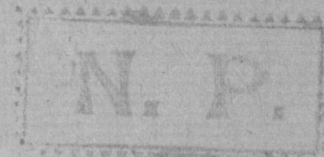


Educational (190 /) Department.

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ORIGINAL

[Despatch Abstract.]

College of Engineering

Approving with certain modifications
the revised rules of the ——— submitted
by the Director

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

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"	488	Edul	2-9-01				
"	605	Edul	25-10-01				
"	734	Edul	27-11-02				
"	209	Edul	11-5-02				
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G.O., No. 366, 28th June 1901.

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College of Engineering.

Approving, with certain modifications, the revised rules of the — submitted by the Director.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

READ—the following paper :—

From the Hon'ble Mr. G. H. STUART, M.A., Barrister-at-Law, Director of Public Instruction, to the Secretary to Government, Educational Department, dated Madras, 12th February 1901, Ref. on C. No. 15927 of 1900.

With reference to paragraph 3 of G.O., No. 576, Educational, dated 12th November last, and in continuation of this office letter, C. No. 80, dated 9th ultimo, I have the honour to submit a copy of the rules of the College of Engineering brought up to date with the modifications necessitated by the Government order quoted above duly made. All reference to the artisan class has been omitted, G.O., No. 573, Educational, dated 8th November 1900, having sanctioned the abolition of the class, and the word "Article" and the roman number denoting each major section have been removed, the heading indicating the subject being retained. The articles have been renumbered as ordered in paragraph 2 of G.O., No. 412, Educational, dated 31st August 1900. A few other verbal alterations have also been made. The modifications now proposed are those in red ink and the reasons for the more important of them are noted against each.

ORDER—No. 366, Educational, dated 28th June 1901.

The revised rules of the College of Engineering submitted by the Director are approved with the following modifications, which the Chief Engineer recommends :—

(i) In rule 25 the marks for building drawing and estimating have been raised to 275 and 250 and that for machine drawing has been reduced to 150.

(ii) In rule 51 the age limit for military candidates for admission to the college has been reduced to 25.

2. The rules, as thus revised, will be published in the *Fort St. George Gazette* and printed as an appendix to this order.

(True Extract.)

C. J. WEIR,
Ag. Secretary to Government.

To the Director of Public Instruction.
" Public Works Department.
Gazette.

Exd, A. D. Xavier.

[Appendix.

APPENDIX.

College of Engineering, Madras.

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

[As authorised from 1st January 1899—vide G.O., No. 530,
22nd August 1898—and corrected up to 31st December 1900.]

PREAMBLE.

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

OBJECT.

1. 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 persons for employment in such capacities by Government, by local boards and municipalities, and by other agencies.

2. Students of the higher course in engineering are, at the same time, prepared for the B.E. degree examination of the Madras University.

CONTROL.

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

STAFF.

4. The staff shall consist of a principal, a professor of civil engineering, a professor of mechanical engineering, a professor of mathematics, an instructor in surveying and drawing, an instructor in civil engineering, an instructor in mechanical engineering, and eight assistants. There shall also be a workshop instructor with foremen assistants and an instructor in gymnastics.

5. Special lecturers may also, when necessary, be employed with the sanction of Government.

6. The principal shall be an engineer, civil or military.

7. The professor of civil engineering shall be a third-grade executive engineer or first-grade assistant engineer of the Public Works department, the professor of mechanical 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.

CLASSES.

8. 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.

9. The engineer and engineer subordinate classes constitute the college department, and the other classes the school department.

COURSES OF INSTRUCTION.

(1) *Engineer Class.*

10. The course of instruction 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.

11. 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

12. 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 awarded at these examinations shall be included in the final total.

13. 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. They must also satisfy the principal of the college in practical surveying. 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.

14. 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

* 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.

labour, and in accounts. Those who elect to become mechanical engineers will proceed to the Public Works workshops but may, if they please, spend the last six months of their practical course at the college workshops. One mechanical engineer student will be permitted each year to join the Madras Railway Locomotive shops at Perambur, 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 Perambur on payment of the full premium.

(2) *Engineer Subordinate Class.*

15. The course of instruction 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.

16. 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 (40), 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

17. 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 awarded at these examinations shall be included in the final total.

18. 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. They must also satisfy the principal of the college in practical surveying. 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.

19. 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.

* 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.

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

20. The course of instruction 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, when possible, work in the workshops. Marks for practical work shall be assigned by the college staff and these marks shall count towards the final total.

21. 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

22. 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 awarded at this examination shall be included in the final total.

