



TECHNICAL UNIVERSITY OF MOMBASA

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF BUILDING & CIVIL ENGINEERING
UNIVERSITY EXAMINATION FOR:

BACHELOR OF TECHNOLOGY IN CIVIL ENGINEERING
TMC 4111 : ENGINEERING DRAWING I

SPECIAL/SUPPLEMENTARY EXAMINATION
SERIES: JULY 2025

TIME: 3 HOURS

Instructions to Candidates

You should have the following for this examination

- Drawing paper, examination pass and student ID
- Drawing instruments

This paper consists of **five** questions.

Attempt question ONE (Compulsory) and any other TWO questions

Do not write on the question paper.

QUESTION ONE (COMPULSORY)

Draw the oblique view of a casting, the isometric view of which is shown in Figure 1 below. The arrow points in the direction of the front. Dimension the drawing appropriately. (20 Marks)

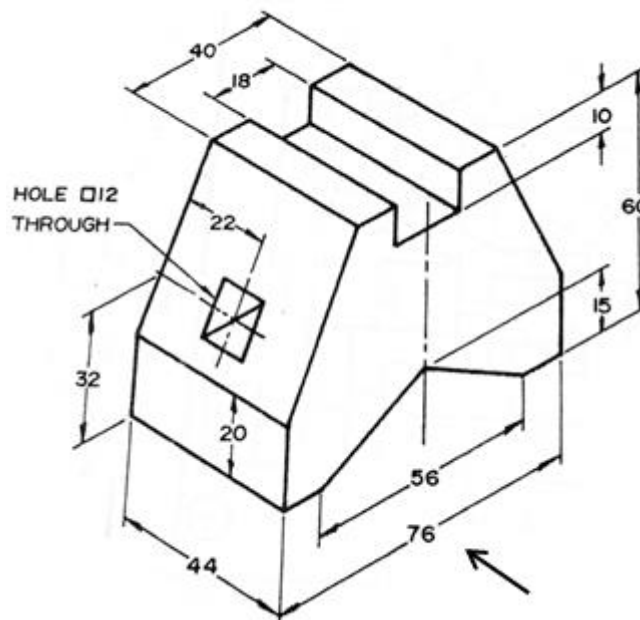


Figure 1

ANSWER ANY TWO QUESTIONS FROM THIS SECTION
QUESTION TWO

Draw the Third Angle Orthographic projection of the Block shown in Figure 2 below indicating all the dimensions and the respective symbol. The arrow points in the direction of the front elevation. (20 Marks)

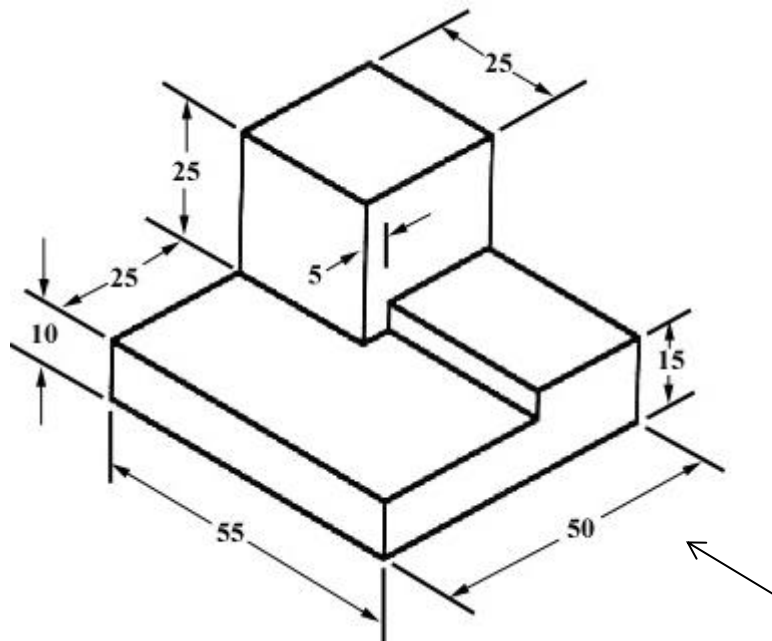


Figure 2

QUESTION THREE

A triangular lamina with sides of 50 mm, 40 mm, and 30 mm lies on the ground plane. One of its corners, where the 50 mm and 40 mm sides meet, is touching the Picture Plane (PP). The 50 mm side is inclined at 30° to the PP. The station point is 35 mm in front of the PP, 50 mm above the Ground Plane (GP), and lies directly above the midpoint of the 50 mm side. Draw the perspective projection of the lamina. (20 Marks)

QUESTION FOUR

Draw a cycloid generated by a point on the circumference of a circle with a diameter of 60 mm, rolling along a straight line. Mark any point Q on the curve and draw the normal and tangent at that point. (20 Marks)

QUESTION FIVE (20 Marks)

- a) Construct the following plane figures:
 - i) Regular hexagon 80mm across flats (5 Marks)
 - ii) Regular octagon 96mm across corners (5 Marks)

b) Create freehand sketch of the bench vice shown in Figure 3 below (10 Marks)

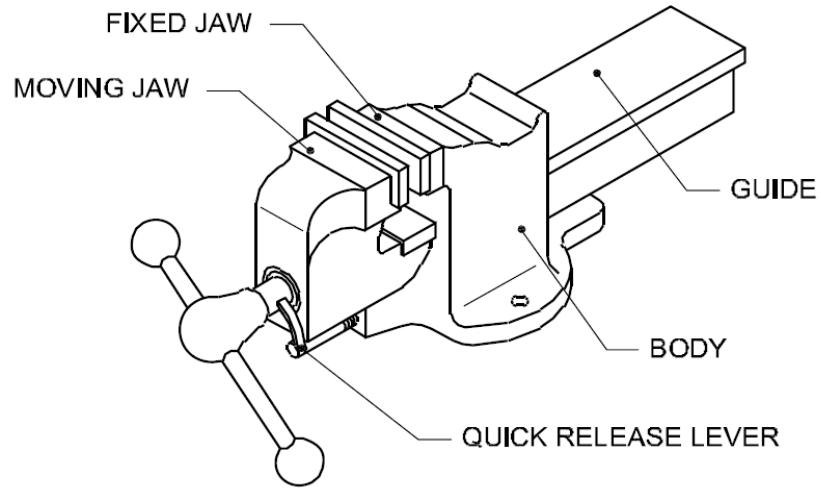


Figure 3