M R.O. 1—77,006—8-6-37.

(1) Number of pages

(2) Date of repair

(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 2160 Press —Mis.—

289-90

Dated 22-8- 1871.

Not to be folded or roughly handled

EDUCATIONAL DEPARTMENT.

The following PROSPECTUS for the Poona Civil Engineering College is published for general information :—

CIVIL ENGINEERING COLLEGE, POONA.

Prospectus.

The Poona Civil Engineering College is divided into three Departments, viz.—

I. First or University Department.
II. Second Department.
III. Vernacular Department.

First Department.

Matriculated students of the University of Bombay or of some other recognized University are alone admissible to this Department. The course of instruction extends over a period of three years, at the end of which time students who may have complied with the University and College Regulations are permitted to present themselves at the University Examination for the Degree of Licentiate in Civil Engineering. (For particulars as to keeping of terms, &c, see the "Bombay University Calendar")

2 The first Department consists of three classes.—

1 Junior class.
2. Middle class
3. Senior class.

To rise from the Junior class to the Middle a student must have kept two terms in the College, and must also have passed an Examination in the subjects studied by his class during the Junior year.

To rise from the Middle to the Senior class a student must have passed the First Examination in Civil Engineering, which is held annually by the University on the 4th Monday in November.

N B —In order that a student may obtain permission from the Principal of the College to present himself at either of the University Examinations (F C.E. or L.C E) it is necessary for him to have obtained credit for the number of terms required by the University Regulations, and also to have answered satisfactorily at the several Terminal and Weekly Examinations held at the College during the preceding year

Fellowships.

Two Fellowships, each of the value of Rupees 50 per mensem, and tenable for two years, are attached to the College. The Fellows are appointed by the Director of Public Instruction, and assist in teaching the lower classes while prosecuting their own studies for the higher Examinations

Scholarships.

The following scholarships, tenable for one year only, are annually open to competition in the First or University Department.—

A.—*Junior Class Scholarships.*

1 of Rupees 10 per mensem.
2 of Rupees 8 per mensem.
1 of Rupees 7 per mensem.
1 of Rupees 6 per mensem.
2 of Rupees 5 per mensem

The Examination for these scholarships will be held on the second Monday in January in each year

The subjects of examination are as follows —

I.—*Mathematics.*

(*a*) Arithmetic (the whole course).
(*b*) Algebra (to end of simple equations).
(*c*) Euclid (Books I. II. III IV., and VI. with deductions).

B.—*Middle Class Scholarships.*

1 of Rupees 12 per mensem
1 of Rupees 10 per mensem.
2 of Rupees 8 per mensem
1 of Rupees 7 per mensem.

The Examination for the Middle class scholarships will be held at the College on the First Monday in December in each year.

The subjects appointed for Examination are as follows.—

I.—*Mathematics.*

(*a*) Arithmetic. The whole course (Colenso).
(*b*) Algebra. To end of quadratic equations.
(*c*) Euclid. The first 4 and the 6th books, and first 21 propositions of 11th book, with deductions.
(*d*) Trigonometry. Solution of plane triangles (Todhunter, to page 200).
(*e*) Conic sections. The parabola (Goodwin's course).
(*f*) Analytical Geometry. The Point, Straight Line, and Circle (Todhunter, Chap I. II. III. V. and VI).

II —*Experimental and Natural Science.*

(*a*) Elementary Chemistry.
(*b*) Heat, Dilatation, Construction of Thermometers and Pyrometers, Latent Heat.

III.—*Engineering.*

(*a*) Roads.
(*b*) Properties and strength of materials
(*c*) Surveying with compass and chain.
(*d*) Drawing.

Marks will be given for the Drawings executed at the College during the year preceding the Examination

C.—*Senior Class Scholarships.*

1. Frere Scholarship, value Rs. 25 per mensem.
2 1 Scholarship of Rupees 15 per mensem.
3. 1 Scholarship of Rupees 10 per mensem

The above mentioned scholarships will be annually awarded immediately after the First Examination in Civil Engineering according to the marks obtained by students at that Examination.

FEES.

