

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech I Year I Semester Regular Examinations February-2024
ENGINEERING GRAPHICS
(Computer Science and Engineering)

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

(Answer all Five Units 5 x 14 = 70 Marks)

UNIT-I

- 1 The vertex of a hyperbola is 60 mm from its focus. Draw the curve, if the eccentricity is $3/2$. Draw a normal and a tangent at a point on the curve, 75 mm from the directrix. **L6 CO1 14M**

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 and construct a tangent and normal at any point on the curve. **L6 CO1 14M**

UNIT-II

- 3 Draw the projections of a straight line AB of 70 mm long, in the following positions: **L1 CO2 14M**
- i) parallel to both HP and VP and 20 mm from each.
ii) Parallel to and 20 mm above the HP and on VP
iii) Parallel to and 30 mm in front of VP and on HP
iv) Perpendicular to HP, 30 mm in front of VP & one end 25 mm above HP
v) Perpendicular to HP, 30 mm in front of VP & one end on HP

OR

- 4 A square plane ABCD of side 30mm is parallel to HP and 20mm away from it. Draw the projections of the plane, when (i) two of its sides are parallel to VP and (ii) and one of its side is inclined at 30° to VP. **L6 CO3 14M**

UNIT-III

- 5 A triangular prism of base side 30mm and axis 50mm long, is resting on H.P on one of its bases **L6 CO3 14M**
- i) perpendicular to V.P ii) inclined 30° to V.P. Draw its projections.

OR

- 6 A cone of diameter 50 mm and axis 60 mm has its generator in the VP and the axis is parallel to the HP. Draw its projections. **L6 CO3 14M**

UNIT-IV

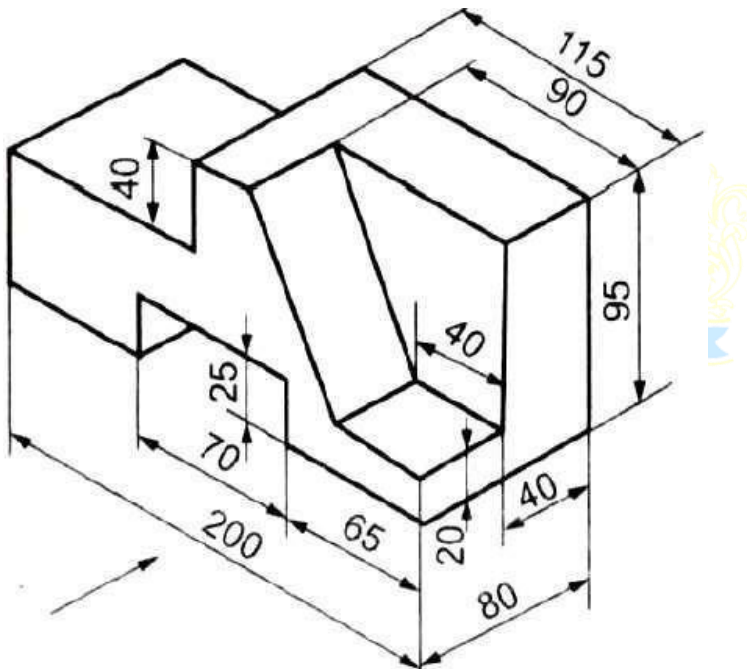
- 7 A hexagonal prism of side of base 30 mm and length of axis 75 mm is resting on its base on HP. It is cut by a section plane inclined at 45° to HP and passing through top corner. Draw the front and sectional top views of the solid and true shape of the section. **L6 CO4 14M**

OR

- 8 A cone of base 50 mm diameter and height 65 mm rests with its base on HP. A section plane perpendicular to VP and inclined at 30° to HP bisects the axis of the cone. Draw the development of the lateral surface of the truncated cone. **L6 CO4 14M**

UNIT-V

- 9 Draw three views of the blocks shown pictorially in figure according to first angle projection. **L6 C06 14M**



OR

- 10 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. **L1 C05 14M**

***** END *****