

**ENGINEERING DRAWING**  
(Common to EIE, IT and ME)

Time: 3 hours

Max Marks: 70

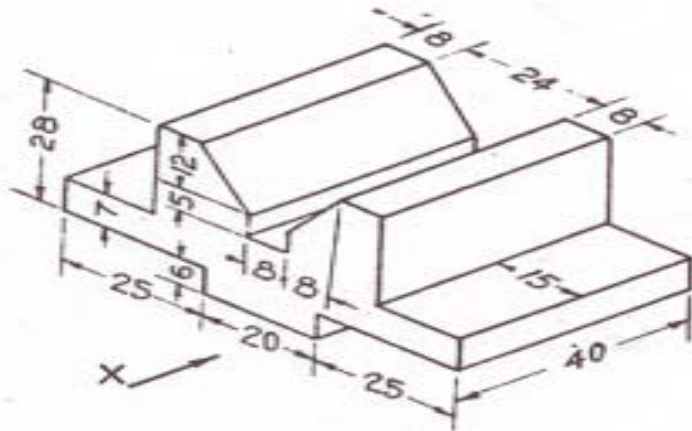
Answer any FIVE questions  
All questions carry equal marks

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- 1 Two fixed points A & B are 100 mm apart. Trace the complete path of a point *P* moving (in the same plane as that of A & B) in such a way that, the sum of its distances from A & B is always the same and equal to 125 mm. Name the curve. Draw another curve parallel to and 25 mm away from this curve.
- 2 (a) Draw the projections of a line AB, 90 mm long, its mid-point M being 50 mm above the H.P. and 40 mm in front of the V.P. The end A is 20 mm above the H.P. and 10 mm in front of the V.P.  
(b) A line AB of 70 mm long has its end A, 20 mm above H.P. and 15 mm in front of V.P. The line is inclined at  $30^\circ$  to H.P. and  $60^\circ$  to V.P. Draw its projections.
- 3 (a) A regular hexagonal plane of 30 mm side has a corner at 20 mm from V.P. and 50 mm from H.P. its surface is inclined  $45^\circ$  to V.P. and perpendicular to H.P. Draw the projections of the plane.  
(b) A pentagon of 30 mm side has one of its corners on HP and its plane is inclined at  $65^\circ$  to VP and perpendicular to HP. Draw its projections.
- 4 (a) Draw the projections of a pentagonal pyramid, base 30 mm edge and axis 50 mm long, having its base on the H.P. and an edge of the base parallel to the V.P.  
(b) Draw the projections of a cone of base 50 mm diameter, axis 60 mm long, resting on ground on its base.
- 5 (a) A cube of 35 mm long edges is resting on the HP on one of its faces with a vertical face inclined at  $30^\circ$  to the VP. It is cut by a section plane parallel to the VP and 9 mm away from the axis and further away from the VP. Draw its sectional front view and the top view.  
(b) A pentagonal pyramid, base 30 mm side and axis 65 mm long, has its base horizontal and an edge of the base parallel to the VP. A horizontal section plane cuts it at a distance of 25 mm above the base. Draw its front view and sectional top view.

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- 6 Draw the front view, top view and right side view of the object shown below (Dimensions in mm).



- 7 A hexagonal prism of side of base 30 mm is resting on one of its bases on HP with a face parallel to VP. The prism contains a square hole of 20 mm side. The axis of the hole is parallel to VP and inclined at an angle of  $30^\circ$  to the HP intersecting the axis of the prism. The faces of the hole are equally inclined to VP. Draw the lines of intersection.
- 8 Draw a perspective view of a square plane with a 60 mm side resting on the GP with one of its corners touching PP and a side right to the corner inclined at  $30^\circ$  to it. The station point is 50 mm in front of PP, 60 mm above GP and lies in a CP which is 40 mm towards right of the corner touching the PP.

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