O.P.Code: 20ME0301	R20	H.T.No.									

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester Supplementary Examinations February-2024

ENGINEERING GRAPHICS

(Common to ME, ECE & EEE)

Time: 3 Hours **Max. Marks: 60**

(Answer all Five Units **5 x 12 = 60** 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	L3	12M
		OR			
2	a	Draw the involute of a regular pentagon of side 20 mm	CO1	L3	5M
	b	Develop the involute of a circle of side diameter 50 mm. Draw a tangent and normal to the curve at a distance of 100 mm from the centre of the circle.	CO1	L3	7M

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 VPF – On VP and 20mm above HP G – Lying on both HP and VP	CO2	L3	12M
		OR			
4		A line AB 50mm long, has its end A away from the HP and VP than end B. The line is inclined to the HP at 300 and to the VP at 45 0. Draw the projections if end A is 35mm above the HP and 50mm in front of the VP.	CO2	L3	12M

UNIT-III

5		An equilateral triangular plane ABC of side 40mm has its plane parallel to VP and 20mm away from it. Draw the projections of the plane when one of its sides is (i) perpendicular to HP (ii) parallel to HP and (iii) inclined to HP at an angle of 450.	CO3	L3	12M
		OR			
6	a	A pentagonal prism of base side 30mm and axis 60mm has one of its rectangular faces on the HP and the axis inclined at 60 o to the VP. Draw its projections.	CO3	L3	12M

UNIT-IV

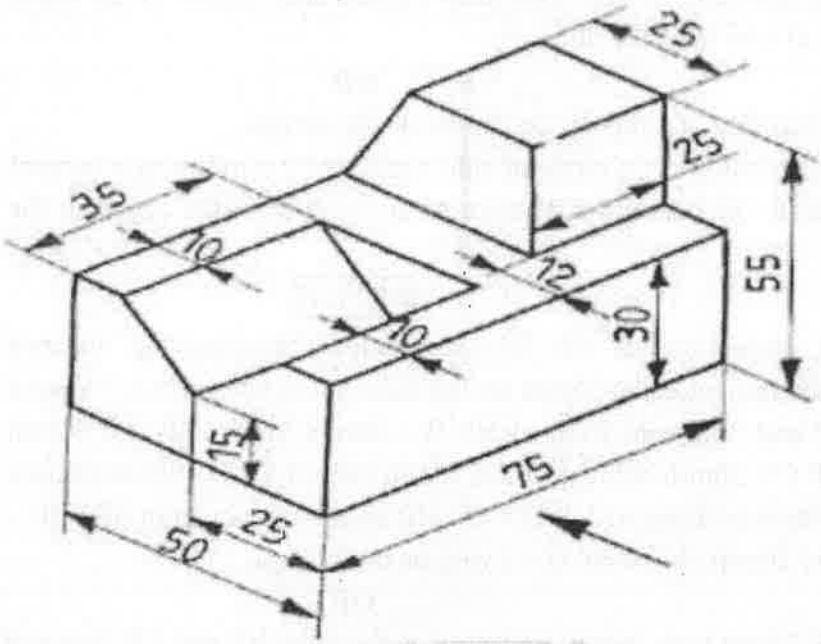
7		A hexagonal prism of side of base 30 mm and length of axis 75 mm is resting on its base on HP. It is cut by a section plane inclined at 450 to HP and passing through top corner. Draw the front and sectional top views of the solid and true shape of the section.	CO4	L3	12M

OR

8	A square pyramid, with side of base 30 mm and axis 50 mm long, is resting on its base on HP with an edge of the base parallel to VP. It is cut by a section plane, perpendicular to VP and inclined at 450 to HP. The section plane is passing through the mid-point of the axis. Draw the development of the surface of the cut pyramid.	**CO4**	**L3**	**12M**

UNIT-V

9	Draw three views of the blocks shown pictorially in figure according to first angle projection	**CO6**	**L4**	**12M**



OR

10	Draw the isometric projection of a pentagonal prism of base side 35 mm and axis 60mm. The prism rests on its base on the HP with an edge of the base parallel to the VP.	**CO5**	**L4**	**12M**

***** END *****