(1) பக்கங்களின் எண்ணிக்கை 54

(2) புதுக்கித் திருப்பிய நாள் 4/89

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

PWD துறை

அரசாணை எண். —
மு. கோப்புத் தாள் எண். 345

அச்சகம்
பலவகை

நாள் : 7. 2. 1889

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மடிக்கவோ கண்டபடி கையாளவோ கூடாது

27 sheets
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1

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Establishment.

Read—the following papers:—

From Captain C. B. HENDERSON, R.E., Acting Principal, College of Engineering, to the Chief Engineer, Public Works Department, Madras, dated 8th January 1889, No. 538 C.

I have the honor to inform you that a class of 8 students has just completed its course of three years in this college and that in a few days the results of the final examination will be published. I expect that at least six will qualify for certificates of Assistant Engineer, and the rules of the college (*vide* copy enclosed, page 5) provide for a further practical course lasting two years. A class of Engineer subordinates, 22 in number, has also completed its course, and I expect about 12 to qualify for certificates as Overseers; the rules provide for two years' practical work for these also. The number of students, who qualify in each class, will be reported to you as soon as the results of the examination are known.

2. At page 8 of the rules, the allowances to be made to the students during their second year of practical training are given. At page 9, it is stated that an appointment as Assistant Engineer will be given to the first on the list at the final examination; this year two such appointments have been sanctioned by the Government of India.

From the same officer, dated 31st January 1889, No. 578 C.

In continuation of my No. 538 C., dated 8th January 1889, I have the honor to forward, herewith, a list giving the names in order of merit of the students of this college who have recently qualified for certificates—4 as Assistant Engineers and 14 as Overseers—and to request that you will be good enough to inform me to whom they should report themselves for orders about their practical course.

Enclosure.

List of students of the Engineer class who passed out in December 1888.

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

List of students of the Engineer subordinates' class who passed out in December 1888.

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

Chepâk,
31st January 1889.

(Signed) C. B. HENDERSON, Captain, R.E.,
Ag. Principal, College of Engineering.

Article IV.—Admission.

(1) The number of students to be admitted annually will, for the present, be limited to 15 in Civil and Mechanical Engineer classes taken together; to 30 in the class for Engineer Subordinates; to 20 in the class for Draughtsmen; to 15 in the class for Surveyors.

N.B.—These numbers will be liable to reduction, which will be notified one month before the entrance examination, until the college accommodation has been improved and enlarged to meet requirements.

The number to be admitted to the other classes will be notified yearly. Admission shall be once a year—(1) For the Engineer classes, on last Monday in January; (2) for the Engineer Subordinates' class, on first Monday in August; (3) for the junior classes, on last Monday in January.

(2) Candidates for admission to the Civil and Mechanical Engineer classes must be between the ages of 17 and 21 years, to the Engineer Subordinates' class between the ages of 16 and 20 years, and to the other classes between the ages of 16 and 22 years, on the 31st December preceding the year of admission.

(3) Candidates for admission to the Civil and Mechanical Engineer classes must produce a certificate of having passed the First Examination in Arts of the Madras or other Indian University; to the Engineer Subordinates' class, a certificate of having passed the Matriculation Examination of the Madras or other Indian University; to the Draughtsmen's and Surveyors' classes, except when specially exempted, a certificate of having passed the Middle School Examination. For the sixth class selection will be made from the sons of artisans or maistries, or from youths who have already had practical training in some of the building trades.

(4) All candidates must produce satisfactory testimony of good character, physical fitness, age, and freedom from liability to small-pox. Candidates whose certificates are unsatisfactory in any respect will be excluded from the test for admission.

(5) Admission to the Civil and Mechanical Engineer classes shall be decided by open competition in the following branches of mathematics; but, to insure a high standard of general knowledge, to the total marks obtained in mathematics will be added one-half of the marks obtained in the F.A. Examination:—

	MARKS.
Arithmetic	100
Algebra, including quadratic equations and binomial theorem	75
Geometry, the first four books and the sixth book of Euclid	75
Mensuration	50
Trigonometry, including the solution of plane triangles	100
Total ...	400
F.A. Examination	300
Grand Total ...	700

Candidates failing to obtain one-third of the combined total marks shall not be admitted. Selection shall be made in order of merit: provided that, if four Europeans and Eurasians and three Muhammadans are not within the first fifteen, the number under each may be made good in order of merit from the other qualified candidates. Before joining the college, the candidates shall inform the Principal whether they intend to be Civil or Mechanical Engineers.

(6) The fee for admission to this examination shall be Rs. 10. The names of the successful candidates shall be published in the *Fort St. George Gazette*.

(7) Admission to the Engineer Subordinates' class shall, except in the case of soldier students, be decided by open competition in the following branches of mathematics; but, to ensure the requisite standard of general knowledge, to the total marks obtained in mathematics will be added one-half of the marks gained in the Matriculation Examination:—

	MARKS.
Arithmetic	125
Algebra	75
Geometry	100
	300
Proportion of marks in the Matriculation Examination	225
Total ...	525

(8) Candidates failing to obtain one-third of the total combined marks shall not be admitted. Selection shall be made in order of merit: provided that, if six Europeans and Eurasians and four Muhammadans are not within the first twenty-five, the number under each may be made good in order of merit from the other qualified candidates. The fee for admission to this examination shall be Rs. 5. The names of the successful candidates shall be published in the *Fort St. George Gazette*.

(9) *Soldier Students.*—Non-commissioned officers and soldiers of Her Majesty's British service desirous of qualifying for employment in the Public Works Department will, to the number of five annually, be admitted to the college on passing an extrance examination in arithmetic and English. After one year's study of arithmetic, algebra, geometry, and vernacular language, they will, provided they pass a satisfactory examination in these subjects, join the subordinate class for the ordinary theoretical and practical courses. Each student will draw a stipend of Rupees 10 per mensem for three and-a-half years, commencing from the date of joining the subordinate class. His pay, rations and clothing will be drawn from his regiment throughout the whole course of study. A fixed proportion between the number of soldiers and civilians to be appointed to the Public Works Department will be established.

