

Public Works (1898) Department.

G.O., No. 2523 W

DATED 30th Sep 98

[Despatch Abstract.]

College of Engineering

For: Some Deptt. Appraisal,
with remarks, the revised rules of the
submitted by the Dy. Public Instruction,
communicated to officers of the S.W.O.

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Indexed.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—the following papers :—

Memorandum of the Public Works Department, dated Madras, 4th February 1897, No. 701 C.

Read—the following letter from the Honourable Mr. D. DUNCAN, M.A., D.Sc., LL.D., Director of Public Instruction, to the Secretary to Government, Local and Municipal Department (through the Chief Engineer), dated Madras, 19th December 1896, No. 13764 :—

I have the honour to submit the revised draft of the rules of the College of Engineering for the sanction of Government. The existing rules are given in parallel columns for the purposes of comparison and I have explained all the important variations in the last column.

2. In the scheme for the reorganization of the Educational Department sanctioned by the Secretary of State, three professorships have been transferred from the graded to the Provincial Service. As professorships are attached only to the Presidency College and the College of Engineering, clause (iii) of Article III has been so worded as to allow of one of the Professors of the College of Engineering, viz., the Professor of Mathematics, being an officer of the Indian Educational Service or the Provincial Educational Service. Major Love considers that both the Professors should be of the Indian Educational Service. But this would handicap the Presidency College permanently; there is moreover no reason to suppose that officers possessing the necessary qualifications for the post of Professor of Mathematics, in the College of Engineering, cannot be found from among the members of the Provincial Educational Service. The standard of mathematics required for the degree of Bachelor of Engineering is not so high as that required for the degree of Bachelor of Arts.

3. Article V has been revised with reference to the revised syllabus sanctioned by Government in its Order, No. 444, Educational, dated 22nd July 1896. In my letter read in the above Government order a qualifying minimum was proposed for the Engineer class in the subjects of mathematics, engineering and drawing. The Principal considers that surveying is an equally important subject. Such a minimum will be required in that subject also. As science is also considered an important subject, a fourth of the marks assigned to the subject may be prescribed as a qualifying minimum as under the existing rules. On the recommendation of the Principal, the two subjects of geometrical and perspective drawing and freehand and model drawing under the draftsman class have been combined into one subject.

4. Drawing has been added to the subjects of the entrance tests prescribed for the Engineer and Engineer subordinate classes. The subject now forms part of the entrance test for the surveyor and draftsman classes. Drawing is taught in all the upper secondary schools as a compulsory subject of instruction.

5. The monthly rate of fees for the sub-overseer and surveyor class has been raised from Rs. 4 to Rs. 5, consequent on the reconstitution of the classes. In Article X, I have fixed the scale of term fees on the principle followed in the Fee notification in respect of Arts colleges, and any further reduction is unnecessary. The scale of examination fees has been revised and graduated with reference to the relative importance of the examinations, and with a view to make the final examination as nearly self-supporting as possible.

6. I have provided for the award of three Government scholarships in each class on a moderate scale. One of the scholarships in each class will be reserved for Muhammadans, Native Christians or Europeans, as special encouragement is needed for these classes to join the college. The rules for stipends in workshops are almost the same as those suggested in my letter, No. 12059, dated 9th November 1896.

NOTE by the Chief Engineer, Public Works Department, dated 1st February 1897.

The only remarks which the Chief Engineer has to offer on the revised rules of the College of Engineering submitted by the Director of Public Instruction, are the following :—

Article IX—Clause (i).—It would be well to insert here the age limit of 28 years, suggested in the Chief Engineer's note forwarded with P. W. No. 5053 C., dated 23rd December 1896, for soldiers desiring to enter the college.

Clause (v).—The sentence "other soldier students will compete with the civilian students for the remaining vacancies which are from time to time notified" should be omitted, with reference to the remarks in the Chief Engineer's note above quoted.

Article XVII—Clause (i).—After the words "B. E. degree examination of the Madras University," should be inserted "and fulfilled the conditions of paragraph 11, Chapter II, Vol. I, Public Works Code."

Clause (ii).—The words "are likely to be available" should be substituted for "will be available" in the second line of this clause.

(Signed) D. McNEIL CAMPBELL, Colonel, R.E.,
Chief Engineer.

Memorandum—No. 701 C., dated 4th February 1897.

Forwarded to the Educational Department.

(Signed) D. McNEIL CAMPBELL, Colonel, R.E.,
Secretary.

From the Honourable Mr. D. DUNCAN, M.A., D.Sc., LL.D., Director of Public Instruction, to the Secretary to Government, Local and Municipal Department, dated Madras, 12th June 1897, No. 6260.

I have the honour to submit the draft revised paragraph 1335, Vol. II, Army Regulations, India, amended as directed in G.O., No. 177, Educational, dated 22nd March 1897. The alterations and additions carried out, which, for facility of reference, are underlined in red ink, call for but few remarks.

2. *Clause (d).*—The portions marked in mathematics are identical with those prescribed at present for civil students.

Clause (e).—The clause "and question papers will be sent to Officers Commanding Regiments" has been struck out as unnecessary, similar provision having been made in clause (c).

Clause (1).—The Principal, College of Engineering, recommends that the amount of the monthly college allowance be raised from Rs. 10 to Rs. 11, as is the case at Roorkee. Major Love's reasons for proposing this increase will be seen from the following remarks of his :—

"As the rules are to be assimilated to those applying to Roorkee, there appears no reason for a difference in the rate of college allowance. Roorkee already possesses superior attractions in regard to guaranteed appointments, and it appears that the least that the Madras College can do is to equalise pecuniary inducements."

In these circumstances I have no objection to the increase referred to above, but I have not altered the figure in clause (1), pending the orders of Government.

Clause (g).—The alterations made in this clause are the result of the concession granted in G.O., No. 203, Educational, dated April 1897, to the soldier students of Madras in regard to appointments in the Public Works Department, Burma.

3. I beg to request that, when final orders have been passed on this letter, the necessary alterations may be made in the draft revised rules of the College of Engineering, Madras, now before Government.

Memorandum from the Public Works Department, dated 14th December 1897, No. 5424 C.

From the Honourable Mr. D. DUNCAN, M.A., D.Sc., LL.D., Director of Public Instruction, to the Secretary to Government, Educational Department (through the Chief Engineer, Public Works Department), dated Madras, 24th January 1898, No. 515.

I have the honour to request that the sanction of Government may be obtained for substituting the following sentence for the second sentence of Article XIV (v) of the draft revised rules of the College of Engineering now before Government:—

"Leave of absence in excess of one month shall involve loss of stipend, and the practical course shall be extended by a period equal to the excess over one month of the leave taken."

2. The rule as now amended fully embodies the instructions contained in paragraph 2 (6) of G.O., No. 560, Educational, dated 28th July 1892.

Forwarded.

Endt. No. 634 C.

The proposed amendment is in accordance with orders already issued by Government.

3rd February 1898.

(Signed)

W. B. DEWINTON,
Ag. Chief Engineer.

From the Honourable Mr. D. DUNCAN, M.A., D.Sc., LL.D., Director of Public Instruction, to the Secretary to Government, Educational Department (through the Chief Engineer, Public Works Department), dated Madras, 8th February 1898, No. 1204.

