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

**B.Tech I Year I Semester Regular Examinations January 2020**

**ENGINEERING GRAPHICS**

(Electronics & Communication Engineering)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1** Construct a conic when the eccentricity is  $5/4$  and the distance between directrix and the focus is 54 mm. Draw tangent and normal to the curve at a point on the lower half of the curve measuring 45 mm from the focus. **12M**

**OR**

- 2** A circle of 40 mm diameter rolls along a line for one revolution clock-wise. Draw the locus of a point on the circle, which is in contact with the line. Also, draw a tangent and a normal to the curve, at a point 35 mm from the directing line. **12M**

**UNIT-II**

- 3** A line AB of 100 mm long is inclined at an angle  $30^\circ$  to H.P and  $45^\circ$  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. **12M**

**OR**

- 4** A semi-circular plate of 80 mm diameter , has its straight edge on V.P and inclined at  $30^\circ$  to H.P , while the surface of the plate is inclined at  $45^\circ$  to V.P .Draw the projections of the plate. **12M**

**UNIT-III**

- 5** A cylinder diameter 60 mm and axis 70 mm long, is having its axis inclined at  $45^\circ$  to V.P and  $30^\circ$  to H.P. Draw its projections. **12M**

**OR**

- 6** 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 35 degree to HP and passing through top corner. Draw the front and sectional top views of the solid and true shape of the section. **12M**

**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 degree 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. **12M**

**OR**

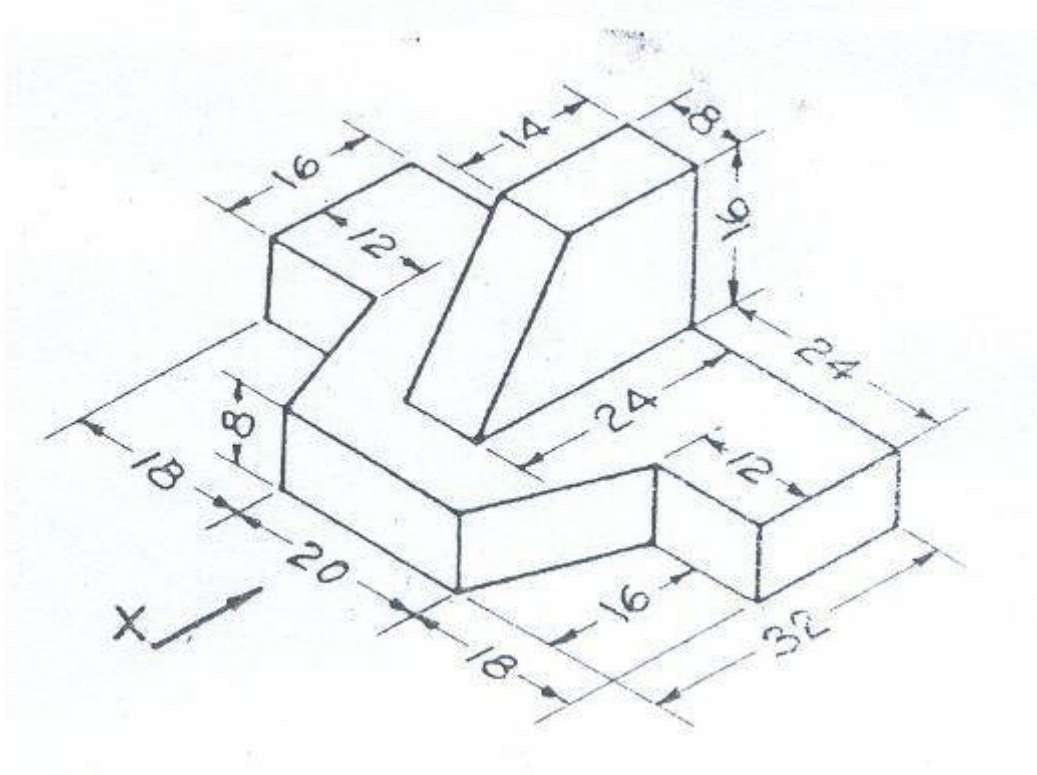
- 8** A vertical square prism of base 30 mm side and 70 mm axis is penetrated by a horizontal square prism of base 25 mm side and 70mm axis. Both the axes intersect and bisect each other. All the faces of the prisms are equally inclined to V.P. Draw the projections showing the curves of intersection. **12M**

**UNIT-V**

9 Draw the isometric projection of a sphere of diameter 50 mm resting centrally on the top of a cube of side 60 mm. **12M**  
top of a cube of side 60 mm.

**OR**

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



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