

071906T4AEN

AGRICULTURAL ENGINEERING TECHNICIAN LEVEL 6

ENG/OS/AGR/CC/08/6/A

PREPARE AND INTERPRET TECHNICAL DRAWINGS

July /August 2024



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

WRITTEN ASSESSMENT

3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper consists of two sections; **A** and **B**
2. Answer **ALL** the questions as guided in each section
3. Marks for each question are as indicated in the brackets
4. You are provided with a separate answer booklet to answer the questions
5. Do not write in this question paper

This paper consists of SIX (6) 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]

Answer *ALL* the questions in this section.

1. State **two** properties of a standard drawing paper (2 Marks)
2. Highlight **five** care and maintenance practices for a Technical drawing board (5 Marks)
3. What do the following abbreviations represent? (4 Marks)

i. CAD;

ii. SQ;

iii. BLDG;

iv. MATL.
4. Sketch the development of surface of a square pyramid of base 40 mm and axis 60 mm. (5 Marks)
5. Highlight **five** types of sectional views. (5 Marks)
6. In **figure 1** below, identify the lines as guided in the table 1 (5 Marks)

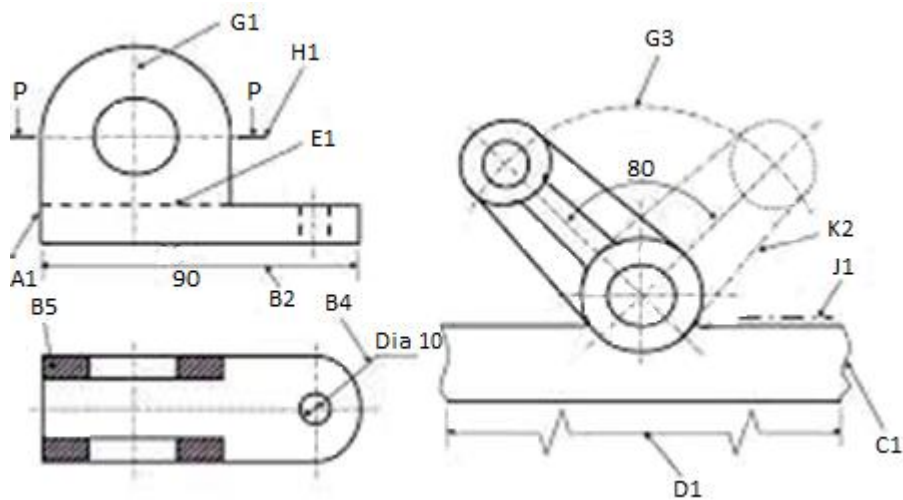
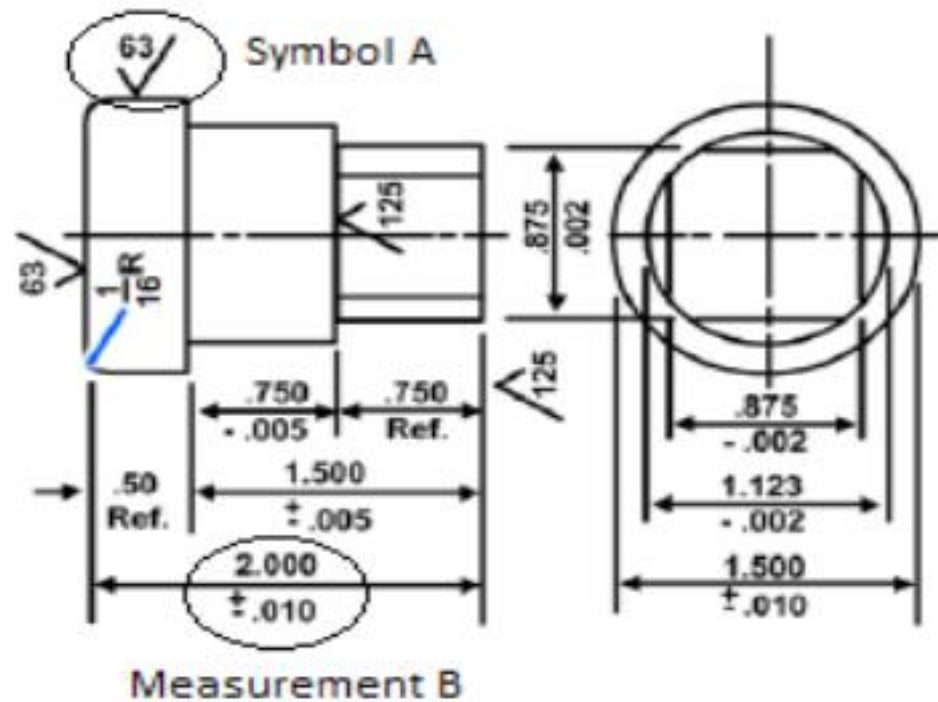


Figure 1

Label	Type of line
PP	
B2	
E1	
B5	
A1	

7. Highlight **five** hazards in technical drawing environment. (5 Marks)

8. State **three** types of CAD software. (3 Marks)
9. Using **figure 2** below, state the interpretation of circled details marked (2 Marks)
- Symbol A
 - Dimension B



10. Highlight **four** methods of constructing an ellipse. (4 Marks)

SECTION B: (60 MARKS)

Answer any **THREE** questions from this section.

