B. Tech I Year Examinations, May/June -2012
ENGINEERING DRAWING
(Common to Computer Science & Engineering, Production Engineering (Mechanical))
Time: 3 hours   Max. Marks: 75
Answer any five questions
All questions carry equal marks
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1. a)   Draw a parabola using 'tangent method' with its base equal to 180 mm and axis equal to 70 mm.
   b)   A room of 1728 m^3 volume is shown by a cube of 4 cm side. Find the R.F. and construct a scale to measure up to 50 m. Also indicate a distance of 37.6 m on the scale.   [15]

2.   The front view of a line PQ is 60 mm long and makes 45^0 with the reference line. The end P is 10 mm above the H.P. and the V.T. of the line is 15 mm below the H.P. If the line PQ is inclined at 30^0 to the V.P., draw its projections. Determine its true length, inclination with the H.P. and locate its traces.   [15]

3. a)   A circular plane with a 60 mm diameter is resting on a point of its circumference on the V.P. The center is 40 mm above the H.P. and the surface is inclined at 45^0 to the V.P., and perpendicular to the H.P. Draw its projections.
   b)   A hexagonal pyramid, having base with a 30 mm side and 70 mm long axis, has a triangular face on the ground and axis parallel to V.P. Draw its projections.   [15]

4.   A square prism, having a base with a 40 mm side and a 60 mm long axis, rests on its base on the H.P. such that one of its rectangular faces makes an angle of 30^0 with the V.P. It is cut by a section plane perpendicular to the H.P. and inclined at 60^0 to the V.P. passing through the prism such that the face which makes 60^0 with the V.P. is bisected. Draw its sectional front view, top view and true shape of section.   [15]

5.   A vertical cylinder with an 80 mm base diameter and a 130 mm long axis, is resting on its base in the H.P. It is penetrated by another cylinder with a 50 mm base diameter and 150 mm long axis. The axes of both the cylinders are parallel to the V.P. and bisect each other at an angle of 30^0. Draw their projection and show the curves of intersection.   [15]

6.   A cone is placed centrally on the top of a cube with a 40 mm side which is placed centrally over a cylindrical block. The cone has a 30 mm base diameter and a 40 mm axis. The cylindrical block has an 80 mm base diameter and 10 mm thickness. Draw isometric projection of the arrangement.   [15]

7. Draw the Front View, Top View and Right Side View for the following figure.
   (All dimensions are in mm) [15]
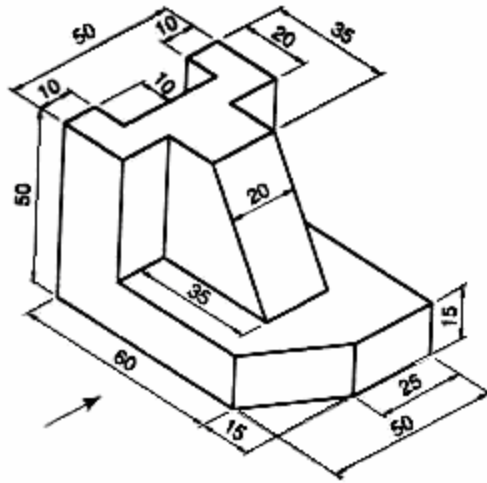
8. Draw a perspective view of a square prism having base with a 40 mm side and 60 mm long axis, resting on its base in the GP with its axis that is 40 mm behind the PP and a vertical face right to the axis inclined at 60^0 to it. The station point is 50 mm in front of PP, 90 mm above GP and lies in a CP which is 50 mm towards right of the axis. [15]

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