Students of this Department will be required to pay a College Fee of Rupees 5 per mensem

INDUCEMENT OFFERED BY GOVERNMENT

Government has annually guaranteed one appointment in the Engineering Branch of the Public Works Department to that student who shall obtain most marks in passing the University Examination for Licence in Civil Engineering

Second Department.

Students desirous of joining this Department will apply to the Principal before the 1st of September in each year. Application should be made in the accompanying Form, and should be signed by the Head Master of the School in which the candidate has last studied —

Name of Candidate	Age	School or schools at which educated	Name, profession and residence of father or next of kin	REMARKS

The entrance Examination will be held once a year, commencing on the second Monday in September at 11 o'clock A.M.

Candidates will be examined in the following subjects.—

I —*Mathematics*

(*a*) Arithmetic (Colenso's course)
(*b*) Algebra (to the end of simple equations)
(*c*) Euclid (First 4 books).

II —*Elementary Natural Science*

Laws of Chemical Combination, Atomic theory, General effects of Heat on matter.

III.—*English.*

(*a*) English Grammar and Parsing.
(*b*) Writing from dictation.

Matriculated students of the University of Bombay will be admitted without examination.

2 This Department consists of a Junior and a Senior class:—

To rise from the Junior to the Senior class a student must have obtained credit for attendance at the several Lectures prescribed for his class, and must have answered satisfactorily at the weekly and terminal examinations held during the first year of the course of this Department.

SCHOLARSHIPS.

Scholarships of the following values are annually open by competition to the students of this Department:

A.—*Junior Class Scholarships*

2 of 6 Rupees per mensem.
5 of 5 Rupees per mensem

These scholarships will be awarded according to the marks obtained at the Entrance Examination.

B.—*Senior Class Scholarships.*

1 of Rupees 9 per mensem.
1 of Rupees 8 per mensem.
1 of Rupees 7 per mensem.
1 of Rupees 6 per mensem.
2 of Rupees 5 per mensem.

The Examination for these scholarships will be held annually on the first Monday in December.

Candidates will be examined in the following subjects.—

I —*Mathematics.*

(*a*) Arithmetic. The whole course (Colenso).
(*b*) Algebra. To the end of quadratic equations.
(*c*) Euclid. The first 4 and the 6th books.
(*d*) Trigonometry. Solution of Plane Triangles (Hann).
(*e*) Conic Sections. The Parabola (Goodwin's course).

II —*Experimental and Natural Science.*

(*a*) Elementary Chemistry.
(*b*) Heat, Dilatations, Construction of Thermometers and Pyrometers, Latent Heat.

III.—*Engineering.*

(*a*) Roads
(*b*) Properties and strength of materials.
(*c*) Surveying with compass and chain.
(*d*) Drawing

Marks will be given for the Drawings executed at the College during the year preceding the Examination

The course of study in this Department extends over a period of two years, at the end of which period students who shall pass the Final Examination will obtain College certificates. These certificates, according to Government Resolution No. 191, dated 12th April 1869, will qualify for admission to the Upper Subordinate Establishment of the Public Works Department for a period of three years, from the date of certificate. Candidates for College certificates will be examined in the following subjects —

I.—*Mathematics*

(*a*) Arithmetic from first principles (Colenso's course).
(*b*) Algebra. To the end of quadratic equations, with Proportion and Progression, Permutation and Combinations (Colenso's course, Part I).
(*c*) Euclid The first 4 and the 6th Books, with the definitions of the 5th, and with simple deductions.
(*d*) Plane Trigonometry. Solution of plane triangles, with expressions for the area and measurements of heights and distances (Hann's course).
(*e*) Nature and use of Logarithms
(*f*) Mensuration. Measurements of surfaces and solids (Chambers's Practical Mathematics)

II.—*Applied Mathematics.*

Composition and Resolution of forces, the Mechanical powers, Friction, and application of the same to framing in carpentry, determining the thickness of Piers and Abutments and Retaining Walls.

III —*Geodesy.*

Adjustment and use of Surveying Instruments, viz. Prismatic Compass, Theodolite, Dumpy and Y Levels.

