

Home (Education) (1916) Department.

Ordinary SERIES.

G.O. No. 12 3 2

DATED 22-11-16

INDEX

[Despatch Abstract.]

Madras Trades School.-

Approving the syllabuses of studies for the ----- and also proposals in regard to the levy and remission of fees in it and the grant of certificates to pupils attending it.

PAPERS PUT UP WITH CURRENT No. _____

Papers of the department to which the current belongs.

Number.	Date.	Original (= O.) or spare copy (= S.C.).	Remarks. (In this column such of the papers as have been removed for copying, printing, etc., should be marked with a cross.)	Initials of Referencer with date in token of return to Reference department

Papers of other departments.

Department.	Number	Date.	Original (= O.) or spare copy (= S.C.).	Initials with date of (1) Referencer acknowledging returns of the paper concerned or (2) Despatcher to denote the return of the papers to the department concerned.

2-16.

DEPARTMENT.

Received



191

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Subject.

THE MADRAS TRADES SCHOOL.

Submitting syllabuses &c relating to _____

ENCLOSURES.

No. 3

Spare copies

G. cur. No. 4

Station Madras, Dated the 11th November, 1916.

From (Name) C.A. Innes, Esq., I.C.S.,

(Designation) AG. Director of Industries,

To The Secretary to the Government of Madras,

Home (Educational) Department.

Sir,

With reference to para 4 of G.O. No. 1092/17-10-16

I have the honor to submit herewith for the approval of Government the proposed syllabuses for the classes in Mechanical Engineering and Plumbing. The syllabuses were first drawn up by Mr. Fyfe in consultation with the two lecturers, and the drafts were then sent by Mr. Couchman to the two Corporation Engineers, Messrs. Madeley & Coats for scrutiny and revision if needbe. The syllabuses now submitted for approval are those proposed by these two gentlemen, who have considerable experience and know exactly what is required, and agreed to by Mr. Fyfe. I recommend that they be approved by Government.

2. As regards the question of fees, I think that it is quite clear that, for the present and until the classes are better known and appreciated, the fees must be purely nominal. Mr. Pyfe suggests a fee of Rs 3 per course for each subject, and I think that this rate is suitable. Following the usual practice obtaining in Scotland in respect of similar trades classes, Mr. Pyfe also suggests that the fee should be refunded at the end of the course to students who attend not less than 80 per cent of the lectures. I concur in the suggestion and recommend ^{that} it be approved.

3. There remains the question of certificates. Mr. Pyfe and I have discussed it, and we are of opinion that the certificates should be granted partly on the work of the term and partly on the results of an examination to be held at the end of the course. Of the maximum number of marks possible, 40 per cent may be allotted to term work, 60 per cent to the examination, and we think that ^{no} student who does not get at least 60% of the aggregate available should be granted a certificate. The examination may be held either by the lecturers themselves or by outside engineers. I prefer the latter alternative, even though it may involve the grant of a small honorarium, but this and other details may be left for future consideration.

4. I enclose a copy of a prospectus I have issued to the various firms likely to be interested in the new classes. I ~~may~~ fear that I have anticipated the orders of Government in regard to the fees and the syllabus of studies. But I received final proposals in regard to the syllabus only on the 7th instant and time is short that I had no option but to act on my own responsibility. We hope to start work in the beginning of December, and if so, the applications for admission

to the classes must be sent in very soon. In the circumstances, I trust that my action will be approved.

I have the honor to be,

Sir,

Your most obedient servant,

M. M. M.

Ag. Director of Industries.

R.K.S.

DEPARTMENT OF INDUSTRIES

GOVERNMENT TRADES SCHOOL, MADRAS.

PROSPECTUS.

1. Arrangements have been made to open immediately, in the new Government Trades School in Muker Nallamuthu Street, Georgetown, classes for practical instruction in Plumbing and Mechanical Engineering (Fitting).

2. Each course will extend to 40 lessons of one hour each.

3. Each class will be held twice during the week. Arrangements will, if possible, be made to hold the meetings of each class alternately in the evening and during working hours.

4. Each class will be limited to 20 students, and admission will be confined to apprentices or workmen actually engaged in Plumbing or Mechanical Engineering (Fitting) as the case may be.

5. The instruction will be given in English, and candidates for admission should have a fair general education and should know English.

6. The instruction will consist partly of theory and partly of practical work, in accordance with the appended syllabuses which, however, are provisional and liable to modification.

7. The following gentlemen have been appointed lecturers :-

Plumbing	...	...	Mr. A. Hillier, Sanitary Engineer, Messrs. Oakes & Co.
Mechanical Engineering.			Mr. W. S. Lockley, Works Manager, Beehive Foundry

12 41/2

8. The fee for admission to each class will be fixed for the present course at a purely nominal figure of Rs. 3 to be paid in advance. Subject to the approval of Government, the fee will be refunded at the end of the course to students who have been regular in their attendance.

9. An examination will be held at the end of the course and certificates will be awarded to approved students who attain a certain percentage of marks in the examination and in the term work combined.

10. Applications for admission should be sent through the firm under which the applicant is employed so as to reach the undersigned not later than Monday, 20th November. Each application should be accompanied by a remittance of Rs. 3 which will be returned if the applicant is not admitted to the class.