23. 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. They must also satisfy the principal of the college in practical surveying. 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.*

24. The course of instruction shall extend over two years.

25. The subjects of study and the marks assigned to each shall be as follows:—

	Marks.
I. <i>Geometrical, &c., Drawing</i> .—Geometrical and perspective drawing (75), freehand and model drawing (75)	150
II. <i>Building Construction and Drawing</i> .—Building construction (125), building drawing (275)	400
III. <i>Machine Drawing</i>	150
IV. <i>Estimating</i>	250
V. <i>Physical Fitness</i> .—Gymnastics and drill	50
Total	1,000

26. Of the total marks, 750 shall be awarded by the Board of Examiners for examination work and 250 (75 for building drawing, 75 for machine drawing, 50 for estimating and 50 for physical fitness) by the college staff. 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 awarded at this examination shall be included in the final total.

27. In order to pass the examination, students must obtain one-third of the marks assigned to each of the four subjects, namely, (1) geometrical, &c., drawing, (2) building construction and drawing, (3) machine drawing and (4) estimating, 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 candidates in the second class.

STRENGTH OF CLASSES.

28. The number of students to be admitted annually shall ordinarily be limited to 15 in the engineer class, 30 in the engineer subordinate class, 35 in the sub-overseer and surveyor class, and 35 in the draftsman class.

ADMISSIONS AND WITHDRAWALS.

29. All applications for admission shall be submitted in a prescribed form.

30. Admissions shall be once a year:—(1) for the engineer class on the 20th January (unless that day falls on a Saturday or Sunday when the students shall join on the following Monday); (2) for the engineer subordinate class on the first Monday in July; and (3) for the sub-overseer and surveyor class, and for the draftsman class on the fourth Monday in January.

31. 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.

32. 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.

QUALIFICATIONS FOR ADMISSION.

(1) *Engineer Class.*

33. 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.

34. Admissions shall be regulated by a competitive examination to be held annually on the third Monday in November and the following day at the college of engineering and at Rajahmundry, Bellary, Kumbakonam, Madura, Calicut and Trivandrum.

35. 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, Propositions 1 to 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.

36. The fee for admission to this examination shall be Rs. 20. Applications will be received by the principal up to the third Monday in October.

37. 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*.

38. The candidates shall join the college on the 20th January (unless that day falls on a Saturday or Sunday when they shall join on the following Monday), 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 outdoor 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.*

39. 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.

40. Admissions shall be regulated by a competitive examination, to be held annually on the last Monday in April and the following day at the college of engineering and at Berhampur, Vizagapatam, Rajahmundry, Masulipatam, Bellary, Kurnool, Nellore, Kumbakonam, Madura, Calicut, Mangalore and Trivandrum.

41. 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.

42. 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.

43. 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*.

44. 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 outdoor 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.*

45. 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.

46. Admissions shall be regulated by a competitive examination to be held annually on the third Monday in November 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.

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

48. The first thirty-five 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-five, 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*.

49. 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 outdoor 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.*

50. 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.

MILITARY STUDENTS.

51. Non-commissioned officers and soldiers of His 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 25 years of age. They must have had not less than two years' service prior to the date of admission to the college. 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 _____ and that to the best of my belief 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.

Name.

Designation.

52. 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.

53. 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.

54. 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.

55. 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 from time to time. 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.

56. 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.

57. 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.

FEES.

58. *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

59. *Special fees.*—A contribution of Rs. 2 per term shall be made by each student 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 rule 14.

60. *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

SCHOLARSHIPS, STIPENDS AND PRIZES.

(1) Engineer Class.

61. 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.

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

63. 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.*

64. 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.

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

66. 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.

67. 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.

68. During the practical course 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.*

69. Three scholarships of the monthly value of Rs. 8 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.

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

(4) *Draftsman Class.*

71. 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.

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

(5) *Special Prizes.*

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

74. 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.*

75. 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.

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

TIME TABLE.

76. 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.

77. 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.

VACATIONS AND HOLIDAYS.

78. 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.

79. The casual holidays allowed in chapter II of the educational rules shall apply to this college in so far as its special character may allow.

LEAVE AND DISMISSAL.

80. Students may obtain leave of absence by application to the Principal.

81. 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.

82. 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.

83. 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.

84. 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.

EXAMINATIONS.

85. 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.

86. The examinations for admission to the several classes shall be conducted by the college staff.

DIPLOMAS AND CERTIFICATES.

87. *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 satisfactory 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.