N B.—Knowledge of Surveying and Levelling to be tested by performance in the Field.

IV.—*Experimental Science.*

(*a*) Elementary Chemistry.
(*b*) Heat.
(*c*) Electricity and Magnetism (Ferguson's Treatise.)

V.—*Engineering.*

(*a*) Roadmaking (Roorkee Treatise, Ford's Notes, Chapter VII.).
(*b*) Strength of materials, with properties of the same (Roorkee Treatise, Nos. I. and II)
(*c*) Principles of construction of buildings and bridges (Roorkee Treatise, No. VI)
(*d*) Neatness and accuracy in drawing
(*e*) Estimating of simple buildings.

VI.—*Carpentry*

Each candidate will be required to execute in the Workshops a simple piece of work, such as squaring a piece of timber accurately, cutting a mortise and tennon, &c, &c

FEES

Students of the Second Department will be required to pay monthly a College Fee of Rupees 3

INDUCEMENT OFFERED BY GOVERNMENT.

Government has annually guaranteed three appointments in the Upper Subordinate Establishment of the Public Works Department to the first three successful students of the Second Department in order of merit.

Third or Vernacular Department.

In this Department instruction is conveyed to students through the medium of the Marathi language. The Entrance Examination annually takes place on the third Monday in March, and the result of the Examination is declared on the second Monday in April. Candidates desiring admission should apply to the Principal before the 1st of March in the following form —

Name of Candidate	Age	School or Schools at which educated.	State whether a Tradesman or otherwise	REMARKS

Candidates for Entrance into this class will be required to produce a 2nd Class Certificate for Entrance into the Lower grades of the public service. Those who can speak and write English with decent facility will *cæteris paribus*, be preferred *

The candidates will also be examined practically in the Workshops, in order to test their proficiency in some trade

SCHOLARSHIPS.

Scholarships will be awarded to the students according to the marks obtained at the entrance examination. The following scholarships are open annually to competition —

1 of Rupees 6 per mensem.
1 of Rupees 5 per mensem.
2 of Rupees 4 per mensem.
2 of Rupees 3 per mensem.

The course of study in this Department is for one year only, at the end of which time students who may be qualified will receive Certificates from the Principal. The subjects for the Final Examination are as follows —

I.—*Mathematics.*

(*a*) Arithmetic. Elementary rules, Rule of Three, Fractions, Vulgar and Decimal.
(*b*) Mensuration.
(*c*) Practical Geometry.

II.—*Engineering.*

(*a*) Building materials.
(*b*) Construction of building.
(*c*) Simple designing and estimating.
(*d*) Carpentry.
(*e*) Surveying and Levelling.
(*f*) Drawing.

Marks will be given for the Drawings executed at the College during the year preceding the Examination.

Candidates will be required to exhibit the models made by them in the Workshops during the preceding year, and will also be tested in the Workshops as to their proficiency in Carpentry, &c.

FEES.

Students of the Vernacular Department are exempted from the payment of a College Fee,

INDUCEMENT OFFERED BY GOVERNMENT.

Government has annually guaranteed three appointments in the Lower Subordinate Establishment of the Public Works Department to the first three successful students of this Department in order of merit.

(Signed) THEODORE COOKE, M.A., M.I., F.G.S.,
Principal.

By order of the Right Honourable the Governor in Council,

E. H. PERCIVAL,
Acting Under Secretary to Government.

Bombay Castle, 22nd December 1869.

* Note —It is found that passed students who know a little English are invariably employed before those who know none

No 1589 — 5 17 6

From J. Sutcliffe Esquire M. A
Principal Presidency College

To E. B. Powell Esquire C. S. I.
Director of Public Instruction
Madras

Presidency College, the 22nd June 1871

Sir,

I have the honor to reply to your letter No 909 of 1st instant.

The Civil Engineering College of Calcutta was abolished as a separate institution 6 years ago - and in its place a department of Civil Engineering in the Presidency College was ~~opened~~, to which the students of the old College were transferred. At the time of the transfer the regulations of the old College were revised, and among other regulations that which placed at the disposal of the College annually a certain number of appointments in the different grades of the Public Works Department was abolished. The following is a list of the appointments which were then

discontinued.

