Code: 9A03101b

B.Tech I Year (R09) Supplementary Examinations, November/December 2012
ENGINEERING DRAWING
(Common to CSE, CSSE and CE)

Time: 3 hours   Max Marks: 70

Answer any FIVE questions
All questions carry equal marks
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1 (a) Draw an epi-cycloid if a circle of 40 mm diameter rolls outside another circle of 120 mm diameter for one revolution.
   (b) A circle of 40 diameter rolls on the concave side of another circle of 40 radius. Draw the path traced by a point on the generating circle for one complete revolution.

2 (a) The top view of a 75 mm long line measures 55 mm. The line is in the V.P., its one end being 25 mm above H.P. Draw its projections.
   (b) The front view of a line, inclined at 30^0 to the V.P. is 65 mm long. Draw the projection of the line, when it is parallel to and 40 mm above the V.P., its one end being 30 mm in front of the V.P.

3 (a) A thin circular metal plate of 48 mm diameter, having its plane vertical and inclined at 40^0 to VP. Its center is 33 mm above HP and 25 mm in front of VP. Draw its projections.
   (b) A hexagonal sheet metal of 25 mm side rests on the HP such that its surface is inclined at an angle of 45^0 to the VP. Draw its projections of the plane.

4 (a) Draw the top and front views of a cube of 40 mm side resting its one of its square faces on H.P. such that one of its vertical faces is parallel to and 10 mm in front of V.P.
   (b) Draw the projections of square prism of side of base 30 mm and height 50 mm resting with its base on H.P. such that one of its rectangular faces is perpendicular to V.P. the nearest edge parallel to V.P. is 5 mm in front it.

5   A hexagonal prism, side of the base 25 mm long and axis 65 mm long is resting on an edge of the base on the H.P. its axis being inclined at 60^0 to the H.P. and parallel to the V.P. A section plane, inclined at 45^0 to the V.P. and normal to the H.P. cuts the prism and passes through a point on the axis at a distance of 20 mm from the top end of the axis. Draw its sectional front view and true shape of the section.

6   Two views of a casting are shown below. Draw the isometric view of the casting (dimensions are in mm)
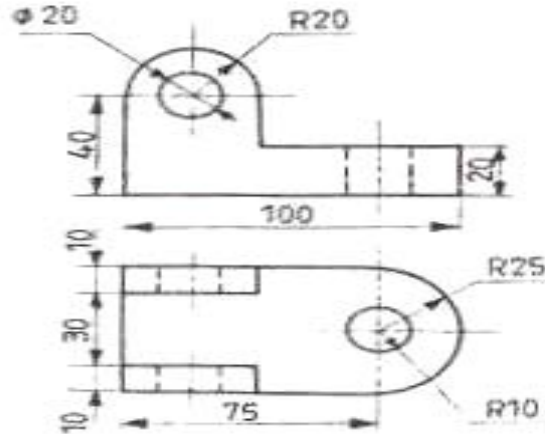
7   A cylindrical boiler is 2 m in diameter and has a cylindrical dome 0.8 m diameter and 0.6 m high. The axis of the dome intersects the axis of the boiler. Draw three views of the arrangement. Also develop the surface of the dome. Take a scale of 1 cm = 0.2 m.

8   A hexagonal plane with a 40 mm side has a centrally cut square hole with a 30 mm side such that a side of the hole and a side of the hexagon are parallel PP. It lies on the GP with a nearer edge of the hexagon 10 mm behind the PP. The station point is 50 mm in front of PP, 70 mm above GP and lies in a CP which is at a distance of 40 mm towards right of the centre of the object. Draw its perspective view.

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