

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

B.Tech. I Year I Semester Regular & Supplementary Examinations December/January-2024/2025
ENGINEERING GRAPHICS

(Computer Science & Engineering)

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 the following points, keeping the distance between the projectors as 25mm on the same reference lines. **CO2 L1 14M**

A – 20mm above HP and 30mm in front of VP

B – 20mm above HP and 30mm behind VP

C – 20mm below HP and 30mm behind VP

D – 20mm below HP and 30mm in front of VP

E – On HP and 30mm in front of VP

F – On VP and 20mm above HP

G – Lying on both HP and VP

OR

- 4 A line AB of 100mm length is inclined at an angle of 30° to HP and 45° to VP. The point A is 15mm above HP and 20mm in front of VP. Draw the projections of the line. **CO2 L1 14M**

UNIT-III

- 5 A cube of 40mm side is resting with a face on H.P such that **CO3 L6 14M**
i) vertical faces are equally inclined to V.P.
ii) one of its vertical faces is inclined at 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 **CO3 L6 14M**

UNIT-IV

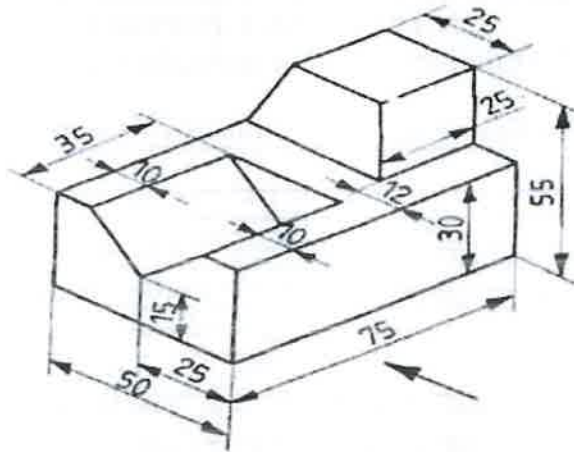
- 7 A cube of side 40 mm is resting on HP on one of its faces, with a vertical face inclined at 30° to VP. It is cut by a section plane inclined at 45° to HP and passing through the axis at 8 mm from the top surface. Draw the projections of the solid and also show the true shape of the section. **CO4 L6 14M**

OR

- 8 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. **CO4 L6 14M**

UNIT-V

- 9 Draw three views of the blocks shown pictorially in figure according to first angle projection. **CO6 L6 14M**



OR

- 10 Draw the isometric view of a pentagonal prism of base side 35 mm and axis 60mm. The prism rests on its base on the HP with an edge of the base parallel to the VP. **CO5 L1 14M**

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