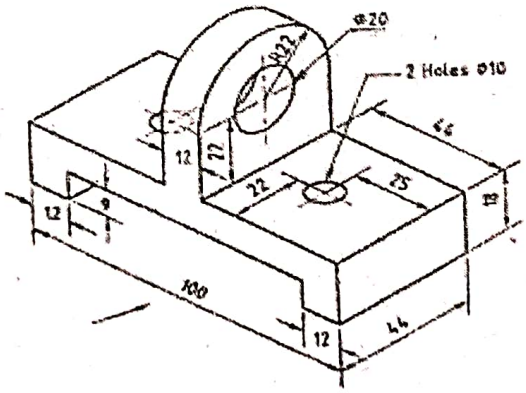
Enrollment No:_____

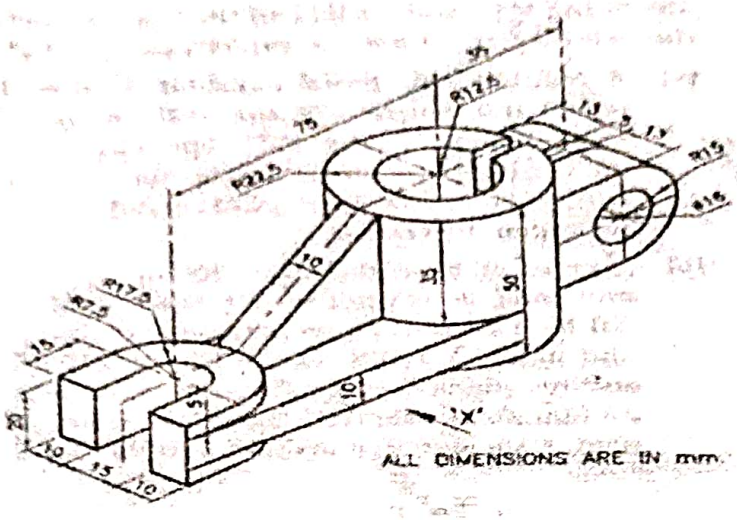
FACULTY OF ENGINEERING

B.E. Sem - II Mid Semester Examination WINTER-2024

Subject Name: 2010201102
Subject Code: Engineering Graphics & Design **Date:25/10/2024**
Total Marks: 40 **Time: 10:00 to 11:30**

Instructions:
1. **Attempt any FOUR questions out of FIVE questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**Answer the following.**	
(A)	(i)Which type of line is use to indicate hidden lines? (ii)Which types of lines is use to indicate cutting planes?	(2)
(B)	Construct a plain scale of R.F. = 1:40 to show meters and decimetres and long enough up to 10 meter. Indicate 7.4 m distance on scale.	(3)
(C)	The foci of an ellipse are 110 mm apart. The minor axis is 70 mm long. Determine the length of major axis and draw half ellipse by rectangular method and half by concentric circle method.	(5)
Q.2	**Answer the following.**	
(A)	Define the following curves: Archemedian spiral and cycloid.	(2)
(B)	Explain Dimensioning Methods with suitable drawing.	(3)
(C)	Draw an Archemedian spiral of 1.5 convolutions, the greatest and least radii being 125 mm and 35 mm respectively. Draw tangent and normal to the spiral at any point on the curve.	(5)
Q.3	**Answer the following.**	
(A)	Differentiate between first angle projection method and third angle projection method.	(2)
(B)	Draw and dimension completely, the following views according to first angle projection method and to full size scale of a given **figure 1.** (i) Front view **(iii)**Top view  	(8)
Q.4	**Answer the following.**	

(A)	Draw and dimension completely, the following views according to first angle projection method and to full size scale of a given **figure 2**. (i) Front view (ii)Right Hand Side view (iii)Top view  	(10)
Q.5	**Answer the following.**	
(A)	Draw the projections of the following points on the same XY line, keeping convenient distance between each projectors. Name the quadrant in which they lie. M - 30 mm below HP and 25 mm behind VP. N - 35 mm below HP and 30 mm infront of VP. P - on HP and 30 mm infront of VP. Q - on HP and 35 mm behind VP.	(2)
(B)	Define eccentricity ratio. Write the values of eccentricity for (i) ellipse, (ii) parabola, and (iii) hyperbola	(3)
(C)	Construct the involute of circle of 38 mm diameter for one turn. Draw tangent and normal to the involute at any point on it.	(5)