No 3

5 Appointments to the Engg. Branch .. { 2 Europeans / 3 Natives
13 Upper Subordinate Branch ... { 5 Europeans / 8 Natives
30 Lower Subordinate Branch .. 30 Natives

The above appointments were given as rewards to the most distinguished students at the annual Examination who were found qualified for ~~appointment~~ employment.

In lieu of these guaranteed appointments in the Public Service, the Director of Public Instruction of Bengal, on the opening of a department of Engineering in this College, recommended that 5 Scholarships of 50 Rs. a month each should be annually awarded to the students who stood highest amongst the successful students at the University Examination for L.C.E. or B.C.E. The recommendation was adopted by Government of Bengal; and these scholarships are tenable for 2 years - the holders of them being attached to the Offices of Executive Engineers in the Presidency Division for the purpose of receiving practical instruction in the duties of

their profession. Although it is no part of the present plan to hold out further encouragement to Licentiates. Yet I have no doubt that those who show aptitude for their profession will receive appointments in the Public Service after their 2 years' training. The first batch of Licentiates who received scholarships will complete their period of practical training at the end of this month but I have not yet heard of them having received appointments in the Public Service. I do not think very highly of the scholarship plan. its success depends entirely on the Executive Engineers under whom these young men are placed, and unless these officers take an interest in the scholars placed under their charge the practical training received will be almost worthless. That it is necessary for Government to hold out some definite encouragement to young men, who have learnt the theory of their profession and passed out as Licentiates, I think there can be no doubt. The only question is as to the form which this should take. My own impression is that the best and

most Economical plan would be to give probationary employment as Overseers for 2 years to a certain number of those who pass through the College and attain the degree of L.C.E. or B.C.E. The Engineers under whom these probationers may have served should then be called upon to state how they have discharged the duties entrusted to them, and if the report be satisfactory they should be appointed permanently to the Service and promoted to the grade of Assistant Engineers when vacancies occurred without further Examination. By some such plan as this Govt would not be under the necessity of employing inefficient men and there would be sufficient encouragement for Natives to study Engineering.-

I have the honor to be,
Sir,
Your most Obed Servt

Whitcliffe
Principal Roorkee College

Dated 22 March 1871
No 303
P.P. 335/71

2 Encl 1871.
From
The Principal of the
Roorkee College
To
The Secretary to
Government N.W.P.
Public Works Dept.
Calcutta and the
Secretary Government
of India Public Works
Dept.

Civil Engineering College,
POONA,
26th June 1871

No 93 of 1871/72

To
The Director of
Public Instruction.
Poona

Sir,

With reference to your letter No 963 dated 1.0 Instant, enclosing a letter from the Director of Public Instruction Madras, I would remark, that the effect of the Government guarantee (by which one appointment in the Engineering branch of the Public Works Department has been reserved for the 8 best Licentiate in Civil Engineering in each year) has

has been to produce a great in-
crease in the College attendance.

2 The Government Reso-
lution by which this suite appoint-
ment was guaranteed bears date
19th February 1869 and I subjoin
a table showing the total number of
students on the roll in each year
from 1st April 1866.—

1st April 1866..... 69
1st April 1867..... 70
1st April 1868..... 47
1st April 1869..... 50
1st April 1870..... 92
1st April 1871..... 134

3 The first appointment
under the guarantee was made in
February 1870 so that the time which
was elapsed when the rule came into

force is too short to admit of
any of the Licentiates distinguishing
themselves in their profession.—

4 Messrs Gopal Ranji
Tilak and Khundubhai Gulabhai
Desai who obtained appointments
in 1869 and 1870 respectively have
both passed the Departmental
Examination required by the rules
of the Public Works Department,
and have been promoted to the rank
of Assistant Engineers 2nd Grade
Messrs Anant Narayan Adarkar
and Gangadhar Anant Khare who
obtained their appointments subse-
quently to the Gentlemen above named
have not as yet presented themselves

for

for their Departmental examination
and still remain in the 3rd Grade.

