GRADE : **II**

SERIES : **DECEMBER 2025**

NATIONAL INDUSTRIAL TRAINING AUTHORITY

ENHANCING SKILLS.

NATIONAL TRADE TEST

ELECTRICAL WIREMAN

THEORY PAPER

TIME: 1 ½ HOURS

INSTRUCTIONS TO CANDIDATES

Read the instructions on the question paper carefully before attempting the questions.

1. Ensure you are provided with clear labeled answer sheet for your use.
2. Write your Full Name, Test Date, T.T. Number, Centre Name and Trade respectively at the top of both sides of the answer sheet provided any extra sheet provided during the test.
3. Answer **ALL** the questions from the question paper provided.
4. This question paper together with the answer sheet **MUST** be handed back to the Assessor at the end of the test.
5. **DO NOT MAKE ANY MARK(S) ON THE QUESTION PAPER.**

TRADE : ELECTRICAL WIREMAN

GRADE : II

PAPER : THEORY

TIME : 1 ½ HOUR

Answer **ALL** the questions

Que. No.	QUESTION DETAILS	MAX. MARKS
1.	a) Outline the procedures for rescuing a person who is in contact with live parts of an electrical installation	**(4Marks)**
	b) State the application of the following types of fire extinguishers. (i) Foam (ii) Carbon dioxide	**(2Marks)**
2.	a) With reference to protection, define the following terms (i) Current rating (ii) Fusing current (iii) Fusing Factor	**(6 Marks)**
	b) State TWO relevant IEE regulations in reference to domestic circuits.	**(2 Marks)**
3.	a) Define the term, final sub-circuit.	**(2 Marks)**
	b) List FOUR factors that influence the choice of a wiring system.	**(4 Marks)**
4.	Outline the procedures of performing the polarity test	**(5Marks)**
5.	a) Explain the difference between a ring and a radial circuit.	**(4 Marks)**
	b) List THREE disadvantages of Concealed Conduit Wiring System	**(3 Marks)**
6.	Explain the term segregation of circuits in reference to domestic installation	**(2 Marks)**
7.	With aid of a diagram explaining the operation of a trembler bell	**(8 Marks)**
8.	State functions of the following components in a fluorescent lamp fitting. (i) Choke (ii) A capacitor across the supply	**(4 Marks)**

Que. No.	QUESTION DETAILS	MAX. MARKS
	(iii) Starter (iv) Capacitor in the starter	
9.	a) Define ohms' law	**(2 Marks)**
	b) In a circuit, a 12V battery is connected to a series combination of a 4 Ω resistor and a 6 Ω resistor. Calculate i) Total resistance of the circuit ii) Current flowing through the circuit iii) Voltage drops across each resistor	**(6 Marks)**
10.	Four capacitors, each with 4μf capacitors, connected in parallel across 16V power supply. Calculating a) Total capacitance b) Total charge	**(4 Marks)**

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NATIONAL TRADE TEST

ELECTRICAL WIREMAN

PRACTICAL PAPER

TIME: 12 HOURS

INSTRUCTIONS TO CANDIDATES

Read the instructions on the question paper carefully before performing the tasks.

1. This paper consists of **TWO (2) PROJECTS.** Perform ALL the tasks in each of the projects.

2. This paper together with the answer sheet **MUST** be handed back to the examiner at the end of the test.

3. All dimensions are in millimeters (mm)

4. Carefully remove all the accessories and wiring circuits from the working board after the project has been marked and clean your working area.

5. **DO NOT MAKE ANY MARK(S) ON THE QUESTION PAPER.**

TRADE : ELECTRICAL WIREMAN

GRADE : II

PAPER : PRACTICAL

TIME : 6 HOURS

TASK	TASK DETAILS	MAX MARKS
Figure 1 shows the layout of equipment at a consumer's intake point and **three** final circuits to be installed using heavy gauge PVC conduit wiring system, such that: i. S_1 is a Master Switch ii. S_2 controls L_1 and L_2 iii. S_2 Controls L_3 iv. S_2, S_3 and S_4 controls lamp L_4. v. SO_1, SO_2 and SO_3 are connected in Ring. vi. SO_4 is a Spur		
TASK 1	Draw the wiring diagram for the circuit.	**(7 Marks)**
TASK 2	Estimate the material required to carry out the installation	**(3 Marks)**
TASK 3	Carry out the installation in accordance with the IEE regulations requirement	**(36Marks)**
TASK 4	Carry out the following tests a) Polarity test b) Continuity of the ring circuit	**(4 Marks)**
TASK 5	Power the circuit to test for correct operation	**(5 Marks)**

