

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech. I Year II Semester Regular & Supplementary Examinations June-2025
ENGINEERING GRAPHICS
(Common to CE & ME)

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

(Answer all the Questions 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. CO1 L6 14M

OR

- 2 Construct a cycloid, given the diameter of the generating circle as 40mm. Draw a tangent and normal to the curve at a point on it, 35mm from the base line. CO1 L6 14M

UNIT-II

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

OR

- 4 A line NS 80mm long has its end N 10mm above HP and 15mm in front of VP. The other end S is 65mm above HP and 50mm in front of VP. Draw the projections of the line and Find its true inclinations with HP & VP. CO2 L3 14M

UNIT-III

- 5 Draw the projections of a hexagonal prism of base side 25mm and axis 60mm 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° to H.P. CO3 L6 14M

OR

- 6 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° to the VP. Draw its projections. CO3 L6 14M

UNIT-IV

- 7 A cylinder of diameter of base 40 mm and axis 55 mm long, is resting on its base on HP. It is cut by a section plane, perpendicular to VP and inclined at 45° to HP. The section plane is passing through the top end of an extreme generator of the cylinder. Draw the development of the lateral surface of the cut cylinder. CO4 L1 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. **CO4 L1 14M**

UNIT-V

- 9 a** Draw the isometric view of a cylinder of base diameter 50mm and axis 60 mm the axis of the cylinder is perpendicular to the HP. **CO5 L1 8M**
- b** Draw the isometric view of a circular lamina of diameter 50mm on all the three principal planes using four centre methods. **CO5 L1 6M**

OR

- 10** Draw the isometric view of the frustum of a hexagonal pyramid of base side 40 mm ,top side 25mm,and height 70mm. The frustum rests on the HP. **CO5 L1 14M**

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