CONSTRUCTION INDUSTRY COUNCIL
建造業議會

HONG KONG CONSTRUCTION INDUSTRY TRADE TESTING CENTRE
香港建造業工藝測試中心

Communication System Mechanic Trade Test Practical Test Mock Paper

(Version：ECT-PM-EN-02)

此文件關於電訊系統裝配工技能測試實務測試模擬試題。
如需索取中文版本，請致電 2100 9000 與香港建造業工藝測試中心聯絡。

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Communication System Mechanic

Trade Test Practical Test Mock Paper

Title: Communication System Mechanic

Skill level: Skilled Worker

Test Requirements and Duration:

Procedures and requirements	Duration
1. **Dynamic risk assessment prior to work** Conduct dynamic risk assessment on worksite environment, equipment and tools, materials and safety equipment prior to work, including identification of potential hazards and taking countermeasures to ensure that potential hazards are eliminated and/or risks are reduced before commencement of work.	5 minutes
2. **Preparation prior to work and protection to work site** Review the worksite delivered by the person-in-charge / worker of the previous work process, and perform proper protection as well as appropriate preparations before commencement of work according to the worksite environment and the conditions of the workpiece etc.	5 minutes
3. **Practical Test** Carry out the works in accordance with the requirements, specifications and drawing(s), and complete the specified works at the designated locations. **Test Content** 1. **Colour Identification and Multi-core telecommunications cable terminal processing according to Working Drawing (1)** After removing an appropriate length of the outer sheath from a 40-core telecommunications cable, connect 20 conductors whose colours match those of the sample to the designated terminals on the connector. The positions and colours of the conductors must correspond exactly to the sample. *Note: Marks will be deducted according to the severity of any defects found in incomplete or improperly completed work.* 2. **Soldering Skill** According to Working Drawing (2), place wire terminals on a printed circuit board as shown in the front view. At the respective locations at the back (copper foil), use fusible alloy to connect bare copper wire, with 12 soldering points in total. *Note: Marks will be deducted according to the severity of any defects found in incomplete or improperly completed work.*	4 hours

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Communication System Mechanic

Trade Test Practical Test Mock Paper (Con't)

Test Requirements and Duration (con't):

Procedures and requirements	Duration
Test Content (Con't) **3. Install "PABX" system** i. System Installation and Connection: Install and connect the Private Automatic Branch Exchange (PABX) System in accordance with the requirements shown in Working Drawing (3). ii. Fault Finding and Rectification: a. Among the materials/devices provided by the test centre, one item will be defective and unable to operate properly. After completing the installation and connections, the candidate shall identify and replace the defective item. b. A record shall be made on the attached form each time a replacement is carried out. Marks will be deducted if more than one replacement is required before the defective item/device is correctly identified. iii. System Testing and Configuration (For configuration methods and procedures, please refer to the Quick Setup Guide.): a. Upon completion of the installation and fault rectification, test the system and perform the following configurations: b. Set the system date and time according to the actual date and time on the day of the examination. c. Assign extension number 007 to the extension connected to Jack 01, and extension number 008 to the extension connected to Jack 02. d. Assign the name APPLE to extension 007 and the name MARRY to extension 008.	Refer to previous page

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Communication System Mechanic
Trade Test Practical Test Mock Paper (Con't)

Test Requirements and Duration (con't):

