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Code: 15A03101a **R15**

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

ENGINEERING DRAWING

(Common to CE and EEE)

Time: 3 hours Max. Marks: 70

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

(All dimensions are in mm unless otherwise specified)

UNIT - I

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

OR

2 A circle of 50 mm diameter rolls on the circumference of another circle of 175 mm diameter outside it. Trace the locus of a point on the circumference of the rolling circle for one complete revolution. Name the curve. Draw a tangent and normal to the curve at a point 125 mm the centre of the directing circle.

UNIT - II

3 Construct a scale to be used with a map, the scale of which is 1 cm = 40 m. The scale should read in meters up to 500 m. Mark on the scale a distance of 456 m.

OR

4 (a) A point P is 15 above the HP and 20 in front of the V.P. Another point Q is 25 behind the V.P and 40 below the H.P. Draw the projections of P and Q keeping the distance between the projectors equal to 90. Draw straight lines joining: (i) Their top views. (ii) Their front views.

(b) Two points A and B are in the H.P. The point A is 30 in front of the V.P, while B is behind the V.P. The distance between their projections is 75 and the line joining their top views makes an angle of 45° with xy. Find the distance of the point B, from the V.P.

UNIT – III

5 A line AB, 90 long, is inclined at 45° to the H.P and its top view makes an angle of 60° with xy. The end A is in the H.P and 15 in front of the V.P. Draw its front view and find its true inclination with the V.P.

OR

6 Draw the projections of a rhombus having diagonals 120 and 50 long, the smaller diagonal of which is parallel to both the principal planes, while the other is inclined at 30° to the V.P.

UNIT – IV

7 A tetrahedron of 75 edges has one edge on the ground and inclined at 45° to the V.P, while the face containing the edge is vertical. Draw its projections.

OR

8 A pentagonal prism 20 side of base and 45 height stands vertically on its base with two of its rectangular faces equally inclined to the V.P. Develop the lateral surface of the prism.

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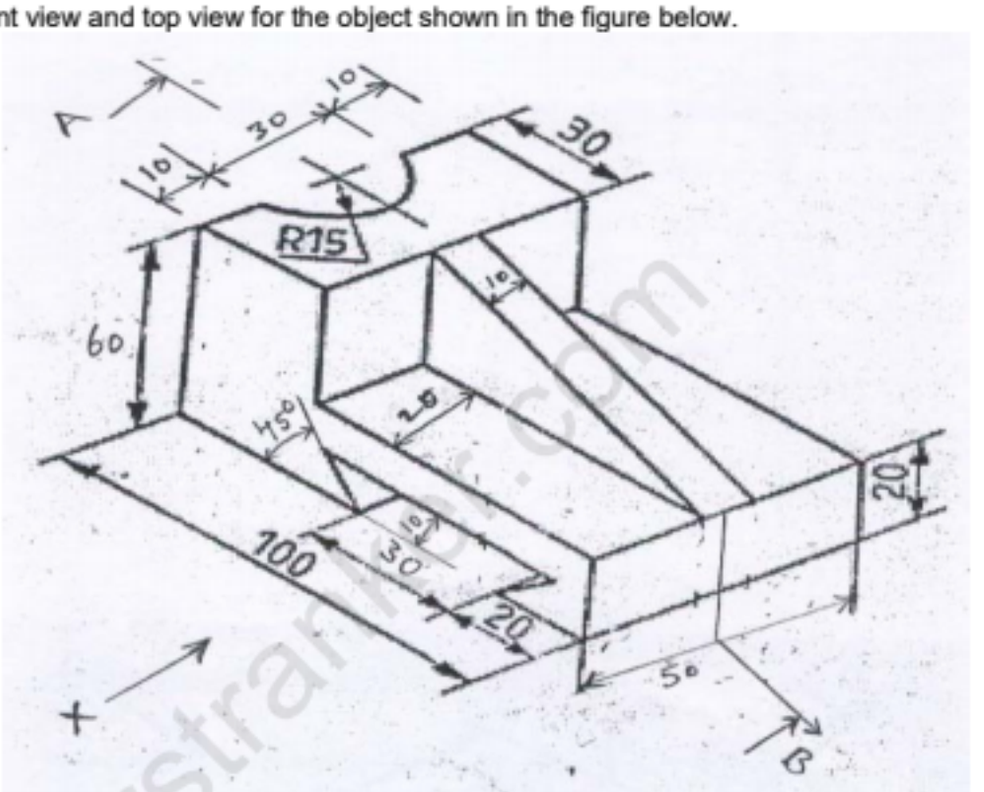
UNIT - V

9 A paper weight consists of three portions. The bottom most portion is a cylinder of 60 diameter and 15 height. On it is situated a frustum of a cone of height 30 and bottom diameter 60 and top diameter 30. The top portion is a sphere of diameter 30 centrally placed on the circle. Draw the isometric projection of the same.

OR

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



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