(10) Admission to the Draughtsmen's and Surveyors' classes shall be regulated by the order in which the candidates have passed the Middle School or some higher examination, the selection proceeding

from those that have passed a higher examination to those who have passed a lower.

Article V.—Courses.

The course and subjects of study in the several classes shall be as follows :—

(1) Civil and Mechanical Engineer Classes.

(*a*) Theoretical Course.—The theoretical course, which extends over three years, will embrace the subjects and carry the marks enumerated below :—

	Marks.
I. *Pure and applied Mathematics.*—Algebra, geometry, and arithmetic ; mensuration and trigonometry ; mechanics ; hydromechanics ; algebraic geometry, and the differential and integral calculus	675
II. *Science.*—Chemistry, physics, and geology ...	325
III. *Engineering.*—Building materials ; building and bridge construction ; hydraulics, irrigation works and sanitary engineering ; road and railway construction ; applied mechanics ; principles of mechanism ; prime movers ; the steam-engine	800
IV. *Surveying.*—Surveying with chain, compass and plane table ; levelling ; theodolite surveying ; topographical drawing	400
V. *Drawing.*—Geometrical drawing ; free-hand, model, and perspective drawing ; architectural drawing ; machine drawing ; estimating ; designing ; specification	500
VI. *Language.*—Tamil or Telugu *	200
VII. *Physique.*—Physical fitness ; gymnastics, &c. ...	100
Final Total ...	3,000

Of the total marks, 2,700 shall be awarded by the Board of Examiners for examination work ; and 300 by the College Staff for drawings, notes, field-work, &c., executed during the course. The Board, however, shall call for and inspect such drawings, notes, &c., before finally accepting the marks given by the Staff.

Term examinations will be held at the end of the first and second years of study, at which portions of the above subjects will be finally disposed of by the Board of Examiners. The marks awardable at these examinations are included in the final total.

Candidates must obtain one-third of the total marks in each of the subject heads I, III, IV, and V, one-fourth in each of the subject heads II, VI, and VII, and one-half of the final total marks. They shall be arranged in two classes in order of merit ; the first, or honor class, containing those who have obtained not less than three-fourths of the total marks.

* Tamil to be obligatory for natives of Telugu districts, and *vice versâ*. The choice of one of these two languages to be open to all other students.

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(*b*) Practical Course—*Civil Engineers.*—After completing the theoretical course, the pupils of the Civil Engineer class will spend one year in the Public Works Workshop, going through the carpenters' shop, the smithy, the foundry, and the fitting shop. They will then be placed for one year under the Public Works Department, and will be stationed at places where large works are in progress. They will be regularly instructed in the practical details of brick-making, bricklaying, quarrying, blasting, masonry, building of all sorts, the management of labor, accounts, &c.

Mechanical Engineers.—The course will comprise two years of practical study at the chief workshops of the presidency.

(2) Engineer Subordinates' Class.

(*a*) Theoretical Course.—The theoretical course, which extends over two-and-a-half years, will embrace the subjects and carry the marks enumerated below :—

	Marks.
I. *Mathematics.*—Arithmetic, algebra and geometry ; plane trigonometry and mensuration ; elementary statics	370
II. *Engineering.*—Building materials ; strength of materials ; building and bridge construction ; earthwork and roads ; hydraulics and irrigation works ; elementary applied mechanics ; mechanism and the steam-engine ; designing and estimating ...	600
III. *Surveying.*—Surveying with chain, compass and plane table ; levelling ; theodolite surveying ; topographical drawing	350
IV. *Drawing.*—Geometrical drawing ; free-hand drawing ; mechanical drawing ; estimating ...	400
V. *Language.*—Tamil or Telugu *	180
VI. *Physique.*—Physical fitness ; gymnastics, &c. ...	100
Final Total ...	2,000

Of the total marks, 1,800 shall be awarded by the Board of Examiners for examination work, and 200 by the College Staff for drawings, notes, field-work, &c., executed during the course. The Board, however, shall call for and inspect such drawings, notes, &c., before finally accepting the marks given by the Staff.

Term examinations will be held at the end of the first and third half-years of study, at which portions of the above subjects will be finally disposed of by the Board of Examiners. The marks awardable at these examinations are included in the final total.

Candidates must obtain one-third of the total marks in each of the subject heads I, II, III, and IV, one-fourth in each of the subject heads V and VI, and one-half of the final total marks. They shall be arranged in two classes in order of merit ; the first containing those who have obtained at least three-fourths of the total marks.

(*b*) Practical Course.—The practical course will comprise one year of practical study in workshops, and one year on large engineer-

* Tamil to be obligatory for natives of Telugu districts, and *vice versâ*. The choice of one of these two languages to be open to all other students.

ing works, on which instruction will be afforded similar to that given to the Civil Engineer pupils.

(3) Draughtsmen's Class.

The course, which extends over two years, will embrace the subjects, and carry the marks enumerated below :—

	MARKS.
(1) Practical and descriptive geometry	150
(2) Free-hand, perspective, and model drawing ...	150
(3) Architectural and topographical drawing	240
(4) Machine drawing	200
(5) Estimating	260
Total ...	1,000

Of the total marks, 800 shall be awarded by the Board of Examiners for examination work, and 200 by the College Staff for plans, &c., executed during the course. The Board, however, shall call for and inspect such drawings, &c., before finally accepting the marks given by the Staff.

A term examination will be held at the end of the first year.

