

work on contract at all, then the Executive Engineer's case almost falls to the ground, because the essence of his complaint seems to be that the procedure causes a little delay, which cannot be a very serious matter as regards works not emergent.

10. Lastly I should think that if competent and suitable contractors are so few, it should not be difficult for the Executive Engineer to have the necessary information as to their capabilities and qualifications recorded in his office; the list of such men being added to when necessary, after due inquiry as to any new tenderers.

hm
25/7

c.
hm
25/7

P.W.C. No. 7858

Mr. G.

Recd 26.7.88

No. 2465 Wdf 13th August 1888

PUBLIC WORKS DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the 13th August 1888

Read the following.

From the Suptg. Engr. to Circle. No. 253 T. N. of 31st May 1888
Office note from the Engr. to Circle. No. 1965 of 25th July 1888.

The Engineer's Office note will be communicated to the Suptg. Engineer to Circle.

2. The Court agree with the remarks in paras 6 to 10.

3. The Engineer will submit separately his views on the subject of paras 3 and 5 of his note, when the opinion of Suptg. Engineers will be called for.

Recd 14/8

5/8/88

To the Suptg. Engr. to Circle
" Engr. to Circle

hm

20TH JULY 1888, No. 429, EDUCATIONAL.

GOVERNMENT OF MADRAS.
EDUCATIONAL DEPARTMENT.

READ—again the following papers:—

G.O., dated 16th November 1887, Mis. No. 627, Educational.

Read—the following letter from H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Madras, 31st October 1887, No. 7671:—

I have the honor, with reference to the enclosed correspondence, to request the sanction of Government for the employment of Mr. G. H. Stuart as an Assistant Examiner to the Board of Examiners for the College of Engineering, under Article II of the Rules, and for paying to him from the balance of fees collected for the Surveying and Draughtsmen's examination in May last, and now with the Principal, the sum of Rs. 500 for the work, which comprises, I understand, all the higher mathematical work.

2. A meeting of the Board, at which the Principal was present, was held at my office to consider how the work allotted to the Board could be reduced to reasonable limits, and I decided to relieve the examiners of all work not of a final character. But even with this relief the amount of examining to be done, to which has been added the additional work consequent on the permission accorded by Government to failed candidates to appear again under the old rules, was, in my opinion, quite beyond what could fairly be demanded of the Board; and I therefore decided to allow, subject to the approval of Government, the employment of Mr. Stuart as proposed by the Board.

3. When the approaching examinations have been completed, I will ask the Board to again consider the details of the present system in view of limiting the examinations to reasonable dimensions. The examination is now unquestionably too detailed in each subject. The qualifications of the students can be sufficiently well ascertained without putting them questions in so many portions of the subjects studied.

Order—dated 16th November 1887, Mis. No. 627, Educational.

The employment of Mr. G. H. Stuart as an Assistant Examiner to the Board of Examiners for the College of Engineering at the next ensuing examinations, and the payment to him of Rs. 500 from the source indicated, is sanctioned.

(True Extract.)

(Signed) H. E. STOKES,
Chief Secretary.

To the Director of Public Instruction.
" Accountant-General.

G.O., dated 24th November 1887, Mis. No. 639, Educational.

Read—the following letter from H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Ootacamund, 13th September 1887, No. O-233 :—

In article II of the new rules of the College of Engineering it is provided that "the admission and all final examinations" are to be conducted by an independent Board of Examiners, whose remuneration is to be fixed from time to time by Government. The Board may employ assistant examiners with the sanction of Government. The decision of the Board in regard to the qualifications of candidates to be final. These rules came into force from the 1st January 1886.

2. The work of the Board in 1886, however, did not include the examination for draughtsmen and surveyors, whose examinations were still conducted by the College staff.* Towards the end of April last Captain Henderson brought the matter to my notice simply with the view of

* Letter from the Acting Principal, College of Engineering, dated 25th April 1887 (requested to be returned).

employing external examiners, and as the fees had been paid, and as the urgency of the arrangement did not admit of laying the case before Government, I approved his proposals.

3. The new rules provide [Article IV (6) and (8)] for the demand of fees for admission examinations only in the case of civil and mechanical engineers and of engineer subordinates. The fees for the final examination of draughtsmen and surveyors appear to have been levied irregularly under G.O., No. 95, dated 6th April 1866. I say irregularly, because that order contemplates the levy of a fee of Rs. 15 from candidates for certificates in surveying and not for a fee of half this amount from candidates in this subject and for fees of a similar amount from candidates for certificates as draughtsmen, and because that order must be held to have been superseded by the new rules.

4. As I thought the whole question regarding the examinations at the college needed revision in view of the above facts, of the fact that the examinations are not self-supporting, and of the fact that remuneration fixed for the Board in G.O., dated 2nd November 1885, Mis. No. 677, will not be adequate for the work which must finally devolve on the Board, I called on Captain Henderson to submit proposals for making the entire work falling on the Board under the rules self-supporting. His proposals are embodied in his letter (requested to be returned), No. 231-C., dated 19th August 1887.

