline in strength. The poor prospects of employment and the heavy cost of education at the college seems to him to have had as much to do in determining the number of admissions as the poor success in examinations. No doubt the inefficient training with which students were sent out under the old system has stood a great deal in the way of passed candidates readily securing suitable employment, and this has in turn reacted prejudicially on the strength of the college, but the recent re-organization and the changes in the constitution of the examining authority will certainly result in a superior class of men being turned out who will be more readily absorbed in the labor market. While therefore deploring the unsatisfactory results of the last two years which may be looked upon as inevitable concomitants of the new development through which the college is passing, the Director feels sanguine that the ultimate results of the changes will be the extension of sound engineering education and increased demand for men educated in the college. The full effects of the changes, however, canot be accurately gauged for some time to come.

4. The particulars relating to the classes of the population to which the pupils belonged demand a passing notice. The figures for the last two years are given below.

	1888.	1889.
Europeans and Eurasians	7	10
Native Christians	6	8
Muhammadans	..	1
Brahmans	53	29
Non-Brahman Hindus	27	42
Others	..	3
Total ..	93	93

The large increase under non-Brahman Hindus is, as expected, due to the opening of the Sub-Overseers' class. The number would have been larger had all the applicants (44 in all) been admitted. The appreciable decrease under Brahmans seems to have occurred in the Engineer Subordinates', Draftsmen's and Overseers' classes. Out of 29 Brahmans as many as 14 were in the Engineer classes, the Eurasian, the Native Christian and Sudra communities being represented only by one each. The small number of Muhammadans is still very unsatisfactory. It is noteworthy that there were 9 students that belonged to the artisan classes; this also is probably due to the formation of the Overseers' class and is an encouraging feature so far as it goes. So soon as the artizan classes begin to take an active part in the new technico-educational departure the industrial work of the country will be carried on under conditions calculated to lead to progressive development.

5. The results of the B.C.E. Degree examination of the University are not given in the report. From the Syndicate's report, the Director observes that out of 16 candidates that appeared only two passed, one in the second and one in the third class. It is not known how many out of the 16 that appeared were in the college immediately before appearing for the examination, but this information should be given in future reports. The result is in any case disappointing.

6. The Board of Examiners consisted of the following members appointed by Government :—

Captain W. L. C. Baddeley, R.E., *President.*
Mr. G. H. Stuart, M.A., } *Members.*
„ E. W. Stoney, M.E., M. INST. C.E., }
„ W. N. Pogson, F.S.A., }
Dr. VanGeyzel, } *Assistant Examiners.*
Mr. P. Viziaranga Mudaliar, }

The Board, besides the usual term examinations, conducted the final examinations of the four sections that had completed their final course under the new rules and also examined four batches of independent students. As in future the new and old rules will not operate concurrently, the work of the Board will be considerably less.

7. Out of eight candidates that appeared for the final examination of the Engineer class, first division, four succeeded and qualified as Assistant Engineers. The average marks obtained were 58 per cent. against 46 in the previous year. This improvement is satisfactory considering the scope of the examination and the stringent tests applied in the different subjects under the new rules. From the results of the term examination of the Engineer class, second division, it is evident that it consists of very poor material. The Engineer class, third division, seems to be a promising one. In Designing, Geometrical and Architectural drawing, better results might have been produced. Out of 22 that appeared for the final examination of the Engineer Subordinates' class, 14 qualified for certificates. The second division of the Engineer Subordinates' class did not acquit itself satisfactorily at the term examination. The results of the final examination of the Draftsmen's class were disappointing though they indicate an improvement compared with those of the previous year. The results are reported to have been very poor in Free-hand and Model Drawing and also in Architectural Drawing. At both the final and term examination the Surveyors' classes produced fairly satisfactory results. More than one examiner complains of the careless and slovenly manner in which the answers were sent up by the candidates. This is a matter which demands careful attention. The satisfactory way in which the papers on purely mathematical subjects were answered is creditable to the college. The appointment recently of a graduate in Engineering, who has specially qualified in Surveying, as teacher of Drawing will, it is hoped, improve the instruction in this important subject. Now that the teaching staff of the college is placed on a very satisfactory basis, it is hoped that the results of the coming year will show a considerable improvement over those of the past two years. The Director fully endorses what the Principal says in paragraph 10 of his report regarding the superior qualifications of the men turned out under the new rules.

8. Full and accurate information is not available as regards passed students. A register should be systematically maintained in the college giving the history of candidates that pass out of the college for at least five years after leaving, and ex-students should be asked to give the Principal information of their movements.