Candidates obtaining 66 per cent. in each of the above five subjects and 75 per cent. on the total shall receive *First-class* Certificates : those obtaining 50 and 66 per cent., respectively, *Second-class* Certificates : those obtaining 36 and 50 per cent., respectively, *Third-class* Certificates.

(4) Surveyors' Class.

The course, which extends over two years, will embrace the subjects, and carry the marks enumerated below :—

	MARKS.
(1) Surveying with chain, compass, and plane table ...	275
(2) Levelling	225
(3) Theodolite surveying	200
(4) Topographical drawing	300
Total ...	1,000

Of the total marks, 800 shall be awarded by the Board of Examiners for examination work, and 200 by the College Staff for field-work and drawings executed during the course. The Board, however, shall call for and inspect such drawings, notes, &c., before finally accepting the marks given by the Staff.

A term examination will be held at the end of the first year.

Candidates obtaining 66 per cent. in each of the above four subjects and 75 per cent. on the total shall receive *First-class* Certificates : those obtaining 50 and 66 per cent., respectively, *Second-class* Certificates : those obtaining 36 and 50 per cent., respectively, *Third-class* Certificates.

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(5) Sub-Overseers, &c.

The courses of study shall be—

Arithmetic.
Elementary Geometry.
Mensuration.
Scales.
Plan-drawing.
Elements of Engineering.

No examinations will be held, but a certificate of attendance shall be given by the Principal after a minimum period of one year's regular study. The instruction shall be given in the Tamil and Telugu languages, and the class shall be an evening one.

Article VI.—Fees.

(*a*) *Civil and Mechanical Engineer Classes.*—The fee is fixed at Rs. 85 for each term of six months, payable in advance; or, if candidates so desire, they will be permitted to pay instead a monthly contribution of Rs. 16, but in either case a deposit of Rs. 100 will be demanded at the outset.

A student may compound for the whole theoretical course by the payment of a fee of Rs. 400 in advance. No fee will be demanded for the practical course.

(*b*) *Engineer Subordinates' Class.*—The fee is fixed at Rs. 30 for each term of six months, payable in advance ; or a monthly contribution of Rs. 6, or Rs. 125 for the whole theoretical course, payable in advance. In every case a deposit of Rs. 50 will be demanded at the outset. No fee will be demanded for the practical course.

Soldier students will be exempted from payment of college fees, and will be supplied with the text-books in use and with drawing instruments, colors, &c., gratis.

(*c*) *Draughtsmen's and Surveyors' Classes.*—A term fee of Rs. 18 to be paid in advance, or a monthly contribution of Rs. 4.

(*d*) *Sub-Overseer and Maistry Class.*—No fee shall be required except a registration fee of 5 rupees.

Note.—Fees will, under no circumstances, be returned after a student has been admitted to the institution.

Article VII.—Certificates.

(*a*) The Board of Examiners shall issue, under their signatures, a certificate to each candidate setting forth the class of study in which he has qualified ; but, in the case of students of the Engineer and Engineer Subordinates' classes, the final certificate, in the nature of a diploma, shall be issued under the signatures of the Principal of the College and of the Director of Public Instruction, in proof that the student concerned has satisfactorily completed the prescribed practical course.

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

	Rs.
Civil and Mechanical Engineers	30
Engineer Subordinates	20
Other classes...	10

(c) The names of the candidates so passing shall be published in the *Fort St. George Gazette* in a separate list, and they shall simply be declared to have satisfied the Board of Examiners.

Article VIII.—Scholarships, &c.

The following scholarships and prizes are allowed for students during their college course :—

(1) *Engineer Classes.*—One scholarship of Rs. 30 per mensem will be awarded annually to the candidate who passes first in the admission examination. The scholarships are reawardable annually on the results of each term examination.

A gold medal of the value of Rs. 120 will be awarded to the student who passes first in the final examination.

Prizes consisting of instruments or books will be given for special proficiency in particular subjects.

(2) *Engineer Subordinates' Class.*—Two scholarships, each of Rs. 10 per mensem, will be awarded annually to the two candidates who pass highest on the list at the admission examination. The scholarships are reawardable after each term examination.

A gold medal of the value of Rs. 60 will be awarded to the student who passes first in the final examination.

Prizes consisting of instruments or books will be given for special proficiency in particular subjects.

(3) *Draughtsmen's Class.*—Two scholarships, each of Rs. 8 per mensem, tenable during the second year of study, will be granted to the students who stand highest on the list at the term examination at the end of the first year.

A silver medal of the value of Rs. 10 will be given to the student who passes first in the final examination.

(4) *Surveyors' Class.*—Two scholarships, each of Rs. 8 per mensem, tenable during the second year of study, will be granted to the students who stand highest on the list at the term examination at the end of the first year.

A silver medal of the value of Rs. 10 will be given to the student who passes first in the final examination.

Note.—Scholarships may be reduced or forfeited for misbehaviour or other cause.

Article IX.—Practical Courses.

All allowances during the practical course will be debitable to the Department of Public Works.

(1) *Civil and Mechanical Engineers.*—During the final year of practical training on works, subsistence allowances of Rs. 50 per mensem for Europeans and Eurasians and Rs. 25 per mensem for Natives will be granted. Such allowances will, however, be contingent on the good conduct and satisfactory progress of the student under instruction; and on proof of misconduct or idleness the allowances may be cut down or withdrawn altogether by the officers in charge of the works.

requesting orders as to their practical training.

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(2) *Engineer Subordinates.*—As in the case of the Civil and Mechanical Engineer pupils, no fee will be exacted during the workshop year; and during the year of practical study on works stipends will be granted of Rs. 30 per mensem for Europeans and Eurasians and Rs. 20 per mensem for Natives, subject to the conditions of good conduct, regular attendance, &c.