88. *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 has passed the final examination and 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.

EMPLOYMENT OF PASSED STUDENTS.

89. *Engineers.*—One appointment annually as apprentice engineer shall be conferred on the student who passes 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 paragraph 11, chapter II, volume 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 engineer students, who have satisfactorily completed the practical course, shall be eligible for appointment to the temporary upper subordinate establishment of the Public Works department, whence transfers may be made to the permanent establishment to fill existing vacancies on the recommendation of superintending engineers. Fully qualified engineer students may also be appointed assistant engineers under local boards.

90. *Engineer Subordinates.*—One appointment annually as overseer, third-grade, in the permanent upper subordinate establishment of the Public Works department shall be conferred on the civilian engineer subordinate student who passes highest at the final examination, provided he has satisfactorily completed his practical course and provided a vacancy exists for such appointment. Other civilian engineer subordinate students, who have satisfactorily completed the practical course and for whom there are vacancies, shall be eligible for appointment to the temporary upper subordinate and lower subordinate establishments of the Public Works department, whence transfers may be made to the permanent upper subordinate establishment to fill existing vacancies on the recommendation of superintending engineers. No person will be eligible for appointment to the permanent upper subordinate establishment unless he be a fully qualified engineer or engineer subordinate. Appointments as delta superintendent, minor irrigation overseer and as overseer to district boards and municipalities are also open to qualified engineer subordinates. Qualified military students required for the Public Works department shall be

appointed apprentice overseers at the commencement of their practical course—*vide* rule 55. In alternate years, one appointment to the engineer establishment, provincial service, will be offered to a senior selected upper subordinate of the Public Works department.

91. *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 superintendent in the Public Works department and as deputy surveyor in the Survey department. When the services of temporary men are required for special surveys not undertaken by the Public Works subordinate staff, the Public Works officers in charge are instructed to select for such employment none but qualified surveyors of the college.

92. *Draftsmen.*—Qualified draftsmen will be appointed to the Public Works department as draftsmen and estimators as vacancies occur.

93. Students of the engineer and engineer subordinate classes who pass sufficiently high to merit guaranteed appointments shall, before appointment, produce certificates of physical fitness for the work of the Public Works department. The medical examination for such certificates shall be held at the end of the practical course. Other qualified students will, on appointment to the Public Works department, be required to produce certificates of physical fitness under the ordinary rules of the public service.

94. The guaranteed appointments referred to are reserved for statutory natives of India, provided that natives of pure Asiatic descent shall be admitted only if their parents or guardians are domiciled in the Madras presidency or the native states of Travancore, Cochin, Pudukkottai, Sanduru, Banganapalle and Mysore.

95. 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., dated 12th December 1893.

CASUAL STUDENTS.

96. 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.

97. 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.

INDEPENDENT CANDIDATES.

98. A student 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

99. Candidates who qualify in this way shall receive the certificates referred to in rules 87 and 88, 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.

REGISTERS AND ACCOUNTS.

100. 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.

101. 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.

MISCELLANEOUS.

102. 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.

103. 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-yearly 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.

104. 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.

105. The principal shall invariably obtain the previous sanction of the Director for any deviation from the prescribed rules.

106. 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.

APPENDIX.

FORMS OF APPLICATION FOR ADMISSION TO THE COLLEGE— *vide* Rule 29.

N.B.—1. Every application must be accompanied by—

- (a) Treasury receipt;
 - (b) Copy of conduct certificate covering at least the two years preceding the date of application;
 - (c) Copy of conduct certificate from the head of the college or school which the candidate is attending or attended last;
 - (d) Copy of horoscope or baptismal certificate or other evidence of age.
2. Unless the abovementioned documents are received, the application will not be accepted.
3. Printed forms will be supplied on application.

I.—Application for admission to the engineer class, College of Engineering, Madras.

Candidate's name in full.	Candidate's address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Year of passing F.A. examination.	Register number and rank in F.A. examination.	Whether passed B.A. examination or appeared for it, or about to appear.	List of documents enclosed.	Place at which candidate desires to appear for entrance examination.

Place.

Date.

Signature of Candidate.

II.—Application for admission to the engineer subordinate class, College of Engineering, Madras.

Candidate's name in full.	Candidate's address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Examination passed, viz., First Arts, upper secondary or matriculation.	Year of passing examination and register number and rank.	List of documents enclosed.	Place at which candidate desires to appear for entrance examination.

Place.

Date.

Signature of Candidate.

III.—Application for admission to the sub-overseer and surveyor class,
College of Engineering, Madras.

