



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

Fire Service Electrical Fitter Intermediate Trade Test Mock Practical Test Paper

此文件關於消防電氣裝配工中級工藝測試考題。如有需要索取此文件的中文版本，請致電 2100 9000 與香港建造業工藝測試中心聯絡。

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Test Paper for Intermediate Trade Test

Job Title : Fire Service Electrical Fitter

Skill Level : Semi-skilled worker

Test : Including the following three tasks. Candidates must past all tasks to pass the test.

(1) Answer multiple-choice questions on electric safety (10 questions in total, each question constitutes 10 marks, 60 marks or above to pass)

(2) Colorblind test (all correct to pass)

(3) Practical task: Complete the practical tasks on page 3 and 4 at the specified locations. Total score of this task is 100. 60 marks or above to pass.

(4) Please note that all fixed electrical installations at the site must be performed by registered “Electrical Workers”.

Time Limit : Three hours

Points to note: (1) Before you start, read all instructions for candidate below;

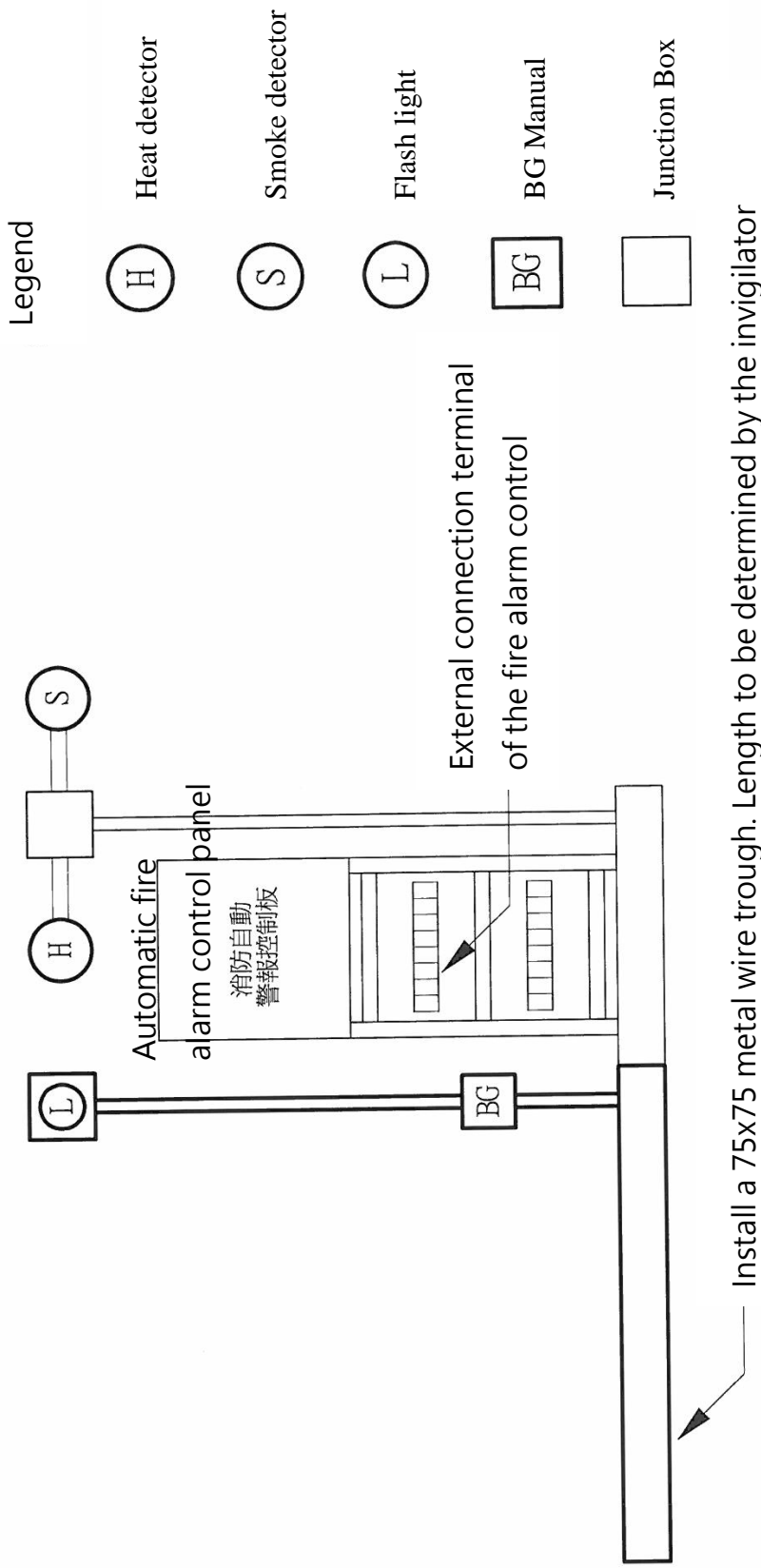
(2) You will fail the test if you do not take proper safety measures during the test.