Under the rules relating to admission of candidates for the artizan class of the College of Engineering, each applicant is required to pay a registration fee of Rs. 8. The Principal has brought to notice that the majority of applications for this class are received from candidates who are not fully qualified for admission and who are tempted to make such applications on trial, either after the prescribed date or with a knowledge of their disqualification, under the impression that, should their applications be not registered, they can obtain a refund of the registration fee paid by them. Thus the object of the imposition of registration fees which was originally intended as a check against frivolous applications of this sort is frequently defeated. I therefore beg to suggest, as recommended by the Principal, that the registration fee be raised from Rs. 8 to Re. 1 and that it be ruled that the fee be ordered to be paid into some Government treasury, the treasury receipt being attached to the candidate's application and that a fee once paid should, on no account whatsoever, be refunded.

2. The registration fee has hitherto been generally sent to the Principal in the shape of private postage stamps which it has been found difficult to dispose of, and the payment of the fee into a treasury as suggested above will remove this difficulty.

3. Should my suggestions meet with the approval of Government, I beg to request that the following may be substituted for the last two sentences of Article VIII (5) of the draft revised rules of the College of Engineering already submitted to Government:—

"The fee for registration shall be Re. 1, which shall be paid into a Government treasury and which shall, on no account, be refunded. The treasury receipt should be attached to the application, which will be received by the Principal up to the first Monday in November."

Forwarded.

Endt. No. 1031 C.

2. The Chief Engineer has no objection to offer to the Director's proposal, but it would perhaps simplify matters if, instead of a treasury receipt, a court-fee label of Re. 1 were attached to each application.

19th February 1898.

(Signed)

S. B. MURRAY,
Ag. Deputy Chief Engineer.

ORDER—No. 530, Educational, dated 22nd August 1898.

The revised rules of the College of Engineering submitted by the Director of Public Instruction are approved with the following modifications and remarks:—

2. (1) To Article I the following clause will be added:—

"(iii). The college will also provide technical instruction to maistries and artisans."

(2) Article VIII (5) (ii).—The Government agrees with the Director of Public Instruction that the fee for registration should be raised to one rupee, and the sentence reading "The fee for registration shall be 8 annas" will be altered as follows:—

"The fee for registration shall be one rupee, which shall be paid into a Government treasury, or be remitted by money order, and which shall on no account be refunded. The treasury receipt should be attached to the application, which will be received by the Principal up to the first Monday in November. If the payment be made by money order, particulars must be entered in the coupon to be retained by the payee."

(3) Article IX.—This article has been amplified so as to correspond with the revised paragraph 1335, Army Regulations, India, Vol. II, Part I, which the Director of Public Instruction was asked to revise in G.O., No. 177, Educational, dated 22nd March 1897. The revised draft of paragraph 1335 submitted by the Director of Public Instruction with his letter, dated 12th June 1897, is approved with the modification that the amount of the monthly college allowance will be raised from Rs. 10 to Rs. 11 as recommended by the Principal of the College of Engineering. Article IX of the revised rules will be altered in accordance with the revised paragraph.

(4) Article X (iii).—The Government considers that it is inadvisable to raise the scale of fees for the final examination in view of the fact that the students are generally poor and that it is proposed to raise the term fees for the sub-overseer and surveyor class. It should be considered whether, in order to make the examination as nearly self-supporting as possible, the Examiners' stipends cannot be reduced. The Director of Public Instruction will be requested to report on this point.

(5) Article XIV (v).—The amendment to the second sentence of clause V proposed by the Director of Public Instruction in his letter, dated 24th January 1898, is approved.

(6) Article XVII.—In clause (i) after the words "B. E. degree examination of the Madras University" should be inserted the words "and fulfilled the conditions of paragraph 11, Chapter II, Vol. I, Public Works Department Code."

In the second line of clause (ii) of the same article for the words "will be available" should be substituted the words "are likely to be available."

(7) Article XXI (ii).—With reference to G.O., No. 1858 W., dated 22nd July 1898, the first sentence of this clause will be amended as follows:—

"The practical course will extend over a complete year, and this period will be reckoned from the dates on which the students join their divisions."

In the second sentence of the same clause for the word "they" will be substituted the words "such students."

3. The alterations noted above will be carried out in the draft submitted by the Director of Public Instruction, which will be forwarded to the Superintendent, Government Press, for publication in the *Fort St. George Gazette*.

4. The revised rules shall come into effect from the 1st January 1899.

(True Extract.)

To the Director of Public Instruction.
" Principal, College of Engineering.
" Public Works Department.
Gazette.

Ed. A. F. Eccleston.

[Signature]
for Secretary to Government.

[Appendix.

APPENDIX.

I.—RULES RELATING TO THE CONSTITUTION AND WORKING OF THE
COLLEGE OF ENGINEERING, MADRAS.

PREAMBLE.

Preamble.—The following code of rules relating to the constitution and working of the College of Engineering has been sanctioned by Government:—

ARTICLE I.—OBJECT.

- (i) The college, which is affiliated to the Madras University, affords theoretical and practical instruction in subjects qualifying for the professions and callings of Engineer, Engineer Subordinate Surveyor and Draftsman, in view of fitting them for employment in such capacities by Government, by local boards and municipalities, and by other agencies.
- (ii) Students of the higher course in Engineering are, at the same time, prepared for the B.E. degree Examination of the Madras University.
- (iii) The college will also provide technical instruction to maistries and artisans.

ARTICLE II.—CONTROL.

The responsibility for the discipline and management of the college is vested in the Principal, under the control of the Director of Public Instruction.

ARTICLE III.—STAFF.

- (i) The staff shall consist of a Principal, a Professor of Engineering, a Professor of Mathematics, an Instructor in Surveying and Drawing, an Instructor in Engineering, and eleven Assistants.
- (ii) Special lecturers may also, when necessary, be employed with the sanction of Government.
- (iii) The Principal shall be an Engineer, Civil or Military.
- (iv) The Professor of Engineering shall be an officer of the Indian Educational service and the Professor of Mathematics shall be an officer either of that service or of the Provincial Educational Service. The Professor of Engineering may be required to inspect and examine technical and higher class industrial schools in the subjects in which he may be considered competent to examine.

ARTICLE IV.—CLASSES.

- The college shall contain the following classes:—
- (i) *Engineer class*—for the training of Civil and Mechanical Engineers.
- (ii) *Engineer Subordinate class*—for the training of Upper Subordinates for the Public Works Department, local boards and municipalities.
- (iii) *Sub-Overseer and Surveyor class*—for the training of Lower Subordinates and Surveyors for the Public Works Department, the Survey Department, local boards and municipalities.
- (iv) *Draftsman class*—for the training of Mechanical Draftsmen and Estimators.
- (v) *Maistry and Artisan class*—for the professional instruction of persons who are Maistries or Artisans, or the sons of such.
- The Engineer and Engineer Subordinate classes constitute the college department, and the other classes of the school department.

ARTICLE V.—COURSES OF INSTRUCTION.

The courses of instruction in the several classes shall be as follows:—

(1) ENGINEER CLASS.

- (i) The course shall extend over four years, of which three shall be spent in the college and the fourth chiefly on works. The course in the college shall be both theoretical and practical. Theoretical instruction shall be conveyed by lectures; while the practical work shall consist of surveying in the field, drawing, and work in the workshops and laboratories. Marks for practical work shall be assigned by the college staff, and these marks shall count towards the final total. Students who desire to become Civil Engineers shall spend the final year in a Public Works division; those who wish to become Mechanical Engineers shall spend it in an Engineering Workshop. Students shall receive lessons in riding during the practical course.