Candidate's name in full.	Candidate's address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Year of passing lower secondary or late middle school examination.	Register number and rank in examination.	Whether passed matriculation or higher examination; if so, date and register number.	List of documents enclosed.	Place at which candidate desires to appear for entrance examination.

Place.

Date.

Signature of Candidate.

IV.—Application for admission to the draftsman class, College of
Engineering, Madras.

Candidate's name in full.	Candidate's address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Year of passing lower secondary or late middle school examination.	Register number and rank in examination.	Whether passed matriculation or higher examination; if so, date and register number.	List of documents enclosed.	Place at which candidate desires to appear for entrance examination.

Place.

Date.

Signature of Candidate.

EDUCATIONAL DEPARTMENT.

NOTES CONNECTED WITH G.O., NO. 366, EDUCATIONAL, DATED
28TH JUNE 1901.

[SUBJECT.—Rules of the College of Engineering.]

From the Director of Public Instruction, Ref. on C. No. 15927 of 1900, dated
12th February 1901.

For the Assistant Secretary—

In submitting the draft of the alterations in the engineering college rules called for in G.O., No. 576, Educational, dated 12th November 1900, the Director has brought up the rules to date and renumbered them. The rules as thus corrected have been put in type, but the corrections and the reasons therefor can be more clearly seen from the original copy put up and flagged VII.

Hardly.

2. It would seem that rules 4 and 7 go too much into details. They may perhaps be omitted altogether.

3. In rule 25 a redistribution has been made of the marks to be assigned to each subject studied by the draftsman class, on the recommendation of the principal of the college of engineering.

4. It seems advisable to obtain the views of the Public Works department on the rules as now corrected, and more especially on those numbered 4, 7 and 25. The printed draft may, therefore, be referred to them u.o., for remarks.

P. T. THARYAN.
9-3-01.

The reference to the Public Works department may be made first, any verbal amendments being seen to when the draft is returned. Will the Public Works department state whether any of the rules requires alteration?

A. T. PRINGLE.
9-3-01.

Public Works department u.o.

PUBLIC WORKS DEPARTMENT.

Draft of the College of Engineering rules as altered and brought up to date.

Rule 4.—There seems to be no objection to showing in detail the appointments sanctioned for the college although not yet filled up.

Rule 7.—Calls for no remarks, as the proposal that the Professor in Civil Engineering shall be a third-grade Executive Engineer or a first-grade Assistant Engineer of the Public Works department was agreed to in this department.

Rules 13, 18 and 23.—The clause now entered—"They must also satisfy the principal of the college in practical surveying"—is a distinct improvement.

Rule 14.—The words "but they may spend the last six months of their course at the college workshops" is an addition already agreed to in this department.

Rule 25.—In order to provide 50 marks for physical fitness there has been a reduction of 25 marks each from *building drawing* and *estimating*. These are, from a Public Works department point of view, the most important subjects in the draftsmen's course, and any reduction in these marks is deprecated. It is suggested that the marks for machine drawing be reduced from 200 to 150.

Rules 28 and 48.—It is observed that the numbers admissible annually to the sub-overseers' and draftsmen's classes has been increased to 35 from 30. There is no objection to this.

Rule 51.—The limit of age of 28 for soldier students was fixed in 1897 on the recommendation of the then Chief Engineer, Colonel D. McNeil Campbell. He appeared to be under the impression that there was no age limit. The Military men who enter the college late in life are seriously handicapped, specially in the matter of military promotion, by which their pensions are largely affected. It is recommended, therefore, that the age of 25 be adopted to coincide with the limit fixed in Army Regulations, India, Section IX, Sub-section V, paragraph 1022, 2 (a).

The words "of not less than two years' service" might be inserted after the words "Commanding officers" in rule 51 as has been done in the paragraph of the Army Regulations above quoted.

R. W. LYONS.

H. E. CLERK.
12-4-01.

A. W. SMART.
12-4-01.

To the Educational department u.o.

EDUCATIONAL DEPARTMENT.

The Chief Engineer's note calls for the following remarks:—

(1) *Rule 25.*—The Chief Engineer deprecates the reduction of 25 marks each from *building drawing* and *estimating* in order to provide 50 marks for *physical fitness* and suggests that the marks for *machine drawing* be reduced from 200 to 150. Submitted that the Director may be consulted u.o. on this point.

