

- (iii) Inlaying and veneering with tortoise-shell, ivory, mother-of-pearl, and metals. The preparation and best methods of applying veneers to flat and sweep work.
- (iv) The different styles of furniture, and the periods to which they belong.
- (v) The principles of estimating the cost of labour and materials.

(2) *Specimen Work.*

Each candidate will be required, during the year preceding the examination, to design and execute a piece of work. The work must be accompanied by a working drawing showing the construction, and must not exceed 18 in. by 12 in. by 12 in. The specimen may be an example of construction, veneering, or inlaying, or it may comprise all three.

Each candidate will also be required to forward at the same time a working drawing of a piece of cabinet-work in which the details are original, and the work specially designed for its use. No ornaments or mouldings to be introduced except such as are absolutely necessary for the construction or are the outcome of the materials used.

A certificate signed by the candidate's employer or by the class-teacher and a member of the Technical School Board, stating that the work has been executed by the candidate himself, without assistance, must be forwarded with both the drawing and the specimen work. In cases where the work has been executed at the candidate's own residence a statutory declaration will be required. Forms for either the certificate or the declaration may be obtained on application.

High merit in workmanship, simplicity of conception in design, and fitness for use of the article made will be the qualities valued most highly by the examiners. In addition, preference in any award will be given to work carried out in New Zealand timbers.

#### ELECTRICAL WIRING AND ELECTRICAL FITTING.

##### GENERAL.

In the written examinations candidates will be expected to show practical knowledge and experience of all the apparatus and appliances referred to in the course; and questions may be set on any part of the whole syllabus up to and including the stage for which he is sitting.

The following classes of candidates will be exempted from the preliminary examination:—

- (a) Those who have passed the examination for a senior free place, passing in the subjects mathematics or alternative mathematics, trade drawing, and technical electricity:
- (b) Those who have obtained a senior free place by recommendation, having reached the pass standard in the subjects mathematics or alternative mathematics, trade drawing, and technical electricity.

A candidate who has failed in the final examination for electrical fitters may be accepted as a candidate for the final examination for electrical wiremen.

#### SYLLABUS OF COURSE FOR ELECTRICAL WIREMEN.

##### PRELIMINARY EXAMINATION FOR ELECTRICAL WIREMEN.

As for electrical fitters, but treated more simply.

##### INTERMEDIATE EXAMINATION FOR ELECTRICAL WIREMEN.

###### A.

(1) *General.*—General ideas regarding the electric current and its effects; a clear understanding of the cases in which the effects are different for A.C. and D.C.

(2) *Terms and Units.*—Meaning and definition of amp., volt, ohm, megohm, conductance, resistance, electro-motive force, impedance, frequency, phase.

(3) *Heating Properties of Current.*—Fuses; bad connections; heating of cables; mechanical and electrical properties of special resistance-wires for heaters; incandescent lamps.

(4) *Electrolytic Properties of Current.*—Pole-testing; electrolytic meters; accumulators; electroplating; electrolysis of pipes; heating of water by A.C.

(5) *Magnetic Properties of Current.*—Measuring-instruments; blow-out coils; bells; lifting and control magnets; generators; transformers; no detailed knowledge of each individual process or appliance required.

(6) *Conductors.*—Mechanical and electrical properties of commonly used metallic conductors; the relative resistance of conductors in common use; variation of resistance with dimensions and temperature; non-mathematical treatment of inductive and non-inductive resistances.