

071304T4EIN

ELECTRICAL INSTALLATION LEVEL 4

ENG/OS/EI/CC/04/4

Prepare and Interpret Technical Drawings.

July/August 2024

Time: 2 Hours



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

WRITTEN ASSESSMENT

2 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of sections A and B.
2. Answer all the questions in the answer booklet and drawing papers size A2 provided.
3. Do not write on the question paper.
4. Marks for each question are indicated in the brackets.
5. All questions should be answered in English.

This tool consists of FIVE (5) printed pages.

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

SECTION A (10 Marks)

Answer **ALL** questions in this section. Each question carries **one (1)** mark.

1. A pentagon is a polygon with _____ number of sides.
 - A. 8
 - B. 7
 - C. 5
 - D. 3
2. _____ is a PPE used in Technical Drawing room.
 - A. Sun glasses
 - B. Dust coat
 - C. Ear plugs
 - D. Compass
3. An instrument for measuring, transferring and marking off distances is called _____.
 - A. Divider
 - B. Set squares
 - C. French curve
 - D. Protractor
4. The following are qualities of a good drawing, except _____.
 - A. It must have dimensions
 - B. It must be within the borderlines
 - C. Must be neatly drawn
 - D. Must be large in size
5. Names of persons who have designed and drawn the drawing are written in the _____.
 - A. Borders
 - B. Margins
 - C. Title block
 - D. Grid system
6. The ratio of the drawing size to the actual size of an object is called _____.
 - A. Scale
 - B. Thickness
 - C. Outline
 - D. Height

7. An instrument used to draw circles and arcs is called_____.
- A. T-square
 - B. Compass
 - C. Scale
 - D. Set square
8. An angle that measures less than 90 degrees is known as _____.
- A. Acute angle
 - B. Right angle
 - C. Obtuse angle
 - D. Straight angle
9. A_____ is a solid.
- A. Heptagon
 - B. Trapezium
 - C. Frustrum
 - D. Rectangle
10. Hidden lines in orthographic projections denote_____.
- A. Holes or slots
 - B. Change of plane
 - C. Position of cut
 - D. Center of a circle or cylinder

SECTION B (40 Marks)

Answer **ALL** questions in this section.

11. Drawing tables are very key in technical drawing. State **three** precautions that should be observed while handling a drawing table. (3 marks)
12. Using freehand sketches, draw the following electrician tools:
- a) Phase tester
 - b) Claw hammer (4 marks)
13. Draw the BS3939 symbols for:
- a) One gang One way switch (2 marks)
 - b) Intermediate switch (2 marks)
 - c) Two way one gang switch (2 marks)
 - d) One gang two way switch (2 marks)
14. Construct 15° angle using a ruler and a compass only. (3 marks)
15. **Figure 1** shows a wooden block. Sketch the following views:
- a) front in the direction shown by the arrow.
 - b) Plan (4 marks)

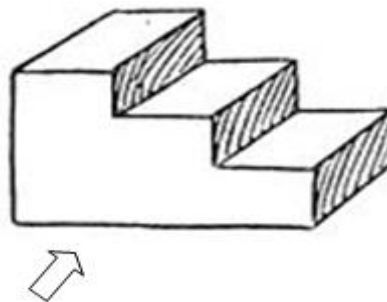


Figure 1

16. Construct a triangle ABC with sides $AB=30\text{mm}$, $BC=AC=40\text{mm}$. (4 marks)
17. Draw the following lines used in Technical Drawing:
- a) Center line
 - b) Hidden line (4 marks)
18. Construct a rectangle given the length of diagonal 80mm and width 30mm . (4 marks)

19. **Figure 2** shows an object drawn in isometric projection. Draw the full size first angle orthographic projection of the figure . (6 marks)

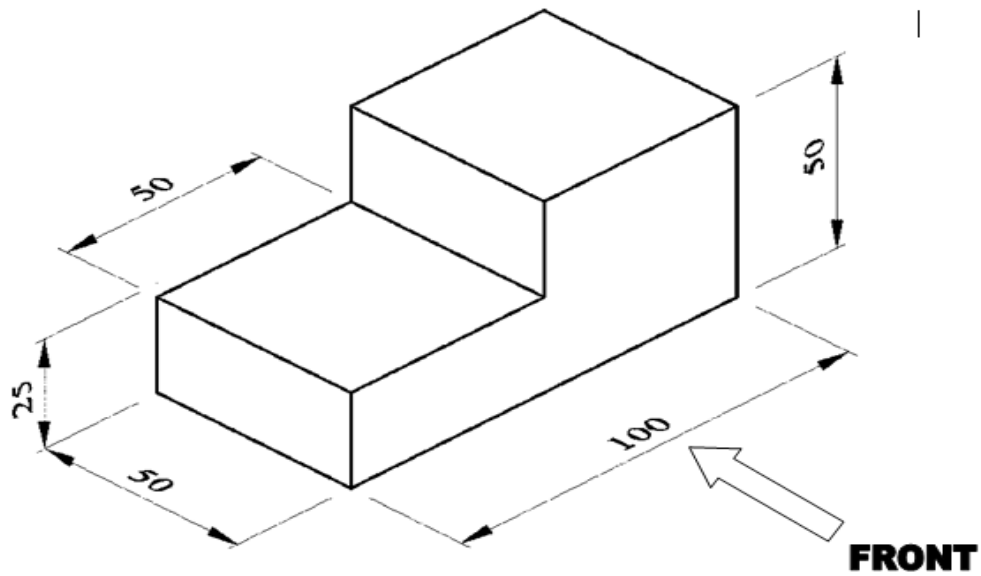


Figure 2

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