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071304T4EIN**ELECTRICAL INSTALLATION LEVEL 4****ENG/OS/EI/CR/01/4****PERFORM ELECTRICAL INSTALLATION****July/August 2025**

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**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL
(TVET CDACC)**

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WRITTEN ASSESSMENT**TIME: 2 HOURS**

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INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections **A** and **B**.

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2. An section

3. Marks for each question are indicated in the brackets.

4. You are provided with a separate answer booklet to answer the questions.

5. Do not write on the question paper.

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This paper consists of SIX (6) printed pages.

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6. Candidate should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.

SECTION A (10 MARKS)

Attempt all questions in this section. Each question carries one mark

1. It is essential to use fire extinguisher to contain spread of fire in the even it breaks out on an electrical installation project. Identify the extinguisher most appropriate to put out a class D fire.

A. Water
B. Dry powder

C. Foam

D. CO₂

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2. A fuse is very important material that is always used in electrical installations. Identify a component that can be used for similar application as a fuse.

A. Ceiling Ross

B. Junction box

C. Earth conductor

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3. Different types of cables are used in electrical installations. Identify one factor that would influence selection of a cable for a particular installation.

A. Voltage ratings in the installation.

B. Size of the system

C. Power rating of the circuit breakers

D. Geographical location of the installation

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4. Tools are used to make our work easier. Identify the tool that is commonly used to remove insulation from electrical wires.

A) Long nose pliers

B) Crimping tool

C) Torque wrench

D) Wire stripper

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5. The total number of socket-outlets that may be connected to an unfused spur is?

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- A. Equal to the total number of socket-outlets on the ring
- B. One single or two twin socket-outlets
- C. One or two twin socket-outlets
- D. Unlimited number of sockets

6. The type of control of lamps is often used in staircase desired that a person going up the stairs should be able to switch ON and after reaching upstairs should be able to switch OFF the light.

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- A. One lamp controlled by two switches
- B. Two lamps controlled by one switch
- C. One lamp controlled by one switch
- D. Two lamps controlled by one two-way switch

7. PVC are increasingly being used in place of steel conduits. Identify one main factor that it more preferred to steel conduit

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- A. They are less expensive
- B. They are Flexible resistant to rust
- C. They save in labour
- D. They are resistance to acids, alkalis, oil

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8. Cables are selected based on several factors. Identify cables used where the installation has risk of mechanical aggression.

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- A. Armored cables
- B. Aluminium cables
- C. Fire resistant cables
- D. Signal cables

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9. In a looped-in lighting circuit, where are the connections made for each light fitting?

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- A. At the main switch consumer unit
- C. At the ceiling rose
- D. At the junction box

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10. Observing colour coding for cables during electrical installation is a critical safety measure. Which colour code is used for earthing/grounding cables?

A. Blue

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B. Red

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C. Yellow

D. Green/Yellow-Green

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SECTION B (40 MARKS)**Attempt all questions in this section.**

11. Electrical systems appliance with IEE regulations. Outline any THREE IEE regulations requirements relating to installation of final circuits. (3 Marks)
12. List THREE main types of electrical installations. (3 Marks)
13. Fuses are protective devices installed in electrical systems. Explain the following terms with reference to fuses. (4 Marks)
- i. Fusing factor
 - ii. Current rating
14. Appropriate wiring systems are selected for installation of various electrical projects. State FOUR factors to be considered when selecting the type of wiring systems. (4 Marks)
15. Diagrams are used to represent electrical installations. Give any TWO comparisons between a schematic diagram and wiring diagram. (4 Marks)
16. Highlight FOUR I.E.E regulations requirement for the consumers' intake point. (4 Marks)
17. State THREE advantages of the steel conduit wiring system. (3 Marks)
18. Highlight the function of the following accessories as used in domestic electrical installations. (4 Marks)
- i. Junction boxes
 - ii. Lamp holders
 - iii. Socket outlets
 - iv. Circuit Breakers (MCB/RCCB)
19. Various equipment are used in the electrical installation works. Give the function of the following tools and equipment. (4 Marks)
- i. Crimping Tool
 - ii. Fish Tape
 - iii. Angle Grinder
 - iv. Measuring Tape
20. Resuscitating a victim of electric shock can help to save life. Give three steps of conducting Cardiopulmonary Resuscitation. (CPR). (4 Marks)

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21. Personal protective equipment (PPEs) are important materials that must be worn by an electrician doing electrical installation works. Identify THREE types essential PPEs required when installing final circuits

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(3 Marks)

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