Soldier students will, during the workshop course, draw pay, rations, and clothing from their regiments, and the stipends prescribed for the theoretical course. During their year of practical training on works, they will cease to draw those allowances, and will be brought on to the Public Works Department scale of establishment as apprentice overseers, drawing the pay and allowances laid down in the Public Works regulations.

Article X.—Prospects of Students.

(1) *Civil and Mechanical Engineers.*—One appointment annually as Assistant Engineer, third grade, in the Public Works Department, will for the present be conferred on the student highest on the list at the final examination who has also obtained the degree of B.C.E. To those next on the list appointments as Supervisors, second grade, will be offered, in order of merit. The number of appointments to be so awarded will be in proportion to the requirements of the service, and will be fixed by the Chief Engineer. The number so determined on will be announced annually, at least six months before the final college examination. It is to be understood, however, that all vacancies in the Supervisor grade will not be filled by selection from the most distinguished of the passed students of this class, as a portion of such vacancies must be reserved for the best qualified subordinates of the Overseer grade.

(2) *Engineer Subordinates.*—Vacancies in the Overseer grades of the Public Works Establishment will be filled by passed men in the order of merit. Prior to each entrance examination, notice will be given of the number of such appointments likely to become available for competition by the then entering batch of candidates.

(3) *Draughtsmen.*—Certificated students of this class will be appointed to the Public Works Department as Draughtsmen and Estimators as vacancies occur. The course of instruction having been extended and the standard for certificate having been raised, passed students under these rules will be entitled to the improved salaries for the different classes of Draughtsmen which will be notified hereafter.

(4) *Surveyors.*—There are no permanent appointments available in the Public Works Establishment for Surveyors only; but, when the services of temporary men are required for special surveys not undertaken by the Public Works subordinate staff, the officers in charge are instructed to select for such employment none but passed Surveyors of the College of Engineering.

Qualified men may be appointed Probationary Deputy Surveyors, Madras Survey, on Rs. 50 with the prospect of rising eventually to the rank of Sub-Assistant Superintendent on Rs. 250.

Note.—It is 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 and Municipal Boards and other agencies. With this view, lists of

qualified men, with remarks as to their attainments, conduct, &c., will be circulated annually to Local Fund Boards and Municipalities, with recommendations that they may be employed in suitable posts when opportunities offer.

Article XI.—General.

(1) Students in the Civil and Mechanical Engineer classes are expected to appear for the B.C.E. degree examination; but they are discouraged from appearing until they have completed the three years' theoretical course.

(2) All students must provide themselves with the text-books in use and with the necessary apparatus, instruments (except surveying instruments), &c. They will, with the exception of military students, be non-resident. Strict observance of the standing rules of the institution as regards attendance, discipline, &c., will be expected from all.

(3) Students during their practical course shall not be under the supervision of the Principal of the College, but officers under whom they 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.

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II.—RULES OF ADMISSION.

(1) Engineer Classes.

A Competitive Examination for admission to the Engineer classes will be held annually on the first Monday in December, commencing at 10 A.M., at the College of Engineering, Madras, and at the Government Colleges of Rajahmundry, Bellary, Calicut and Madura. Candidates who have passed the F.A. Examination of the Madras or other Indian University, who will be between 17 and 21 years of age on 31st December following, and who have complied with the conditions laid down in paragraph 3 below will alone be permitted to compete. To the marks gained in this examination will be added half the marks previously secured by each candidate in the First Examination in Arts of the Madras University.* One-third of the combined total marks will be the minimum qualifying for admission. The first fifteen † qualified candidates on the list will be selected for admission, provided that, if four Europeans or Eurasians and three Mussalmans be not within the first fifteen, the number under each may be made good in order of merit from the other qualified candidates.

2. The scheme of examination will be as follows :—

		MARKS.
Morning paper 10 A.M. to 1 P.M.	Arithmetic (the whole)	100
	Algebra (to the binomial theorem)	75
	Mensuration	25
Afternoon paper 2 P.M. to 5 P.M.	Mensuration (continued)	25
	Geometry (Euc. I, II, III, IV & VI)	75
	Plane Trigonometry	100
		400
Add half F.A. Examination marks		300
Qualifying minimum 233 marks.	Total ...	700

3. Application for admission to this examination will be received by the Principal up to the first Monday in November. Each application must be accompanied by—

(*a*) a fee of Rs. 10, which will under no circumstances be returned;

(*b*) *copies* of testimonials certifying to good character and conduct for a period of not less than two years immediately prior to date of application;

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* If the candidate is an undergraduate of one of the other Indian Universities, his marks in the F.A. Examination will be applied for, and a proportionate number allotted.

† *Vide* Note to article IV, clause 1 of Rules relating to the constitution of the College.

(*c*) *copy* of horoscope or other certificate of birth ;
(*d*) statement in the following form, filled up in the candidate's handwriting :—

*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.

* Here enter *Civil* or *Mechanical*.

Place
Date

Signature of Candidate.

4. The names of the successful candidates will be published in the *Fort St. George Gazette*. The candidates will join the College on the last Monday in January (unless appearing for the B.A. Degree Examination, when they must present themselves on the first Monday in February), and must each on that day deposit with the Principal—

(*a*) the sum of Rs. 100, which will be drawn against for books, drawing instruments, &c., any balance being ultimately returned to the candidate ;
(*b*) a certificate from a Gazetted Government Medical Officer declaring that the candidate is of good constitution, free from disease, fit for the out-door work of the Public Works Department, and that he has been vaccinated. The certificate must bear a personal description of the candidate ;
(*c*) original University certificate ;
(*d*) originals of certificates referred to in paragraph 3.

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requesting orders as to their practica
training.

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(2) Engineer Subordinates' ("Overseers'") Class.

(*a*) Civil Candidates.