(2) *Rule 51.*—The Chief Engineer considers that the raising of the age limit for soldier students to 28 in 1897 was a mistake and recommends that the age of 25 be adopted to coincide with the limit fixed in clause 2 (a) of paragraph 1022 of section IX of Army Regulations, India, Volume II (Provisional issue). This recommendation is based on a complete misapprehension of the matter. Before 1898, the age limit for soldier students was 25; on the recommendation of Colonel Campbell it was raised to 28 in 1898 to coincide with the limit in force in the Thomason College, Roorkee—*vide* clause (a) of paragraph 1021 of section IX of Army Regulations, India, Volume II (Provisional issue).

Paragraph 1022 of section IX of Army Regulations, India, Volume II (Provisional issue), is the same as paragraph 1335, Volume II, Army Regulations, India (old Edition). Paragraph 1335 was revised in G.O., No. 530, Educational, dated 22nd August 1898, for insertion in the revised edition of the Army Regulations, and in the revised draft the age limit was raised to 28. But as the Provisional issue of the regulations was published before August 1898, paragraph 1022 (old 1335) has not been corrected as revised in G.O., No. 530, Educational, dated 22nd August 1898. It will of course be corrected in the revised edition. The corrected rule need not therefore be amended to correspond with the uncorrected one.

(3) The Chief Engineer's proposal to insert the words "of not less than two years' service" after the words "Commanding officers" in the second sentence of rule 51 is likewise based on a misapprehension. It ignores the fact that what is aimed at by the proposed insertion is already provided for in the third sentence of the rule.

T. KANAKASUNDARAM PILLAI.
16-4-01.

P. T. THARYAN.
17-4-01.

Secretary—

As regards (1) it is merely a matter of opinion, and it seems hardly necessary to consult the Director. The Government may decide what to do. As the interests of the Public Works department are the most important, I submit that Colonel Smart's objection to reducing the marks for the subjects he has named should be upheld and the marks for machine drawing reduced as an experiment. If there is a demand later on for raising them, they may be placed at 175, and 25 marks given for physical fitness instead of 50. **A**

2. Colonel Smart has misunderstood the case in regard to (2), as stated in the note, but that circumstance does not alter what he says in respect to the handicapping of the military men who enter the college late in life. As it is obvious that the quality of a man's work is much affected by anxiety about the pension which he will receive, and as it is quite certain that, as the Chief Engineer says, the pensions of these men are much affected by the adoption of 28 years as the limit, it appears probable that Colonel Campbell's views were not as sound on this point as Colonel Smart's and that Government would now do well to fix the limit for soldier students at 25. **B**

3. As regards (3) the Chief Engineer probably did not see that the words in red ink in the margin of rule 51 were intended to form part of it. The point is of no importance, but as it is, no alteration is necessary in the draft rule.

A. T. PRINGLE.
22-4-01.

As regards (2) I don't understand the matter sufficiently, or how these men are handicapped in the matter of military promotion. Perhaps the Public Works department will explain more fully. Does the Public Works department consider that men entering the college after 25 years of age are unlikely to make useful Public Works department officials?

C. J. WEIR.
23-4-01.

To Public Works department u.o.

PUBLIC WORKS DEPARTMENT.

Military upper subordinates are compulsorily retired on reaching the age of 55. Their pensions depend on the military rank they hold on the date of retirement, and not on the civil pay which they were drawing in the Public Works department.

There are only 21 warrants allotted to the Madras Public Works department, viz.:—

	Pensions.
	£
One Deputy Commissary	216 per annum, or Rs. 200 per mensem in India.
One Assistant Commissary	144, or Rs. 140 per mensem.
Two Deputy Assistant Commissaries	108, or " 100 "
Seven Conductors	90 per annum, or Rs. 85 per mensem in India.
Ten Sub-Conductors	72, or Rs. 70 per mensem.

The sergeants in the department can only be promoted to the warrant grade on the occurrence of a vacancy in those grades irrespective of their departmental standing.

It follows that the more advanced the age of a Military upper subordinate when he enters the department, the less chance he has of reaching the higher warrant grades, and therefore of obtaining a higher rate of pension. For instance, a Military upper subordinate who is retired at 55 when holding the military rank of Conductor and the departmental rank of Sub-Engineer, 2nd grade, only gets a pension of Rs. 85, while a civilian of the same departmental standing would get a pension of Rs. 150, and he may be even continued in service till the age of 60, or more with the sanction of Government.

It is observed that the limit of age was raised from 25 to 28 to assimilate the rule in the Madras college of engineering to that of Roorkee. But in the interests of the Military upper subordinates it would be advisable to fix the age limit at 25.

