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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, $05 \times 14 = 70 \text{ Marks}$)

UNIT – I

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

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

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

- 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 infront 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 infront 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

The end point C of an 80 mm long line CD is 15 mm above the HP and 10 mm infront 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

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]

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

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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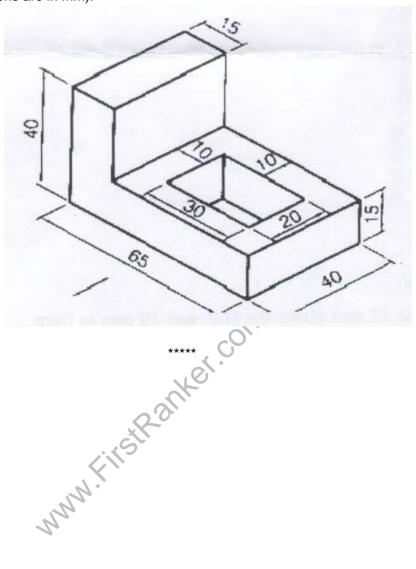
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UNIT – V

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

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).



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