

073206T4CEN

CIVIL ENGINEERING LEVEL 6

CON/OS/CET/CC/02/6/A

PREPARE AND INTERPRET TECHNICAL DRAWINGS

July/August 2024



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

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper has two sections A and B.
2. Answer ALL the questions as guided in each section.
3. You are provided with a separate answer booklet.
4. Marks for each question are indicated in the brackets.
5. Do not write on the 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 pages are missing

SECTION A (40 MARKS)

Answer ALL questions in this section

1. Working drawings are essential for any construction project in Civil Engineering. List FOUR types of working drawings. (4 Marks)
2. Engineering drawings consists of a number of geometric constructions. Draw a line $AB = 7$ cm and divide it in the ratio of 1:3:4. (5 Marks)
3. Personal Protective Equipment is used in line with occupational safety and health regulations in the construction industry. Outline FOUR reasons why it is importance to use Personal Protective Equipment while working. (4 Marks)
4. Orthographic projection and isometric projection are both methods of representing objects. Outline FOUR reasons for using orthographic projection in technical drawing. (4 Marks)
5. The first-angle and third-angle projection methods are two different approaches for representing an object on a plane. Highlight the difference between first and third angle projections. (4 Marks)
6. An auxiliary view is a concept in technical drawing that is used by engineers, designers and architects. Describe the classification of auxiliary views. (3 Marks)
7. As a civil Engineer, it's important to use scales to represent objects. State three reasons why scale is important in technical drawing. (4 Marks)
8. Isometric drawings are relevant and useful in technical drawing and architecture. Differentiate between an isometric line and a non-isometric line. (4 Marks)
9. Section view and an auxiliary view are both used in technical drawing; briefly differentiate between section view and auxiliary view. (4 Marks)
10. Dimensioning is important in technical drawing, state TWO differences between linear and angular dimensions. (4 Marks)

SECTION B (60 MARKS)

Answer Question ELEVEN 11 (compulsory) and any other TWO (2) questions

11. Figure 1 shows the isometric view of a machine block. Draw the following in third angle orthographic projection:

- i. Front elevation as shown;
- ii. The end elevation;
- iii. The plan.

(20 Marks)

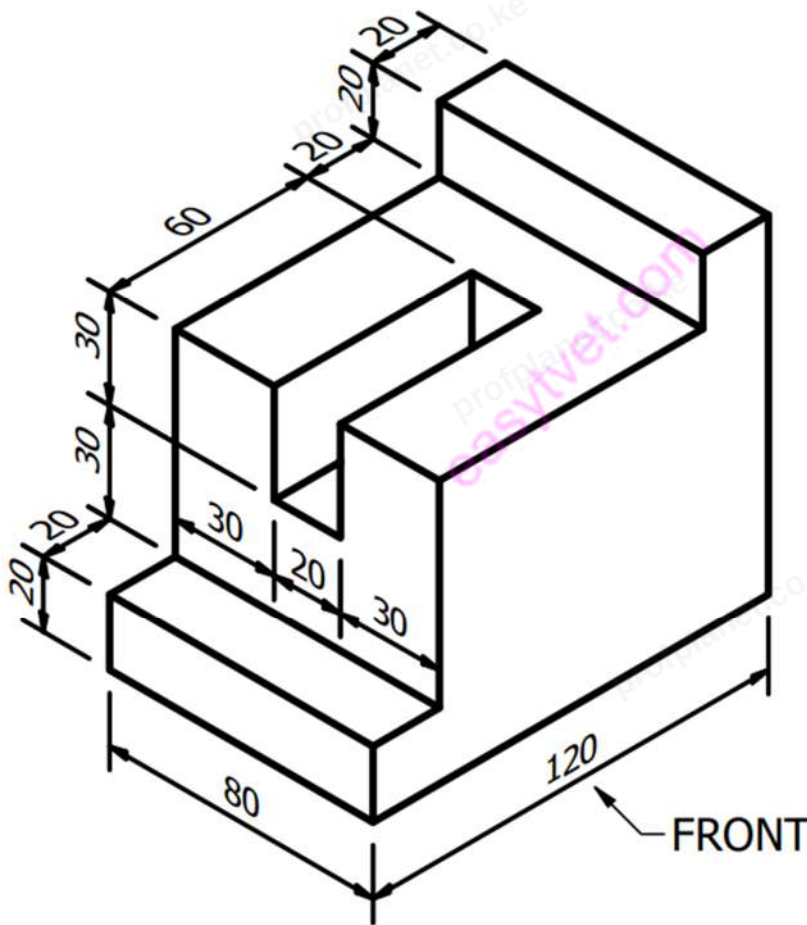


Fig 1

12. Figure 2 shows orthographic views of a machine block, drawn in third angle projection.

Draw the isometric of the block taking “A” the lowest point

(20 Marks)