As regards (3) in the Educational department note, the remarks made in this department have not been understood because they were not clearly expressed. What was meant was, that it would probably be better to insert the words "of not less than two years' service" after the words "Commanding officers" in rule 51 as has been done in the Army Regulations, section IX, paragraph 1022, Volume II, than to have the sentence, "They must have had not less than two years' service prior to the date of admission to the college." This amendment was merely suggested in order that the wording of the college rule might coincide with the paragraph of the Army Regulations, but as remarked it is a point of no importance.

R. W. LYONS.

S. B. MURRAY.
8-6-01.

W. B. DEWINTON.
8-6-01.

To the Educational department u.o.

EDUCATIONAL DEPARTMENT.

For Orders.

P. T. THARYAN.
21-6-01.

Secretary—

I submit that orders may now issue on the lines suggested in my note of 22nd April 1901 at A and B.

A. T. PRINGLE.
21-6-01.

Honourable Member—

C. J. WEIR.
21-6-01.

I agree.

J. T[OMSON].
28-6-01.

The draft placed below may issue.

P. T. THARYAN.
26-6-01.

Yes.

A. T. PRINGLE.
27-6-01.

C. J. WEIR.
27-6-01.

Reasons for the Changes

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

[As authorised from 1st January 1899—vide G.O., No. 530,
22nd August 1898—and corrected to August 1900.]

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.

2. (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.
3. (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 maistrics 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.

5. (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.
6. (ii) Special lecturers may also, when necessary, be employed with the sanction of Government.
7. (iii) The Principal shall be an Engineer, Civil or Military.
8. (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.

Civil Engineering shall be a ~~fourth~~^{third} grade Executive Engineer or First grade Assistant Engineer of the Public Works Department the Professor of Mechanical

A Professor of Civil Engineering, a Professor of Mechanical Engineering, a Professor of Mathematics, an Instructor in Surveying and Drawing, an Instructor in Civil Engineering, an Instructor in the Chemical Engineering and eight Assistants. There shall also be a Workshop Instructor with foremen assistants and an instructor in Gymnastics.

T
June 1899.

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.

- 8 9. The college shall contain the following classes:—
- 10 (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.
 - 11 (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.
- 9 10. The Engineer and Engineer Subordinate classes constitute the college department, and the other classes the school department.

ARTICLE V.—COURSES OF INSTRUCTION.

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

(1) *Engineer Class.*

- 10 11. (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.
- 11 12. (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

Changes proposed

Reasons for changes

U

Printed in the reference to
for no. 1745. N. Chatterjee
having been placed on
special duty, this work
will devolve on him.

	Marks.
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 but may, if they please, spend the last six months of their practical course at the College 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

* 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.

Page 3, Article V (1) (iv). After the word "separately" in sixth line insert the sentence "They must also satisfy the Principal of the College in practical surveying." (S.P. No. 4124, 27.5.5.0.)

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

(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.

* 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.

Page 4, Article V (2) (iv). After the word "separately" in fifth line insert the sentence "They must also satisfy the Principal of the College in practical surveying."

(80. No. 4125) 31.8.0.

5

Page 5, Article V (3) (iv). After the word "separately" in fifth line insert the sentence "They must also satisfy the Principal of the College in practical surveying." (P.O. No. 4128d) (5)

of instruction

5

(3) Sub-overseer and Surveyor Class.

20/ 21. (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.

21/ 22. (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

22/ 23. (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 ~~awarded~~ ^{awarded} at this examination shall be included in the final total.

23/ 24. (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.

24/ 25. (i) The course shall extend over two years.

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

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

Changes proposed

Reasons for changes

when possible

The Principal says that, initially, it has not been found possible to give this class workshop training—hence, the addition of the words "when possible".

I <i>Geometrical Drawing</i> - Geometrical and perspective drawing (75) freehand and model drawing (75)	marks 150
II <i>Building Construction and Drawing</i> - Building construction (125), building drawing (275)	375
III <i>Machine drawing</i>	200
IV <i>Estimating</i>	225
V <i>Physical fitness</i> - Gymnastics and drill	50
Total	1000

Changes made with reference to P.O. No. 5763d 12.11.00 0

The redistribution of marks under each head is strongly recommended by the Principal.

27. Of the total marks, 750 shall be awarded by the Board of Examiners for examination work and 250

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.

awarded/
27/ 28

(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, 80 in the Sub-overseer and Surveyor class, 30 in the Draftsman class, and 40 in the Maistry and Artisan class.

28/ 29
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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.