5. The remuneration of the present Board was fixed by Government at the present figures on my recommendation (letter No. 6139, dated 15th September 1885, recorded in G.O., dated 12th October 1885, Mis. No. 632). I considered it undesirable to remunerate the members of the Board on the university system. Dr. Duncan, however, held a different view, I presume, because the remuneration did not vary with the amount of work, and recommended a fixed scale of remuneration in his letter No. 8080, dated 4th December 1886. The Government, in G.O., dated 8th January 1887, Mis. No. 21, declined to sanction the increase suggested. The total present remuneration is Rs. 1,800. At the rates proposed by Dr. Duncan, the aggregate remuneration would have been about 25 — 30 per cent. higher, whilst he apparently contemplated confining the work of the Board to the examinations relating to civil engineers, mechanical engineers and engineer subordinates.

6. I think the scale of remuneration originally proposed by me will be too low, as observed by Major Henderson, when the new scheme is in full working. Major Henderson, however, includes term examinations in the Board work, whilst the intention of the rules is simply to dispose of certain subjects in the courses for engineers and engineer subordinates at term examinations [Article V 1 (a) and 2 (a)]. But I consider that the candidates concerned should bear the full cost of maintaining the

7. I propose therefore to raise the remuneration from the 1st November next, when the second year of the Board's life expires, to the following amount :—

	RS.
President	900
Two members at Rs. 700 each	1,400
Assistants	250
Total	2,550

This sum, I would observe, is but little above that suggested by Dr. Duncan for work which does not represent more, I should say, than two-thirds of the work which will devolve on the Board by requiring them to conduct the examinations for surveyors and draughtsmen. An additional sum of about Rs. 250 must be provided for assistant examiners for the vernacular and field test work.

8. To meet this outlay I propose to fix the fees for admission and final examination as follows :—

	RS.
Admission, Engineer class	20
Do. do. Subordinate class	15
Final, Engineer class	20
Do. Subordinate class	15
Do. Draughtsmen	10
Do. Surveyors	15
Intermediate, Engineer class	10
Do. Subordinate class	6

9. At these rates the several examinations should produce an income of not less than Rs. 2,550 annually. This estimate is based on the following figures :—

	No. of candidates.	Fee.	Total.
		RS.	RS.
Admission Examination, Engineer class	15	20	300
Do. do. Subordinates	35	15	525
Final Examination, Engineer class	10	20	200
Do. Subordinate class	25	15	375
Do. Draughtsmen	35	10	350
Do. Surveyors	20	15	300
2 Intermediate Final Examination, Engineer class, 10 candidates in each year	20	10	200
2 Intermediate Final Examination, Subordinate class, 25 candidates in each examination	50	6	300
Total			2,550

10. I propose that, as regards the Engineer and Subordinate Engineer classes, these new rates should not affect students already in the college, but should apply to surveyors and draughtsmen from the end of the current year.

11. As regards the constitution of the Board I would recommend, on the expiry of the three years for which the present Board has been appointed, that the Board be constituted as follows :—One Royal Engineer or Civil Engineer officer of the Public Works Department, one Civil Engineer not in Government employ and a Mathematician when practicable, one officer of the Educational Department. My object in making this recommendation is to secure the representative character of the Board, and also the presence on the Board of an officer who has kept up his knowledge of the higher mathematics. This is not to be expected of officers whose work has been for years of a practical and executive character.

12. Should these suggestions be approved by Government, I will submit a draft notification for their approval, embodying them in the College Code of Rules.

13. Should, however, the Government not be prepared to raise the fees in the way proposed, I would suggest, as an economical alternative arrangement, that the conduct of the examinations concerned be transferred from 1st January 1888 to the

Commissioner for the Uncovenanted Civil Service Examinations to be included among the examinations held under notification, dated 21st March 1886, through the agency of a "Board of Professional Examiners," as provided in article 4 of that notification.

Order—dated 24th November 1887, Mis. No. 639, Educational.

Pending further experience of the working of present arrangements, the Government are not prepared to alter the decision recorded in G.O., dated 8th January 1887, No. 21, Educational, and from the correspondence recorded in G.O., dated 16th November 1887, No. 627, it would appear that, if further expenditure is proved to be necessary, it should be spent on strengthening the Board and not on increasing the stipends of members.

2. The Government approve of the principle that the examiners of the college should, as far as possible, be conducted by examiners unconnected with the staff, but they are not disposed to sanction the proposal to charge fees for the intermediate examinations, which form a part of the college discipline. The fees specified in paragraph 8 of the foregoing letter are accordingly approved, with the exception of those for the intermediate classes, and subject to the limitation proposed in paragraph 10.

(True Extract.)

(Signed) H. E. STOKES,
Chief Secretary.

To the Director of Public Instruction, with two enclosures.