(3) After the test, clean up the venue and restore its original condition as instructed by the invigilators.

Practical task: Complete the follow tasks at the specified location:
(Please refer to the work drawing)

1. According to the work drawing, correctly produce and install a simple metal conduit, steel wire trough and junction box.
2. Select the correct type of cables. According to the work drawing, correctly insert suitable number of cables to the conduit, and connect it to the relevant components properly.
3. Correctly install and connect fire smoke detector, heat detector, manual alarm and fire flashlight, etc.
4. Properly connect an automatic fire alarm control panel.
5. Upon completion, connect your work to the power in order to test whether all functions could normally operate. After the test, you should resume the automatic fire alarm control panel to its normal settings.

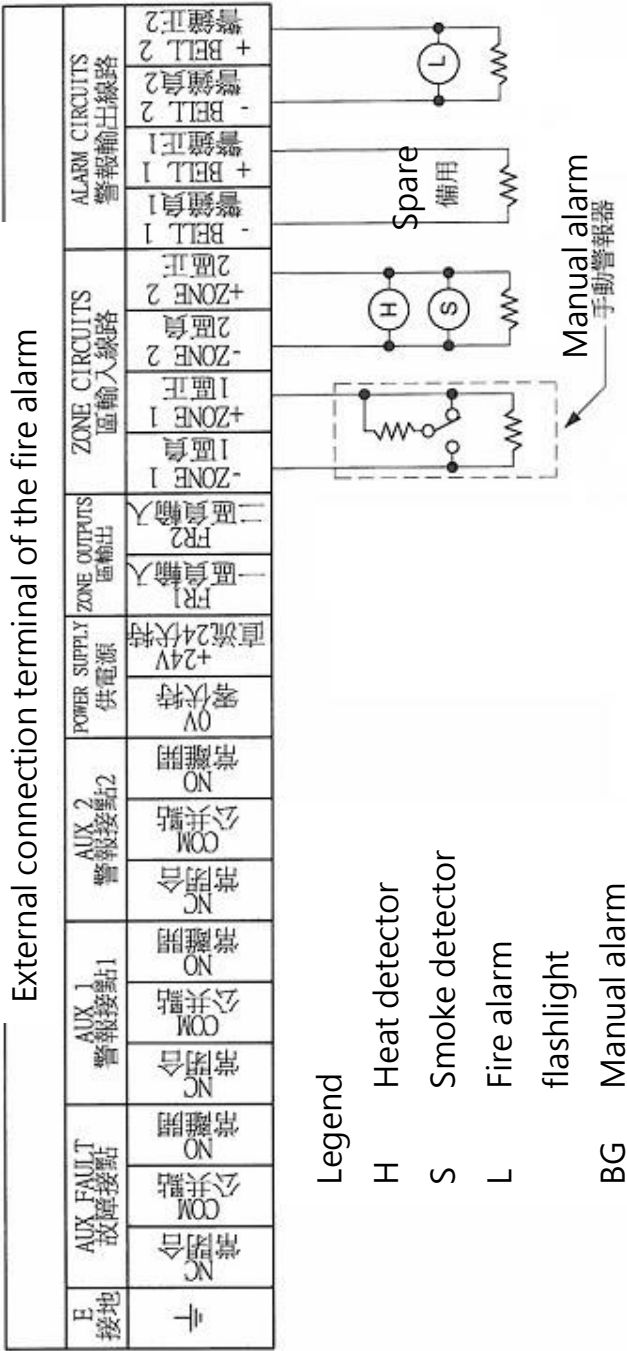
Elevation for the Fire Service Electrical Fitter (Intermediate) IFE (E406a) Trade Test



Note: (i) The diameter of the metal pipe to be installed is 20mm, with a 1mm² PVC cable.

(ii) The bold lines mark the area for the practical test of installation, threading and wire connecting.