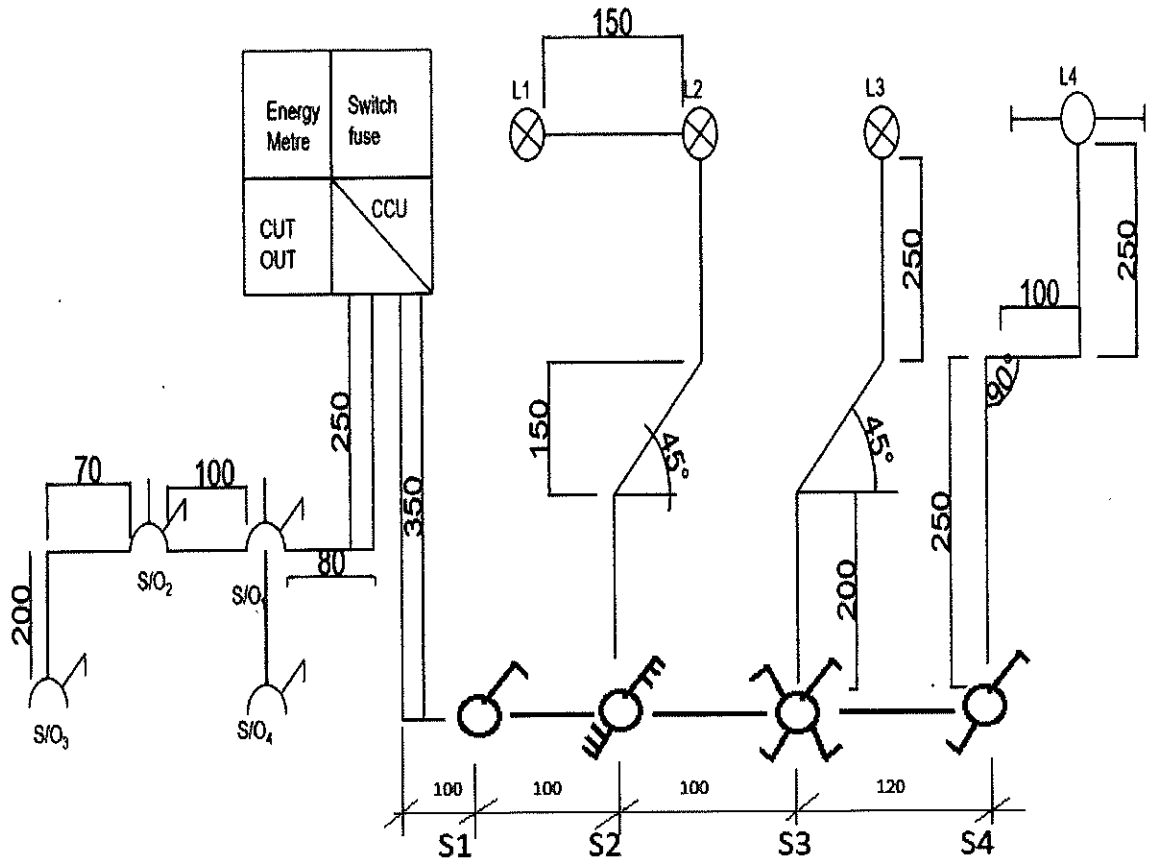
TRADE : ELECTRICAL WIREMAN

GRADE : II

PAPER : PRACTICAL

TIME : 6 HOURS

PROJECT 1



TRADE : ELECTRICAL WIREMAN

GRADE : II

PAPER : PRACTICAL

TIME : 6 HOURS

PROJECT 2

Figure 2 shows the layout of a call and alarm circuit to be installed using mini-trunking wiring system such that:

(a) Push buttons A and B control bell 1 through the 240V relay

(b) Push button C, and cord operated switch D control bell 2 through the 12V relay

