

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

B.Tech I Year II Semester Supplementary Examinations May/June-2024

ENGINEERING GRAPHICS

(Common to CE, ME, EEE & AGE)

Time: 3 Hours

Max. Marks: 60

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

UNIT-I

- 1 Construct an ellipse when the distance between the focus and the directrix is 50 and the eccentricity is $2/3$. Draw tangent and normal at a point 40 from the directrix. CO1 L3 12M

OR

- 2 Construct a cycloid, given the diameter of the generating circle as 40 mm. Draw the tangent to the curve at a point on it, 35 mm from the line. CO1 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. CO2 L1 12M
 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 80 mm long as its end A 15 mm from both H.P and V.P. The other end B is 40 mm above H.P and 50 mm in front of V.P. Draw the projections of the line and determine the inclination of the line with H.P and V.P. CO2 L1 12M

UNIT-III

- 5 Draw the projections of a cylinder of 40 mm diameter and axis 60 mm long, when it is lying on H.P, with its axis inclined at 45° to H.P and parallel to V.P. CO3 L1 12M

OR

- 6 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° to H.P. CO3 L1 12M

UNIT-IV

- 7 A cube of 50 mm edge, is resting on a face on H.P such that, a vertical face is inclined at 30° to V.P. It is cut by a section plane perpendicular to V.P and inclined to H.P at 30° and passing through a point at 12 mm from the top end of the axis. Develop the lateral surface of the lower portion of the cube. CO4 L3 12M

OR

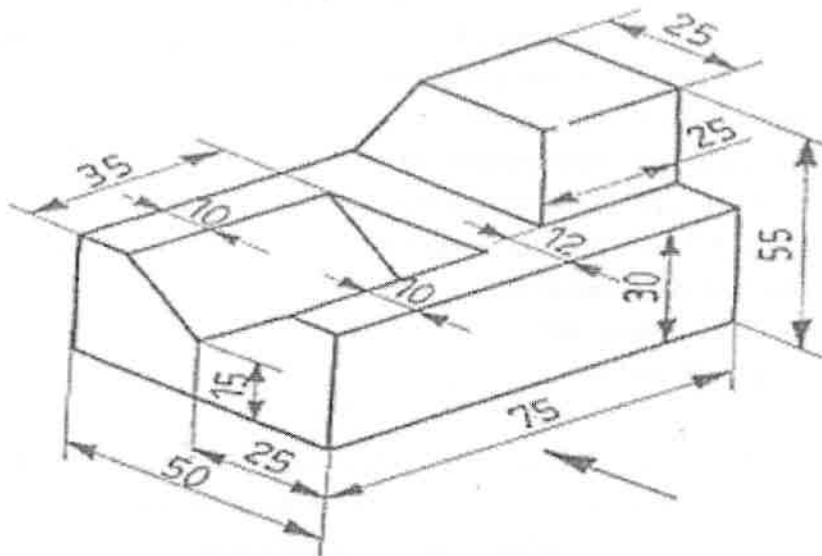
- 8 A vertical cylinder 60 mm diameter, is penetrated by another cylinder of 45 mm diameter. The axes of the two cylinders are intersecting at right angle. CO4 L1 12M
Draw the projections of the two cylinders, showing the lines (curves) of intersection.

UNIT-V

- 9 Draw the isometric view of a pentagonal prism of base side 30 mm and axis 60mm. The prism rests on its base on the HP with a vertical face perpendicular VP. CO5 L1 12M

OR

- 10 Draw three views of the blocks shown pictorially in figure according to CO5 L1 12M
first angle projection.



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