Code: 9A03101a

R9

B.Tech I Year (R09) Supplementary Examinations, November/December 2012

ENGINEERING DRAWING

(Common to ECE, E.Con.E and BT)

Time: 3 hours Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

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1 A circle of 60 mm diameter rolls on a horizontal line for a half revolution and then on a vertical line for another half revolution. Draw the curve traced out by a point *p* on the circumference of the circle.

2 (a) A line MN 50 mm long is parallel to VP and inclined at 45^0 to HP. The end M is 20 mm above HP and 15 mm in front of VP. Draw the projections of the line and finds its traces.

(b) Draw the projections of a straight line AB of 100 mm long when one of Its ends is touching the VP and the other end touching HP. The angles of inclination with HP and VP are 40^0 and 50^0 respectively.

3 (a) A rectangular lamina of sides 40 mm X 30 mm is perpendicular to both HP and VP. Draw its projections.

(b) Draw the projections of a pentagonal plane figure of side 28 mm resting with one of its edges on HP. Such that the plane figure is inclined at 30^0 to HP perpendicular to VP.

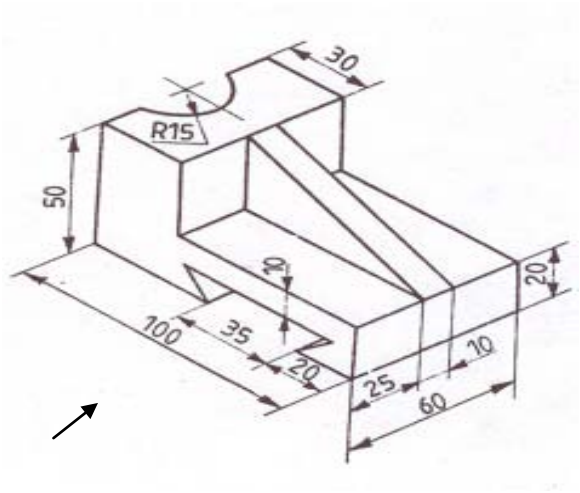
4 (a) A cone of diameter 60 mm is resting on the HP on one of its generator. Draw its projections if its axis is parallel to VP.

(b) A hexagonal prism of side of base 25 mm and length of axis 70 mm is resting on the HP on one of its rectangular face. Draw its projections when its axis is inclined to the VP at 45^0.

5 A pipe of 45 mm diameter is welded to the vertical side of a rectangular steel tank. The axis of the pipe 100 mm long is inclined at an angle of 60^0 to the side to which it is welded. The other end of the pipe makes an angle of 30^0 to its own axis. Draw the development of the pipe. Neglect the pipe thickness.

Contd. in Page 2

6 Draw the elevation, plan and right views of the bracket shown in the picture below (dimensions in mm)



7 A cylinder of 60 mm diameter and axis 80 mm long is standing on its base on HP. A horizontal hexagonal hole of 25 mm side is cut through the cylinder. Axis of the hole is parallel to VP. The axes of both cylinder and hole intersect at right angles and bisect each other. A side face of the hole is inclined at an angle of 30^0 to the HP. Draw the projections and show the curves of intersection.

8 A solid is in the form of a square prism of side of base 40 mm up a height of 50 mm and thereafter tapers into frustum of a square pyramid whose top surface of 25 mm side. The total height of the solid is 70 mm.
Draw the solid in perspective, given that one side of the base of the solid resting on the ground is inclined at 25^0 to the PP and the corner containing that side is 40 mm to the right of the eye and is touching the PP. The eye is 100 mm from PP and 90 mm above the ground.

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