Procedures and requirements	Duration
Test Content (Con't) **4. Install "IBCCD" system 4: Install "IBCCD" system** i. <u>System Installation and Connection</u> Install and wire the system using the correct materials/devices in accordance with Working Drawing (4). In addition, both ends of the signal source cables connected to the three channel amplifiers shall be labelled accordingly. ii. <u>System Testing</u> Upon completion of the installation and rectification, perform system testing. The signal strength at the test point and at each subscriber outlet shall be within the range of 65 dB to 75 dB, and the results shall be recorded in the Test Record Form. In addition, the received digital television channels shall be stable and clear, and the digital video signal level shall be at least 5 dB lower than the analogue video signal level. *Notes:* a. Candidates shall ensure that all cable connections are secure. Marks will be deducted according to the severity of any loose or improperly completed connections. b. Candidates shall verify that the system operates properly, including monitoring the high-definition reception using an Integrated Digital Television (iDTV) and measuring the signal strength at all output points using appropriate test instruments to confirm compliance with the specified requirements. c. Marks will be deducted for improper use of equipment or damage to any materials, devices, or equipment provided.	Refer to previous page
4. <u>Housekeeping after work and final touch-up on work before handover</u> After completion of work, clean and tidy up the worksite, equipment, tools and materials, and review the quality of workpiece taking into account of the possible impact on the upcoming work process. The finished workpiece should be properly handled in preparation for delivery along with the worksite.	5 minutes

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Communication System Mechanic
Trade Test Practical Test Mock Paper (Con't)

Note:

1. Candidates should read the attached "Notes to Candidate" before commencement of work and comply with all test related rules and requirements.

2. Practical test assessment framework is comprised of "Technical Assessment" and "Dynamic Risk Assessment and Safety Practice Assessment". Candidates must fulfil the passing requirements for both assessment parts to achieve an overall "Pass" grade in the practical test.

Passing Requirement for "Technical Assessment"	Passing Requirement for "Dynamic risk Assessment and Safety Practice Assessment"
Achieve 60 marks out of 100 marks; and meet the specific requirement(s) in the critical assessment items of the technical assessment.	Achieve 60 marks out of 100 marks; and meet the specific requirement(s) in the critical assessment items of "Dynamic Risk Assessment and Safety Practice Assessment".

Precautions

This document is provided as reference for test preparation only. Under all circumstances all content in the official test papers, including but not limited to the terms and conditions therein, prevails.

There are different versions of the test paper, content include but not limited to tools, materials, equipment, drawing, construction details or procedures and different simulated site environments. Candidates should refer to the official test documents during testing. The CIC reserves the right, at its sole and absolute discretion, to change, update or delete the contents in this document at any time without prior notice.

