I/IV B.E./B.Tech. DEGREE EXAMINATION

First and Second Semester

ENGINEERING GRAPHICS-1-2012

(Common for all Branches Except ¼ B.Tech. [CT & GI] & 1/5 MS [SE & IT]

(Effective from the admitted batch of 2006-2007)

Time : Three hours Maximum : 70 marks

1. Part A is compulsory. Answer any FOUR questions from Part B.
2. Part A is to be answered on the main answer book and Part B.

   On the drawing sheet
3. All questions carry equal marks.
4. Assume the missing data if any, suitably.

PART - A

1. a) What is Visual Ray method ?
   b) What is isometric Projection ?
   c) Give the classification of Intersection of surfaces.
   d) What is the method of developing helices ?
   e) What are traces of a line ?
   f) Define a Rectangular Hyperbola.
   g) Differentiate an epi cycloid and a hypo cycloid.

PART - B

2. Draw the perspective view of a square pyramid of base 10 cm side and height of the apex 12 cm. The nearest edge of the base is parallel to and 3 cm behind the picture plane. The station point is situated at a distance of 30 cm from the picture plane, 6 cm above the ground plane and 20 cm to the right of the apex.
3. The outside dimensions of a box made of 4 cm thick planks are 90 cm x 60 cm x 60 cm height. The depth of the lid on the outside is 12 cm. Draw the isometric view of the box when the lid is 120o open.
4. A vertical of cylinder of 60 diameters, is penetrated by a horizontal square prism of base 40 sides, the axis of which is parallel to V.P. and 10 away from the axis of the cylinder. A face of the prism makes an angle of 30o with H.P. Draw the projections of the solids, showing the lines of intersections.
5. A cone of base 75 diameters and axis 75 long is resting on its base on H.P. The cone is cut by two inclined section planes, intersecting the axis at 25 above the base. The planes make 30o and 45o with base. Draw the three views of the solid.
6. A pentagonal pyramid, with base 35 side and height 70, rests on one edge of its base on H.P. The highest point in the base is 25 above H.P. Draw its projections, when the axis is parallel to V.P. Drawn another front view, on a reference line inclined at 45o to the edge on which it is resting, so that the base is visible.
7. A circle of 50 diameters rolls on straight line without slipping. In the initial position, consider the diameter of circle which is parallel to the line, on which it rolls. Draw

the path traced by the outer extreme point on the above diameter, for one revolutions of the circle.

8. Construct a diagonal scale of five times the full size, to read accurately up to 0.2 mm and mark on it, the following length : 4.96 cm, 28.8 mm and 2.02 cm.