5. The College Prospectus
which I enclose herein and the
Bombay University Calendar will
I think, supply the Director of
Public Instruction, Madras, with
full information as to standards &c.

I have the honor to be

Sir

Your most obed.t servant

T. Cooke L.L.B.

Principal

Civil Engg. College

Rec.d 1871

Encl No. 1321

No. 1361. of 1871/72.

Poona office of the
Director of Public Instruction.
29 June 1871.

To.

E. B. Powell Esquire, C.S.I.
Director of Public Instruction
Madras.

Sir

In answer to your letter No. 910 of the 1 instant, I have the honor to inform you that one appointment annually in the higher grade of the Government Engineering Service is given to the best candidate in the L.C.E. Examination. I append a report by the Principal of the Poona Civil Engineering College giving the information you require, a copy of the Resolution of Government in 1869, and a copy of the College Prospectus.

2 The attention given by this Government to the interests of the College and the inducements offered to the students have undoubtedly made the profession of Engineer attractive to native students and the College at Poona may be said to be in

flourish

flourishing condition. The College is a fine new building, and the staff comprises, besides the Principal who is a professional Engineer, a Professor of Chemistry and Geology, a Professor of Mathematics, and a Teacher of Drawing lately appointed. The last two are natives of India.

I have the honour to be,
Sir,
Your most obedient Servant.

Weele.

Director of Public Instruction.

To
The Chief Secretary to Government,
Fort Saint George.

Dated 3rd Sept 1871.

From
The Director of Public Instruction,
Madras.

Received the 5th Sept 1871.

Public Department.
No. 1135.

P.D. 3351/71.

Examine and report
regarding the Proposals
of the Director of Public
Instruction, contained
in his Letter dated
the 10th July 1871.

Public Department.
No. 1135.

OFFICE OF THE DIRECTOR OF
PUBLIC INSTRUCTION,
Madras, 10th July 1871.

From
THE DIRECTOR OF PUBLIC INSTRUCTION,
Madras.

To
THE CHIEF SECRETARY TO GOVERNMENT,
Fort Saint George.

Sir,

In an opening address I had the honour of delivering at the late Anniversary of the Civil Engineering College, I took the liberty of respectfully urging upon His Excellency the Governor that some definite encouragement should be held out to the students of the 1st Department of the College by offering annually one or two Assistant Engineerships for competition upon such conditions as might seem appropriate. I ventured to say that in my humble opinion, so far from encouragement having been given to advanced students and graduates in Civil Engineering, a discouragement had practically been marked out for them, as the few successful men had all, or nearly all, been compelled to seek service outside the Public Works Department. Setting aside the far more important question, as to whether the better educated Natives should not be encouraged to look to Civil Engineering as a profession, I pointed out that the effect upon the College was to make the 1st Department exist in name rather than in reality; and I suggested that, if the Board of Study were to continue, it might be well to abolish the 1st Department, and reduce the College to a simple school intended to turn out subordinates for the Public Works Department.

Lord Napier, in closing the proceedings of the evening directed me to ascertain and report what encouragement was held out to students in Civil Engineering in the Presidencies of Bengal and Bombay. Accordingly I

addressed the Educational Authorities at Calcutta and Bombay upon the subject; and I now do myself the pleasure of submitting letters of the 22nd and 29th ult. from the Principal of the Calcutta Presidency College and the Director of Public Instruction for the Bombay Presidency respectively.

3. From Mr. Sutcliffe's letter it will be seen that he entertains no doubt of it's being necessary that definite encouragement should be held out to young men who have learnt the theory of Civil Engineering and secured University Diplomas. Formerly five appointments to the Engineering Branch of the Public Works Department were given annually to the most distinguished students at examination. Now a different arrangement has been introduced, and five scholarships, of Rupees 50 per mensem each, are annually awarded to the students who stand highest at the University examinations in Civil Engineering. The scholars hold their stipends for two years, and are attached to the offices of Executive Engineers, with a view to their receiving a practical training; and though no pledge is given, Mr. Sutcliffe entertains no doubt, but that the scholars who shew an aptitude for their profession will receive appointments after their training. The weak point in the scheme is the absence of all security that the Executive Engineers will take trouble to make the training really worth anything.

