Code: R7100107

R7

B.Tech I Year (R07) Supplementary Examinations, December 2012

ENGINEERING GRAPHICS

(Common to CE and ME)

Time: 3 hours Max Marks: 80

Answer any FIVE questions
All questions carry equal marks
*****

1 (a) Construct a regular pentagon of 30 mm side by general method.
(b) The major axis of an ellipse is 150 mm long and the minor axis is 100 mm long. Find the foci and draw the ellipse by arcs of circles method. Draw a tangent to the ellipse at a point on it 25 mm above the major axis.

2 A line MN is 70 mm long. It's mid- point is 30 mm above HP and 25 mm in front of VP. The line inclined at an angle of 45^0 to HP and 35^0 to VP. Draw its projections.

3 A regular pentagon of 30 mm side is resting on one of its edge on H.P, which is inclined at 45^0 to V.P. Its surface is inclined at 30^0 to H.P. Draw its projections.

4 (a) A hexagonal pyramid, side of base 25 mm and axis 50 mm long, rests with one of the edges of its base on H.P and its axis is inclined at 30^0 to H.P and parallel to V.P. Draw its projections.
(b) A pentagonal prism side of base 25 mm and axis 50 mm long rests with one of its shorter edges on H.P. Such that the base containing that edge makes an angle 30^0 to H.P, and its axis is parallel to V.P. Draw its projections.

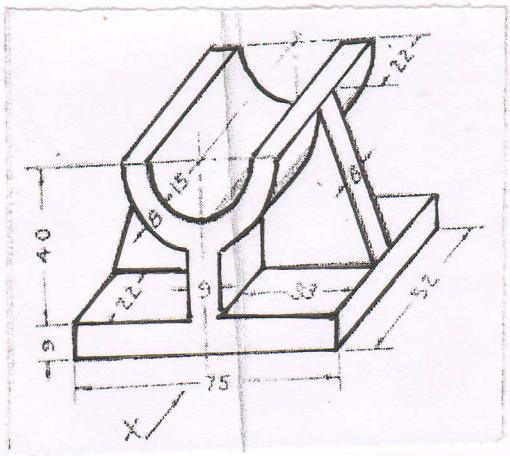
5 (a) Draw the isometric projection of a triangular pyramid of side of base 35 mm and height 75 mm when it is resting on H.P, such that an edge of the base is parallel to V.P.
(b) Draw the isometric projection of a cone of base 40 mm diameter and height 58 mm when it rest with its base on H.P. (axis is vertical).

Contd. in Page 2

Code: R7100107

R7

6 Draw the front view, top view and right side view of the object shown below.



7 A vertical cylinder of 60 mm diameter is penetrated by a square prism of 35 mm side. The axis of the prism is inclined at an angle of 30^0 to the ground, but parallel to the VP. The faces of the prism are equally inclined to the VP and the axis of the prism is 10 mm in front of the axis of the cylinder. Draw the projections of the solids showing the curves of interpenetration.

8 A pentagonal plane with a 30 mm side lies on the GP with an edge parallel to and 20 mm behind the PP. The station point is 50 mm in front of PP, 65 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.

*****