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

B.Tech I Year II Semester Regular Examinations November-2021

ENGINEERING GRAPHICS

(Common to CE, AGE, CSE (AI & ML) & CSE (IoT & CS Including BCT))

Time: 3 hours

Max. Marks: 60

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

UNIT-I

- 1 Construct an ellipse, with distance of the focus from the directrix as 50 mm and eccentricity as $\frac{2}{3}$. Also draw normal and tangent to the curve at a point 35 mm from the directrix. L3 12M

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. L3 12M

UNIT-II

- 3 A point A is 20mm above the HP and 50mm in front of the VP. Another point B is 40mm below the HP and 15mm behind the VP. The distance between the projectors of the points, measured parallel to XY, is 75mm. Draw the projections of the points. Draw lines joining their FVs and TVs. L1 12M

OR

- 4 A line AB 50mm long, has its end A away from the HP and VP than end B. The line is inclined to the HP at 30° and to the VP at 45° . Draw the projections if end A is 35mm above the HP and 50mm in front of the VP. L3 12M

UNIT-III

- 5 A regular hexagonal plane of 30 mm side has a corner on HP, and its surface is inclined at 45° to HP. Draw the projections, when the diagonal through the corner, which is on HP makes 30° with VP. L3 12M

OR

- 6 A cylinder of base diameter 50 mm and axis 70 mm has a generator in the VP and inclined at 45° to the HP. Draw its projections. L3 12M

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. L3 12M

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. L3 12M

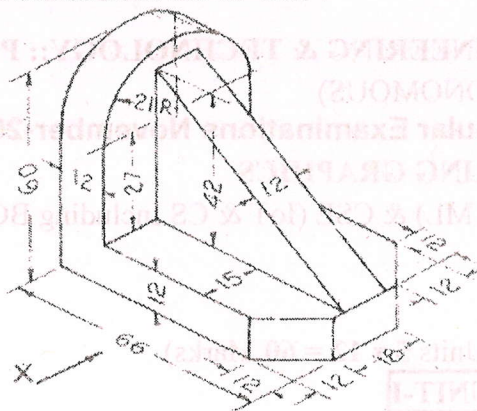
UNIT-V

- 9 Draw the isometric view of a cone of base diameter 50mm and axis 60 mm. The cone has its base on (a) HP (b) VP. L3 12M

OR

- 10 Draw three views of the blocks shown pictorially in figure according to first angle projection. Assume all dimensions are in 'mm'.

L3 12M



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