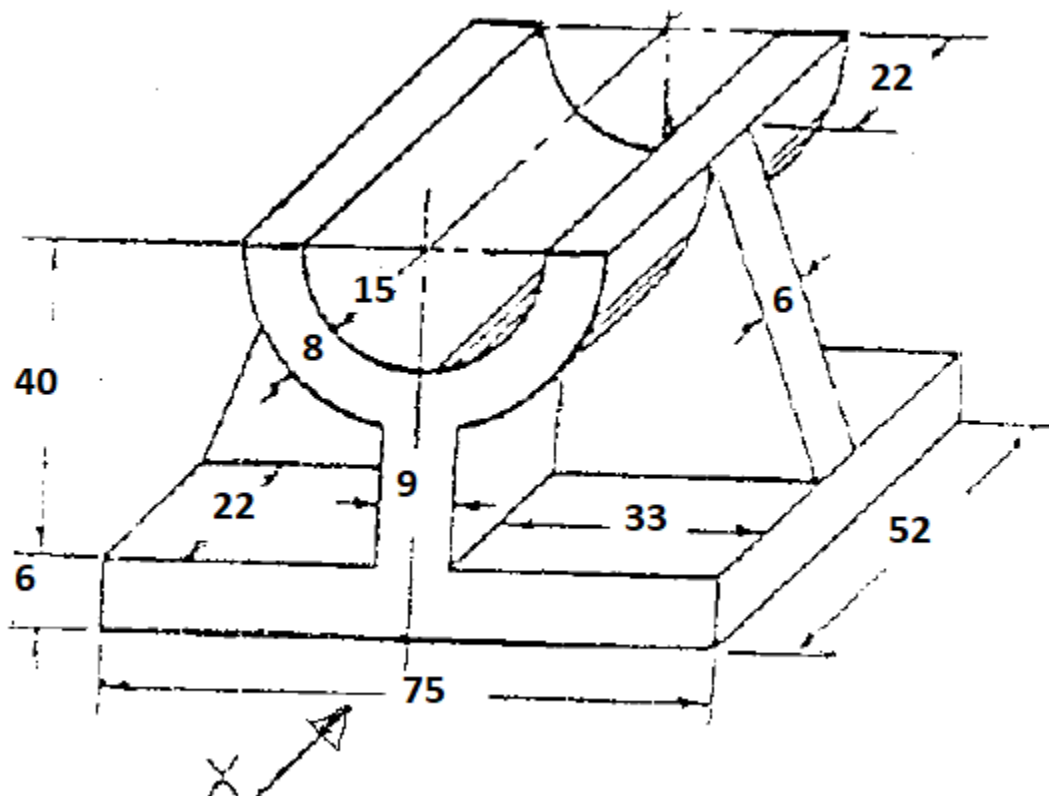


Attempt **ALL** the questions in this Section

a) i) Draw the boundary and title block to recommended ISO standard.
ii) Properly print your name, registration number, course name, course code and questions attempted. **(8 marks)**

- b) The figure below is an isometric drawing of a machine part.
- i. Considering the direction of the arrow as the front view, Sketch without dimensions the:
- A. Top view
 - B. Front view
 - C. Side view
- ii) Draw to a scale 1:1 the first angle projections showing all the hidden parts and proper dimensions.
- (8 marks @)**
(8 marks)



SECTION B (60 MARKS)

Attempt **ONLY THREE** Questions in this Section

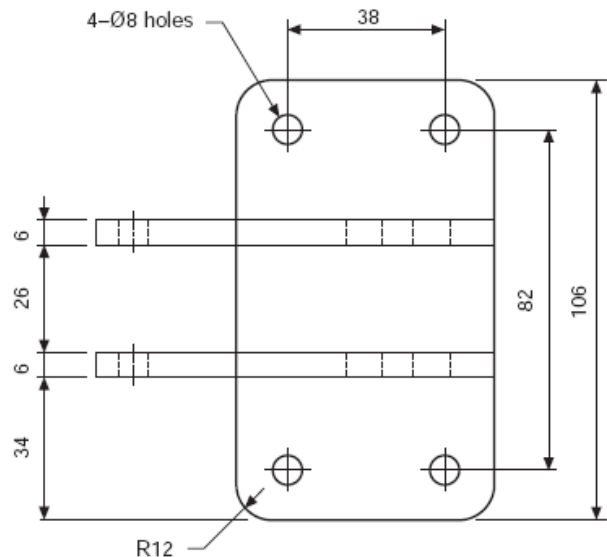
Question 2

- a) Draw the figure below to a scale of 1:1

(12 marks)

- b) Construct involute of a circle of diameter 40mm; given that the string length is equal to the circumference of the circle.