29/ 30
30/ 31

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

31/ 32
32/ 33

33/ 34

250 (75 for building drawing, 75 for machine drawing, 50 for estimating and 50 for physical fitness) by the College Staff. The marks given by the College Staff shall, however, be submitted to the Board for approval.

viz. (i) Geometrical & drawing (Building Construction and drawing) (Machine drawing and estimating), 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 candidates in the second class.

35/ and 35/

The system of awarding College marks being restored 250 marks will be allotted by the College Staff.

The minimum for a first class has been raised to three-fourths (i.e. in keeping with that in the case of the other examinations of the Board).

The Principal considers a slight increase in the strength of the junior classes desirable.

Page 6, Article VII (ii) (1). For "last Monday in January" in second line read "20th January (unless that day falls on a Saturday or Sunday when the students shall join on the following Monday);" (S.O. No. 4008/30-8-0)

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.

34/35. (ii) Admissions shall be regulated by a competitive examination to be held annually on the third Monday in November 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.

36/37. The fee for admission to this examination shall be Rs. 20. Applications will be received by the Principal up to the third Monday in October.

37/38. (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.

38/39. (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.

Page 7, Article VIII (1) (iv). For "last Monday in January (unless appearing for the B.A. degree Examination, when they shall present themselves on the first Monday in February)," in lines one to three read "20th January (unless that day falls on a Saturday or Sunday when they shall join on the following Monday), (Yr. no. 40050) 50-8-0" ✓

and the following day

Repositions 15 21

The examination occupies two days.

(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—

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

and the following day

The examination occupies two days

16 and 22 years on the 31st nber preceding the year of admission.

(ii) Admissions shall be held by a competitive examination to be held annually on the third of November at the College of Engineering and at Berhampur, Patam, Rajahmundry, Masulipatam, Bellary, Kurnool, Nelloombakonam, Madura, Calicut, Mangalore and Trivandrum. Time of examination shall be as follows:—

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

The qualifying minimum sh 200 marks.

The fee for admission to thisination shall be Rs. 10. Applications will be received by the pal up to the first Monday in October.

(iii) The first thirty qualifindidates on the list shall be selected for admission, provided thour Europeans or Eurasians and three Muhammadans be not with the first thirty, the number under each may be made good, in ordermerit, from the other qualified candidates. The names of suce candidates shall be published in the *Fort St. George Gazette*.

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

- the sum of Rs. 75, which all be drawn against for books and instruments;
- a health certificate fro Government Medical officer to the effect that the caate is fit for the out-door work of the Public Worksartment, and that he has had small-pox or has been inoculated;
- his Lower Secondary or dle School Examination certificate;
- testimonials of good chaer covering the last two years;
- his horoscope or other evace of age;
- a leaving certificate from last school.

(4) Drafts Class.

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

(5) Artis Class.

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

vide change in article 29.

(ii) Admissions shall be selection from persons who are employed as maistries or a, or from persons who have some practical knowledge of the butrades, or from the sons of maistries and artisans. The fee for admission 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 of 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 each on that day deposit with the Principal—

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

ARTICLE. MILITARY STUDENTS.

(i) Non-commissioned soldiers 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 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 Army defaulter's book for the preceding two years;
- (c) certificate that the candidate has never been dismissed from staff employment;
- (d) statement whether 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 _____ and that to the best of my belief his eye-sight is correct, and he has no disease, constitutional affection or bodily infirmity, unfitting him, or likely to unfit him, for active out-door employment as an *1st* Subordinate in the Public Works Department.

Name.

Designation.

They must have had not less than two years' service prior to the date of admission to the College.

This is implied by clause (b) in the same article and the sentence now added only makes the matter clearer.

52.52/ (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.

54.53/ (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) a descriptive roll;
- (b) the record of service;
- (c) a last-pay certificate;
- (d) last clothing and bedding certificates;
- (e) a certified list of clothing and necessities in their possession when quitting their regiments;
- (f) 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.

54/56. (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.

53/ (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

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

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.

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.
Engineer class	Rs. 12	Rs. 68	Rs. 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

from time to time.

The Principal says that the Burma P.W.D. has not hitherto been able to make an appointment every year.

premium payable by Mechanical Engineer students at Perambúr is laid down in Article V. *Article 18.*

(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.

68/69. lcl
(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.

69/70
(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.

70/71. (ii) A bronze medal will be awarded to the student who passes first at the final examination.

71/72. (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.

72/73. (ii) A bronze medal will be awarded to the student who passes first at the final examination.

