

I B.Tech Year(R07) Supplementary Examinations, May/June 2010
ENGINEERING GRAPHICS
(Common to Civil Engineering and Mechanical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. (a) A Study of map reading showed that a distance of 1 cm on it represents an actual distance of 5 Km on the field. Construct a plain scale to read to single kilometre. Mark on it a distance of 69 Kilometers. What is the representative fraction?
(b) Construct a diagonal scale of R.F = 1: 4000 to show meters and long enough to measure 500 meters. Indicate a length of 379 meters. [8+8]
2. An inelastic string 145 mm long , has its one end attached to the circumference of a circular disc of 40 mm diameter. Draw the curve traced out by the other end of the string , when it is completely wound around the disc, keeping the string always tight and name the curve. [16M]
3. Draw the projections of a regular hexagon of 25 mm side, having one of its sides in the H.P. and inclined at 60 degrees to the V.P. and its surface making an angle of 45 degrees with the H.P. [16M]
4. A pentagonal prism of base side 25mm and axis length 50mm rests on the HP on one of the base corners with the base edges containing it being equally inclined to the HP. The axis is inclined at 45^0 to the HP and the plane containing the axis is inclined at 30^0 to the VP. Draw the projections of the prism. [16M]
5. A cone of base diameter 70mm and height 100mm rests on the hp and is penetrated by a horizontal cylinder of diameter 45mm the axis of cylinder is 9 mm away from the axis of the cone and at a distance 30mm above the base of the cone. Draw projection of the solids showing the curves of inter section between the solids. [16]
6. Draw the isometric projection of a Frustum of hexagonal pyramid, side of base 30 mm the side of top face 15mm of height 50 mm. [16]
7. Draw perspective view of a straight line CD, 36 mm long, lying on the ground plane, with end C in the picture plane, and inclined at 30^0 to the PP. The station point is 48 mm in front of the picture plane, 36 mm above the ground plane, and lies in a plane 12mm to the right of the end C. [16M]
8. A point A is situated 20 mm behind the picture plane and 12 mm above the ground plane. The station point is 32 mm in front of the picture plane, 26 mm above the ground plane. It lies in a central plane 14 mm to the right of the point. Draw the perspective view of the point. [16M]