Wiring Drawing for the Fire Service Electrical Fitter (Intermediate) IFE (E406a) Trade Test



Legend

- H Heat detector
- S Smoke detector
- L Fire alarm
- BG Manual alarm

Standards for acceptance check

- (i) Before the test, candidates must read carefully the test paper and related drawing. If you have any questions, ask an invigilator immediately.
- (ii) To ensure safety, candidates must adhere to the safety requirements and wear the safety equipment provided by the test venue. For any violation of such, the invigilator may terminate the test, demand that you leave the venue immediately and disqualified your candidacy.
- (iii) Before the test, candidates must check all tools and materials. You may request for an exchange of any faulty item.
- (iv) Candidates must perform the installation according to the work requirements and standards of the practical test. The test will be deemed incomplete for any unapproved alteration or unattempted section.
- (v) All polarity colors of the wires must be correct: brown for positive pole wire and blue for negative pole wire. Any misconnection is a serious mistake.
- (vi) Marks will be deducted for any additional request for wires, wire troughs or components.
- (vii) Marks will be deducted for additional acceptance checks (from the 3rd time onwards).
- (viii) Time limit for this practical test is 3 hours. During the first 2 hours and 45 minutes, candidates may request as many inspections by the invigilator as they wish. However, in the last 15 minutes, all inspection will be stopped, until after the bell rings. The invigilators will then perform the final inspections.
- (ix) Cleaning up and restoration of the venue to its original condition also contribute to part of the total score.
- (x) Candidates must pass the colorblind test (100 marks) and the written test on knowledge of safety and fire service electrics, complete all installation procedures and pass the functionality tests required for the practical task, and score 60 marks or above to pass the entire test.

Fire Service Electrical Fitter (Intermediate)

Tools List

Item	Tools	Quantity	Item	Tools	Quantity
1	8" combination slip-joint plier	1	16	200mm flat file	1
2	8" combination plier	1	17	Hacksaw with blade	1
3	6" plier	1	18	300mm blade (spare)	1
4	6" long-nose plier	1	19	4" scriber	1
5	Cable stripper	1	20	Medium punch	1
6	6" G-shaped vise grips	2 pairs	21	Multi-meter	1
7	150mm flathead screwdriver	1	22	Threading belt	1
8	150mm cross-head screwdriver	1	23	Safety goggles	1 pair
9	100mm flathead screwdriver	1	24	Pipe bender	1
10	100mm cross-head screwdriver	1	25	20mm conduit wrench	1 set
11	75mm flathead screwdriver	1	26	Bushing spoon	1
12	Screwdriver tester	1	27	Oiler	1
13	Measuring tape	1	28	Pencil	1
14	6" angle square	1	29	6.5mm high speed steel drill	1
15	Light hammer	1	30	20mm hole saw	1

Fire Service Electrical Fitter (Intermediate)

Materials List

Item	Materials	Quantity	Item	Materials	Quantity
1	75x75 steel wire trough	1	9	Manual alarm	1
2	75x75 terminal cover of steel wire trough	1	10	Resistors (3.9kΩ)	10
3	75x75 steel wire trough	2	11	Resistors (560Ω)	10
4	Screws for embedding troughs M5x6	12	12	M3.5 X 20 screws	2
5	Copper earth link	1	13	1mm ² cable	5.5m
6	Steel conduit 20mm	0.85m	14	Masking tape	1 roll
7	20mm copper bushing	6	15	Cotton gloves	1 pair
8	20mm copper plan coupling	4			

Notes to Candidates :

1. Candidates should read the test papers carefully and ask the invigilator for any queries.
2. Candidates should study the drawings and specifications attached to test papers, if any, before the test begins.
3. Candidates should carry out the test according to test papers, working drawings and specifications provided.
4. Candidates shall bring their own safety shoes, other safety equipment will be provided by trade testing centre. Candidates must take all necessary safety precautions to ensure work safety.
5. All tools and materials required by the test will be provided by trade testing centre, candidates should check and ensure their adequacy and quality. Candidates shall use the tools and materials properly based on trade practice. All the tools must be returned to trade testing centre after the test. The candidates may ask the invigilator for any problems.
6. Candidates are required to handle and move the tools and materials for use in the test, and to carry out associated works.
7. Invigilator will take record photos periodically during the test.
8. Candidates are not allowed to take any photo or video with cameras or mobile phones.
9. Candidates are not allowed to use their mobile phones during the trade tests, except for emergency situation.
10. The marking scheme is based on the following criteria :
 - a) Understanding of drawing and specification
 - b) Preparation works before commencement of test
 - c) Working procedures
 - d) Accuracy and quality of works
 - e) Progress of works
 - f) Proper handling and use of materials
 - g) Proper use of tools and equipment
 - h) Safety precautions
 - i) Considerate of other trades
 - j) Housekeeping after completion of test
11. All candidates must stop when time is up.
12. Candidates are required to return the test paper to invigilator after the test.
13. Offering bribe to invigilator is an offence in law and trade testing centre will report to the ICAC for any such case.

In the event that the candidate fails to take any necessary safety precautions and / or works in any dangerous situations, he / she will be assessed failed