A Competitive Examination for admission to the Engineer Subordinates' class will be held on the first Monday in May, commencing at 10 A.M., at the College of Engineering, Madras, and at Berhampore, Vizagapatam, Rajahmundry, Masulipatam, Bellary, Kurnool, Nellore, Kumbakónam, Madura, Calicut and Mangalore. Candidates who have passed the Matriculation Examination of the Madras or other Indian University, whose ages were between 16 and 20 on 31st December preceding, and who have complied with the conditions laid down in paragraph 3 below, will alone be permitted to compete. To the marks gained in this examination will be added half the marks previously secured by each candidate in the Matriculation Examination of the Madras University.* One-third of the combined total marks will be the minimum qualifying for admission. The first twenty-five qualified candidates on the list will be selected for admission, provided that, if six Europeans and Eurasians, and four Mussalmans be not within the first twenty-five, the number under each may be made good in order of merit from the other qualified candidates.

2. The scheme of examination will be as follows :—

		MARKS.
Morning paper 10 A.M. to 1 P.M.	Arithmetic (the whole)	125
	Algebra	25
Afternoon paper 2 P.M. to 5 P.M.	Algebra (continued) (up to quadratic equations inclusive)...	50
	Geometry (to Euclid Book IV inclusive)	100
		300
Add half Matriculation marks		225
Qualifying minimum—175 marks.	Total ...	525

3. Applications for admission to this examination will be received by the Principal up to the first Monday in April. Each application must be accompanied by—

(*a*) a fee of Rs. 5, which will under no circumstances be returned ;
(*b*) *copies* of testimonials certifying to good character and conduct for a period of not less than two years immediately prior to date of application ;
(*c*) *copy* of horoscope or other certificate of birth ;
(*d*) a statement in the following form, filled up in the candidate's handwriting :—

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* If the candidate is a Matriculate of one of the other Indian Universities, his marks in the Matriculation Examination will be applied for, and a proportionate number allotted.

Application for Admission to the Engineer Subordinates' 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 Matriculation Examination.	Register number and rank in Matriculation Examination.	Whether passed F.A. Examination, or appeared for it.	List of documents enclosed.	Place at which candidate desires to appear for Entrance Examination.

Place
Date

Signature of Candidate.

4. The names of the successful candidates will be published in the *Fort St. George Gazette*. The candidates will join the College on the first Monday in August, and must on that day deposit with the Principal—

(*a*) the sum of Rs. 50, which will be drawn against for books, drawing instruments, &c., any balance being ultimately returned to the candidate;
(*b*) a certificate from a Government Medical Officer declaring that the candidate is of good constitution, free from disease, fit for the out-door work of the Public Works Department, and that he has been vaccinated. The certificate must bear a personal description of the candidate;
(*c*) original University certificate;
(*d*) originals of certificates referred to in paragraph 3.

(*b*) Military Candidates.

A Competitive Examination for admission to the College of Engineering, Madras, will be held annually on the first Monday in May. The examination will be conducted by means of papers forwarded from the College to Officers Commanding Regiments and Batteries, who are

requesting orders as to their practica
training.

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requested to detail one or more officers to superintend the examination in accordance with rules which will be furnished with the papers. Candidates from Madras, St. Thomas' Mount, and Poonamallee will be examined at the College.

2. Candidates must—

(*a*) be non-commissioned officers or men of Her Majesty's British Forces of not less than two years' service, and under twenty-five years of age;
(*b*) have uniformly conducted themselves to the satisfaction of their Commanding Officers in the discharge of their duties;
(*c*) be thoroughly trustworthy and well-conducted men, who can be relied on to superintend native workmen and to treat them in a becoming manner.

3. Applications from Commanding Officers for the examination of such men as they may recommend for admission should reach the Principal not later than 15th April, and should be accompanied by the following documents, viz.:—

(*a*) Extract from Troop and Company or Battery Defaulter Sheet.
(*b*) Extract from third page of Attestation.
(*c*) Do. from Court-martial Sheet.
(*d*) Certificate of sound health and unimpaired constitution from a Commissioned Medical Officer.

Each application should state whether the candidate is married.

4. The entrance examination, which occupies one day, comprises the following subjects:—

	MARKS.
Arithmetic.—The whole subject; one three-hour paper...	100
English Dictation	50
English Grammar and Composition.—Grammatical rules, construction of sentences, short essay; one two-hour paper	50
Qualifying minimum—100 marks. Total ...	200

5. The first five qualified candidates will be admitted, and will join the College on the first Monday in August. At the expiration of a year, they will undergo an examination in Arithmetic, Algebra, Geometry, and Vernacular Language, and those who are successful will be admitted to the Engineer Subordinates' class for the regular course of technical study.

Note.—Soldier students will be under the command of the Principal, or, in his absence, of the officer acting for him. They will reside in Barracks and quarters attached to the College, and will wear the undress uniform of their regiments. They are exempt from payment of College fees, and are supplied with the text-books in use, and with drawing instruments, colors, &c., gratis.

(3) Draughtsmen's Class.

The standard fixed for admission is that of the Middle School Examination. The names of the candidates who have passed this or some higher examination will, provided the conditions laid down in paragraph 2 are complied with, be received by the Principal for registration up to the first Monday in November. The registered names will be placed in a list regulated by the order in which the candidates have passed the Middle School or some higher examination, and the first twenty candidates on the list will be selected for admission in the following January to the College of Engineering.

2. Applications will be registered on receipt of—

(*a*) a registration fee of Rs. 2, which will under no circumstances be returned;

(*b*) *copies* of testimonials certifying to good character and conduct for a period of not less than two years immediately prior to date of application;

(*c*) statement in the following form filled up in the candidate's handwriting:—

Application for Admission to Draughtsmen's Class, College of Engineering, Madras.

Name in full.	Address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Year of passing Middle School Examination.	Register number and rank in Middle School Examination.	Whether passed Matriculation or higher examination; and if so, date and register number.	List of documents enclosed.