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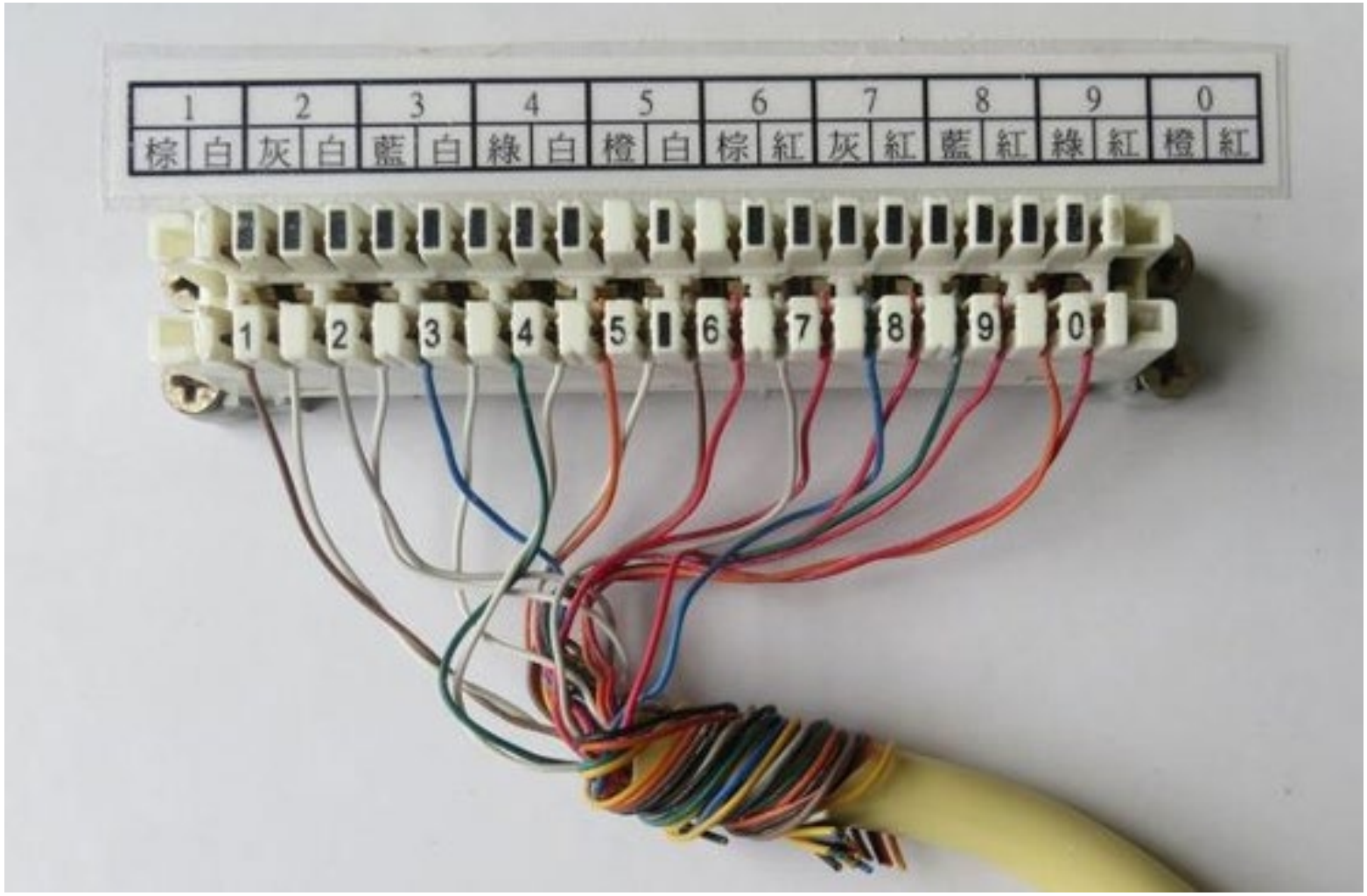
Working Drawing (1)



