Code No: 09A10191 **R09**

B. Tech I Year Examinations, May/June -2012
ENGINEERING DRAWING
(Common to all Branches)

Time: 3 hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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1. a) The vertex of a hyperbola is 65mm from its focus. Draw the curve if the eccentricity is 3/2. Draw a normal and a tangent at a point on the curve, 75 mm from the directrix.
   b) Draw a cycloid given the diameter of a rolling circle as d=30 mm. Draw a normal and tangent at any point on the curve. [7+8]

2. A 120 mm long straight line PQR, is inclined at 30^0 to the H.P. and 45^0 to the V.P. The point Q divides the line in the ratio of 1:3 and is situated 40 mm above the H.P. and 60 mm in front of the V.P. Draw its projections and locate its traces. [15]

3. A square ABCD of 50 mm side has its corner A in the H.P, its diagonal AC inclined at 30^0 to the H.P. and the diagonal BD inclined at 45^0 to the V.P. and parallel to the H.P. Draw its projections. [15]

4. A pentagonal prism of base 30mm side and 60mm height is resting on the base in HP such that one of the rectangular face is parallel to the VP. It is cut by a plane perpendicular to VP and 60 degrees inclined to HP and bisecting the axis of the solid. Draw development of lateral surface of the bottom part of the solid. [15]

5. A vertical cylinder 70 mm diameter is penetrated by a square prism of side 30 mm and its axis is parallel to both HP and VP. Rectangular faces of the prism are equally inclined to the VP. Axis of vertical cylinder intersecting the axis of the horizontal square prism. Draw the projections showing curves of intersection. [15]

6. Draw the isometric view of the block, two views of which are shown in figure 1. All dimensions are in mm. [15]

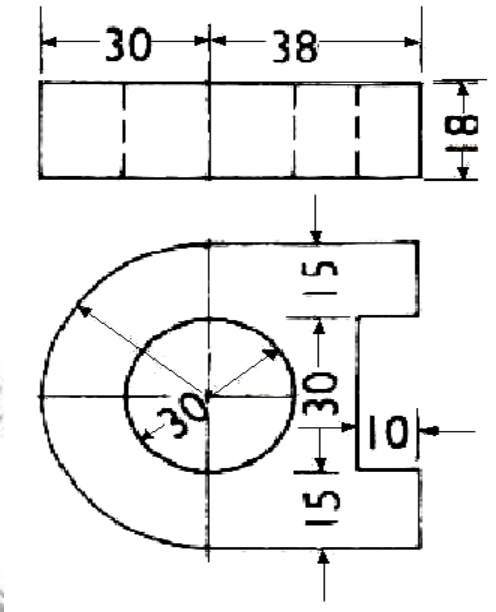

Figure: 1

7. Draw the front view, top view and left side view of the object shown in figure 2 (All dimensions are in mm). [15]

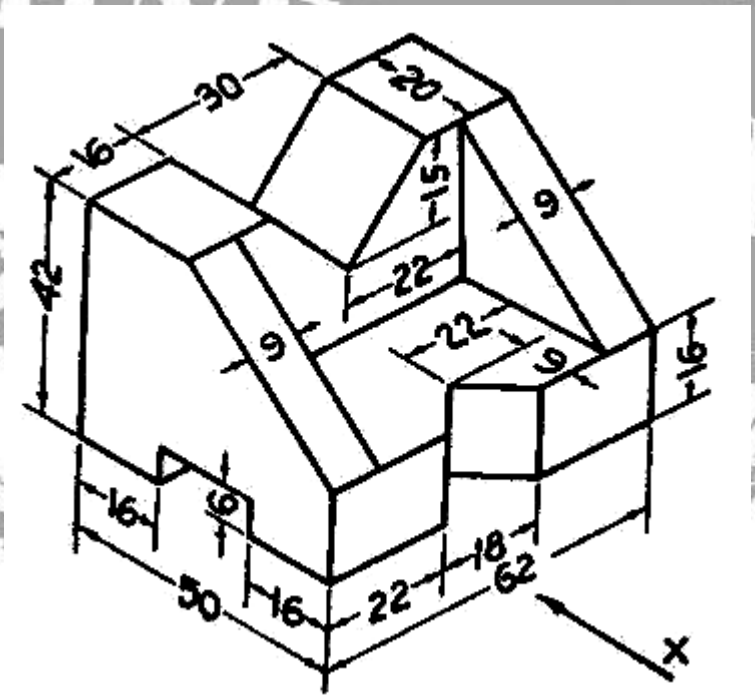

Figure: 2

8. A pentagonal pyramid of side of base 25 mm and height is 50 mm rest with an edge of the base touching the P.P. The station point is on the central line passing through the apex and 80 mm in front of P.P and 65 mm above the ground. Draw the perspective view of the solid. [15]

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