B.Tech I Year I Semester (R15) Supplementary Examinations June 2016
ENGINEERING DRAWING
(Common to CE, EEE and CSE)

Time: 3 hours   Max. Marks: 70

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

1   Draw a hyperbola when the distance between its focus and directrix is 50 mm and eccentricity is 3/2. Also draw the tangent and normal at a point 25 mm from the directrix.

OR

2   A circle of 50 mm diameter rolls along a line. A point on the circumference of the circle is in contact with the line in the beginning and after one complete revolution. Draw the cycloidal path of the point. Draw a tangent and normal at any point on the curve.

UNIT – II

3   A water tank of size 27 m^3 was represented in the drawing by 216 cm^3 size. Construct a vernier scale for the same to measure up to 5 m. show on it, the following lengths: (i) 3.95 m. (ii) 0.27 m. (iii) 0.042 m.

OR

4   Draw the projections of the following points on a common reference line.
   (a) P 35 mm behind the VP and 20 mm below the HP.
   (b) Q 40 mm infront the VP and 30 mm above the HP.
   (c) R 50 mm behind the VP and 15 mm above the HP.
   (d) S 40 mm below the HP and in the VP.
   (e) T 30 mm infront of the VP and 50 mm below the HP.

UNIT – III

5   A line PQ has its end P, 10 mm above the HP and 20 mm infront of the VP, the end Q is 35 mm infront of the VP. The front view of the line measures 75 mm. The distance between the end projectors is 50 mm. Draw the projections of the line and find its true length and its true inclinations with the VP and HP.

OR

6   A pentagon of side 30 mm rests on the ground on one of its corners with the sides containing the corner being equally inclined to the ground. The side opposite to the corner on which it rests is inclined at 30° to the VP and is parallel to the HP. The surface of the pentagon makes 50° with the ground. Draw the top and front views of the pentagon.

UNIT – IV

7   A cone of 15 mm radius and 70 mm height rests on the ground on one of its base circle points such that the apex is 20 mm and the nearest base circle point is 50 mm infront of VP and the base is perpendicular to HP. Draw the projections.
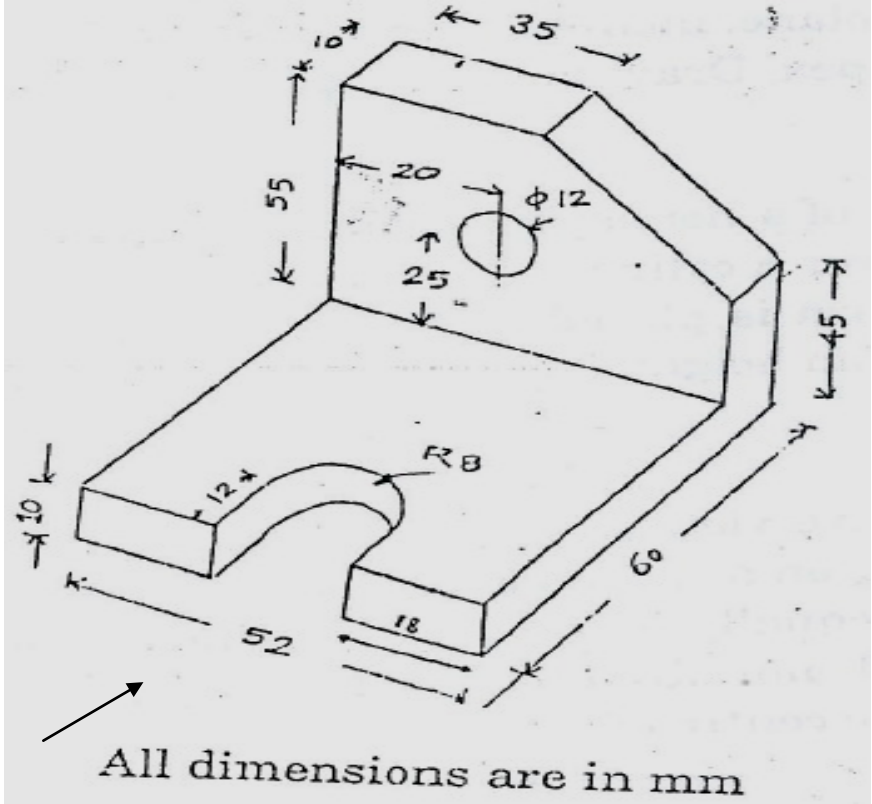
OR

8   A cylinder of diameter 40 mm and height 50 mm is resting vertically on one of its ends on the HP. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP. The plane meets the axis at a point 30 mm from the base. Draw the development of the lateral surface of the lower portion of the truncated cylinder.

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UNIT – V

9   Draw the isometric view of frustum of a hexagonal pyramid when it is resting on its base on the HP with two sides of the base parallel to the VP. The side of base is 20 mm and top is 8 mm. The height of the frustum is 55 mm.

OR

10   Make free hand sketches of the front, top and right side views of the object shown in figure below.

All dimensions are in mm

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