(c) Indicator lamp glows when bell 2 is ringing

(d) Siren operates when bell 2 is ringing

TASK No	QUESTION DETAILS	MAX. MARKS
TASK 1	Draw the wiring diagram of the circuits	**(6 Marks)**
TASK 2	Estimate materials required for the project	**(2 Marks)**
TASK 3	Install and wire the project on the assigned working board to conform with the IEEE regulations requirements.	**(18 Marks)**
TASK 4	Power the circuit to test for correct operation as instructed by the assessor	**(4 Marks)**

TRADE : ELECTRICAL WIREMAN

GRADE : II

PAPER : PRACTICAL

TIME : 6 HOURS

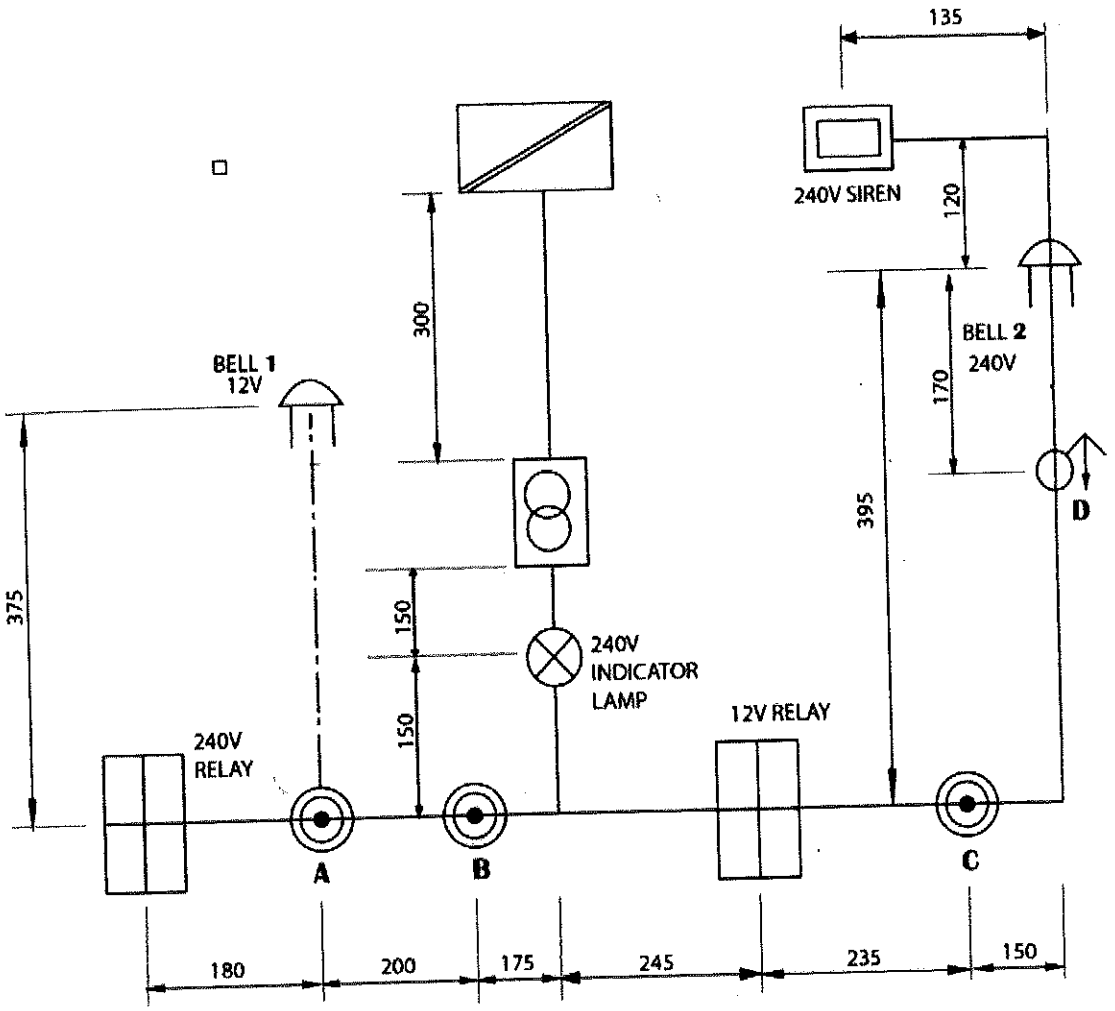


Figure 2