(ii) The subjects of study and the marks assigned to each shall be as follows:—

	Marks.
I. <i>Mathematics.</i> —Algebra (75), geometry (100), mensuration (75), plane trigonometry (75), differential and integral calculus (125)	450
II. <i>Science.</i> —Physics (325), chemistry (100), practical work (75)	500
III. <i>Engineering.</i> —Building materials (50), building construction (100), hydraulic engineering (100), applied mechanics (150), mechanism and the steam engine (100), practical work (200)	700
IV. <i>Drawing.</i> —Geometrical and perspective drawing (60), freehand and model drawing (40), building drawing (150), machine drawing (100), estimating (100), practical work (150)	600
V. <i>Surveying.</i> —Surveying (75), levelling (75), theodolite (75), topographical drawing (100), practical work (175)	500
VI. <i>Vernacular Language.</i> —Tamil or Telugu *	150
VII. <i>Physical Fitness.</i> —Gymnastics and drill	100
Total ..	3,000

(iii) Of the total marks, 2,300 shall be awarded by the Board of Examiners for examination work, and 700 by the college staff for practical work and physical fitness. The marks given by the college staff shall, however, be submitted to the Board for approval. Term examinations shall be held at the end of the first and second years, at which, portions of the above subjects shall be finally disposed of by the Board of Examiners. The marks awardable at these examinations shall be included in the final total.

(iv) In order to pass the examination, students must obtain one-third of the marks assigned to each of the four subjects, namely, (1) Mathematics, (2) Engineering, (3) Drawing and (4) Surveying, one-fourth of the marks assigned to Science, and one-half of the total marks awarded by the Board of Examiners and the college staff separately. Students who obtain not less than three-fourths of the total marks shall be declared to have passed in the first class, and all other successful students in the second class. Students shall be expected to present themselves for the first examination in Engineering of the Madras University at the end of their second year of study, and for the B.E. degree Examination at the end of their third year.

(v) Students who are successful at the college final examination shall proceed to the practical course. Those who elect to become Civil Engineers shall be posted to a division where large public works are in progress, and will be regularly instructed in the preparation of materials, the practical details of construction, the management of labour, and in accounts. Those who elect to become Mechanical Engineers will proceed to the Public Works Workshops. One Mechanical Engineer student will be permitted each year to join the Madras Railway Locomotive shops at Perambūr, the concession being offered in the order of merit at the final examination. The premium will be Rs. 500, of which half will be defrayed by the Educational Department, the other half being met by the student. The premium will cover a course of two years, of which one year is obligatory. Other Mechanical Engineers may attend at Perambūr on payment of the full premium.

(2) ENGINEER SUBORDINATE CLASS.

(i) The course shall extend over three and-a-half years, of which two and-a-half shall be spent in the college, and one year on works or in the workshops. The course in the college shall be both theoretical and practical. Theoretical instruction shall be conveyed by lectures, while the practical work shall consist of surveying in the field, drawing, and work in the workshops. Marks for practical work shall be assigned by the college staff, and these marks shall count towards the final total. The course on works shall be in a division of the Public Works Department. Students shall receive lessons in riding during the practical course.

(ii) The subjects of study and the marks assigned to each shall be as follows:—

	Marks.
I. <i>Mathematics.</i> —Algebra (75), geometry (75), mensuration (100), plane trigonometry (100)	350
II. <i>Engineering.</i> —Building materials (50), building construction (100), hydraulic engineering (100), applied mechanics (125), mechanism and the steam engine (75), practical work (150)	600
III. <i>Drawing.</i> —Geometrical and perspective drawing (40), freehand and model drawing (35), building drawing (100), machine drawing (75), estimating (75), practical work (125)	450
IV. <i>Surveying.</i> —Surveying (75), levelling (75), theodolite (50), topographical drawing (75), practical work (125)	400
V. <i>Vernacular Language.</i> —Tamil or Telugu *	125
VI. <i>Physical Fitness.</i> —Gymnastics and drill	75
Total ..	2,000

* Tamil to be obligatory for natives whose mother tongue is Telugu and vice versa. The choice of one of these two languages to be open to all other students.

(iii) Of the total marks, 1,525 shall be awarded by the Board of Examiners for examination work, and 475 by the college staff for practical work and physical fitness. The marks given by the college staff shall, however, be submitted to the Board for approval. Term examinations shall be held at the end of the first and third half-years, at which, portions of the above subjects shall be finally disposed of by the Board of Examiners. The marks awardable at these examinations shall be included in the final total.

(iv) In order to pass the examination students must obtain one-third of the marks assigned to each of the four subjects, namely, (1) Mathematics, (2) Engineering, (3) Drawing and (4) Surveying and one-half of the total marks awarded by the Board of Examiners and the college staff separately. Students who obtain not less than three-fourths of the total marks shall be declared to have passed in the first class, and all other successful students in the second class.

(v) Students who are successful at the college final examination shall be posted to a division where large public works are in progress, and shall be regularly instructed in the preparation of materials, the practical details of construction, the management of labour, and in accounts.

(3) SUB-OVERSEER AND SURVEYOR CLASS.

(i) The course shall extend over two years, and shall be both theoretical and practical. Theoretical instruction shall be given in class, while the practical work shall consist of surveying in the field, drawing, and work in the workshops. Marks for practical work shall be assigned by the college staff and these marks shall count towards the final total.

(ii) The subjects of study and the marks assigned to each shall be as follows:—

	Marks.
I. <i>Surveying</i> .—Surveying (100), levelling (100), theodolite (100), topographical drawing (100), practical work (300)	700
II. <i>Engineering</i> .—Building materials (75), building construction (150), practical work (50)	275
III. <i>Drawing</i> .—Geometrical drawing (75), building drawing (150), estimating (150), practical work (100)	475
IV. <i>Physical Fitness</i> .—Gymnastics and drill	50
Total	1,500

(iii) Of the total marks, 1,000 shall be awarded by the Board of Examiners for examination work, and 500 by the college staff for practical work and physical fitness. The marks given by the college staff shall, however, be submitted to the Board for approval. A term examination shall be held at the end of the first year, at which, portions of the above subjects shall be finally disposed of. The marks awardable at this examination shall be included in the final total.

(iv) In order to pass the examination, students must obtain one-third of the marks assigned to each of the three subjects, namely, (1) Surveying, (2) Engineering and (3) Drawing and one-half of the total marks awarded by the Board of Examiners and the college staff separately. Students who obtain not less than three-fourths of the total marks shall be declared to have passed in the first class, and all other successful students in the second class.

(4) DRAFTSMAN CLASS.

(i) The course shall extend over two years.

(ii) The subjects of study and the marks assigned to each shall be as follows:—

	Marks.
I. { <i>Geometrical and perspective drawing</i> (75) <i>Freehand and model drawing</i> (75)	150
II. <i>Building Construction and Drawing</i> .—Building construction (125), building drawing (275)	
III. <i>Machine Drawing</i>	400
IV. <i>Estimating</i>	200
	250
Total	1,000

(iii) The whole of these marks shall be assigned by the Board of Examiners. A term examination shall be held at the end of the first year, at which portions of the above subjects shall be finally disposed of. The marks awardable at this examination shall be included in the final total.

