SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester Regular Examinations July- 2021

ENGINEERING GRAPHICS

(Common to EEE, ECE & ME)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Construct an ellipse having major axis is equal to 100 mm and the minor axis is equal to 70 mm. Use the concentric circle method.	L3	6M
	b	Construct a parabola in a parallelogram of sides 100 x 60 with an included angle of 750.	L3	6M

OR

2	a	Draw the involute of a regular pentagon of side 20 mm.	L3	6M
	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.	L3	6M

UNIT-II

3	a	Identify the relative positions of the projections of the following points with respect to xy A – In the second quadrant B – In the third quadrant C – In the first quadrant p D – In the fourth quadrant.	L3	4M
	b	A point E is 20 mm below HP and 30mm behind VP. Another point F is infront of VP and above the HP. The distance between the projectors of the points is 60mm .Determine the point F and Point E if the length of line joining their top views and front views are 80 & 90.	L3	8M

OR

4	a	A line AB of 100mm length is inclined at an angle of 300 to HP and 450 to VP. The point A is 15mm above HP and 20mm in front of VP. Draw the projections of the line.	L3	6M
	b	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.	L3	6M

UNIT-III

5		A semi circular plane of diameter 70mm has its straight edge on the VP and inclined at 30 degree to the HP .Draw the projection of the plane when its surface is inclined at 450 to VP.	L3	12M

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.	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 45 0 to HP and passing through top corner. Draw the front and sectional top views of the solid and true shape of the section.	L3	12M

OR

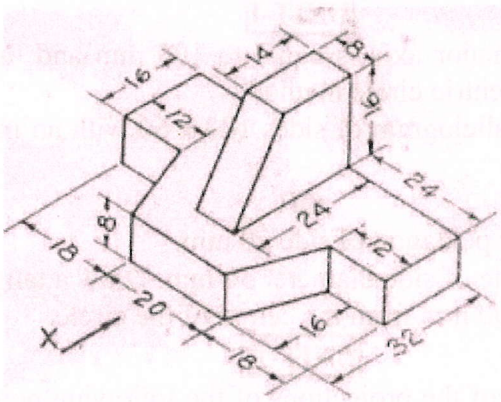
8		A cone of 50 mm diameter and axis 70 mm long. Its base is on HP.It is cut by a sectional plane perpendicular to VP and inclined to HP at 450 from apex 32mm. Draw the projections of FV,S.TV, True shape.	L3	12M

UNIT-V

9	**a**	Draw the isometric projection of a hexagonal prism of base side 30 mm and axis 70mm. The prism rests on its base on the HP with an edge of the base parallel to the VP	**L3**	**6M**
	b	Draw the isometric projection of the frustum of a hexagonal pyramid of base side 40 mm ,top side 25mm,and height 70mm. The frustum rests on the HP.	**L3**	**6M**

OR

10		Draw three views of the blocks shown pictorially in figure according to first angle projection	**L3**	**12M**



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