

Code: 15A03101b

B.Tech I Year II Semester (R15) Supplementary Examinations December 2016

ENGINEERING DRAWING

(Common to ME and IT)

Time: 3 hours

Max. Marks: 70

(Answer all five units, 05 X 14 = 70 Marks)

UNIT – I

- 1 Draw and name the curve by focus-directrix method when the distance of the focus from the directrix is equal to 60 mm and the eccentricity is $2/3$.

OR

- 2 A circle of 45 mm diameter rolls along a straight line without slipping. Draw a curve traced out by point P on the circumference for one complete revolution of the circle. Name the curve and draw a tangent to the curve at a distance of 35 mm from the straight line.

UNIT – II

- 3 The Marina Beach at Chennai, is 2.5 km long. On inspection of the road map, its equivalent distance measures 5 cm. Draw a diagonal scale to read 50 m minimum. Mark on the scale a distance of 6350 m.

OR

- 4 Draw the projections on the following points on the same reference line, keeping the projectors 30 mm apart:

- (i) A, 30 mm above HP and 30 mm in front of VP.
- (ii) B, 45 mm below HP and 30 mm behind VP
- (iii) C, 40 mm above HP and in the VP
- (iv) D, 40 mm in front of VP and in HP
- (v) E, 45 mm below HP and in VP
- (vi) F, 50 mm behind VP and in the HP
- (vii) G, in both HP and VP.

UNIT – III

- 5 The end point C of an 80 mm long line CD is 15 mm above the HP and 10 mm in front of the VP. The line is inclined at 30° to the HP and 45° to the V.P and the other end point D lies in the second quadrant. Draw its projections.

OR

- 6 Draw the projections of a rhombus having diagonals 125 mm and 50 mm long, the smaller diagonal of which is parallel to both the principal planes while the other is inclined at 30° to HP.

UNIT – IV

- 7 A regular tetrahedron of edges each 40 mm long rests on one of its corners on HP with its axis inclined to HP at 45° . Draw its projections.

OR

- 8 Draw the development of the lateral surface of a hexagonal prism of 24 mm base edge and 68 mm height. An insect moves on its surface from a corner on the base to the diametrically opposite corner of the top face shortest route. Trace graphically the path of the insect in the front view.

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UNIT – V

- 9 A sphere of diameter 40 mm rests centrally on the top of a square frustum, base 60 mm top 40 mm and height 75 mm. Draw isometric view of the combination of solids.

OR

- 10 Draw the front view, top view and side view of the object whose isometric view is shown in the figure below (All dimensions are in mm).


