O.P.Code: 23ME0301d	R23	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech. I Year I Semester Regular & Supplementary Examinations December/January-2025/2026
ENGINEERING GRAPHICS
(Electronics and Communications Engineering)

Time: 3 Hours **Max. Marks: 70**

(Answer all the Questions **5 x 14 = 70** Marks)

UNIT-I

1		Construct an ellipse, with distance of the focus from the directrix as 50 mm and eccentricity as 2/3. Also draw normal and tangent to the curve at a point 40 mm from the directrix.	CO1	L6	14M
		OR			
2	a	Develop the involute of a regular hexagon of side 20 mm. Draw a tangent and normal to the curve at a distance of 100 mm from the centre of the hexagon.	CO1	L3	8M
	b	i) Draw the involute of a square of side 25 mm ii) Draw the involute of an equilateral triangular of side 20 mm.	CO1	L3	6M

UNIT-II

3		Draw the projections of the following points, keeping the distance between the projectors as 25mm on the same reference lines. A – 20mm above HP and 30mm in front of VP B – 20mm above HP and 30mm behind VP C – 20mm below HP and 30mm behind VP D – 20mm below HP and 30mm in front of VP E – On HP and 30mm in front of VP F – On VP and 20mm above HP G – Lying on both HP and VP	CO2	L1	14M
		OR			
4		A regular hexagonal plane of 30 mm side has a corner on HP, and its surface is inclined at 450 to HP. Draw the projections, when the diagonal through the corner, which is on HP makes 300 with VP	CO3	L6	14M

UNIT-III

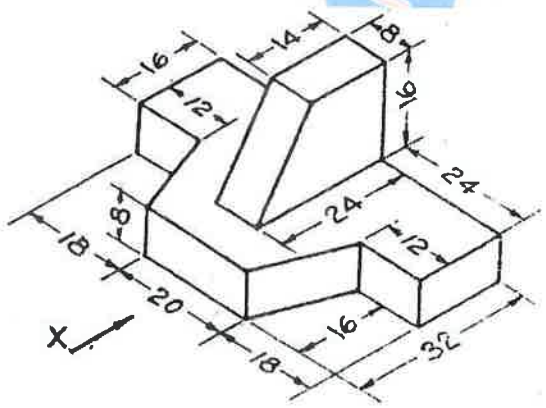
5		A cube of 40mm side is resting with a face on H.P such that i) vertical faces are equally inclined to V.P. ii) one of its vertical faces is inclined at 300 to V.P. Draw its projections.	CO3	L6	14M
		OR			
6		A pentagonal prism of base side 30 mm and axis 60mm is resting on one of its rectangular faces on HP, with the axis parallel to VP. Draw its projections.	CO3	L6	14M

UNIT-IV

7		A cylinder of diameter of base 40 mm and axis 55 mm long, is resting on its base on HP. It is cut by a section plane, perpendicular to VP and inclined at 450 to HP. The section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of the lateral surface of the cut cylinder.	CO4	L1	14M
		OR			
8		A square pyramid of base 40 mm and axis 60 mm long, Its base lies on VP with its axis parallel to HP. A cut sectional plane, 600 to VP and bisect the axis. Draw the projections sectional front view and true shape of the section.	CO4	L6	14M

UNIT-V

9		Draw three views of the blocks shown pictorially in figure according to first angle projection	CO6	L6	14M



OR

10		Draw the isometric view of the frustum of a hexagonal pyramid of base side 40 mm ,top side 25mm,and height 70mm. The frustum rests on the HP	CO5	L1	14M

***** END *****