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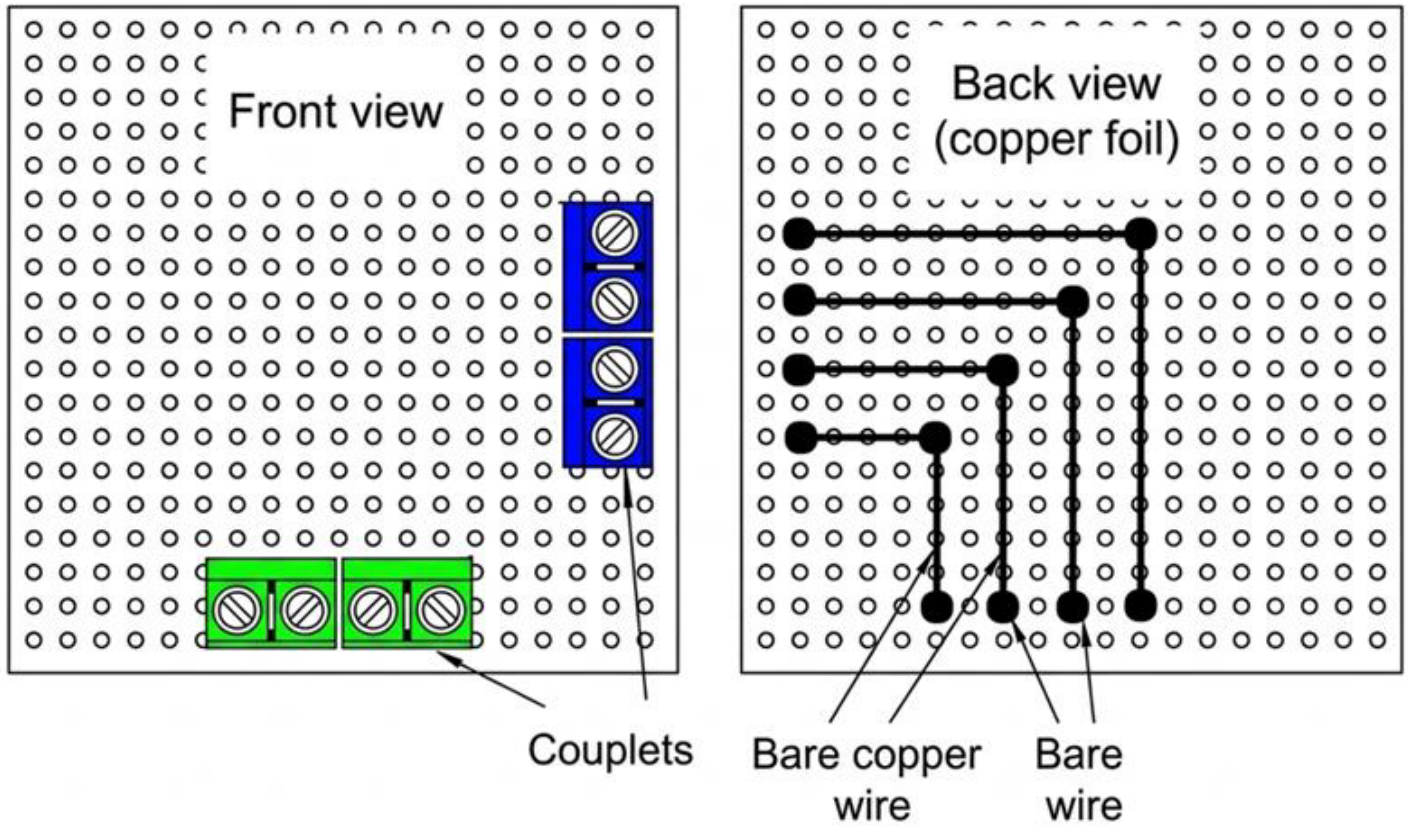
Working Drawing (2)



