



CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

Control Panel Assembler Intermediate Trade Test Mock Practical Test Paper

此文件關於控制板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 : Control Panel Assembler

Skill Level : Semi-skilled worker

Test : Including the following three tasks:

1. Multiple choice questions on electricity and safety (10 questions in total, each question constitutes 10 marks, 60 marks or above to pass)
2. Colorblind test (All correct to pass)
3. Complete the following practical control panel assembling tasks at the specified locations (2 tasks in total with a total score of 100. 60 marks to pass. Please refer to page 3 to 6.)

Time Limit : Three hours

Points to note: (1) Before you start, check all tools and materials according to the list;

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

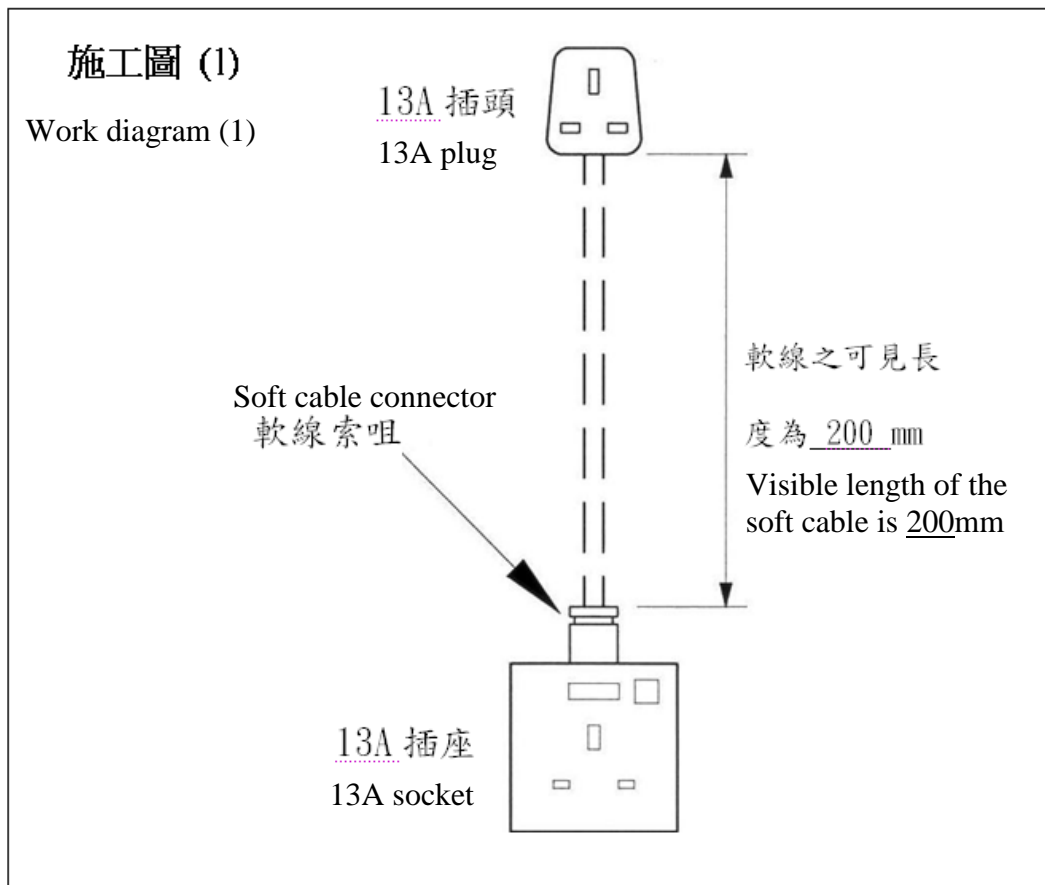
(3) After the test, clean up the venue and restore its original condition as instructed by the invigilators.

Tasks : (1) Wire a plug to electrical apparatus; and
(2) assemble and wire a control panel

(1) Wire a plug to an extension socket

1.1 According to measures on the work drawing (I), use a three-core soft cable to connect a 13A plug to a 13A extension socket.