Place
Date

Signature of Candidate.

3. The selected candidates will join the College on the last Monday in January, and must each on that day deposit with the Principal—

(*a*) the sum of Rs. 50, which will be drawn against for books, instruments, &c., any balance being ultimately returned to the candidate;

(*b*) a certificate from a Government Medical Officer that the candidate is free from disease, that he has been vaccinated,

requesting orders as to their pract
training.

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and that his age lies between 16 and 22 years. The certificate must bear a personal description of the candidate;

(*c*) original Middle School (or Matriculation, &c.) certificate;

(*d*) originals of certificates referred to in paragraph 2.

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(4) Surveyors' Class.

The standard fixed for admission is that of the Middle School Examination. The names of the candidates who have passed this or some higher examination will, provided the conditions laid down in paragraph 2 are complied with, be received by the Principal for registration up to the first Monday in November. The registered names will be placed in a list regulated by the order in which the candidates have passed the Middle School or some higher examination, and the first fifteen candidates on the list will be selected for admission in the following January to the College of Engineering.

2. Applications will be registered on receipt of—

(*a*) a registration fee of Rs. 2, which will under no circumstances be returned;

(*b*) *copies* of testimonials certifying to good character and conduct for a period of not less than two years immediately prior to date of application;

(*c*) statement in the following form filled up in the candidate's handwriting:—

Application for Admission to Surveyors' Class, College of Engineering, Madras.

Name in full.	Address.	Name and address of father or guardian.	Date of birth.	Race and religion.	Year of passing Middle School Examination.	Register number and rank in Middle School Examination.	Whether passed Matriculation or higher examination; and if so, date and register number.	List of documents enclosed.

Place
Date

Signature of Candidate.

3. The selected candidates will join the College on the last Monday in January, and must each on that day deposit with the Principal—

(*a*) the sum of Rs. 50, which will be drawn against for books, instruments, &c., any balance being ultimately returned to the candidate;

(*b*) a certificate from a Government Medical Officer that the candidate is of good constitution, free from disease, fit for the out-door work of the Public Works Department, that his age lies between 16 and 22 years, and that he has been vaccinated. The certificate must bear a personal description of the candidate;

(*c*) original Middle School (or Matriculation, &c.) certificate;

(*d*) originals of certificates referred to in paragraph 2.

H. D. LOVE, Capt., R.E.,
Principal, College of Engineering.

MADRAS: Printed by R. HILL, at the Government Press, Fort St. George.

Ans 259

345/16/12

Note

The rules of the College of Engineering forwarded by the Principal are a copy of the Rules approved by Govt. in G.O. No. 7 dated 7.1.86, Educational Dept. They were the outcome of the Several G.O.s in the file marked "Reorganisation of the C.E. College".

The rule about the stipends to be paid to Engineer subordinates during their practical course shall be deductable by the P.W. Dept. was apparently based on G.O. No. 15-12 W dt 16.6.82, vide file marked "Apprentice Overseers".

Papers relating to the transfer of the P.W. workshop apprentices

to exhibited to the pupils as exhibition allowance in the 1st year at R25

to the Railway workshops are also nominated. The apprentices of 1883 were all lads, of the artisan class. The premium agreed upon for their instruction was Rs 100 each, but the Ry. Co. will probably want more in proportion for young men qualifying for the position of Asst. Engrs or upper subordinate.

According to Article X (1) the guaranteed appts. to the engineer establt: are to be made after the final College examination. The two students who have passed at the top at the recent exam: must apparently be appointed now. If approved by Govt. they may be appointed Apprentice engineers under

345/713

Code para 81, while undergoing practical instruction, and until confirmed as Asst Engrs 3rd grade, they would receive per mensem - vide Code para 477. Their confirmation as Asst. Engrs would of course depend on the reports prescribed in Code para 81.

The remaining students of the engineer class would receive no stipend during the first or workshop year, but during the second year, while on works they would receive Rs 25 each per mensem, if natives, or Rs 50 per mensem if Europeans or Eurasians.

The students of the subordinate class will likewise receive

no allowance during the
workshop year, & Rs 30 or
20 during the second year

Early arrangements
will apparently have to
be made for drafting
the men into workshops.

Yours sincerely

C.L.
15.1.89

259.

The two semi students
in the Engineer class, might
be appointed apprentice
Engineers under Code para 81
as soon as they have taken
their B.C.E. degree Art. IX (1)
of the College rules.
Their pay would be 100 Rs
a month until they are
confirmed as A.E. 3rd grade.

Arrangements have to be made
for 8 men of the Engineer class
& 12 men of the U.S. class
to be practically trained

Engineer class { 1 Year in the Workshops.
1 Year on Loco's works.

pay only during final year
Art. IX (1)

Upper Subordinate { 1 Year in Workshops
Class 1 Year on Loco's works.

pay only during final year
Art. IX (2)

The rules do not allow of
the students being sent to
Rivenhall workshops, except
in the case of Mechanical Engineers

I doubt if all the Students will go through the practical Course.
The best arrangement would be to send all the Students to the R.N. Dockyards Portsmouth & Devonport for the first year - Each Division should provide for each Students.
It can scarcely be expected that any of the Students should pay their way to Dockyard Towns or Ports for the first year when they do not pay.
The R.N. Dockyards would have no difficulty in training 20 more, as they could be divided up among the different Ships.

Kerr
6.1.83

The two apprentice Engineers might be sent during 1 year on Training Ships.

