



**University of Ruhuna - Faculty of Technology**  
Bachelor of Engineering Technology Honours  
Level 2 (Semester 2) Examination, December 2025  
Academic year 2023/2024

**Course Unit: ENT2262 Technical Drawings and Computer Aided Drafting**

**Duration: 3 hours**

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- Answer all **Five (05)** questions. Each question carries **10 marks**.
  - Use provided A2 papers to answer your questions and use both sides to answer questions.
  - This is a closed-book examination.
  - Your answer sheet should contain a border on both sides and the description Title block on only one side drawn according to the standards used during the practical sessions.
  - Assume reasonable values for any data not in or with the examination paper. Clearly state such assumptions made in the script.
  - If you have any doubt as to the interpretation of the wording of a question, make your own decision, but clearly state it in the script.
  - All Dimensions are in mm
  - **ADDITIONAL MATERIALS:**
    - Figure-1 for Q4
    - Figure-2 for Q5

Q1.

a) Graphically determine the circumference of a circle of diameter  $D = 60 \text{ mm}$ . (5 marks)

b) Draw an equilateral triangle of 120 mm side. Place three equal circles, each one touching the other two circles and two sides of the triangle. (5 marks)

Q2.

On a single plane, draw the following conics curves by using focus and directrix method,  
(Draw the Conic Curve in Free hand)

a)  $FD = 50\text{mm}$ ,  $e = 2/3$  (5 marks)

b)  $FD = 50\text{mm}$ ,  $e = 1$  (5 marks)

$FD$  = distance between the focus and the directrix  
 $e$  = eccentricity

Q3.

a) Trace the locus of point P on the circumference of rolling disc for one complete revolution. of the 50 mm diameter disc rolls along a base line (straight line) without slipping. Initially, the point P is touching the base line. Also draw a tangent and a normal to the curve at point 35 mm above the baseline. (5 marks)

b) Draw the involute of a Hexagon of sides 20 mm and draw the tangent and normal to this involute at any point of your choice and show the construction lines. (5 marks)

Q4.

Construct the Isometric drawing with the dimensions of the object as denoted by orthographic projection drawing shown in Figure-1 (Mark the viewing direction indicated by the arrows) (10marks)

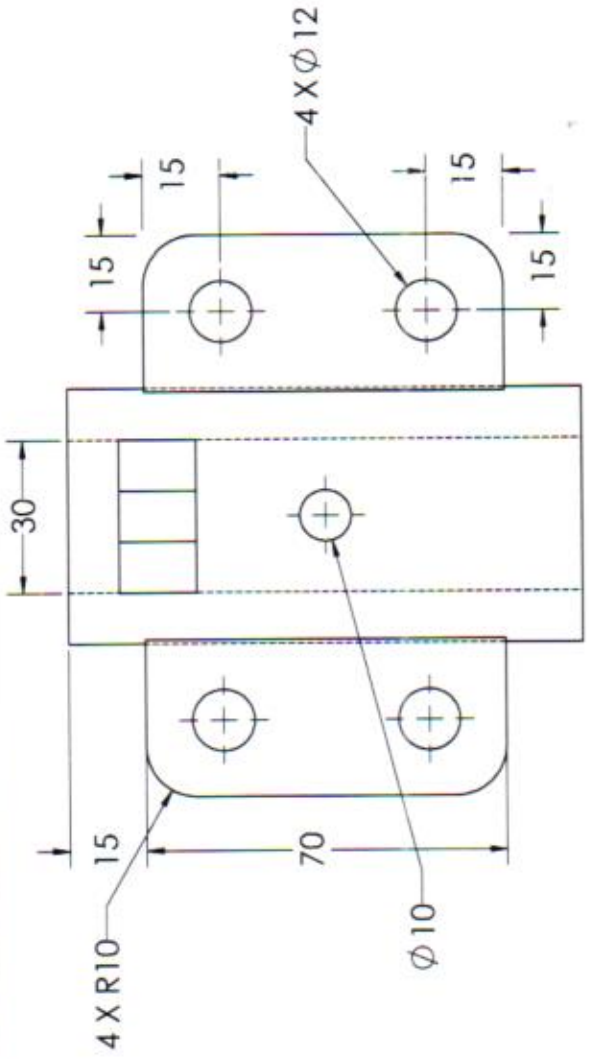
Q5.