READ—also the following paper:—

From H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Ootacamund, 27th June 1888, No. O-300.

With reference to G.O., dated 24th November 1887, No. 639 (Educational), I have the honor to submit, for the consideration of Government, a report (requested to be returned) from the President of the Board of Examiners, College of Engineering.

2. In the first place I would draw the attention of Government to the fact that the intermediate examinations to be held by the Board under Article 5 (a) of the College Rules are really the final examinations in the subjects or branches of the subjects concerned. The Board strongly advocate the retention of the system of examining finally in certain subjects at the close of the first or second year of the course, and their reasons may, I think, be accepted, although, to my thinking, the system is too schoolish and cumbersome, and makes public examination rather an accessory of education than its final test.

3. In view of the above recommendation I hope the Government will sanction the levy of fees at final examinations held during the course at the rates mentioned in paragraph 9 of my letter recorded in the Government order above read, substituting for "subordinate class" the words "other classes," as I observe that the Board propose to examine draughtsmen and survey students at the end of the first year finally in certain subjects. I submit a draft notification for the approval of Government.

4. The next point raised is the constitution of the Board and its remuneration. It will be observed that the Board recommend a board of three members with three assistant examiners, one for mathematics, one for science, one for Tamil and Telugu. I entirely object to the transfer of the mathematical work to an assistant examiner. The standard of study in mathematics is very high, and, as proposed in my letter, should devolve on a member of the Board. I therefore do not support their proposal. If the work is too heavy for one examiner, it can in the less advanced subjects be well shared by the engineering examiners, who have until this year done the work unaided. The other two assistant examiners are necessary.

5. As regards the salaries of the staff the Board propose to give the President and the members the salaries recommended in paragraph 7 of my letter, and in addition Rs. 500 to the mathematical assistant examiner, Rs. 200 to the science assistant

examiner, and Rs. 150 to the assistant examiner for vernaculars. There is no sufficient reason, I think, for varying my former recommendation beyond raising the provision for assistant examiners from Rs. 250 to Rs. 350. I certainly do not see my way, in view of the fact that the classes are at present very weak (they averaging less than half the strength on which my calculation was based), to proposing a material increase in the cost of the Board, whilst on the other hand I believe it would not be practicable to secure good men to sit on the Board if the additional sum required for assistant examiners, Rs. 500, is to be taken out of the Rs. 2,300 to be allotted to the Board of three members, for I fancy few specialists will undertake the work of the Board if the present rates are not raised. The fees for this year will probably not much exceed Rs. 1,000, thus leaving a net charge on provincial for the Board of Rs. 1,500 approximately.

6. The Board will complete their three years' term as a board next month, and I take this opportunity of proposing the constitution of a fresh board, under article II of the notification, as follows:—

President.

Major Coaker, R.E., Public Works Department.

Members.

Mr. G. H. Stuart, Educational Department.

" J. A. Jones, M.I.C.E., Vice-President, Madras Municipality.

The assistant examiners will be selected later.

ORDER—dated 20th July 1888, No. 429, Educational.

The permanent addition to the Board of Examiners for the College of Engineering of an assistant examiner for science on a yearly remuneration of Rs. 250 is approved, but, in view of the small proportion borne by fees to the total cost, the Government cannot sanction the proposed enhancement of the remuneration paid to the President and members. With the addition of the assistant now sanctioned, the Board will cost Rs. 2,125 a year.

2. The Director's remarks in paragraph 4 of the foregoing letter on the objections to the delegation of the mathematical work to an assistant examiner are concurred in by the Government, and the constitution of the Board recommended in paragraph 6 is approved.

(True Extract.)

M. Dawson
Under Secretary P. or. &
Ag. Chief Secretary.

To the Director of Public Instruction, with enclosure returned.
" Public Works Department.
" Accountant-General.

Exd. J. Moses.

B. No 298W 24-1-88.

P. N. C. 704

Govt. of [1888] Madras.
EDUCATIONAL.

2470 W 24-1-88

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Recd. 2. 8. 88.

Encl.

G.O., 20th July 1888, No. 429.

2470 W 24-1-88

JULY.

College of Engineering.

Approving of the permanent addition to the Board of Examiners for the — of an Assistant Examiner for Science and the constitution of the Board recommended by the Director of Public Instruction, but declining to sanction the proposed enhancement of the remuneration paid to the President and members of the Board.

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B. No 298W 24-1-88

Recorded

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Govt. of [1888] Madras.
EDUCATIONAL.

Issued

Recd.

Encl.

G.O., 14th January 1888, No. 17.

B. No 298W 24-1-88

JANUARY.

College of Engineering, Madras.

Approving certain proposals made by the Director of Public Instruction in connection with the revised establishment, —, and sanctioning its introduction from 1st January 1888, except as regards certain newly-created Professorships.

14. The superintendence of the military students is undertaken by Mr. Cames, the second assistant master, now on furlough; Sergeant Goddard is now doing the work, and I beg to suggest that Mr. Cames be appointed superintendent of military students with Sergeant Goddard to act for him.

