Q.P. Code: 19ME0302 **R19**

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech I Year I Semester Supplementary Examinations December-2021

ENGINEERING GRAPHICS

(Common to ECE, CSE & CSIT)

Time: 3 hours Max. Marks: 60

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

UNIT-I

1	**a**	Draw an involute of a circle of 40 mm diameter. Also, draw a normal and a tangent at a point 95 mm from the centre of the circle.	**L1**	**6M**
	b	Draw an involute of a hexagon 20 mm side. Also, draw a normal and a tangent at a point 100 mm from the center of the hexagon.	**L2**	**6M**

OR

2		Construct an ellipse when the distance between the focus and the directrix is 50 mm and the eccentricity is 2/ 3. Draw tangent and normal at a point 40 mm from the directrix.	**L3**	**12M**

UNIT-II

3		Draw the projections of the following points, keeping the distance between the projectors as 25mm on the same reference lines. A – 20 mm above HP and 30 mm in front of VP B – 20 mm above HP and 30 mm behind VP C – 20 mm below HP and 30mm behind VP D – 20 mm below HP and 30 mm in front of VP E – On HP and 30mm in front of VP F – On VP and 20 mm above HP G – Lying on both HP and VP	**L3**	**12M**

OR

4		A Thin 30^0-60^0 set- square has its longest edge (diagonal) on H.P and inclined at 30^0 to V.P. Its surface makes an angle of 45^0 with H.P. Draw the projections, choosing suitable size for the set -square.	**L3**	**12M**

UNIT-III

5		Draw the projections of a hexagonal prism of side of base 25 mm and axis 60 mm long, when it is resting on one of its corners of the base on H.P. The axis of the solid is inclined at 45^0 to H.P.	**L3**	**12M**

OR

6		A square pyramid of base 30mm and axis 65 mm long is resting with its base on H.P and all the edges of the base are equally inclined to VP. It's cut by sectional plane perpendicular to VP and inclined 45^o to HP bisecting the axis. Draw its SFV, SSV, STV, TS.	**L3**	**12M**

UNIT-IV

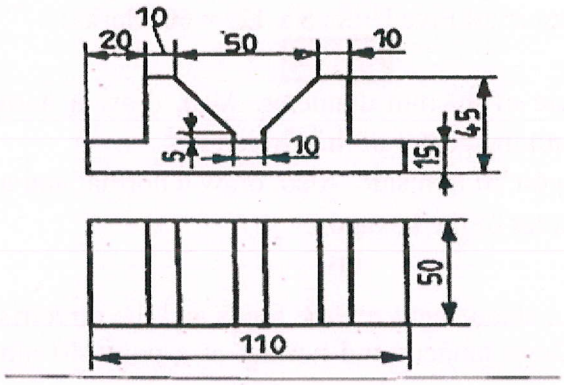
7		A hexagonal prism side of base 30 mm and axis 75 mm long ,is resting on its base on H.P such that, a rectangular face is parallel to V.P. It is cut by a section plane, perpendicular to V.P and inclined at 30^0 to H.P. The section plane is passing through the top end of an extreme lateral edge of the prism. Draw the development of the lateral surface of the cut prism.	**L3**	**12M**

OR

8 A vertical square prism of base 30 mm side and 70 mm axis is penetrated by a horizontal square prism of base 25 mm side and 70mm axis. Both the axes intersect and bisects each other. All the faces of the prisms are equally inclined to V.P. Draw the projections showing the curves of intersection. **L3 12M**

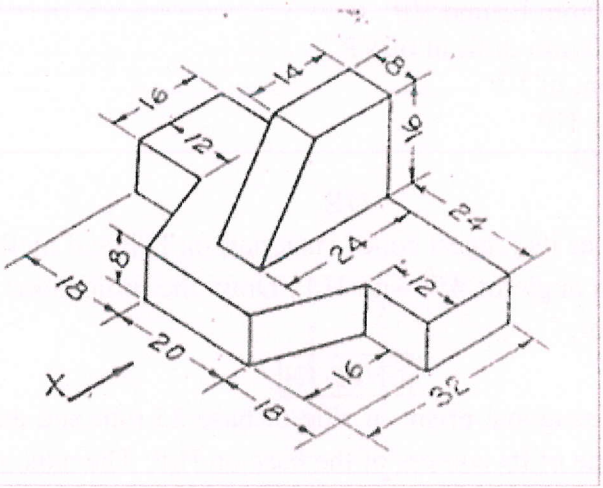
UNIT-V

9 Draw the isometric view of the following sketch. **L4 12M**



OR

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



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