9. The recommendations made by the Board of Examiners regarding the granting of permission to unsuccessful pupils of the Engineer Subordinates' class to qualify as Overseers and the raising of the pay for draftsmen in the Public Works Department have been disposed of by Government in their Order No. 384, Educational, dated 1st July 1889. The Director was not able to support the first recommendation, for, besides being contrary to the rules of the college, the concession, if granted, would injure the working of the Engineer Subordinates' class. Government have concurred in this view. As regards the second recommendation, Government have ruled that in future Draftsmen holding second-class certificates will be eligible for promotion to the first grade under certain conditions, and that men in the service will be allowed to appear at any time as independent candidates for examinations for first-class certificates. These concessions will go a great way to improving the status and prospects of Draftsmen.

10. Government in their Order No. 297, Educational, dated 27th May 1889, have sanctioned the opening of a temporary workshop in which carpentry, smith's work, turning and other mechanical pursuits will be taught. The need for such a workshop has long been felt; and as attendance in the workshop is to be made compulsory, due provision must be made in the rules of the college as regards the practical courses to be gone through by the Engineer and Engineer Subordinate students.

11. The use made of the library was not so satisfactory as in the previous year judging from the number of books issued. Independent study should be much encouraged. It is not understood why no reference is made in the Principal's report to the physical education of the students, more especially as he believes the equipment of the gymnasium was completed during the year. The Director had occasion to remark last year on the want of systematic attention given to physical education, but he trusts that this was not the case during the period under review.

12. The Director is glad to find that the conduct of the students has been satisfactory.

13. It is believed that the question of fixing general and special educational qualifications for Local and Municipal service is now under the consideration of Government. The Principal's remark is endorsed.

14. The working of the college, though discouraging so far as immediate results are concerned, gives promise of more satisfactory results in the future.

(A true Copy and Extract.)

(Signed) H. B. GRIGG,
Director of Public Instruction.

To the Principal, College of Engineering.
„ Principals of other Government Colleges.
„ the Superintendent, School of Arts.
„ Government with covering letter.

From Captain H. D. LOVE, R.E., Principal, College of Engineering, to the Director of Public Instruction, dated Madras, 16th August 1889, No. 404-C.

I have the honor to report that of the twenty-five candidates who passed the Entrance Examination of the Engineering Subordinates' class in May last, twenty joined the college on its re-opening in August. Of these, one has since resigned. Two Military students also joined, so that the number in the class is now twenty-one.

2. As the corresponding numbers in the first and second divisions of this class (which joined in August 1887, and August 1888, respectively) are only nine and eight respectively, a great improvement is this year noticeable.

3. The numbers of students in the different classes are now as follow:—

Engineer class	17
„ Subordinates' class	38
Draftsmen's class	18
Surveyors' class	13
Military probationer	1
Sub-overseers' and Artizan's class	24
Total ..	111

ORDER—dated 2nd October 1889, No. 600, Educational.

The report on the working of the College of Engineering, Madras, during the half-year ending 31st December 1888, will be forwarded to the Right Honorable the Secretary of State. As the period with which the report deals will in future be the calendar, instead of the official, year, it should be submitted at an earlier date than hitherto.

2. The fall in the numbers in the college, to whatever cause it may be due, is regrettable and the figures regarding the present strength supplied in Captain Love's letter of the 16th August 1889, No. 404-C., are not very re-assuring. Excluding the newly organized sub-overseers and artizan's class, the number of pupils now is only 87 against 102 in 1888, 117 in 1887-88 and 166 in 1886-87. Both the higher standard of examination and the longer course have doubtless helped to produce the reduction in numbers and it is obviously impossible to ascertain precisely which of these causes has operated most. There is, however, no evidence that the difficulty in obtaining employment has increased in such a degree as to deter students from joining the college.

3. There can be little doubt that the reorganization of the curriculum and the raising of the standard of qualification were much called for; the discreditable results in the B.C.E. Examination of the University in 1888, and in the College examinations so soon as these were entrusted to an independent board, sufficiently prove this. His Excellency the Governor in Council believes that the usefulness of the college will have been largely increased, and that, as pointed out by Captain Love in paragraph 10, the students now turned out will be found to have higher attainments and more practical knowledge than formerly. The improvement in quality is a sufficient set off against the decrease in numbers. The strength of the most important—the Engineer—class is, however, well maintained, and when the disturbance caused by the revised course of instruction has ceased, some recovery in the strength of the other branches may be hoped for.

4. The attention of the Local and Municipal department will be drawn to paragraph 2 of G.O., dated 14th August 1888, No. 479, with the request that the action taken thereon may be communicated to this department.

(True Extract.)

Chief Secretary.

To the Director of Public Instruction.
„ Public Works Department.
„ Local and Municipal Department.

Exd. W. H. French.

Govt. of {1889} Madras.

EDUCATIONAL.

No. 2952 Wat Oct. 16, 1889

Recorded.

Issued 13.10.89

Recd. 16.10.89 Encl.

G.O., 2nd October 1889, No. 600.

OCTOBER.

SECRETARY TO GOVERNMENT, P.W. DEPARTMENT, MADRAS. 16

College of Engineering, Madras.

Reviewing the report on the — for 1888-89, and forwarding copy of the Proceedings to the Secretary of State.