15. Mr. Hyde draws Rs. 20 as Instructor in Photography; this is not allowed for in the new scale, but I suppose it can be continued without fresh sanction.

16. I have written to the Consulting Architect about the college extension buildings and he informs me that he will not be able to say for a month when they will be completed, but it will not be before the end of next March.

STATEMENT showing appointments to be made at College of Engineering under the reorganization sanctioned in G.O., No. 605, Educational, dated 10th November 1887.

Designation.	Name.	Pay.	Remarks
1. Instructor in Engineering.	Sub-Conductor W. Cames (on furlough).	Rs. 215	Present salary as 2nd Asst. Master is Rs. 215
2. Instructor in Surveying and Drawing.	W. Hyde, Esq.	215	Do. 3rd do. 215
3. Assistant Instructor in Surveying and Drawing.	Mr. J. Hamilton	160	Do. 4th do. 160
4. Assistant Instructor in Drawing.	Mr. F. Pope	100	Do. 5th do. 100
5. Assistant Instructor in Surveying.	Sergeant W. H. Goddard	100	Do. 6th do. 100
6. Assistant in Vernacular.	C. R. Krishna Aiyar, B.A.	64	Do. Tamil Munshi .. 64
7. Do. do.	H. Narasinga Rau, B.A.	60	Do. Telugu do. .. 50
8. First Assistant Clerk.	C. Varadaraja Aiyangar	40	Do. Temporary Clerk .. 25
9. Second do.	V. Colandavelu Mudaliyar	20	Do. Assistant Clerk .. 15
10. Storekeeper	Mr. Pearson (on leave). C. K. Subrahmanya Aiyar, B.A. (acting).	30	Do. Librarian and Storekeeper .. 30
11. Instructor in Bricklaying.	P. Nadamuni Mudaliyar	30	Do. Instructor in Bricklaying .. 30
12. Superintendent of Military Students.	Sub-Conductor W. Cames (on furlough). Sergeant W. H. Goddard (acting).	20	

NOTE.—If the above appointments are made, the date from which they are to take effect must be stated. When they are made, the following acting appointments should also be sanctioned:—

Mr. J. Hamilton to act as Instructor in Engineering, *vice* Sub-Conductor W. Cames on furlough.
Sergeant W. H. Goddard to act as Assistant Instructor in Surveying and Drawing, *vice* Mr. J. Hamilton.
C. K. Subrahmanya Aiyar, B.A., to act as Storekeeper, *vice* Mr. Pearson on leave without pay.

ORDER—dated 14th January 1888, No. 17, Educational.

The Director's proposals in paragraph 3 of the foregoing letter are approved and the introduction of the revised establishment with effect from the 1st January 1888 is sanctioned, except as regards the newly-created Professorships of Engineering and Mathematics, respecting which the Secretary of State will be addressed.

(True Extract.)

H. E. STOKES,
Chief Secretary.

To the Director of Public Instruction.
„ Public Works Department.
„ Accountant-General.

Exd. P. L. Pereira.

5. As under section 45, (a) III, of the Pay and Acting Allowance Code, Messrs. Cames and Hyde will be entitled to begin on their present pay of Rs. 215 in the new appointments, it is unnecessary to grant them personal allowances as suggested by Captain Henderson.

ENCLOSURES.

From Captain C. B. HENDERSON, R.E., Acting Principal, College of Engineering, Madras, to the Director of Public Instruction, dated Madras, 15th November 1887, No. 430-C.

With reference to your endorsement, No. 7953, of 12th instant, I have the honor to report as follows on the reorganization of the staff of this college.

2. The new scale for the staff differs in several respects from the present one, and as it is intended to retain the members of the present staff, but under different designations and at other salaries in some cases, I beg to suggest that the appointments entered in accompanying statement be now sanctioned. The new courses are now being taught in the college and I think that the staff should have the benefit of the changes as early as possible.

3. I leave entirely to you the selection and appointment of the Professors of Engineering and Mathematics, as I suppose that is a matter on which I am not asked to report. I may observe, however, that Mr. T. R. Scott, B.A., is now the Instructor in Mathematics on Rs. 420; he will have to be provided for elsewhere on the arrival of a Professor, and as he has given me entire satisfaction, I should be glad if he could be appointed to act as Professor in Mathematics on Rs. 500 pending the arrival of a man from England.

4. Captain Love has recommended Mr. Cames for the post of Instructor in Engineering and Mr. Hyde for the post of Instructor in Surveying and Drawing. Mr. Cames, who is now on furlough until November 1888, draws Rs. 215, and Mr. Hyde, who is now on privilege leave on half-pay, draws the same salary, *plus* Rs. 20 a month, as Instructor in Photography. I suppose it would not be fair to these two men to appoint them to posts carrying less pay than what they now get, so if they cannot be appointed at once on Rs. 215, I beg to suggest that they be appointed on Rs. 200, with personal allowances of Rs. 15 each, these allowances to cease when the instructors are entitled to draw the Rs. 15 as an increment.