Draw the Sectional Isometric drawing with the dimensions through Section X-X of Cast iron block shown in Figure-2.

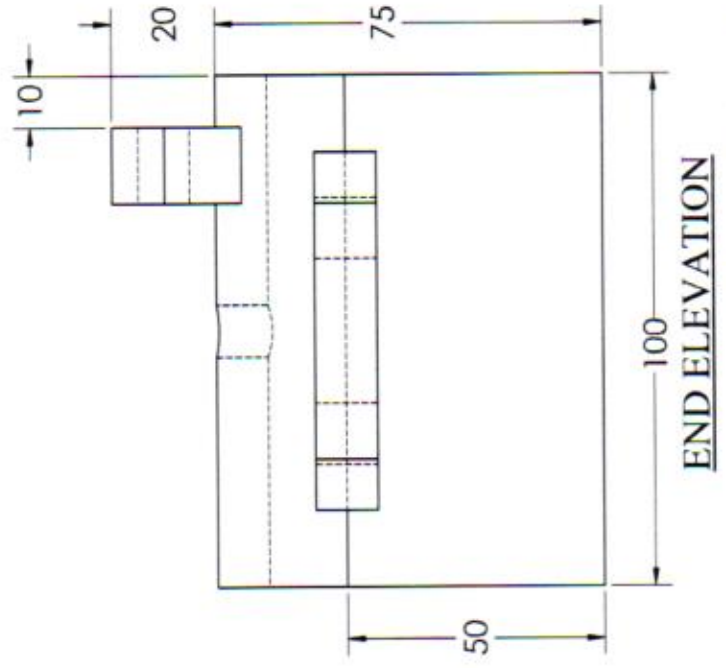
(10 marks)



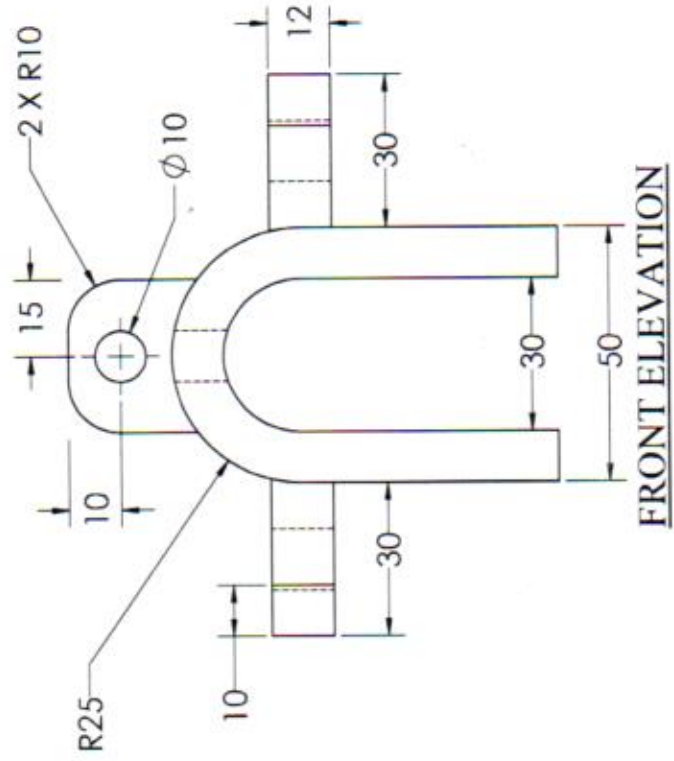
Q.4 (Figure-1)



PLAN



END ELEVATION



FRONT ELEVATION

All Dimensions are in mm