(8 marks)



Question 3

- a) A cricket ball thrown reaches a maximum height of 9m and falls on the ground at a distance of 25m from the point of projection. Draw the path of the ball. **(9 marks)**

- b) Given two lines $AB=50\text{mm}$ and angle $ABC=60^\circ$, $\angle CAB=90^\circ$.

- i) Construct the triangle

(5 marks)

- ii) Bisect AC and connect the center, E to point D.

(3 marks)

- iii) Circumscribe a circle on triangle ABD.

(3 marks)

Question 4

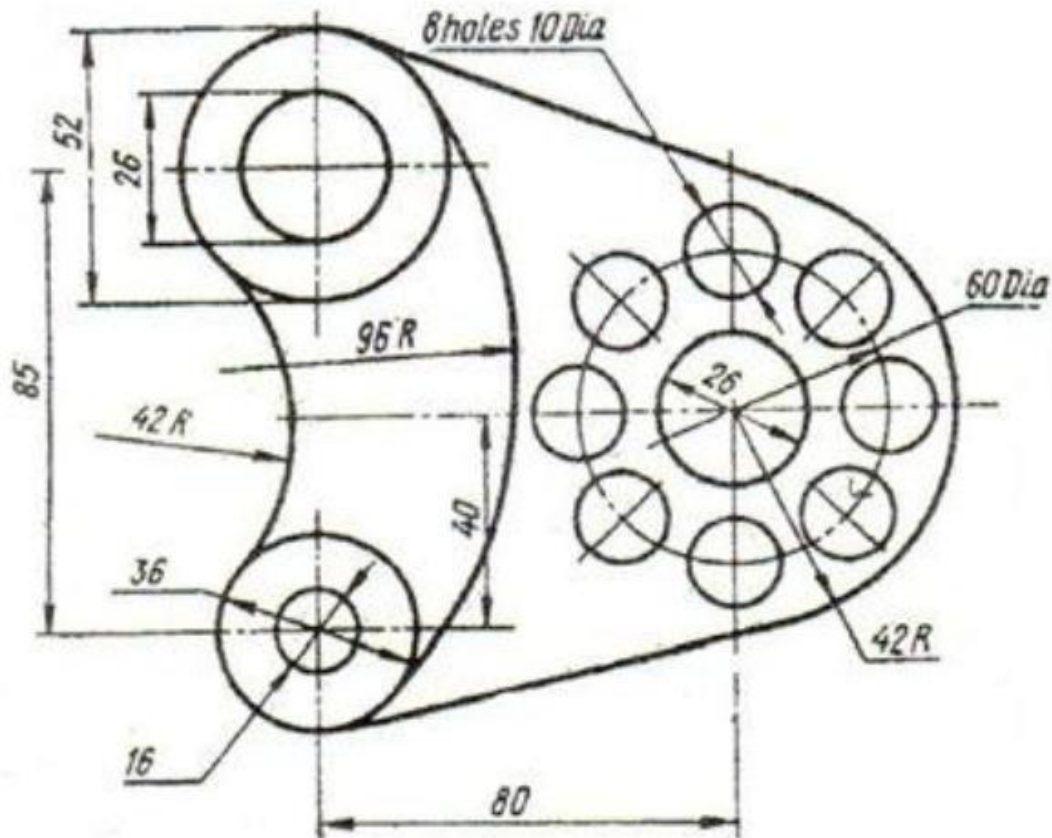
- a) Construct a heptagon and Nonagon on straight line construction. Given that the length of one side is 30mm. Both polygons should be in one drawing. **(12 marks)**

- b) Given a square ABCD of sides 60mm, inscribe in it another square EFGH such that one of its corner edge is 40mm from point B horizontally. **(8 marks)**

Question 5

Construct the machine part below to full size scale showing all the center points.

(20 marks)



Question 6

- A circular cone, 40 mm base diameter and 60 mm long axis is resting on Horizontal Plane. Draw it's projections. (8 marks)
- Construct an ellipse by concentric circle method, given that the major is 120mm and minor is 70mm. (12 marks)