5. For the post of Assistant Instructor in Surveying and Drawing, Captain Love recommends Mr. Hamilton, who is now fourth assistant master on Rs. 160, but is acting as second assistant master for Mr. Cames on furlough: here also if Mr. Hamilton cannot be appointed on Rs. 160, I beg to suggest that he may have a personal allowance of Rs. 10, so that he may not lose by the change.

6. Mr. Pope, who is now fifth assistant master on Rs. 100, is recommended by Captain Love for the post of Assistant Instructor in Drawing.

7. Sergeant Goddard, who is now sixth assistant master on Rs. 100 and acting fourth assistant master, may be appointed Assistant Instructor in Surveying.

8. I await your orders about inviting applications for the appointments of Second Assistant Instructors in Drawing and Surveying on Rs. 75 each.

9. The Tamil and Telugu munshis, Messrs. Krishna Aiyar, B.A., and Narasinga Rau, B.A., on Rs. 50 each, may be appointed assistants in vernacular on Rs. 60 each.

10. No change of head clerk is necessary, except that he may be enabled to get increments which he cannot do now. For first assistant clerk on Rs. 40, I recommend C. Varadaraja Aiyangar who is now temporary clerk on Rs. 25. For second assistant clerk, I would recommend V. Colandavelu Mudaliyar who is now assistant clerk on Rs. 15, but he is an unpassed man and I do not know if he is eligible for the post.

11. I will recommend a man for gymnastic instructor as soon as I receive orders on the subject from you.

12. At present the librarian's and storekeeper's duties are performed by one man, Mr. Pearson, on Rs. 30, who is now on leave for six months without pay. I cannot recommend that he should be allowed to continue to do both duties as I consider him unfit for the proper performance of either of them, but he will probably not return to India at the expiration of his leave, and as during his absence on leave his services cannot be dispensed with, I beg to suggest that he be appointed storekeeper on Rs. 30, with Mr. C. K. Subrahmanya Aiyar, B.A., to act for him until the leave expires, when other arrangements may be made.

13. The present Instructor in Bricklaying gets a salary of Rs. 30; the new scale provides only Rs. 20, rising to Rs. 40, and I think that the present man, P. Nadamuni Mudaliyar, might be appointed on Rs. 20 with a personal allowance of Rs. 10.

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, 16th December 1887, No. 9120.

With reference to G.O., No. 605, dated 10th ultimo, Educational, I have the honor to enclose a letter from the Acting Principal, College of Engineering, and to state that I consider it desirable that the scheme should be introduced from the 1st January next, although it is not necessary that the two new Professors should arrive from England until towards the end of June, so as to be ready for the opening of the college on the 1st August. To bring them out when the spring term is considerably advanced, would involve unnecessary expense without any corresponding benefit to the college. The new building will not, it is true, be ready for occupation until towards the end of May, when the term ends; but the new curriculum has already been introduced, and I think it therefore desirable that, as far as practicable, the subordinate portion of the staff should be constituted according to the new scheme at the beginning of the college year in January next.

2. As regards the selection of gentlemen to fill the two newly-constituted Professorships—Engineering and Mathematics, I beg to suggest that the Secretary of State be invited to place the nomination in the hands of Sir A. Taylor, the Principal of Cooper's Hill College, Sir Philip Magnus, Director and Secretary of the City and Guilds of London Central Institution, and of Mr. Unwin (formerly of Cooper's Hill), Professor of Engineering in the same institution. I consider it most desirable that the gentlemen selected should have practical experience of technical educational work in one of the large Science institutions, such as the Technical College, Finsbury, Owen's College, Manchester, and the Yorkshire College, Leeds. The salary of each Professorship is Rs. 500—750, rising by annual increments of Rs. 50 to begin with, but as the scale of establishment provides for promotion to the salaries of Rs. 750—1,000 and Rs. 1,000—1,250 (*vide* paragraph 7 of my letter printed in G.O., 27th May 1886, No. 328, Educational), it is desirable that the relative position of the Professors should be fixed on appointment. I would therefore recommend that the Professorship of Engineering be regarded as the Senior Professorship of the two; and consequently that the gentleman holding this Professorship shall have priority of right to promotion on completing his term of service, six years, in the higher class.

3. In introducing the subordinate portion of the scheme, I would recommend the following modifications for the sanction of Government :—

- (1) That the pay of the first assistant clerk be fixed at Rs. 20—40, instead of Rs. 40—60.
- (2) That the pay of the second assistant clerk be Rs. 15—25, instead of Rs. 20—40.
- (3) That the offices of storekeeper and librarian be continued on a salary of Rs. 30—50. These changes will involve an average saving of Rs. 53-12-0 per mensem.