(iv) In order to pass the examination, students must obtain one-third of the marks assigned to each of the four subjects and one-half of the total marks. Students who obtain not less than two-thirds of the total marks shall be declared to have passed in the first class, and all other successful students in the second class.

(5) MAISTRY AND ARTISAN CLASS.

(i) The subjects of study shall be—

- I. *Arithmetic*.
- II. *Mensuration*.
- III. *Building materials and construction*.
- IV. *Plan drawing and estimating*.
- V. *Surveying*.

(ii) No examination will be held, but a certificate of attendance shall be given after a period of one year's regular study. Students are, however, expected to appear for the elementary grade of the Government Technical examinations in the above subjects. The class shall be an evening one, and instruction shall be given, when necessary, through the medium of the vernacular languages.

ARTICLE VI.—STRENGTH OF CLASSES.

The number of students to be admitted annually shall ordinarily be limited to 15 in the Engineer class, 30 in the Engineer subordinate class, 30 in the Sub-overseer and Surveyor class, 30 in the Draftsman class, and 40 in the Maistry and Artisan class.

ARTICLE VII.—ADMISSIONS AND WITHDRAWALS.

(i) All applications for admission shall be submitted in a prescribed form.

(ii) Admissions shall be once a year:—(1) for the Engineer class on the last Monday in January; (2) for the Engineer Subordinate class on the first Monday in July; (3) for the Sub-overseer and Surveyor class, and for the Draftsman class on the fourth Monday in January; and (4) for the Maistry and Artisan class on the last Monday in January.

(iii) The Principal may refuse admission to any candidate whose previous conduct has not been satisfactory. His order shall be subject to appeal to the Director, whose decision shall be final.

(iv) Withdrawals in the case of scholarship-holders shall, except for good and sufficient reasons, be allowed only on completion of the course for which the scholarships have been awarded.

ARTICLE VIII.—QUALIFICATIONS FOR ADMISSION.

(1) Engineer Class.

(i) Candidates must have passed the First Examination in Arts of the Madras University or an examination accepted by Government as equivalent thereto and must be between the ages of 17 and 22 years on the 31st December preceding the year of admission. Candidates otherwise qualified, but whose ages exceed the maximum above laid down may be admitted with the sanction of the Director of Public Instruction, if the strength of the class permits. Students so admitted shall be ineligible for guaranteed appointments and for prizes and scholarships.

(ii) Admissions shall be regulated by a competitive examination to be held annually on the first Monday in December at the College of Engineering and at Rajahmundry, Bellary, Kumbakonam, Madura, Calicut and Trivandrum. The scheme of examination shall be as follows:—

	Marks.
Arithmetic (the whole)	100
Algebra (including quadratic equations and the binomial theorem)	75
Geometry (Euclid Books I to IV, VI, and XI to prop. 21)	75
Mensuration	50
Trigonometry (including the solution of plane triangles)	100
English Composition	80
Hand-writing (to be judged from the paper on English Composition)	60
Elementary Drawing	60
Total	600

The qualifying minimum shall be 240 marks.

The fee for admission to this examination shall be Rs. 20. Applications will be received by the Principal up to the first Monday in November.

(iii) The first fifteen qualified candidates on the list shall be selected for admission, provided that, if four Europeans and Eurasians and three Muhammadans be not within the first fifteen, the number under each may be made good, in order of merit, from the other qualified candidates. The names of successful candidates shall be published in the *Fort St. George Gazette*.

(iv) The candidates shall join the college on the last Monday in January (unless appearing for the B.A. degree Examination, when they shall present themselves on the first Monday in February), and shall each on that day deposit with the Principal—

- (a) the sum of Rs. 100, which shall be drawn against for books and instruments;
- (b) a health certificate from a Gazetted Government Medical officer to the effect that the candidate is fit for the out-door work of the Public Works Department, and that he has had small-pox or has been vaccinated;
- (c) his University certificate;
- (d) testimonials of good character covering the last two years;
- (e) his horoscope or other evidence of age;
- (f) a leaving certificate from his last school.

(2) *Engineer Subordinate Class.*

(i) Candidates must have passed the Upper Secondary Examination, or the Matriculation Examination of the Madras University, or an examination accepted by Government as equivalent thereto and must be between the ages of 16 and 21 years on the 31st December preceding the year of admission.

(ii) Admissions shall be regulated by a competitive examination, to be held annually on the last Monday in April at the College of Engineering and at Berhampur, Vizagapatam, Rajahmundry, Masulipatam, Bellary, Kurnool, Nellore, Kumbakonam, Madura, Calicut, Mangalore and Trivandrum.

The scheme of examination shall be as follows:—

	Marks.
Arithmetic (the whole)	125
Algebra (including quadratic equations)	75
Geometry (the first four Books of Euclid)	100
English Composition	80
Hand-writing (to be judged from the paper on English Composition).	60
Elementary Drawing	60
Total	500

The qualifying minimum shall be 200 marks.

The fee for admission to this examination shall be Rs. 15. Applications will be received by the Principal up to the third Monday in March.

(iii) The first thirty qualified candidates on the list shall be selected for admission, provided that, if five non-commissioned officers or soldiers of British Regiments, six other Europeans and Eurasians, and five Muhammadans be not within the first thirty, the number under each may be made good, in order of merit, from the other qualified candidates. The names of selected candidates shall be published in the *Fort St. George Gazette*.

(iv) The civilian candidates shall join the college on the first Monday in July, and shall each on that date deposit with the Principal—

- (a) the sum of Rs. 75, which shall be drawn against for books and instruments;
- (b) a health certificate from a Gazetted Government Medical officer, to the effect that the candidate is fit for the out-door work of the Public Works Department, and that he has had small-pox or has been vaccinated;
- (c) his University or Upper Secondary Examination certificate;
- (d) testimonials of good character covering the last two years;
- (e) his horoscope or other evidence of age;
- (f) a leaving certificate from his last school.

(3) *Sub-overseer and Surveyor Class.*

(i) Candidates must have passed the Lower Secondary or the late Middle School Examination, and must be between the ages of 16 and 22 years on the 31st December preceding the year of admission.

(ii) Admissions shall be regulated by a competitive examination to be held annually on the first Monday in December at the College of Engineering and at Berhampur, Vizagapatam, Rajahmundry, Masulipatam, Bellary, Kurnool, Nellore, Kumbakonam, Madura, Calicut, Mangalore and Trivandrum. The scheme of examination shall be as follows:—

	Marks.
Arithmetic (to the end of fractions)	100
English Composition	100
Hand-writing (to be judged from the paper on English Composition)	100
Drawing (copying a lithographed drawing)	100
Total	400

The qualifying minimum shall be 200 marks.

The fee for admission to this examination shall be Rs. 10. Applications will be received by the Principal up to the third Monday in October.

(iii) The first thirty qualified candidates on the list shall be selected for admission provided that, if four Europeans or Eurasians and three Muhammadans be not within the first thirty, the number under each may be made good, in order of merit, from the other qualified candidates. The names of successful candidates shall be published in the *Fort St. George Gazette*.