257

We should have to obtain Order of Govt & Admty

According to the Rules of the Educational Code
IV (1) b & IV (2) b
Pupils of the C.E. the other pupils as A & C and also those that keep as Servants have to go through 1 year course in Shops and 1 year in Drawing Offices
2 years after is all after they have left the College
Is there anything in any G.O. regarding this
In Article IX para 8 the allowances are stated and also that those allowances are debitable to W & P.W.
why this is I do not know but I do believe this is ordered
Lord Henderson states that probably we should have 6 C.E. & 12 Subordinates that is 18 in all
We have the Dockyards Besides the London Workshops but I do not see any to send more than 2 to each
I think see G.O. No 3051 W dated 26 Oct 1883
that 5 Apprentices are sent

I the Rev Theodore Wilkenstein
in 5 years and a premium
of R 100 each was handed
to them

Please note that the students
in question are the Railway
teachers & Justin the latter
there were to be 2 years
and when asked what premium
they would refer to this

With regard to the 2 Std
C.P.S that are in the
affair I do not consider
that they will turn in
the P.W.D. which would they
have worked these 2 years
practical course but this
must be looked into

11/11/09

* annually 1 each year
see Article IX of the rules (1)
page 9 of the Rules, for
these years 2 students

Note the rules

The Principal of the C.E.
Letters brings to notice
that probably 6 students
will qualify to be entitled
of Asst C.P. and 12 to
them of Overseers.
The 2 senior students *
who pass their B.C.E.
examination / this will
be known probably at the
end of Feb / 10 would
be admitted as Asst C.P.
III Grade when they
have passed their final
examination
It is a question whether the
is when they have got
their Degree then when
come or whether passing
the final examination at
the College and obtaining a
B.C.E degree is sufficient.
My opinion is that they
shd not be admitted until
they have got through the
practical course referred to
in article V of the rules.
if this is correct they will
be entitled to be given
an appointment about June
the 1st year and to R25

V 6

be the 2nd year
as Article IX (1)
But the other hand if
they can't be attached
to WPWs as learning
the Artisan and so finishing
their BCE examination,
they will at once be
made entitled to R1
of the Basic Allowance
existing as R100 a
month and although
eligible for promotion to
3rd Grade Artificer it is
considered unlikely under any
normal circumstances they
will ever be so promoted
until they have completed
their 2 years training.

If these 2 men are
to be made Apprentices
at R100 a month I
would further think they
ought to start in the
Yorkshires and about
a year in the Lowthers
Workshops as I think
then they would be fairly
young men when the
Apprentices studies
The 2nd year might

be spent in their district
as some other men when
they can't go into quite going
on, this can be decided
on locally

With regard to the other
Apprentices as they will
receive no subsistence
allowance during their
first year they won't
not I consider be sent
to any country until they
volunteer to do so
and this necessitates that
they shd do their first
years practical course in
the Lowthers Workshops
I shd prefer them going
to Lowthersburn in the
Riviera

Then with the Apprentices
in the 2nd year course the
men will receive subsistence allowance (R25
& R50) will probably be
by the men carried not
sufficient to keep them entirely
in any country so long as
they will wish to do their
2nd years course in Lowthers
This I consider shd not
be allowed, they shd be

that opportunity such
if practicable among them
them station own distributes

It will I think be
advisable to the Foreman
of the Waterworks to
be paid a small premium
to each student that
before them to the classes
indistinctly

17/1/89

No. 313 C 1/22 - 1 - 89.

345/22/12

P.ᵀᵀW. Department.

Read the following:—

From the Principal C.E. College № 538 C of Jan: 8. 1889.

FOR ORDERS.

The Principal of the Civil Engineering College brings to notice that probably six students will qualify for certificates of Assistants Engineers and twelve for those of Overseers.

The two senior students who pass the B.C.E. examination (this will be known probably at the end of February) are to be appointed as Assistant Engineers III grade when they have passed their final

* usually 1 each year. see article X of the rules (1) part 9 of the rules, but this year two students

final examination.

It is a question whether this is when they have gone through their whole course, or whether passing the final examination at the College and obtaining a B.C.E. degree is sufficient.

My opinion is that they should not be appointed, until they have gone through the practical course referred to in article V b of the rules - if this is correct they will be entitled to no pay or subsistence allowance for the first year and to Rs 25 or Rs 50 for the second year - see article IX (1). On the other hand if they are to be appointed to the Public Works on leaving the College and on passing

I agree. I don't see anything in the rules necessitating their immediate appointment to the P.W.D. Also rule X says is that Govt appts xx will be conferred. Of course this implies the completion of the training of which the practical course is part.

H.L.S

346/25
19

passing their B.C.E examinations, they will at once be made, under para 81 of the Code, Apprentice Engineers on Rs 100 a month, and although eligible for promotion to 3rd grade Assistant Engineer, it is considered, except under very special circumstances, they will not be promoted until they have completed their two years training.

2. If these two men are to be made Apprentices on Rs 100 a month, I would propose that they should be sent to the Godavari and spend a year in the Pawlaschmeram Workshops as I think there they would probably learn more than in the Madras shops. The

But they will not be appt. as Apprentices & ∴ I think they must be allowed to stay in Madras. The PW workshops must mean those at Madras

H.L.S

The second year might be spent in that district or some other one where there are large works going on, this can be decided on hereafter.

3. With regard to the other students as they will receive no subsistence allowance during their first year, they should not, I consider, be sent up-country unless they volunteer to do so, and this necessitates that they should do their first years practical course in the Madras Workshops.

I should prefer them going to Darlaishweram on the Kistna.

4. There will be difficulties in the second years course for these men as their subsistence allowance (Rs. 25 to Rs. 50) will probably be by the men considered not sufficient to pay their expenses up-country on works and they will wish to do their second years course in Madras. This I consider should not be allowed, they should be sent up-country and if practicable away from their own districts.

5. It will I think be advisable for the Foreman of the Workshops to be paid a small premium for each student that passes through the shops creditably.—

10/1/09. W

345/24

20

This can very probably be done under the rules.

11/1 9 Jan

Will take it in hand for.

NLO 12 Jan

Hon

No. 313 Civil / 22-1-89

Hon. 18-1-89
R 21-1-89.