4. As it will be necessary to retain the services of Mr. Scott, the Instructor in Mathematics in the college, until the new Professor arrives, I will, on receiving the sanction of Government to these proposals, submit a minute nominating him to act as Professor of Mathematics.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—again the following papers :—

G.O., dated 16th November 1887, Mis. No. 627, Educational.

Read—the following letter from H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Madras, 31st October 1887, No. 7671 :—

I have the honor, with reference to the enclosed correspondence, to request the sanction of Government for the employment of Mr. G. H. Stuart as an Assistant Examiner to the Board of Examiners for the College of Engineering, under Article II of the Rules, and for paying to him from the balance of fees collected for the Surveying and Draughtsmen's examination in May last, and now with the Principal, the sum of Rs. 500 for the work, which comprises, I understand, all the higher mathematical work.

2. A meeting of the Board, at which the Principal was present, was held at my office to consider how the work allotted to the Board could be reduced to reasonable limits, and I decided to relieve the examiners of all work not of a final character. But even with this relief the amount of examining to be done, to which has been added the additional work consequent on the permission accorded by Government to failed candidates to appear again under the old rules, was, in my opinion, quite beyond what could fairly be demanded of the Board; and I therefore decided to allow, subject to the approval of Government, the employment of Mr. Stuart as proposed by the Board.

3. When the approaching examinations have been completed, I will ask the Board to again consider the details of the present system in view of limiting the examinations to reasonable dimensions. The examination is now unquestionably too detailed in each subject. The qualifications of the students can be sufficiently well ascertained without putting them questions in so many portions of the subjects studied.

Order—dated 16th November 1887, Mis. No. 627, Educational.

The employment of Mr. G. H. Stuart as an Assistant Examiner to the Board of Examiners for the College of Engineering at the next ensuing examinations, and the payment to him of Rs. 500 from the source indicated, is sanctioned.

(True Extract.)

(Signed) H. E. STOKES,
Chief Secretary.

To the Director of Public Instruction.
„ Accountant-General.

G.O., dated 24th November 1887, Mis. No. 639, Educational.

Read—the following letter from H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Ootacamund, 13th September 1887, No. O-239 :—

In article II of the new rules of the College of Engineering it is provided that “the admission and all final examinations” are to be conducted by an independent Board of Examiners, whose remuneration is to be fixed from time to time by Government. The Board may employ assistant examiners with the sanction of Government. The decision of the Board in regard to the qualifications of candidates to be final. These rules came into force from the 1st January 1886.

2. The work of the Board in 1886, however, did not include the examination for draughtsmen and surveyors, whose examinations were still conducted by the College staff.* Towards the end of April last Captain Henderson brought the matter to my notice simply with the view of

* Letter from the Acting Principal, College of Engineering, dated 25th April 1887 (requested to be returned).

employing external examiners, and as the fees had been paid, and as the urgency of the arrangement did not admit of laying the case before Government, I approved his proposals.

3. The new rules provide [Article IV (6) and (8)] for the demand of fees for admission examinations only in the case of civil and mechanical engineers and of engineer subordinates. The fees for the final examination of draughtsmen and surveyors appear to have been levied irregularly under G.O., No. 95, dated 6th April 1866. I say irregularly, because that order contemplates the levy of a fee of Rs. 15 from candidates for certificates in surveying and not for a fee of half this amount from candidates in this subject and for fees of a similar amount from candidates for certificates as draughtsmen, and because that order must be held to have been superseded by the new rules.

4. As I thought the whole question regarding the examinations at the college needed revision in view of the above facts, of the fact that the examinations are not self-supporting, and of the fact that remuneration fixed for the Board in G.O., dated 2nd November 1885, Mis. No. 677, will not be adequate for the work which must finally devolve on the Board, I called on Captain Henderson to submit proposals for making the entire work falling on the Board under the rules self-supporting. His proposals are embodied in his letter (requested to be returned), No. 231-C., dated 19th August 1887.

5. The remuneration of the present Board was fixed by Government at the present figures on my recommendation (letter No. 6139, dated 15th September 1885, recorded in G.O., dated 12th October 1885, Mis. No. 632). I considered it undesirable to remunerate the members of the Board on the university system. Dr. Duncan, however, held a different view, I presume, because the remuneration did not vary with the amount of work, and recommended a fixed scale of remuneration in his letter No. 8080, dated 4th December 1886. The Government, in G.O., dated 8th January 1887, Mis. No. 21, declined to sanction the increase suggested. The total present remuneration is Rs. 1,800. At the rates proposed by Dr. Duncan, the aggregate remuneration would have been about 25 — 30 per cent. higher, whilst he apparently contemplated confining the work of the Board to the examinations relating to civil engineers, mechanical engineers and engineer subordinates.

6. I think the scale of remuneration originally proposed by me will be too low, as observed by Major Henderson, when the new scheme is in full working. Major Henderson, however, includes *term* examinations in the Board work, whilst the intention of the rules is simply to dispose of certain subjects in the courses for engineers and engineer subordinates at *term examinations* [Article V 1 (a) and 2 (a)]. But I consider that the candidates concerned should bear the full cost of maintaining the Board.