73/74. (5) *Special Prizes.*

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

74/75. (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.

75/76. (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

The increased rate of Scholarship is recommended by the Principal as necessary to mark the superiority of this class to the Draftsman class. This recommendation is supported.

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.

- 77. (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.
- 78. (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.

- 79. (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.
- 80. (ii) The casual holidays allowed in chapter II of the Educational Rules shall apply to this college in so far as its special character may allow.

ARTICLE XIV.—LEAVE AND DISMISSAL.

- 81. (i) Students may obtain leave of absence by application to the Principal.
- 82. (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.
- 83. (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.
- 84. (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.
- 85. (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.

- 86. (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

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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.

has passed the final examination and

ARTICLE XVII.—EMPLOYMENT OF PASSED STUDENTS.

(i) *Engineers*.—One appointment annually as apprentice Engineer shall be conferred on the student who passes 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 paragraph 11, chapter II, volume 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 Engineer students, who have satisfactorily completed the practical course, shall be eligible for appointment to the temporary Upper Subordinate establishment of the Public Works Department, whence transfers may be made to the permanent establishment to fill existing vacancies on the recommendation of Superintending Engineers. Fully qualified Engineer students may also be appointed Assistant Engineers under local boards.

97/ 95. (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.

98/ 96. (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.

99/ 97. (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.

98. (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.

9. (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

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rules 87 and 88

~~articles 88 and 89~~

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-yearly 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.

APPENDIX.

FORMS OF APPLICATION FOR ADMISSION TO THE COLLEGE— vide ARTICLE VII.

I.—Application for Admission to the Engineer Class, College of Engineering, Madras.

Candidate's name in full.	Candidate's address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Year of passing F.A. Examination.	Register number and rank in F.A. Examination.	Whether passed B.A. Examination or appeared for it, or about to appear.	List of documents enclosed.	Place at which candidate desires to appear for Entrance Examination.

Place.
Date.

Signature of Candidate.

1. Every application must be accompanied by
 - (a) Treasury receipt
 - (b) Copy of Conduct Certificate covering at least the two years preceding the date of application
 - (c) Copy of Conduct Certificate from the head of the college or school which the candidate is attending or attended last
 - (d) Copy of horoscope or baptismal Certificate or other evidence of age.
2. Unless the above mentioned documents are received the application will not be accepted.
3. Printed forms will be supplied on application.

II.—Application for Admission to the Engineer Subordinate Class, College of Engineering, Madras.

Candidate's name in full.	Candidate's address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Examination passed, viz., First Arts, Upper Secondary or Matriculation.	Year of passing examination and register number and rank.	List of documents enclosed.	Place at which candidate desires to appear for En- trance Examination.

Place.

Date.

Signature of Candidate.

III.—Application for Admission to the Sub-overseer and Surveyor Class, College of Engineering, Madras.

Candidate's name in full.	Candidate's address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Year of passing Lower Secondary or late Middle School Examination.	Register number and rank in examination.	Whether passed Matricula- tion or higher examina- tion; if so, date and re- gister number.	List of documents enclosed.	Place at which candidate desires to appear for Entrance Examination.

Place.

Date.

Signature of Candidate.

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IV.—Application for admission to the Draftsman Class, College of Engineering, Madras.

Candidate's name in full.	Candidate's address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Year of passing Lower Secondary or late Middle School Examination.	Register number and rank in examination.	Whether passed Matriculation or higher examination; if so, date and register number.	List of documents enclosed.	Place at which candidate desires to appear for entrance examination.

Place.
Date.

Signature of Candidate.

V.—Application for Admission to the Maistry and Artisan Class, College of Engineering, Madras.

Name in full.	Address.	Age.	Race and religion.	Occupation of candidate, if any.	Occupation of father.	List of documents enclosed.

Place.
Date.

Signature of Candidate.

N.B.—The form will be drawn up by the candidate on a half sheet of foolscap paper.

H. D. LOVE, Lt.-Col., R.E.,
Principal, College of Engineering.

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Ch. 2142/4

Go. no 366 Ed 28 6-07

Encl. 1/203

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12th February 1901.

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No. 306, dated 28-6-1901

(i) In rule 25 the marks for building drawing and estimating have been raised to 275 and 250 and that for machine drawing ^{has been} reduced to 150.

(ii) In rule 51 the age limit for military candidates for admission to the College has been reduced to 26.

2. The rules as thus revised will be published in the Fort St George gazette and

printed as an appendix to this order.

1 From orders/

26/6/11
27.6.11

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