46 5

DEPARTMENT OF INDUSTRIES.

MECHANICAL ENGINEERING SYLLABUS.

THEORY.

The characteristics and uses of cast and wrought iron, mild steel, copper and its alloys, and the various grades of cast steel, including high speed and special alloy steels.

Recognition of the various qualities of iron and steel from their fractured section.

Chipping, filing, scraping, turning, drilling, shaping and milling and the various uses of all the machines usually found in a machine shop.

The various tools appertaining to each branch of these subjects and their several uses. The grinding and tempering of tools. Cutting speeds and feeds. Calculations of change wheels and pulley sizes.

Use of measuring instruments, gauges and scribing blocks. Use of surface plates, squares, levels and the surface table with the tools used thereon and the methods of marking out work. The testing of the truth of work.

Use of vices, machine vices and chucks and the methods of holding work. General engineering workshop appliances.

PRACTICAL WORK.

The application in a workshop of the above theoretical course with as much practical demonstration as possible.

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DEPARTMENT OF INDUSTRIES.

PLUMBING SYLLABUS.

THEORY.

WATER-SUPPLY.—Arrangement of service pipes in building. Quality and quantity of Madras water, and its action upon pipes and fittings. Connection of pipes to mains; methods of fixing pipes; house cisterns, their construction and fittings; valves, taps, flushing tanks, stop and draining cocks, warning pipes; causes of noises in pipes and ball valves, tracing leakage.

HOUSE DRAINAGE.—Methods of laying drains; gradients and sizes. Chambers and their construction; disconnecting and gully traps. Drain ventilation and flushing. Flush tanks and their construction. Drain testing and testing apparatus.

SANITARY APPLIANCES.—Water closets, baths, lavatories, sinks, etc., their fittings and method of fixing; their relative merits and defects.

SOIL AND WASTE PIPES.—General arrangement and methods of support. Trapping and ventilating. Sizes of pipes. Connection with drains. Details of connections.

TRAPS.—Various types; unsealing of traps, its cause and remedy; defects of traps.

JOINTS.—Methods of jointing the various metal pipes. Joints most suitable for various pipes.

ALLOYS.—Solders—hard and soft—their uses. Lead burning and lead-burning apparatus.

BY-LAWS.—By-laws relating to sanitary installations and plumbing, particularly those adopted by the Madras Corporation.

PRACTICAL WORK.

Arrangement of pipes in buildings ; with services and connection to mains ; drainage connections to sewers.

Fixing taps, cisterns, valves, flushing tanks, and other fittings.

Laying and jointing drains ; use of boring rods.

Fixing water closets, baths, sinks, etc.

Jointing wrought-iron, cast iron, and lead pipes.

Soldering ; use of different kinds of solders, lead burning and making " wipe joints."

PLUMBING TOOLS.—Their correct names, uses and maintenance.

FAULTS AND LEAKS.—Tracing and remedying them.

WORKSHOP WORRIES.—The ordinary daily difficulties which occur in plumbing and how to overcome them.

PLANS AND ESTIMATE.—Application of by-laws and the preparation of proper plans and estimates for submission to the Corporation.

TESTING, ETC.—Testing work. Measuring up. Billing after completion.

NOTES.

fee, if only a small one, and suggests that at present an admission fee of Re 1 should be charged for each course?

In the present case Mr Limes proposes that a fee of Rs 3 should be charged for the whole course but that it should be returned to the pupils at the end of the course. It is stated that this is the practice obtaining in Scotland in regard to similar classes. The proposal may, if it is submitted, be approved.

3. Mr Limes' proposals in regard to the grant of certificates to pupils at the end of the course may also be accepted for the present.

4. A draft order is submitted for approval.

14.11.16.

11/11/16

HE

P.
21.11.16.

Draft for apl

17.11.16

para 2. p. 2 of cf.

para 3. p. 2 of cf.

John B. Miller

for it could be small one
of great that present
admission for of the school
changes for each corner
in the future there has been
proposed that a few
should be changes for the whole
corner but that it should be
returned to the point of the
end of the corner. It is also
that this is the position obtaining
in Boston in regard to similar
cases. The proposal is, it
is submitted, to appear
in the future, for present
reference to the point of reference
to point at the end of the corner
may be also be as a help for
the present
to the staff of the

Madras Trades School.

Approving the syllabuses of studies for the ----- and also proposals in regard to the levy and remission of fees ^{in it} ~~in it~~ and the grant of certificates to pupils attending ~~in it~~ ^{in it}.

Read C.No.4142, from the Director of Industries, No.G.Cur.4, d/the 11-11-16.

ORDER: No. 1232, d/the 22-11-1916
M.S.

The Government approve the syllabuses of studies recommended for adoption in the Madras Trades School. They also approve Mr. Innes's proposals in regard to the levy and remission of fees in the school and the grant of certificates to pupils attending it.

S.K.
16-11-16.

N.K. 16-11-16. E.A.H. 17-11-16.

To the Special Officer, (En)
Department of Industries

" Accountant General. (En)

Approved
16-11-16

20/11

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 When copied
 When examined
 When signed

191

READ AGAIN G.O. No.
 191

DATED

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT

LETTER OF GOVERNMENT

STATEMENT WITH DITTO

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
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S.E.—

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