(iv) The candidates shall join the college on the fourth Monday in January, and shall each on that day deposit with the Principal—

- (a) the sum of Rs. 75, which shall be drawn against for books and instruments;
- (b) a health certificate from a Government Medical officer to the effect that the candidate is fit for the out-door work of the Public Works Department, and that he has had small-pox or has been vaccinated;
- (c) his Lower Secondary or Middle School Examination certificate;
- (d) testimonials of good character covering the last two years;
- (e) his horoscope or other evidence of age;
- (f) a leaving certificate from his last school.

(4) *Draftsman Class.*

The rules of admission to the Draftsman class shall be the same as those for the Sub-overseer and Surveyor class, except that the health certificate need testify only to the candidate's fitness for the public service, and that the deposit shall be one of Rs. 60.

(5) *Artisan Class.*

(i) Candidates must be between the ages of 16 and 22 on the 31st December preceding the year of admission.

(ii) Admissions shall be by selection from persons who are employed as maistries or artisans, or from persons who have some practical knowledge of the building trades, or from the sons of maistries and artisans. The fee for registration shall be one rupee, which shall be paid into a Government treasury, or be remitted by money order, and which shall on no account be refunded. The treasury receipt should be attached to the application which will be received by the Principal up to the first Monday in November. If the payment be made by money order, particulars must be entered in the coupon to be retained by the payee.

(iii) Forty candidates shall be selected for admission, and their names shall be published in the *Fort St. George Gazette*.

(iv) The selected candidates shall join the college on the last Monday in January, and shall each on that day deposit with the Principal—

- (a) a certificate that he has had small-pox or has been vaccinated;
- (b) testimonials of good character covering the last two years;
- (c) his horoscope or other evidence of age.

ARTICLE IX.—MILITARY STUDENTS.

(i) Non-commissioned officers and soldiers of Her Majesty's British service, desirous of qualifying for employment in the Public Works Department, will, to the number of five annually, be admitted to the college by a competitive examination. Candidates must be soldiers of thoroughly good character well recommended by their commanding officers and under 28 years of age. Applications will be received by the Principal up to the second Monday in March. Each candidate's application shall be forwarded by his Commanding officer to the Principal and shall be accompanied by the following documents relating to the candidate:—

- (a) extract from regimental defaulter's and court-martial books for the whole period of service;
- (b) extract from the Company defaulter's book for the preceding two years;
- (c) certificate that the candidate has never been dismissed from staff employment;
- (d) statement whether the candidate is married or unmarried;
- (e) certificate of perfect eye-sight, sound health and unimpaired constitution, signed by a Medical officer in the following form:—

I certify that I have carefully examined
his eye-sight is perfect, and he has no disease, constitutional affection or bodily infirmity, unfitting him, or likely to unfit him, for active out-door employment as an Upper Subordinate in the Public Works Department.

and that to the best of my belief

Name.

Designation.

(ii) If these certificates are satisfactory, the Principal shall forward to the Commanding officer papers of questions for the following examination * to be held on the last Monday in April:—

	Marks.
English composition	80
Hand-writing	60
Arithmetic (the whole)	125
Algebra (including quadratic equations)	75
Geometry (the first four Books of Euclid)	100
Elementary Drawing	60
Total ..	500

The qualifying minimum shall be 200 marks.

(iii) The five qualified candidates who stand highest on the list shall be selected and shall join the college in the following July.

On joining the college they shall bring with them—

- a descriptive roll;
- the record of service;
- a last-pay certificate;
- last clothing and bedding certificates;
- a certified list of clothing and necessities in their possession when quitting their regiments;
- a certificate of the carriage, if any, furnished to them at the Government expense, &c., on leaving their regiments to proceed to Madras.

When not furnished with carriage to enable them to join, a certificate shall be given to this effect and they shall then receive travelling allowance at the rate of one anna per mile. A double allowance shall be granted to married men accompanied by their wives.

(iv) While studying at the college they shall be considered as doing duty, and shall remain on the strength of their respective regiments, without prejudice to their promotion and other advantages until appointed to the Public Works Department. Military students shall be provided with barracks and married quarters at the college, they shall wear the undress or fatigue uniform of their rank and regiment, and they shall be under the command of the Principal, or, in his absence, of the Superintendent of Military students. They shall receive, whilst at the college, the same pay as with their regiments, including good-conduct pay when entitled to it, together with rations or compensation in lieu, and a college allowance of Rs. 11 per mensem to cover extra messing and other expenses. They shall be exempted from the payment of college fees, and shall be supplied *gratis* with drawing instruments and the text-books in use. They shall not compete for civil scholarships, but shall be eligible for medals and prizes. The Principal may remand any student to his regiment for insufficient progress or unsatisfactory conduct.

(v) The course of study and examinations shall be those of the Engineer Subordinate class. Those men who pass the final examination shall, in order of merit and to the extent of the requirements of the Public Works Department of Madras and Burma, be appointed apprentice overseers for one year. Two appointments as apprentice overseer in the Madras Public Works Department will be given every year. In addition an appointment as apprentice overseer in the Burma Public Works Department may be expected annually. Students who qualify, but do not pass sufficiently high for immediate appointment, shall revert to their regiments pending selection in any subsequent year in which less than the guaranteed number pass the examination.

(vi) During their practical year, the Military apprentices shall retain their position as students, and shall continue to be borne on college and regimental lists. Their military pay and clothing shall be drawn from the Military Department by the Executive Engineers of the divisions to which they are attached. They shall be provided with free quarters or compensation in lieu, and receive a staff allowance sufficient to bring their total consolidated pay up to Rs. 80 per mensem. Married men shall receive in addition the usual regimental allowances for wife and children. The apprentice overseers, if favourably reported on, shall, at the termination of the practical year, be transferred, in the rank of Sergeant, to the Unattached List, and posted to the Public Works Department as first-grade overseers. Any apprentice who is unfavourably reported on shall revert to his regiment. An outfit allowance of Rs. 150 shall be granted to Military apprentices on their appointment to the department.

(vii) Military apprentices shall receive travelling allowance at the rate of two annas per mile, or in case of portions of the journey performed by railway, at one anna and a half per mile, for the journey from Madras to the site of the work to which they are posted, and for all journeys performed on transfer during their apprenticeship.

* NOTE.—The first examination under this rule will be held in April 1900.

ARTICLE X.—FEES.

(i) *Tuition fees.*—The following shall be the fees payable in advance by students while at college. Fees shall, under no circumstances, be returned after a student has been admitted to the institution:—

Class.	Monthly rate.	Per term, if paid in advance.	For the full theoretical course, if paid in advance.
	RS.	RS.	RS.
Engineer class	12	68	360
Engineer Subordinate class	6	34	150
Sub-overseer and Surveyor class	5	28	100
Draftsman class	4	22	80
Maistry and Artisan class	1	5	10

(ii) *Special fees.*—A contribution of Rs. 2 per term shall be made by each student, excepting students of the Maistry and Artisan class, to the recreation club. The riding course fee for students of the Engineer and Engineer Subordinate classes shall be Rs. 15. The premium payable by Mechanical Engineer students at Perambur is laid down in Article V.

(iii) *Examination fees.*—Students shall pay fees at the following rates for admission to the final examinations:—

	RS.
Engineer class	20
Engineer Subordinate class	15
Sub-overseer and Surveyor class	10
Draftsman class	10

ARTICLE XI.—SCHOLARSHIPS, STIPENDS AND PRIZES.

The following scholarships, stipends and prizes are awardable to the different classes:—

(1) Engineer Class.