7. I propose therefore to raise the remuneration from the 1st November next, when the second year of the Board's life expires, to the following amount :—

	RS.
President	900
Two members at Rs. 700 each	1,400
Assistants	250
Total	2,550

This sum, I would observe, is but little above that suggested by Dr. Duncan for work which does not represent more, I should say, than two-thirds of the work which will devolve on the Board by requiring them to conduct the examinations for surveyors and draughtsmen. An additional sum of about Rs. 250 must be provided for assistant examiners for the vernacular and field test work.

8. To meet this outlay I propose to fix the fees for admission and final examination as follows :—

	RS.
Admission, Engineer class	20
Do. do. Subordinate class	15
Final, Engineer class	20
Do. Subordinate class	15
Do. Draughtsmen	10
Do. Surveyors	15
Intermediate, Engineer class	10
Do. Subordinate class	6

9. At these rates the several examinations should produce an income of not less than Rs. 2,550 annually. This estimate is based on the following figures :—

	No. of candidates.	Fee. RS.	Total. RS.
Admission Examination, Engineer class	15	20	300
Do. do. Subordinates	35	15	525
Final Examination, Engineer class	10	20	200
Do. Subordinate class	25	15	375
Do. Draughtsmen	35	10	350
Do. Surveyors	20	15	300
2 Intermediate Final Examination, Engineer class, 10 candidates in each year	20	10	200
2 Intermediate Final Examination, Subordinate class, 25 candidates in each examination	50	6	300
Total			2,550

10. I propose that, as regards the Engineer and Subordinate Engineer classes, these new rates should not affect students already in the college, but should apply to surveyors and draughtsmen from the end of the current year.

11. As regards the constitution of the Board I would recommend, on the expiry of the three years for which the present Board has been appointed, that the Board be constituted as follows :—One Royal Engineer or Civil Engineer officer of the Public Works Department, one Civil Engineer not in Government employ and a Mathematician when practicable, one officer of the Educational Department. My object in making this recommendation is to secure the representative character of the Board, and also the presence on the Board of an officer who has kept up his knowledge of the higher mathematics. This is not to be expected of officers whose work has been for years of a practical and executive character.

12. Should these suggestions be approved by Government, I will submit a draft notification for their approval, embodying them in the College Code of Rules.

13. Should, however, the Government not be prepared to raise the fees in the way proposed, I would suggest, as an economical alternative arrangement, that the conduct of the examinations concerned be transferred from 1st January 1888 to the

Commissioner for the Uncovenanted Civil Service Examinations to be included among the examinations held under notification, dated 31st March 1886, through the agency of a "Board of Professional Examiners," as provided in article 4 of that notification.

Order—dated 24th November 1887, Mis. No. 639, Educational.

Pending further experience of the working of present arrangements, the Government are not prepared to alter the decision recorded in G.O., dated 8th January 1887, No. 21, Educational, and from the correspondence recorded in G.O., dated 16th November 1887, No. 627, it would appear that, if further expenditure is proved to be necessary, it should be spent on strengthening the Board and not on increasing the stipends of members.

2. The Government approve of the principle that the examiners of the college should, as far as possible, be conducted by examiners unconnected with the staff, but they are not disposed to sanction the proposal to charge fees for the intermediate examinations, which form a part of the college discipline. The fees specified in paragraph 8 of the foregoing letter are accordingly approved, with the exception of those for the intermediate classes, and subject to the limitation proposed in paragraph 10.

(True Extract.)

(Signed) H. E. STOKES,
Chief Secretary.

To the Director of Public Instruction, with two enclosures.

READ—also the following paper:—

From H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Ootacamund, 27th June 1888, No. O-300.

With reference to G.O., dated 24th November 1887, No. 639 (Educational), I have the honor to submit, for the consideration of Government, a report (requested to be returned) from the President of the Board of Examiners, College of Engineering.

2. In the first place I would draw the attention of Government to the fact that the intermediate examinations to be held by the Board under Article 5 (a) of the College Rules are really the final examinations in the subjects or branches of the subjects concerned. The Board strongly advocate the retention of the system of examining finally in certain subjects at the close of the first or second year of the course, and their reasons may, I think, be accepted, although, to my thinking, the system is too schoolish and cumbersome, and makes public examination rather an accessory of education than its final test.

3. In view of the above recommendation I hope the Government will sanction the levy of fees at final examinations held during the course at the rates mentioned in paragraph 9 of my letter recorded in the Government order above read, substituting for "subordinate class" the words "other classes," as I observe that the Board propose to examine draughtsmen and survey students at the end of the first year finally in certain subjects. I submit a draft notification for the approval of Government.

