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

B.Tech I Year I Semester Supplementary Examinations August-2021

ENGINEERING GRAPHICS

(Common to ECE, CSE & CSIT)

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 50mm and the eccentricity is $\frac{2}{3}$. Draw tangent and normal at a point 40mm from the directrix. **12M**

OR

- 2 Draw an epi-cycloid of a circle of 40mm diameter, which rolls on another circle of 120mm diameter for one revolution clock wise. Draw a tangent and normal to it at a point 90mm from the center of the directing circle. **12M**

UNIT-II

- 3 a Two point A and B are on H.P, the point A being 30 mm in front of V.P, while B is 45 mm behind V.P. The line joining their top views makes an angle of 45° with XY. Find the horizontal distance between two points. **5M**
b A line AB of 100 mm long is inclined at an angle 30° to H.P and 45° to V.P. A point A is 15 mm above H.P and 20 mm in front of V.P .Draw the projections of the line. **7M**

OR

- 4 A regular pentagon of 30 mm side is resting on one of its edges on H.P, which is inclined at 45° to V.P. Its surface is inclined at 30° to H.P. Draw its projections. **12M**

UNIT-III

- 5 Draw the projections of a pentagonal prism of base 25 mm side and axis 50 mm long, when it is resting on one of its rectangular faces on H.P .The axis of the solid is inclined at 45° to V.P **12M**

OR

- 6 A cube of 50 mm edge, rests on one face on H.P, with its vertical faces equally inclined to V.P. It is cut by a section plane, perpendicular to V.P, producing a large rhombus. Draw the projections, true shape of the section and determine the inclination of the section plane with H.P **12M**

UNIT-IV

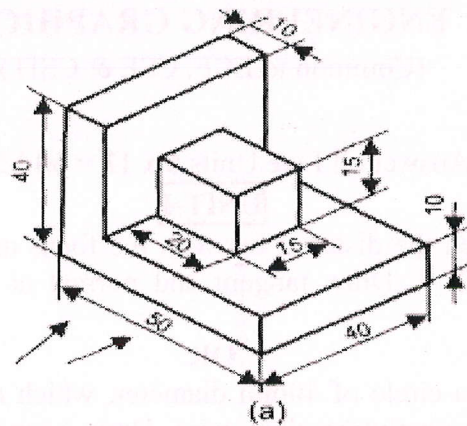
- 7 A square pyramid with side of base 30 mm and axis 50 mm long ,is resting on its base on H.P with an edge of the base parallel to V.P.it is cut by a section plane, Perpendicular to V.P and inclined at 45° to H.P. The section plane is passing through the mid- point of the axis. Draw the development of the surface of the cut pyramid. **12M**

OR

- 8 A vertical square prism of base 50 mm side , is penetrated by a horizontal square prism of base 40 mm side such that, the axis intersect. The axis of the horizontal prism is parallel to V.P and the faces of the both the prisms are equally inclined to V.P. Draw the projections of the two prisms, showing the lines of intersection. **12M**

UNIT-V

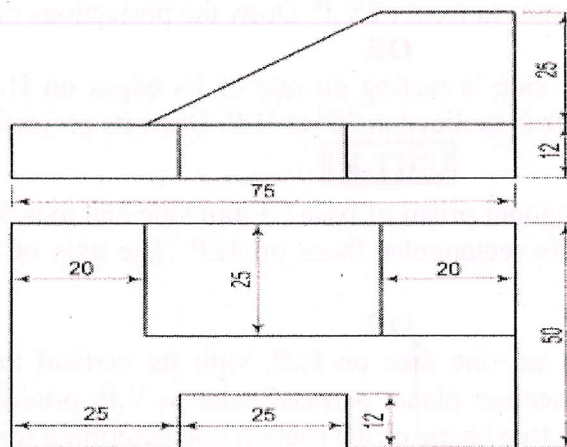
- 9 Draw three views of the blocks shown pictorially in figure according to first angle projection. **12M**



OR

- 10 Draw the isometric view of the following sketch.

12M



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