

Code: 15A03101a

**R15**

B.Tech I Year II Semester (R15) Regular & Supplementary Examinations May/June 2017

**ENGINEERING DRAWING**

(Common to ECE and EIE)

Time: 3 hours

Max. Marks: 70

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

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**UNIT – I**

1 The vertex of a hyperbola is 65 mm from its focus. Draw the curve if the eccentricity is  $2/3$ . Name the curve and draw a normal and tangent to the curve at a point on it 70 mm from the directrix.

**OR**

2 A circle of 40 diameter rolls on the concave side of another circle of 40 radius, without slipping. Draw the path traced by a point on the smaller circle for one complete revolution. Name the curve and draw a normal and tangent to the curve at any point on it.

**UNIT – II**

3 Construct a scale to measure kilometers, one eighth of a kilometer and one fortieth of a kilometer in which a kilometer is represented by 4 cm. Mark on the scale a distance of 2.775 km.

**OR**

4 (a) A point A is located in the first quadrant. The shortest distance line drawn from the point A to the intersection of HP and VP is 50 and this line is inclined at  $30^\circ$  to the HP. Draw the front and top views of the point A.

(b) A point B is lying in the second quadrant. The shortest distance of the point from intersection of HP and VP is 55. If the point is 30 above HP, draw the front and top views of the point B.

**UNIT – III**

5 The mid-point of a line 80 long is 25 above HP and 30 in front of VP. The line is inclined at  $30^\circ$  to the HP and  $40^\circ$  with the VP. Draw the projections of the line.

**OR**

6 A semi-circular plate of 80 dia has its straight edge in the VP and inclined at  $45^\circ$  to the HP while the surface of the plate is inclined at  $30^\circ$  to the VP. Draw the projections of the plate.

**UNIT – IV**

7 One of the body diagonals of a cube of 50 edge is parallel to the H.P and Inclined at  $60^\circ$  to the V.P. Draw the projections of the cube, in this position

**OR**

8 A cone of diameter 60 and height 70 is cut by a section plane such that the plane passes through the mid-point of the axis and is tangential to the base circle. Draw the development of the lateral surface of the bottom part of the cone.

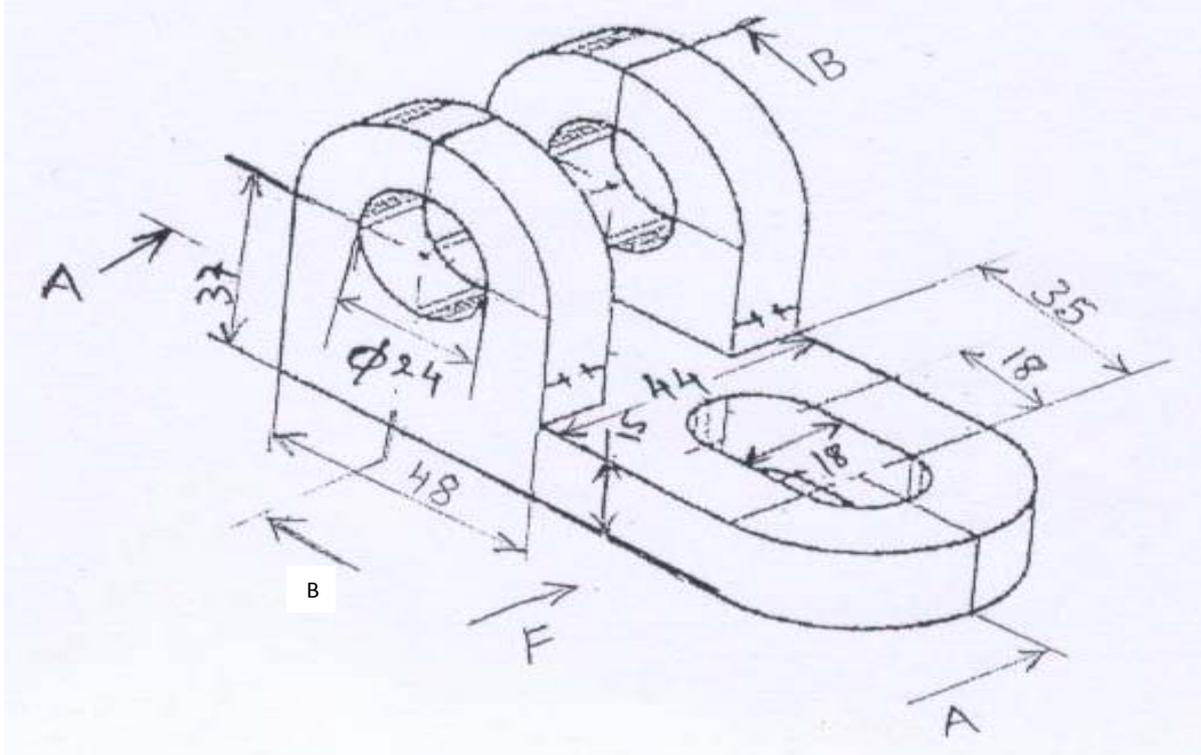
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UNIT - V

9 A Paper weight consists of three portions. Bottom most portion is hexagonal prism of side of base 60 and height 15. Middle portion is the cylinder 50 of dia and height being 25. Top portion is a sphere of 40 dia. Draw the isometric projection of the solid.

OR

10 Draw the front view and top view for the object shown in the figure below.



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