11. **Figure 3** below shows a pentagonal prism, with a side of base 25 mm and altitude 50 mm, rests on its base on the Horizontal Plane such that an edge of the base is parallel to Vertical plane and nearer to the observer. It is cut by a plane inclined at 45° to Horizontal Plane, and passing through the centre of the axis at a vertical height of 25 mm.

Draw the development of the complete surface of the truncated prism. (20 Marks)

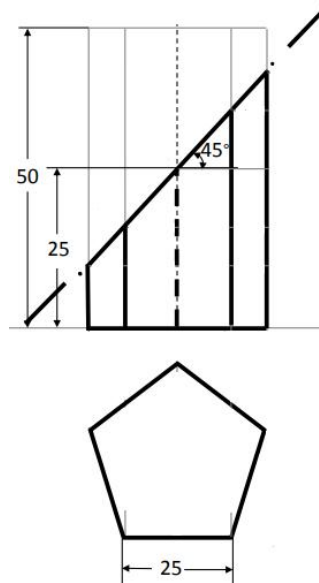


Figure 3

12. **Figure 4** shows a slider mechanism labelled OAB. Slider B is sliding on a straight path passing through O as shown in **Figure 4** given below. Crank OA is 30 mm and rotates in the anticlockwise direction and the length of connecting rod AB is 100 mm. A point P is located on connecting rod AB such that $AP = 40$ mm. Draw locus of point P for one complete revolution of the crank. (20 Marks)

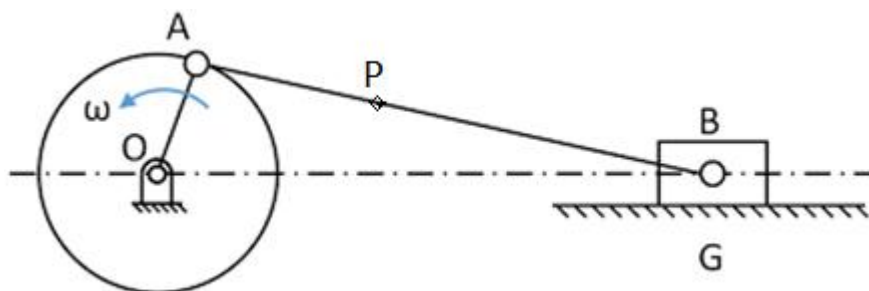
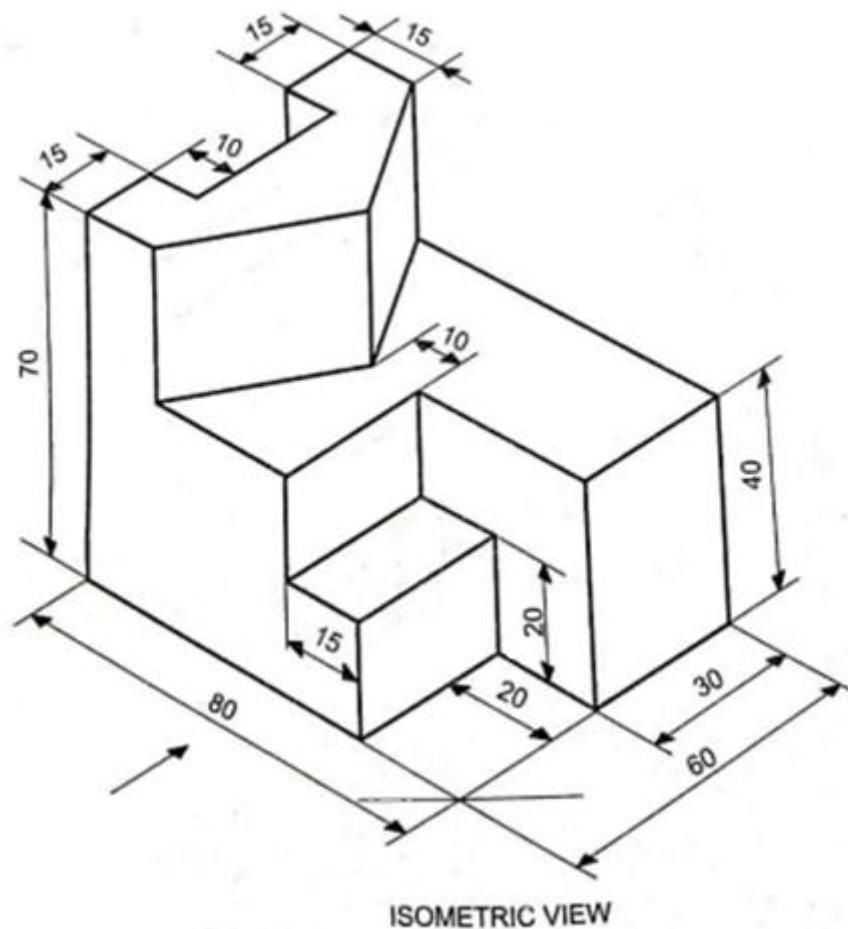


Figure 4

13. **Figure 5** shows a machine block in isometric view. Take the direction of the arrow as the front view and draw to a scale of 1:1 the followings views in 3rd Angle projection;

- i. Front view;
- ii. Top view;
- iii. Side view.

**Figure 5**

14. Construct the block shown in **Figure 6** below as an isometric view with all dimensions as indicated in millimetres. (20 Marks)

