

071306T4EEN

ELECTRICAL ENGINEERING (POWER OPTION) LEVEL 6

ENG/OS/PO/CC/04/6

Prepare and Interpret Technical Drawing

November/December 2025



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

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INSTRUCTIONS TO CANDIDATE

1. Marks for each question are indicated in the brackets.
2. The paper consists of **TWO** sections: **A** and **B**.
3. Attempt **ALL** questions in section A.
4. Attempt **QUESTION 11** and **ANY OTHER TWO (2)** in section B.
5. Candidates are provided with a separate answer booklet
6. **DO NOT** write on this question paper.

This paper consists of FOUR (4) 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 (40 MARKS)

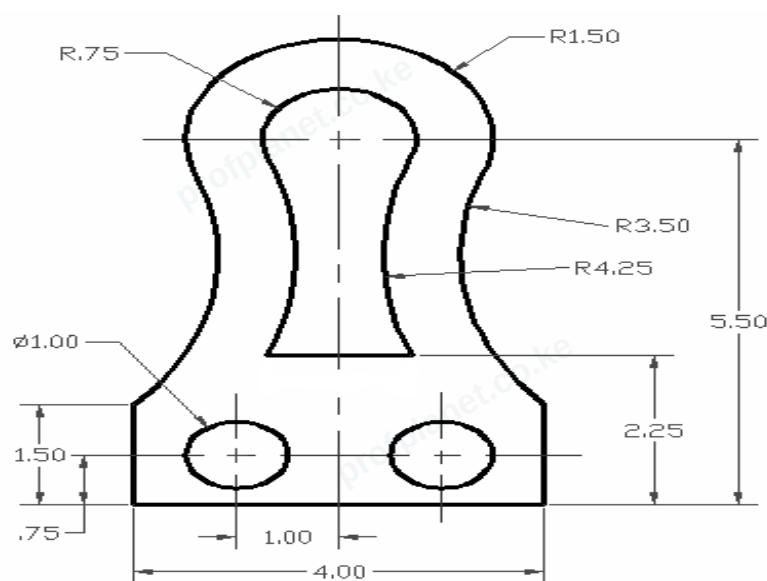
Attempt ALL the questions in this section.

1. Care in handling and maintaining drawing tools and equipment is paramount. Briefly outline THREE safety precautions while using Drawing boards. (3marks)
2. Using a ruler and a protractor, draw the title block and in it, print your Name, the institution, Admission number, and the unit name (4marks)
3. The first rule of engineering drawing is to standardize the projection that is used. Name THREE projections. (3marks)
4. Make freehand sketches of the following engineering tools.
 - a) Combination pliers. (3marks)
 - a) Ball pein hammer. (3marks)
5. Construct a triangle given the perimeter of 130mm and the ratio of 4:3:6 (4marks)
6. A parabola is the locus of a point that moves its distance from a fixed point called the focus. Given the focus and directrix are 20mm apart. Draw the parabola (4marks)
7. Construct a nonagon given the diameter of 80mm. (4marks)
8. Given the length of a diagonal of 80mm, a square. (4marks)
9. Given the radius of a circle as 40mm, tangent to a circle from any point on the Circumference (4marks)
10. A triangle has sides 50mm, 70 mm and 20 mm long. Draw the triangle and circumscribe it. (4marks)

SECTION B (60 MARKS)*Attempt Question 11 and any other TWO questions in this section*

11. Figure 1 shows the section of an orthographic view of an object. Perform the following tasks:

- Draw the figure using AutoCAD software (10marks)
- Include your name and index number. (5marks)
- Print on A4-size paper and hand over. (5marks)

**Figure 1**

12.

- Using concentric method, construct an ellipse whose major and minor axes are 100 mm and 60 mm, respectively. (10 marks)
- Draw the following electrical symbols
 - Switch
 - Resistor
 - Capacitor
 - Diode
 - LED diode. (10 marks)

13. Figure 2 shows a pictorial view in isometric projection. Draw the following views in full size in first-angle projection. (20 marks)

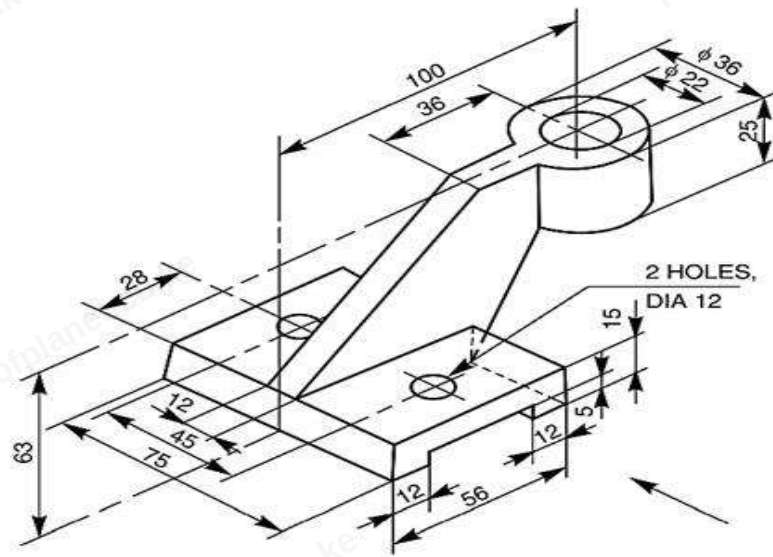


Figure 2

- i. Front view from the direction of arrow
- ii. Plan
- iii. End View
- iv. Insert SIX major dimensions

14. Figure 3 shows two views of an object drawn in first-angle orthographic projection. Draw an isometric view of the object, making the corner P the lowest point. (20 marks)

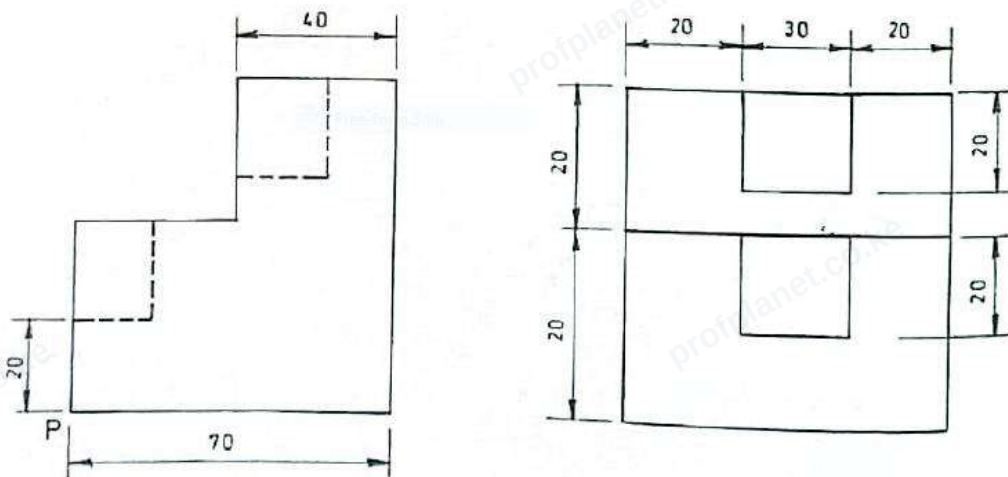


Fig. 3