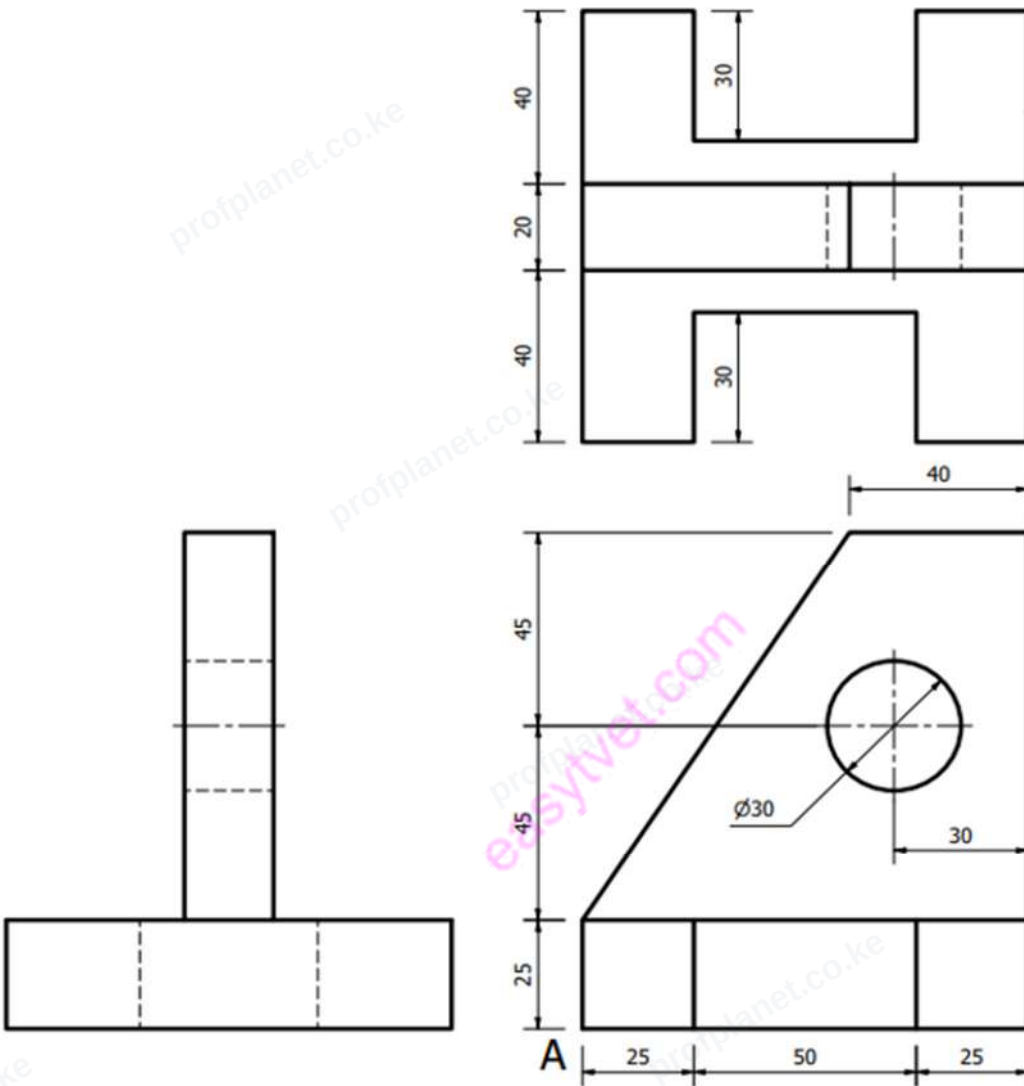


Fig 2

13. Figure 3 shows the isometric view of a machine block. Draw the following in first angle orthographic projection:

- Front elevation as shown;
- The end elevation;
- The plan.

(20 Marks)



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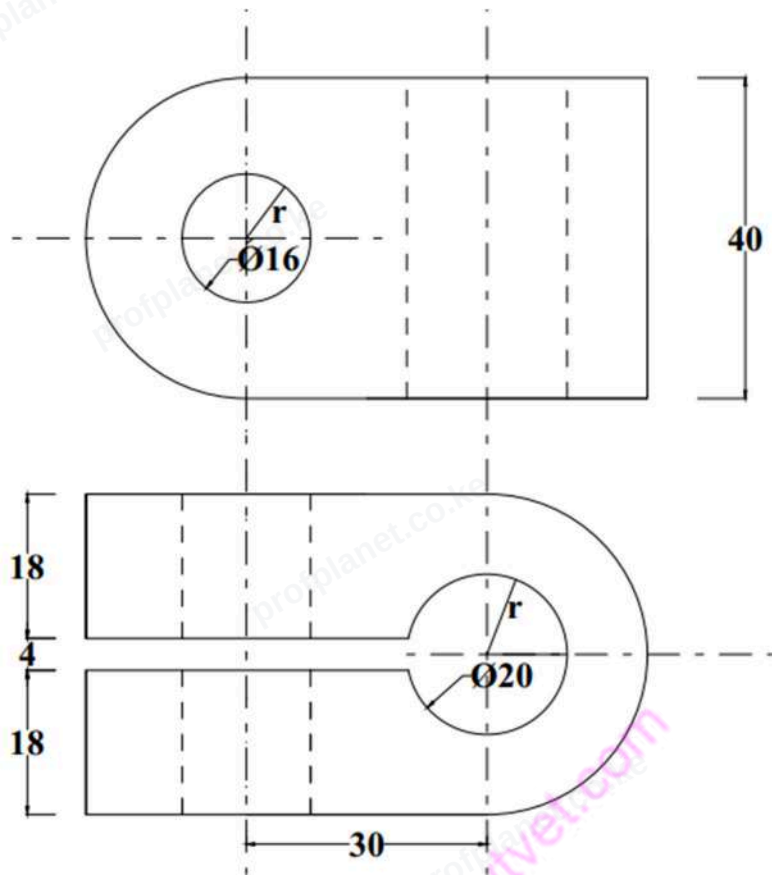


Fig .4

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