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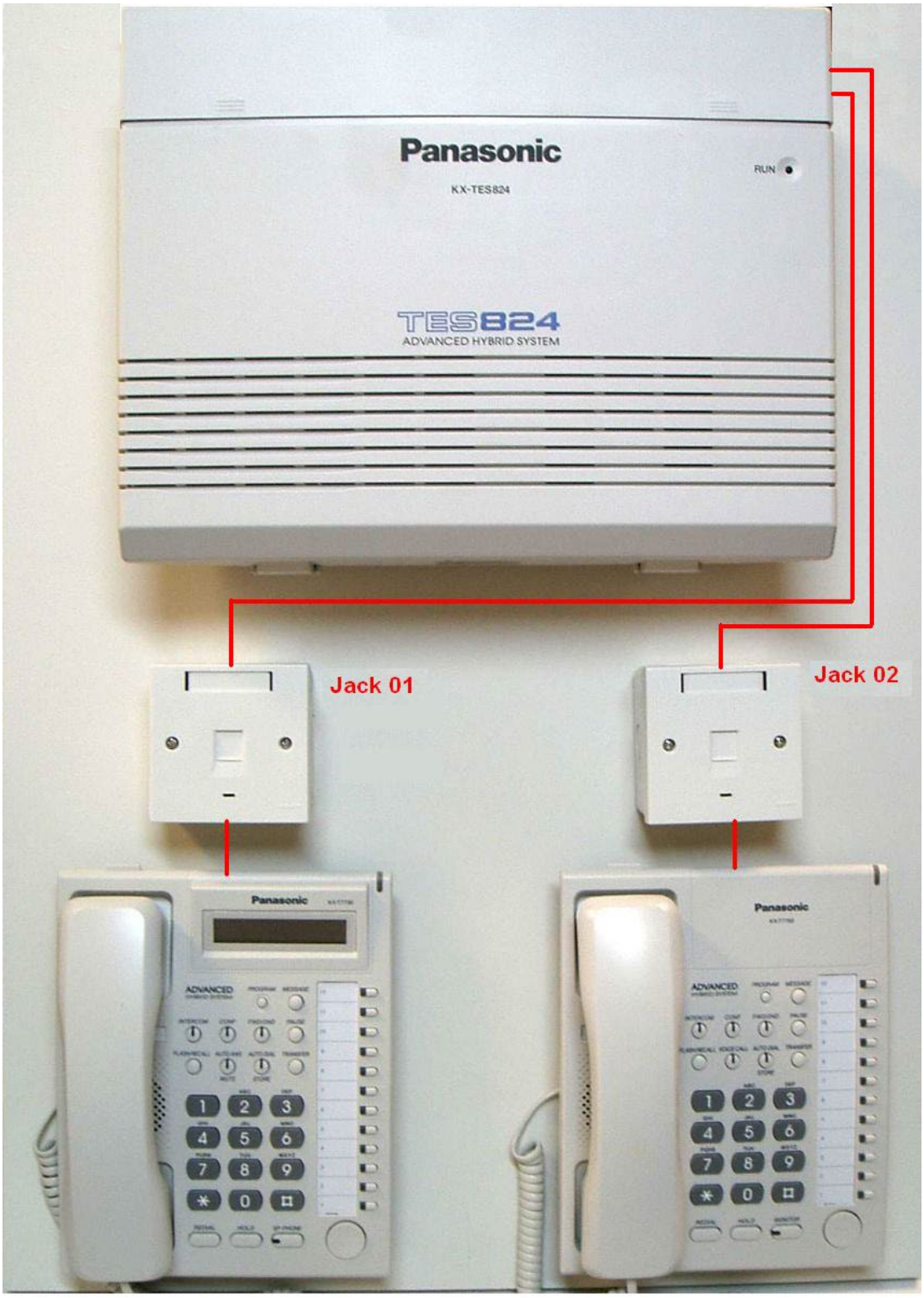
Working Drawing (3)



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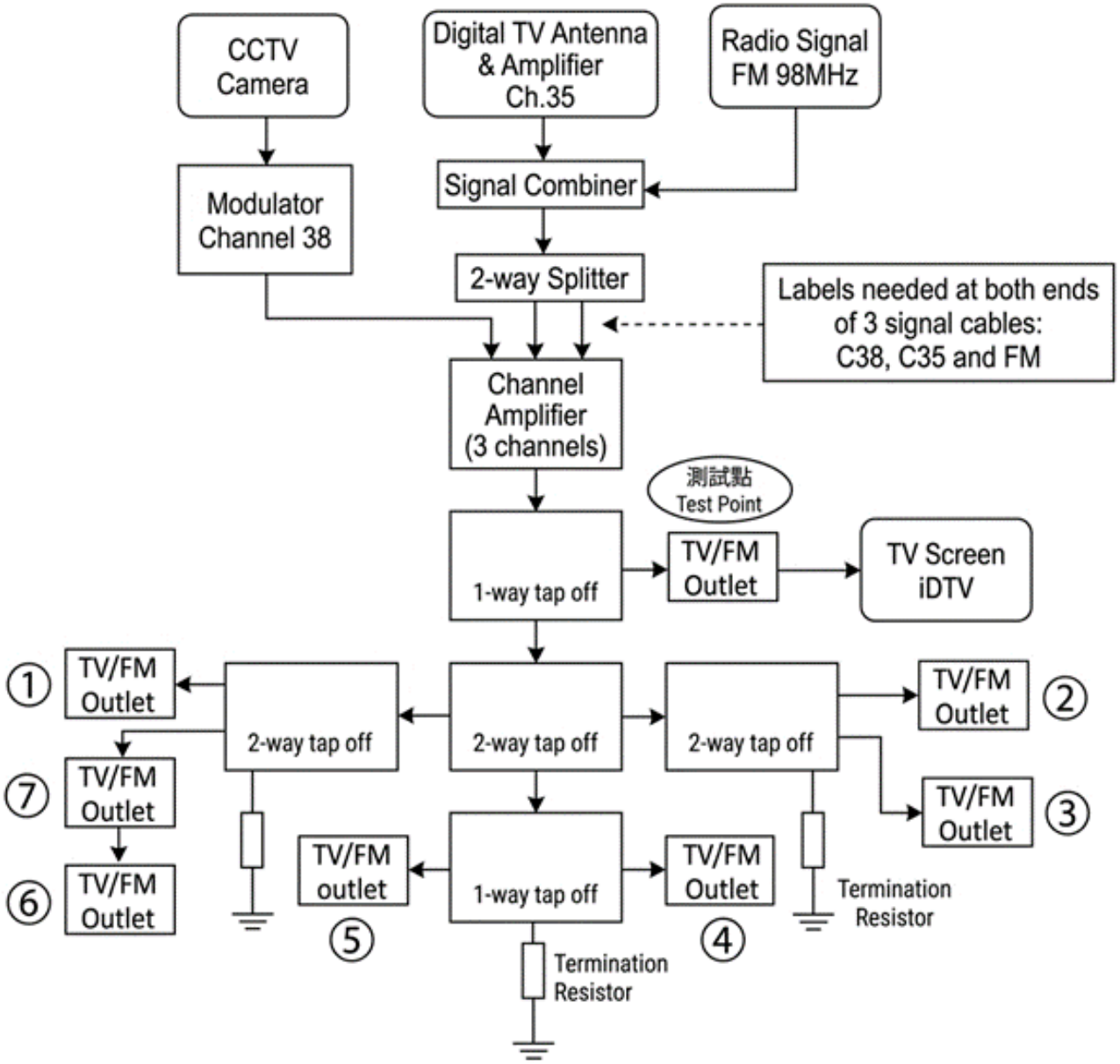
Working Drawing (4)