(i) Three scholarships of the monthly value of Rs. 15 each will be annually awarded: two of them will be awarded to the two candidates standing highest at the entrance examination, who are admitted to the class, and the third to a Muhammadan, or a Native Christian, or a European or Eurasian, in the order mentioned, who is admitted to the class and who does not secure a merit scholarship. The scholarships shall be renewed on the results of each term examination.

(ii) A gold medal will be awarded to the student who passes first in the final examination.

(iii) During the year of practical training, subsistence allowances of Rs. 50 per mensem for Europeans and Eurasians, and Rs. 25 per mensem for Natives shall be granted. Such allowances shall, however, be contingent on the good conduct and satisfactory progress of the student; and on proof of misconduct or idleness, the allowances may be reduced or withdrawn by the Executive Engineer. Travelling allowances to students joining or on the works shall be drawn at the rates sanctioned for officers of the third class under the Civil Service Regulations.

(2) Engineer Subordinate Class.

(i) Three scholarships of the monthly value of Rs. 10 each will be annually awarded to the civilian students: two of them will be awarded to the two candidates standing highest at the entrance examination, who are admitted to the class, and the third to a Muhammadan, or a Native Christian, or a European or Eurasian, in the order mentioned, who is admitted to the class and who does not secure the merit scholarship. The scholarships shall be renewed on the results of each term examination.

(ii) A silver medal will be awarded to the student who passes first at the final examination.

(iii) The 'Walker' scholarship of the value of about Rs. 13 per mensem shall be tenable for two and-a-half years by a student of this class who is a native of the Malabar, South Canara, or Nilgiri district, and who possesses a fair knowledge of Malayalam or Canarese.

(iv) The 'Rogers' prize of the value of about Rs. 20 shall be given annually in books to the most distinguished student of the class after the final examination.

(v) During the practical year subsistence allowances of Rs. 30 per mensem for Europeans and Eurasians, and Rs. 20 per mensem for Natives will be granted. Such allowances shall, however, be contingent on the good conduct and satisfactory progress of the student; and

on proof of misconduct or idleness, the allowances may be reduced or withdrawn by the Executive Engineer. Travelling allowances to students joining or on the works will be drawn at the rates sanctioned for officers of the third class under the Civil Service Regulations.

(3) *Sub-overseer and Surveyor Class.*

(i) Three scholarships of the monthly value of Rs. 7 each will be annually awarded: two of these will be awarded to the candidate standing highest at the entrance examination, who is admitted to the class, and the third to a Muhammadan, or a Native Christian, or a European or Eurasian, in the order mentioned, who is admitted to the class and who does not get the merit scholarship. The scholarships shall be renewed during the second year on the results of the term examination at the end of the first year.

(ii) A bronze medal will be awarded to the student who passes first at the final examination.

(4) *Draftsman Class.*

(i) Three scholarships of the monthly value of Rs. 7 each will be annually awarded on the same conditions as those given in the Sub-overseer and Surveyor class.

(ii) A bronze medal will be awarded to the student who passes first at the final examination.

(5) *Special Prizes.*

(i) Prizes consisting of instruments or books will be given in all the above classes for special proficiency in particular subjects.

(ii) Three 'Sir Madhava Rau' prizes of the value of Rs. 20 each will be given annually, under certain prescribed conditions, for proficiency in practical work. When possible, one prize will be awarded to a Mahratta Brahman.

(6) *Stipends in Workshops.*

Four stipends of the monthly value of Rs. 6 for the first year, Rs. 7 for the second year, and Rs. 8 for the third year will be awarded annually to young men who have passed the elementary technical examination in carpentry or blacksmith's work, and who join the college workshop with a view to be trained as teachers in technical or industrial schools or in school workshops for manual training. The course shall extend over three years during which time the students shall be prepared for the highest technical examination in cabinet-making, or carpentry, or fitters' work. The students shall ordinarily work in the workshop for thirty-five hours per week and will be allowed one month's vacation in the hot weather and the ordinary authorized holidays. They shall be required, if need be, to serve as teachers for two years, and to submit half-yearly reports as to how they are employed for three years after leaving the workshops.

NOTE.—Scholarships and stipends may be reduced or forfeited for misconduct, idleness or want of progress.

ARTICLE XII.—TIME TABLE.

(i) The hours of attendance at the college shall be from 10 A.M. to 1 P.M. and from 2 to 4-30 P.M. The field work and workshop hours shall, from time to time, be fixed by the Principal.

(ii) The Principal shall submit a time table annually for the approval of the Director. No material change shall be made in the time table or in the general arrangement of the college work without his sanction.

ARTICLE XIII.—VACATIONS AND HOLIDAYS.

(i) The college shall be closed for the midsummer vacation from the 1st May to the first Monday in July and for the Christmas vacation from 23rd December to 17th January.

(ii) The casual holidays allowed in chapter III of the Educational Rules shall apply to this college in so far as its special character may allow.

ARTICLE XIV.—LEAVE AND DISMISSAL.

(i) Students may obtain leave of absence by application to the Principal.

(ii) Scholarship-holders shall forfeit their scholarships during any period, however short, of absence without leave, and shall be further liable to have their scholarships withdrawn, if they absent themselves without leave for five consecutive working days.

(iii) In cases of severe illness certified to by a competent medical authority, sick leave with scholarship may be given by the Principal for a fortnight. If such leave is granted for a period exceeding a fortnight, the excess period shall be leave without allowances.

(iv) Any student who has obtained admission into the college by means of a false certificate or by false representations of any kind, or who has been found guilty of grave misconduct, shall be summarily dismissed; the fact of such dismissal and the reasons for it being at once reported to the Director.

(v) Leave may be granted during the practical course for a period or aggregate of periods not exceeding one month per annum. Such leave shall not entail forfeiture of stipend, but any leave in excess of one month shall involve loss of stipend and the practical course shall be extended by a period equal to the excess over one month per annum of the leave taken.

ARTICLE XV.—EXAMINATIONS.

(i) All term and final examinations shall be conducted by an independent Board of Examiners, consisting of a President and two members appointed by Government, on the recommendation of the Director of Public Instruction, for a term of three years. When necessary, the Board may, with the sanction of Government, employ Assistant Examiners. The decision of the Board of Examiners in regard to the qualifications of any student appearing for examination shall be final. The names of all students declared by the Board to have passed a final examination shall be published in the *Port St. George Gazette*. After completing the annual examinations, the Board shall submit a report to Government, through the Director of Public Instruction, summarising the results of the examinations. It may record in the report any observations of a general nature bearing on the working of the college, or make any suggestions it may consider expedient, provided such observations or suggestions arise naturally out of the examination work which the Board has to perform. The report shall be signed by the President and members of the Board.

(ii) The examinations for admission to the several classes shall be conducted by the college staff.

ARTICLE XVI.—DIPLOMAS AND CERTIFICATES.

The following diplomas and certificates shall be issued to students who satisfactorily complete their courses of study:—

(i) *Engineer and Engineer Subordinate classes.*—On the completion of the course in the college a provisional certificate signed by the Principal and the President of the Board of Examiners, shall be issued, showing that the candidate has passed the final examination. On the completion of the practical course, a diploma signed by the Principal and the Director of Public Instruction shall be issued, setting forth the qualifications of the student for employment as a Civil Engineer, a Mechanical Engineer, or as an Engineer Subordinate.