4. Mr. Peile explains in his letter that one appointment in the higher grade of the Engineer service is given annually to the best candidate in the Licentiate in Civil Engineering Examinations; he further remarks "the attention given by this Government to the

* The Poona Civil Engineering College.

interests of the College and the inducements offered to the students have undoubtedly made the profession of Engineer attractive to Native students, and the College at Poona may be said to be in a flourishing condition." Mr. Peile's remarks are supported by the letter from the Principal of the Poona College, which he forwarded with his own communication.

5. I trust that His Excellency in Council will be satisfied that the throwing open to competition one or two appointments annually, in the higher grades of the Public Works Department to Natives of this country, is a step really called for. The difficulty is to fix the conditions under which such appointments should be given; and perhaps the best way of dealing with the question before its final consideration by Government, would be to refer it to a Committee.

I have the honor to be,
Sir,
Your most obedient Servant,

W. Wordsworth
Director of Public Instruction.

Public Works Department

No. 2160. 19

Proceedings of the Madras Government

Under date the 12th August 1871

Read the following

From The Director of Public Instruction Madras } H.E. No. 269 / 10th July 1871

These papers will be referred to a Committee composed of the Chief Engineer and Secretary to Government P.W. the Director of Public Instruction, and the Acting Principal Civil Engineering College with the view to their reporting by what arrangement of

Public Works Dept. No. 2160. 1871.

From The Director of Public Instruction, Madras.

To The Chief Secretary to Government, Fort Saint George.

No 1133

Dated 10th July 1871.
Received 12th July 1871.

Read 13th July 1871

No. 269
Enclosures 2

Original

Brings forward the proposal of the Director of Public Instruction that the Professorship of Engineering in the College should be abolished.

Referred to the Director of Public Instruction, the Chief Engineer P.W. and the Acting Principal Civil Engineering College.

Report by 25th July.

Original

No. 286

Dated 12th July 1871

Received 13th July 1871

Read 20th July 1871

Forwards the proposal of the Director of Public Instruction that the Professorship of Engineering in the College should be abolished.

Requests that the Director of Public Instruction, the Chief Engineer P.W. and the Acting Principal Civil Engineering College may be requested to report by the 25th instant by what arrangement the duties of the Professorship of Engineering can be carried on, if the Professorship be abolished.

Original

No. 287

Dated 12th July 1871

Received 13th July 1871

Read 20th July 1871

Forwards the proposal of the Director of Public Instruction that the Professorship of Engineering in the College should be abolished.

Requests that the Director of Public Instruction, the Chief Engineer P.W. and the Acting Principal Civil Engineering College may be requested to report by the 25th instant by what arrangement the duties of the Professorship of Engineering can be carried on, if the Professorship be abolished.

of appointment to the
P.W.D. suitable in
encouragement should be
afforded to those Students
of the Civil Engineering
College who distinguish
themselves at the annual
examination and to
those who take the
degree of B.C.E. in
the Madras University

Desp. 24/8/71.

To The Chief Engr. & Secy to
Govt. P.W. [illegible]
Director of Public Instn
Acting Principal C.E.
College
Educational Dept.

Public Work Department.

Letter from the Director of Public Instruction, Madras dated 10th July 1871 No. 269

Circulated for perusal.-

The subject of the Director's letter will be brought before Council on the 25th Instant -

[illegible]

Under the dept is to be organised we cannot do this. The Board ought not to have called the question on to be till

No 3351

Govt of 1871 Madras.

PUBLIC WORKS.

To The Chief Engr and Secretary to Govt P. W. D.

Dated

Recd Encl 2

G 022 Augt 71. No. 2160.

Nos. 289 & 290

Engineering College, Madras. The

[illegible] appointments in the [illegible] being known open to [illegible] dents passing out from [illegible] College referred to a [illegible] mittee composed of [illegible] Carpendale, Lt Burnell [illegible] Rogers for report.

27.

ii 6-12

MADRAS RECORD OFFICE.

Government Records.

P. W. Department.

G. O. (Printed).

Dated 22-8-1871.

No. 2160