1.2 Check whether all components are firm upon completion.



1.3 Materials:

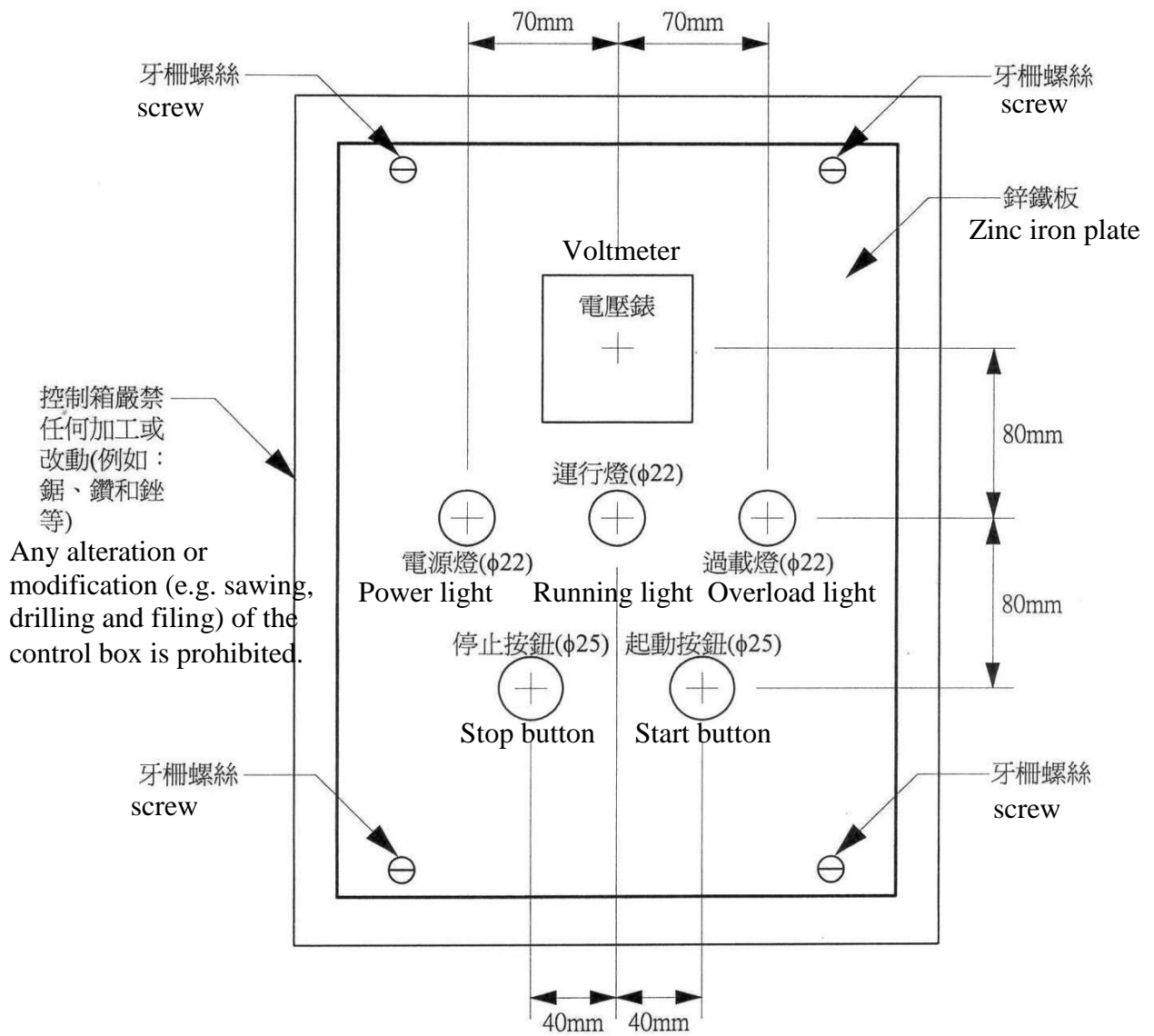
Items	Description	Quantity
1	13A plug	1
2	13A socket	1
3	Three-core soft cable	1
4	Surface box	1
5	Soft cable connector	1

1.4 Tools:

Items	Description	Quantity
1	Plier	1 pair
2	Cable stripper	1 pair
3	Flathead screwdriver	1
4	Screwdriver tester	1

(2) Assemble and wire a control panel

- 2.1 According to work drawing (2), taking the running indicator as the center, use a scribe to draw the necessary electrical components on the provided zinc iron plate, which include, switch (start and stop), indication lights (yellow power light, green running indication light and red overload light) and the hole location of the voltmeter;
- 2.2 According to the hole location on the 4 corners of the control box panel provided, use a scribe to draw the hole location on the zinc iron plate, then make holes and fix the zinc iron plate onto the control box panel with screws and nuts;
- 2.3 Using suitable tools, drill holes on the zinc iron plate, then tidy up and file all metal edges;
- 2.4 According to work drawing (2), install the electric components on the zinc iron plate;
- 2.5 According to work drawing (3), use appropriate color cables and suitable needle-shaped or cross-shaped solderless terminals to connect the control box and the components on the zinc iron plate. Upon completion, tidy up the cables with a cable wrap and cable ties; and
- 2.6 Submit to an invigilator for scoring after completion and checking.



Work drawing (2) Location of components on control panel

List of materials and tools

Item	Tools	Quantity	Item	Materials	Quantity
1	Measuring tape, 3.6m	1	1	Control box	1 set
2	Flathead screwdriver	1	2	Zinc iron plate	1
3	Cross-head screwdrivers	2	3	PVC soft cable, brown, 1mm ²	5 m
4	Screwdriver tester	1	4	PVC soft cable, blue, 1mm ²	2m
5	Combination plier, 150mm	1	5	PVC soft cable, yellow/green	1 m
6	Long-nose plier, 150mm	1	6	screws and nuts for fixing the zinc iron plate	4 sets
7	Plier, 150mm	1	7	Cable wrap	1
8	Cable stripper	1	8	Cable ties	10
9	Hand drill	1	9	Cross-shaped solderless terminals	15
10	Drill bit, Φ 6mm	1	10	Needle-shaped solderless terminals	15
11	Hole saw, Φ 22mm	1	11	Earthing solderless terminals	3
12	Hole saw, Φ 25mm	1	12	Red indication light	1
13	Semicircle file	1	13	Yellow indication light	1
14	Straight steel ruler	1	14	Green indication light	1
15	Angle square	1	15	500V voltmeter	1
16	Center punch	1	16	Red switch button	1
17	Pencil	1	17	Green switch button	1
18	Eraser	1	18	13A plug	1
19	Wireless electric saw and jigsaw blade x 2	1 set	19	13A socket	1
20	Oil brush	1	20	Three-core soft cable	1
21	Handhammer	1	21	Surface box	1
22	Clamp	1	22	Soft cable connector	1
23	Multi-meter	1			

Note: After completing the test, candidates should return all borrowed tools as well as this test paper. Candidates may not leave until the invigilator's instructions.

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