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Reg. No: ⬜⬜⬜⬜⬜⬜⬜⬜⬜⬜

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year II Semester Supplementary Examinations July-2021
ENGINEERING GRAPHICS
(Common to CE, EEE, ME & AGE)

Time: 3 hours   Max. Marks: 60

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

UNIT-I

1	a	Draw an ellipse having major axis is equal to 100 mm and the minor axis is equal to 70 mm. Use the concentric circle method.	6M
	b	Draw 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 center of the hexagon.	6M

OR

2	Draw an epi-cycloid of rolling circle of diameter 40 mm which rolls outside another circle (base circle) of 150 mm diameter for one revolution. Draw a tangent and normal at any point on the curve.	12M

UNIT-II

3	A point A is 20mm above the HP and 50mm in front of the VP. Another point B is 40mm below the HP and 15mm behind the VP. The distance between the projectors of the points, measured parallel to **xy**, is 75mm. Draw the projections of the points. Draw lines joining their FVs and TVs	12M

OR

4	a	Draw the projections of a straight line AB of 60 mm long, such that it is inclined at 45^0 to HP and parallel to VP. The one end of a line is 20 mm above HP and 30 mm in front of VP.	6M
	b	Draw the projections of a straight line AB of 70 mm long, such that it is inclined at 30^0 to VP and parallel to HP. The one end of a line is 15 mm above HP and 20 mm in front of VP.	6M

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 45^0.	12M

OR

6	Draw the projections of a cone, base 30 mm diameter and axis 50 mm long, resting on HP on a point of its base circle with (a) the axis making an angle of 45^0 with HP and its top view making an angle of 30^0 with VP.	12M

UNIT-IV

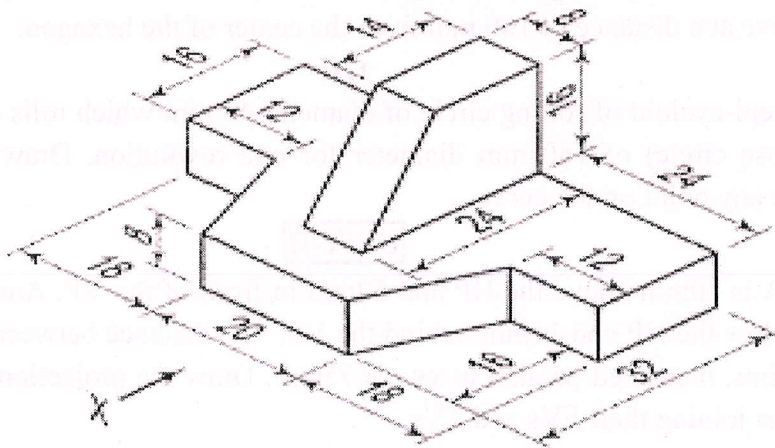|		
7	A pentagonal pyramid with edge of base 25 mm and axis 65 mm long, its base is resting on HP. It is cut by a section plane, inclined at 60 degree to HP and perpendicular to VP at bisect the axis. Draw the projections and obtain the true shape of the section.	12M

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 45^0 to HP. The section plane is passing through the mid-point of the axis. Draw the development of the surface of the cut pyramid.   **12M**

UNIT-V

9   Draw the isometric view 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.   **12M**

OR

10   Draw the front view, top view and left side view of the block shown in figure. Assume all dimensions are in "mm".   **12M**

*** END ***