4. The next point raised is the constitution of the Board and its remuneration. It will be observed that the Board recommend a board of three members with three assistant examiners, one for mathematics, one for science, one for Tamil and Telugu. I entirely object to the transfer of the mathematical work to an assistant examiner. The standard of study in mathematics is very high, and, as proposed in my letter, should devolve on a member of the Board. I therefore do not support their proposal. If the work is too heavy for one examiner, it can in the less advanced subjects be well shared by the engineering examiners, who have until this year done the work unaided. The other two assistant examiners are necessary.

5. As regards the salaries of the staff the Board propose to give the President and the members the salaries recommended in paragraph 7 of my letter, and in addition Rs. 500 to the mathematical assistant examiner, Rs. 200 to the science assistant

examiner, and Rs. 150 to the assistant examiner for vernaculars. There is no sufficient reason, I think, for varying my former recommendation beyond raising the provision for assistant examiners from Rs. 250 to Rs. 350. I certainly do not see my way, in view of the fact that the classes are at present very weak (they averaging less than half the strength on which my calculation was based), to proposing a material increase in the cost of the Board, whilst on the other hand I believe it would not be practicable to secure good men to sit on the Board if the additional sum required for assistant examiners, Rs. 500, is to be taken out of the Rs. 2,300 to be allotted to the Board of three members, for I fancy few specialists will undertake the work of the Board if the present rates are not raised. The fees for this year will probably not much exceed Rs. 1,000, thus leaving a net charge on provincial for the Board of Rs. 1,500 approximately.

6. The Board will complete their three years' term as a board next month, and I take this opportunity of proposing the constitution of a fresh board, under article II of the notification, as follows:—

President.

Major Coaker, R.E., Public Works Department.

Members.

Mr. G. H. Stuart, Educational Department.

" J. A. Jones, M.I.C.E., Vice-President, Madras Municipality.

The assistant examiners will be selected later.

ORDER—dated 20th July 1888, No. 429, Educational.

The permanent addition to the Board of Examiners for the College of Engineering of an assistant examiner for science on a yearly remuneration of Rs. 250 is approved, but, in view of the small proportion borne by fees to the total cost, the Government cannot sanction the proposed enhancement of the remuneration paid to the President and members. With the addition of the assistant now sanctioned, the Board will cost Rs. 2,125 a year.

2. The Director's remarks in paragraph 4 of the foregoing letter on the objections to the delegation of the mathematical work to an assistant examiner are concurred in by the Government, and the constitution of the Board recommended in paragraph 6 is approved.

(True Extract.)

J. F. PRICE,
Ag. Chief Secretary.

To the Director of Public Instruction, with enclosure returned.
" Public Works Department.
" Accountant-General.

Exd. J. Moses.

Govt. of {1888} Madras.
EDUCATIONAL.

Issued

Recd.

Encl.

G.O., 20th July 1888, No. 429.

JULY.

Recorded

20

W. H. Coaker R.S.

College of Engineering.

Approving of the permanent addition to the Board of Examiners for the — of an Assistant Examiner for Science and the constitution of the Board recommended by the Director of Public Instruction, but declining to sanction the proposed enhancement of the remuneration paid to the President and members of the Board.

20TH JULY 1888, No. 429, EDUCATIONAL.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—again the following papers :—

G.O., dated 16th November 1887, Mis. No. 627, Educational.

Read—the following letter from H. B. GRIGG, Esq., M.A., Director of Public Instruction, to the Chief Secretary to Government, dated Madras, 31st October 1887, No. 7671 :—

I have the honor, with reference to the enclosed correspondence, to request the sanction of Government for the employment of Mr. G. H. Stuart as an Assistant Examiner to the Board of Examiners for the College of Engineering, under Article II of the Rules, and for paying to him from the balance of fees collected for the Surveying and Draughtsmen's examination in May last, and now with the Principal, the sum of Rs. 500 for the work, which comprises, I understand, all the higher mathematical work.

2. A meeting of the Board, at which the Principal was present, was held at my office to consider how the work allotted to the Board could be reduced to reasonable limits, and I decided to relieve the examiners of all work not of a final character. But even with this relief the amount of examining to be done, to which has been added the additional work consequent on the permission accorded by Government to failed candidates to appear again under the old rules, was, in my opinion, quite beyond what could fairly be demanded of the Board; and I therefore decided to allow, subject to the approval of Government, the employment of Mr. Stuart as proposed by the Board.

3. When the approaching examinations have been completed, I will ask the Board to again consider the details of the present system in view of limiting the examinations to reasonable dimensions. The examination is now unquestionably too detailed in each subject. The qualifications of the students can be sufficiently well ascertained without putting them questions in so many portions of the subjects studied.

Order—dated 16th November 1887, Mis. No. 627, Educational.

The employment of Mr. G. H. Stuart as an Assistant Examiner to the Board of Examiners for the College of Engineering at the next ensuing examinations, and the payment to him of Rs. 500 from the source indicated, is sanctioned.

(True Extract.)

(Signed) H. E. STOKES,
Chief Secretary.

To the Director of Public Instruction.
„ Accountant-General.