Civil Branch. 345/18/21

No. 538 C

1P

COLLEGE OF ENGINEERING MADRAS.

Dated 8th January 1889.

From

The PRINCIPAL,

COLLEGE OF ENGINEERING,

To

The Chief Engineer
Public Works Department, Madras.

Sir,

Enclosure One.

I have the honour to inform you that a class of 8 students has just completed its course of 3 years in this College and that in a few days the results of the final Examination will be published. I expect that at least six will qualify for certificates of Assistant Engineer and the Rules of the College (vide Copy enclosed, page 5) provide for a further Practical Course lasting two years. A class of Engineer Subordinates 22 in number has also completed its course and I expect about 12 to qualify for Certificates as Overseers, the Rules provide for two years Practical work for these also. The number of Students who

qualify in each class will be reported to you as soon as the results of the Examination are known.

2. At page 8 of the Rules, the allowances to be made to the Students during their Second year of practical training are given. At page 9 it is stated that an appointment as Assistant Engineer will be given to the first on the list at the final Examination, this year two such appointments have been sanctioned by the Government of India.

I have the honour to be,
Sir,
Your most obedient Servant,
C B Henderson — Capt. R.E.,
Ag. Principal.

345/B 22

1888-89.

College of Engineering.

To the Chief Engineer
P. W. Department
No. 538 C. Madras

Dated 8th
Despatched 8th } January 1889
Received

Previous Paper.

Index No.

Letter No. dated

Abstract.

States that two classes have completed their course at the College and that the number of students who qualify in each class will be reported as soon as the results are known.

Civil Branch.

No. 578 C.

Dated 31st January 1889.

From

Captain C. B. Henderson, R.E.,
ag Principal, College of Engineering, Madras.

To

The Chief Engineer,
Public Works Department,
Chepauk

Enclosure

Sir,

In continuation of my No. 538 C, dated 8th January 1889, I have the honour to forward herewith a List giving the names in order of merit of the Students of this College who have recently qualified for Certificates, four as Assistant Engineers and fourteen as Overseers, and to request that you will be good enough to inform me to whom they should report themselves for orders about their Practical Course.

I have the honour to be,
Sir,
your most obedient Servant,
C B Henderson Capt R.E.,
ag Principal.

1888-89.

College of Engineering.

To the Chief Engineer P.W.D.,

No. 578. C

Dated 31st
Despatched } January 1889.
Received

Previous Paper.

Index No.

Letter No. dated

Abstract.

Forwards a List of Students who passed out in December 1888 from the Engineer and Engineer Subordinates' Classes and requests to be informed to whom they should report themselves about their Practical Courses

W.M. 345/5 Encls. 3 & 1°

24

List of Students of the Engineer class who passed out in December 1888:—

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

List of Students of the Engineer Subordinates' Class who passed out in December 1888:—

1. U. Venkata Rau
2. G. Narayana Rau
3. G. Srinivasa Aiyangar
4. A. Arulanandam Pillai
5. Sergeant E. Price
6. L. S. Ganchapathesa Sarma
7. M. R. Subrahmanya Aiyar
8. P. V. Ramaswami Aiyar

9

9. C. J. Plummer
10. O. M. Swaminatha Aiyar
11. O. S. Krishnaswami Aiyar
12. T. Venkatarama Aiyar.
13. R. Srinivasa Raghava Aiyangar
14. P. Sivasubrahmanya Pillai

Chepauk,
31st January 1889

W. J. Henderson Capt. R.E.,
ag Principal, College of Engineering.

Genl Estabt

No. 345

PUBLIC WORKS DEPARTMENT.

A
Proceedings
345/25

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the Feby 7. 1889

READ the following

From the Principal Mr. C. of E. No. 538 dt 8.1.89.
" Do —— Do —— 578 " 31.1.89.

In his earlier letter above recorded, the Principal Madras College of Engineering reports that 8 students of the Civil & Mechanical Engineer Class, & 2 Students of the Engineer Subordinate class have completed the three years theoretical course prescribed in the rules printed with G.O. dated 7 January 1886. No. 7, Educational Dept, & he points out that the

the successful candidates at the final College examination must, under the rules, undergo a further practical course of two years. He also points out that under the guarantee sanctioned by the Govt. of India, appointments as Asst. Engineers will be given to the two students of the Civil Engineer class who stand at the top of the list at the final examination.

2. With his second letter, the Principal submits a list of the successful candidates in the two classes, showing that four have qualified for certificates as Asst. Engrs, & fourteen as overseers.

3. The Chief Engr P.W. Dept will arrange to have the successful students interviewed at the Presidency

P.W.

348/26

R. Srinivasa Aiyngar B.A., BCE
J. M. Lacey, B.C.E.

S.P.

P.W. workshops during the first or workshop year, and to post them to suitable works during the second year, in accordance with the rules.

4. The two students named in the margin, who have passed first & second at the final examination, will be appointed Asst Engrs 3rd grade at the end of their two years practical course, if they undergo the same satisfactorily.

5. Provision will be made in the P.W. Budget at the proper time, for the maintenance allowances to be granted to the students during their second year of practical training.

2.2.26 2/II/26 5/2/26

Cs

To the Educational Dept
" S.E. I circle
" Ch. E. P.W.D.
" Exam Branch

D 1512/26

CHIEF SECRETARY
4 FEB 89
GOVERNMENT OF MADRAS

6

345
89

11-5-28

Govt. of [1889] Madras.

PUBLIC WORKS.

Dated 8/2/89

Read. Encl.

G.O. 7 Feb 1889 No. 345W

Madras College of Engineering.

Passing orders on letter from the Principal, Madras College of Engineering, reporting the names of Municipal students who have passed the theoretical course & suggesting orders as to their practical training.

7/2

(28)

100/3