(ii) *Sub-overseer and Surveyor class and Draftsman class.*—On the completion of the course, a certificate signed by the Principal and the President of the Board of Examiners shall be issued, stating that the student is qualified for employment as a Sub-overseer and Surveyor or as a Draftsman. A student who has passed the final examination of the Engineer Subordinate class, and who elects not to proceed to the practical course, shall be granted a certificate of qualification as a Sub-overseer.

(iii) *Maistry and Artisan class.*—On the completion of the course a certificate of attendance signed by the Principal shall be issued.

ARTICLE XVII.—EMPLOYMENT OF PASSED STUDENTS.

(i) *Engineers.*—One appointment annually as apprentice Engineer shall be conferred on the student who stands highest at the final examination. The apprenticeship shall commence on the 1st January following the examination, and shall ordinarily extend over twelve months, when the apprentice, provided he has passed the B.E. degree Examination of the Madras University and fulfilled the conditions of para. 11, chapter II, Vol. I, Public Works Department Code, shall be brought on the permanent establishment of the Public Works Department, Provincial service, as Third-grade Assistant Engineer. Other fully qualified Engineer students are eligible for appointment to the Upper Subordinate establishment of the Public Works Department, but first appointments shall not, as a rule, be made in a grade higher than that of Overseer, third-grade.

(ii) *Engineer Subordinates.*—The number of appointments as Overseers, third grade, which are likely to be available for each batch of students on the completion of the practical course shall be as notified six months before the final examination. The appointments shall be made on the termination of the practical course in the order of merit at the final examination. Vacancies existing after the guaranteed appointments have been made may be filled by fully qualified Engineers or Engineer Subordinates. Military students required for the Public Works Department shall be appointed apprentice Overseers at the commencement of their final year's course—*vide* article IX. In alternate years, commencing from 1889, one appointment to the Engineer establishment, Provincial service, will be offered to a senior selected Upper Subordinate of the Public Works Department.

(iii) *Sub-overseers and Surveyors.*—Qualified Sub-overseers and Surveyors will be appointed to the Public Works Department as Sub-overseers as vacancies occur. They will be eligible also for employment as Channel Superintendents. When the services of temporary men are required for special surveys not undertaken by the Public Works subordinate staff, the officers in charge are instructed to select for such employment none but passed Surveyors of the college. Qualified men may be appointed Probationary Deputy Surveyors, Madras Survey, on Rs. 50, with the prospect of rising eventually to the rank of Sub-Assistant Superintendent on Rs. 250.

(iv) *Draftsmen*.—Qualified Draftsmen will be appointed to the Public Works Department as Draftsmen and Estimators as vacancies occur.

NOTE.—It shall be the duty of the Principal to render all reasonable assistance to passed students who may not be appointed to the Public Works Department, in seeking employment under local boards and municipalities and other agencies. With this view lists of qualified men, with remarks as to their attainments, conduct, &c., shall be circulated annually to local boards and municipalities, with recommendations that they may be employed in suitable posts when opportunities offer, and the attention of such boards should be invited to G.O., No. 2773 L, L. and M., dated 12th December 1893.

ARTICLE XVIII.—CASUAL STUDENTS.

(i) Applicants who pass the entrance examination, and who produce certificates of good health and good character, make the usual deposit and pay the prescribed fees may be admitted as casual students to the Engineer class, provided that accommodation is available for them. They may present themselves for the term and final examinations, and if they pass they will receive provisional certificates issued to successful students at the end of the college course; but they shall not be eligible for guaranteed appointments or for scholarships or prizes or for the free practical course.

(ii) Other casual students may also be admitted to the Engineer class for one or more terms, on payment of the prescribed fees, for instruction in special subjects, provided that they possess sufficient general education to follow and profit by the instruction given and that accommodation is available for them. They shall not be eligible for any of the college examinations, but may receive a certificate of attendance.

ARTICLE XIX.—INDEPENDENT CANDIDATES.

(i) A student of any of the college classes who has failed to obtain a certificate from the Board at the final examination, may appear before the Board for examination in any subsequent year, provided he is certified to have put in the necessary attendance at the college, and pays a fee as follows:—

	RS.
Engineer candidates	30
Engineer Subordinate candidates	24
Sub-overseer and Surveyor candidates	18
Draftsman candidates	12

(ii) In the case of a candidate for certificate as draftsman, the proviso that he has previously gone through the college course will not, for the present, be exacted.

(iii) Candidates who qualify in this way shall receive the certificates referred to in Article XVI, and their names shall be published in the *Fort St. George Gazette* in a separate list. Engineer and Engineer subordinate independent candidates shall not be eligible for diplomas until they have satisfactorily completed the practical course.

ARTICLE XX.—REGISTERS AND ACCOUNTS.

(i) The following registers shall be kept:—

- (1) Register of admissions and withdrawals for each class.
- (2) Monthly register of attendance, fees and fines for each class.
- (3) Acquittance roll and pay abstract.
- (4) Library catalogue and register and inventory of valuable stock.
- (5) Register of scholarships.
- (6) Register of expenditure on contingencies.

(ii) The register of valuable stock shall be scrutinized every year, the work being entrusted in rotation to one of the senior members of the staff, who shall certify to the correctness of the stock and the entries in the register.

ARTICLE XXI.—MISCELLANEOUS.

(i) All civilian students shall provide themselves with the prescribed books and drawing instruments. They will be non-resident. Strict observance of the standing orders of the institution as regards attendance, discipline, &c., shall be required from all.

(ii) The practical course will extend over a complete year, and this period will be reckoned from the dates on which the students join their divisions. Students during their practical course shall not be under the supervision of the Principal, but officers under whom such students are serving will be required in the Public Works Department to furnish to the Principal half-early reports of their progress in such form as may from time to time be prescribed by Government. All allowances during the practical course shall be debited to the Public Works Department.

(iii) The provisions of the Educational Rules relating to accommodation and sanitation, discipline, dress, periodical examinations and punishments shall apply *mutatis mutandis* to the college, in so far as its special character permits of their application.

(iv) The Principal shall invariably obtain the previous sanction of the Director for any deviation from the prescribed rules.

(v) Extracts from this code of rules with such alterations as may have been sanctioned during the preceding twelve months shall be published every year by the Principal in the first issue of the *Fort St. George Gazette* in January.

Draft revision of paragraph 1535, Indian Army Regulations, Volume

II Part I.

V. College of Engineering, Madras.

1335. The following are the rules for the admission of non-commissioned officers and soldiers to the Engineer Subordinate Class of the College.

(a) Candidates for admission to this class must be soldiers of thoroughly good character of not more than 26 years of age well recommended by their Commanding officers.

(b) Each candidate's application for admission shall be forwarded by his Commanding officer to the Principal, and shall be accompanied by the following documents relating to the candidate:—

(1) Extracts of Regimental defaulters' and Court Martial books from the date of entering the service,

N.B. should there be no entries of any kind against him in these books, it will be sufficient to forward a certificate to this effect.

(2) Extracts from the company defaulter's book for the preceding two years.

(3) Certificate that he has never been dismissed from the staff employment.

(4) A statement that the candidate is married or not married, as the case may be.

(5) A certificate of perfect eyesight, sound health and unimpaired constitution signed by a medical officer in the following form:—

Medical Certificate.

