R13

B.Tech II Year II Semester (R13) Regular Examinations May/June 2015
ENGINEERING GRAPHICS
(Electronics and Communication Engineering)

Time: 3 hours
Max. Marks: 70

PART – A
(Compulsory Question)
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1 Answer the following: (10 X 02 = 20 Marks)
  (a) Define eccentricity.
  (b) What do you mean by conjugate axis?
  (c) List the significance of engineering drawing.
  (d) State the quadrants and their positions with respect to principle planes.
  (e) Distinguish between first and third angle projection.
  (f) Define trapezoidal method.
  (g) Define traces of planes.
  (h) Explain the four centre method.
  (i) Explain Isometric scale.
  (j) Explain the radial line method.

PART – B
(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 The distance between a fixed straight line and a fixed point is 65. Trace the path of a point P moving in such a way that the ratio of its distance from the fixed point, to its distance from the straight line is 3/2. Name the curve. Draw a normal and a tangent to each curve at a point on it, 50 from the fixed point.

OR

3 A coin of 35 mm diameter rolls over dining table without slipping. A point on the circumference of the coin is in contact with the tae surface in the beginning and after one complete revolution. Draw the curve traced by the point. Draw a tangent and a normal at any point on the curve.

UNIT – II

4 Draw the projections of the following points on the same reference line keeping the projections 30 part.
      A – 40 above the H.P and 50 infront of the V.P
      B – 40 below the H.P and 50 infront of the V.P
      C – 40 below the H.P and 50 behind the V.P
      D – 40 above the H.P and 50 behind the V.P.

OR

5 The end C of a line CD is in the third quadrant and is 50 from the V.P. The end D is in the first quadrant and is 40 from the V.P. The top view of the line is inclined at 45° to xy and H.T of the line is 20 below xy. The line CD is inclined at 30° to the V.P. Draw the projections of the line and determine:
  (a) True length of the line.
  (b) Inclination of the line with the H.P.
  (c) The location of V.T from the H.P stating whether it is above or below the H.P.

UNIT – III

6 A plate is of the shape of an isosceles triangle of base 60 and altitude 80. Draw the projections of the plate, when it is placed such that the front view appears as an equilateral triangle of sides 60 each and one of the plate edges makes 30° wit the H.P.

OR

7 A pentagonal prism of base 50 and 70 long rests on a corner of its base on H.P with the longer edge through that corner inclined at 45° to H.P. The vertical plane containing that longer edge and the axis of the prism is inclined at 30° to V.P. Draw the projections.

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UNIT – IV

8   A cone of base 65 diameters and axis 75 long, rests on H.P on a point on the circumference of the base. The axis of the cone makes 60° with H.P. It is cut by a section plane, inclined at 30° to V.P and passing through the midpoint of the axis. Draw the sectional front view and determine the true shape of the section.

OR

9   A pentagonal pyramid, side of base 30 mm and height 52 mm, stands with its base on H.P and an edge of the base is parallel to V.P. It is cut by a plane perpendicular to V.P inclined at 40° to H.P and passing through a point on the axis 32 mm above the base. Draw the sectional top view and develop the lateral surface of the truncated pyramid.

UNIT – V

10   Draw the isometric projections of a square prism of 30 side of base and 60 length of axis when its axis is:
    (a) Vertical.
    (b) Horizontal.

OR

11   Draw the front view, right side view and top view.

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