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Notes to Candidate

1. Candidates should read the test papers carefully and ask the invigilator for any queries.
2. The practical test making scheme is based on the following criteria:
   a. Understanding of drawing and specification
   b. Preparation work before commencement of test
   c. Working procedures, accuracy and quality of work
   d. Proper handling and use of materials
   e. Proper use of tools and equipment
   f. Housekeeping after completion of test
   g. Safety precautions
3. Candidates should study the drawings and specifications attached to the test paper, if any, before the test begins.
4. Candidates should carry out the test according to test papers, working drawings and specifications provided.
5. Candidates should bring their own safety shoes and appropriate workwear, other safety equipment will be provided by HKCITTC. Candidates must take all necessary safety precautions to ensure work safety.
6. All tools and materials required by the test will be provided by HKCITTC, candidates should check and ensure their adequacy and quality. All the tools must be returned to HKCITTC after the test. The candidates may ask the invigilator for any problems.
7. Candidates are required to handle and move the tools and materials for use in the test, and to carry out associated work.
8. All candidates must stop when time is up.
9. Candidates are required to return the test paper to invigilator after the test.
10. Invigilators will take record photos periodically during the test.
11. Candidates are not allowed to take any photo or video with cameras or mobile phones.
12. Candidates are not allowed to use their mobile phones during the trade tests, except for in an emergency.
13. Offering bribes to an invigilator is an offence in law and HKCITTC will report to the ICAC for any such case.
14. Subject to certain situations and/or conditions of the date of event, trade tests/courses could be at any moment suspended or postponed at discretion of the invigilators. Examples of such situation/condition could be, but not limited to, (a) sudden operation disruptions to classrooms, test venues, test equipment or tools etc. due to unforeseeable mishaps; (b) sickness or injury of candidates, students or elated staff of the HKCITTC; (c) adverse weather conditions. HKCITTC will rearrange another appointment, for free, with the candidates/students affected. Whilst every effort is made to ensure the smooth running of trade test/courses, the HKCITTC will not resume any liability any loss/damage directly or indirectly related to such arrangement.

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

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