R13

SET - 1

I B. Tech II Semester Supplementary Examinations, April/May - 2017
ENGINEERING DRAWING
(Com. to CE, ME, TE)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of **Part-A** and **Part-B**
2. Answering the questions in **Part-A** is Compulsory
3. Answer any **THREE** Questions from **Part-B**

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PART –A

1. a) Divide a Straight line of 80 mm into 9 equal parts. (4M)
   b) Draw the projections of a 60mm long straight line, in the following positions (4M)
      i) Perpendicular to the H.P, in the V.P. and its one end in the H.P.
      ii) Inclined at 45^0 to the V.P, in the H.P. and its one end in the V.P.
   c) Draw the projections of the following points on the same ground line, keeping (4M)
      the Projectors 30mm apart.
      i) Point A, 30mm below the H.P. and in the V.P.
      ii) Point B, 35mm below the H.P. and 20mm in front of the V.P.
   d) Draw the isometric view of a square prism, with side of base 40mm and length (4M)
      of axis 70mm, when its axis is horizontal.
   e) An isosceles triangle of base 30mm and altitude 50mm has its base in the VP. (6M)
      The surface of the plane is inclined at 45^0 to the VP and perpendicular to HP.
      Draw its projections.

PART –B

2. a) The foci of an ellipse are 85 mm apart and the minor axis is 60 mm long. (8M)
      Determine the length of the major axis and draw the ellipse by oblong method
      (or) rectangle method.
   b) Construct a scale to be used with a map, the scale of which is 1cm = 500m. The (8M)
      maximum length to be read is 5km. Mark on the scale a distance of 3.85 km.

3. a) Find the distance between two points A and B when B is 40 mm in front of V.P. (8M)
      and 25 mm above H.P. The point A is 25 mm behind the V.P. and 40 mm below
      H.P. The distance between projectors measured along xy line being 40 mm.
   b) Two pegs fixed on a wall are 4.5 m apart. The distance between the pegs (8M)
      measured parallel to the floor is 3.6m. If one peg is 1.5 m above the floor, find
      the height of the second peg and the inclination of the line joining the two pegs,
      with the floor.

4. The projectors through the HT and VT of a line are 100 mm apart while those (16M)
   its ends are 65 mm apart. An end of the line is 15 mm above the HP. The HT 40
   mm in front of the VP and the VT is 75 mm above HP. Draw the front view and
   top view of the line and find its true length. Also the inclinations the line makes
   with the reference planes.

5. a) A plate having shape of an isosceles triangle has base 50 mm long and altitude (10M) 70 mm. It is so placed that in the front view it is seen as an equilateral triangle of 50 mm sides one side inclined at 45^0 to xy. Draw its top view.

    b) Draw the projections of a circle of 5 cm diameter, having its plane vertical and (6M) inclined at 30^0 to V.P. Its center is 3 cm above the H.P. and 4 cm in front of the V.P.

6. a) A hexagonal pyramid, base 25 mm side and axis 65 mm long, has an edge of its (8M) base on the ground. Its axis is inclined at 30^0 to the ground and parallels to the V.P. Draw its projections.

    b) Draw the projections of a pentagonal prism of base 25 mm side and axis 50 mm (8M) long, when it is resting on one of its rectangular faces on H.P., the axis of the solid is inclined at 45^0 to V.P.

7. Draw the Front View, Top view and side view of the figure shown below. All (16M) dimensions are in mm.

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