I certify that I have carefully examined----- and that to the best of my belief his eyesight is perfect, and he has no disease, constitutional affection or bodily infirmity, unfitting him or likely to unfit him, for active out door employment as an upper subordinate in the Public Works Department

(c) Should all these certificates &c be satisfactory, papers of questions for the entrance examination will be sent by the Principal (with directions for conducting the examination) to the candidate's Commanding officer.

(d) The following is a list of the subjects for the entrance examination which will be held annually in April.

- (1) English Composition -----30 marks
 (2) Handwriting-----60 ..

Mathematics.

- (3) Arithmetic (the whole)-----125 ..
 (4) Algebra (including Quadratic Equations)-----75 ..
 (5) Geometry (the first four books of Euclid)-----100 ..

Drawing

- (6) Elementary Drawing-----60
 Total 500

Qualifying minimum 200 marks.

M.E. The above examination will be held for the first time in April 1900.

(e) Applications for admission will be received by the Principal up to the second Monday in March. The examination will be held on the last Monday in April. The five qualified candidates who stand highest on the list will be selected for admission.

(f) The names of the selected candidates will be notified and the men will join the College under Military orders on the 1st July following.

(g) On joining the College, they will bring with them

(1) Descriptive roll.

(2) Record of service.

(3) Last pay certificate.

(4) Last clothing and bedding certificate.

(5) Certified list of clothing and necessities in their possession when quitting their Regiments.

(6) Certificate of the carriage, if any, furnished to them at the Government expense on leaving their Regiments to proceed to Madras.

(h) When not furnished with carriage to enable them to join, a certificate is to be given to this effect, and they will then receive travelling allowance at the rate of one anna per mile. A double allowance will be granted to married men accompanied by their wives.

(i) The men while studying at the college will be considered as being duty and will remain on the strength of their respective regiments (without prejudice to their promotion and other advantages) until appointed to the Public Works Department. Staff sergeants of British regiments, however, will not be permitted to

study at the College unless they resign their staff appointments. Soldiers of the unattached list will be required to resign positions on that list and revert to the regimental pay and allowances of the rank which they held previous to their transfer. (k) Whilst at the College the soldier students will wear the dress or fatigue uniform of their rank and Regiment and will be under the command of the Principal or in his absence of the Superintendent of Military students.

(l) They will receive whilst at the college, the same pay as with their Regiments, including good conduct pay when entitled to it together with rations or compensation in lieu; also ^{eleven} ~~ten~~ Rupees per mensem College allowance to cover extra messing and other expenses.

(m) If their conduct is unsatisfactory or if through want of proper diligence they fail to make sufficient progress in their studies they will be remanded to their Regiments.

(n) The course will extend over three years and a half commencing on the 1st July and terminating on the 31st December. Two years and a half including vacations will be spent in the college and one year chiefly on Works.*

* Full particulars of the course of study in all classes: with copies of the examination papers (entrance, term and final) of the past year, are given in the College of Engineering calendar which can be obtained on application to the Librarian, price including postage Rs. 1-12-0.

(o) The vacation will be the months of May and June. Men who are recommended by Medical authority for transfer to the hills will be sent to Wellington Depot. Others will remain at the College. The despatch of men to Wellington is to be arranged for in the ordinary way, any thing special in the manner of sending them to the Depot being avoided. The cost of conveyance will be a Military charge.

(p) At the end of the first, third and fifth term, examinations will be held, the marks awarded at each of which count towards the final total.

(q) Those men who pass the final examination will to the extent of the requirements of the Public Works Departments of Madras and be appointed apprentice Overseers for one year. Two appointments as apprentice overseer in the Madras Public Works Department will be given every year to the superior

- (1) English Co
- (2) Handwrit one appointment as apprentice overseer in the Durma
rls Department may be expected annually. Students who
- (3) Aithm but do not pass sufficiently high for immediate appointment
- (4) Algebert to their regiments pending selection in any subsequent
- (5) Geom which less than the guaranteed number pass the examination.

During the year on Works the Military apprentices will retain

- (6) Fir position as students and will continue to be borne on College
d regimental lists. Their Military pay, clothing and bedding will
e drawn from the Military Department by the Executive Engineers
of the divisions to which they are attached. They will, in addition
be provided with free quarters or compensation in lieu and receive
a staff allowance sufficient to bring their total consolidated pay
up to Rs. 30 per mensem. Married men will receive in addition the
usual regimental allowance for wife and children.

(s) Half yearly reports on apprentices will be forwarded to the
Principal; and permanent appointment to the Public Works Department
will depend upon the opinion of the Chief Engineer in regard to the
steadiness, temper, intelligence and industry of the apprentice and on
his practical knowledge of the description of work in which he has
been instructed.

(t) If this opinion is satisfactory, the passed apprentice will be
transferred with the rank of Sergeant to the unattached list and
posted to the Public Works Department as a first ^{grade} overseer. If the
opinion is unsatisfactory, he will revert to his regiment.

(u) An outfit allowance of Rs. 150 will be granted to the passed
Military apprentice on his appointment to the Department.

(v) Departmental promotion of overseers to the ranks of supervisor
and or Sub-Engineer is regulated by the Chief Engineer. The scale of
consolidated salaries for civilians of the upper Subordinate
Establishment is given below. The salaries of European non-commissioned
officers and soldiers are made up of Military pay and allowances
staff pay. They are never less than those applicable to civilians
and may be somewhat more. Travelling allowance is drawn in addition
and upper subordinates in charge of a sub-division are entitled
a further allowance of Rs. 30 per mensem.

Sub-Engineers

geants of

Rs. 400
Rs. 300

Supervisors.
1st Grade ----- Rs. 200
2nd .. ----- 150

Overseers
1st Grade ----- 100

Military promotion will proceed in accordance with vacancies
in the scale of warrants laid down by the Government of India
for the Public Works Department.

(x) Military apprentices will receive travelling allowance at
the rate of two annas per mile, or in case of portions of the
journey performed by railway, at one anna and a half per mile for
the journey from Madras to the site of the work to which they
are posted, and for all journeys performed on transfer during
their apprenticeship.

19th December 1895

No.

Bd.

6801

From

The Lieutenant-General COMMANDING the FORCES, Madras.

To

The Secretary to the Government of Madras
Public Works Department

Sir,

With reference to G.O. No. 2666 of the 28th October 1895, I have the honor to request that you will be good enough to inform me how closely the rules of the College of Engineering, Madras, can be assimilated to those of the Thomason College, Roorkee, as regards the admission of non-commissioned officers. The rules for the latter are given in para 1330, Volume II, Army Regulations, India, conveying much more information than those in para 1330.

2

I shall be prepared to recommend to the Commander-in-Chief in India, the alteration of para 1335 on the lines of the fuller information afforded by para 1330.

I have the honor to be,
Sir,

Your obedient servant,

W. M. M. Lieut. General
Commanding the Forces, Madras.

Enclosure to 1600 No 6972 of 97

Bd.
6801
13/12/95

18282

Dec 21. 12. 95

No 124 C d/g - January

Referred to the 1896

Director of Public
Instruction for favor
of remarks.

PUBLIC INSTRUCTION
11 JAN 1896

J. H. Russell Lt. Col. R. A.

Chief Engineer, General Building
and Roads Branch

CROSS
6/96

1897
Ed. C. 107

Dec 21 1895

No 1
Referred to
letter No 124
22-7-96
Ed C 107/13