AR13 SET 01

13ME1001

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)

I B.Tech I Semester, Regular Examinations, February – 2015

ENGINEERING DRAWING

(ME Branch)

Time: 3 Hours Max Marks : 70

Part – A

Answer all Questions **[10X1 = 10 M]**

1. a) What is the RF when a distance of 50 km is represented by a 5 cm line?
   b) What is the shape of the cut portion when a cone is cut by an inclined plane parallel to one of the end generators?
   c) What are the main differences in the First angle and Third angle projections?
   d) Draw the Side View of a Point A, 20 mm above HP and 40 mm in front of VP.
   e) What is the Front View of a Circular Plate of 60 mm radius Perpendicular to HP and making 30^0 with VP?
   f) Where do you draw the Right Side view of a Pentagonal Prism resting on HP with its axis vertical?
   g) Draw the Projections of a Square Pyramid when it is resting on its base in HP and two of its edges parallel to VP.
   h) What are the solids of Revolution?
   i) What is the length of a 100 mm long line in Isometric Length?
   j) Draw the Isometric view of a Square plane having its surface parallel to VP and two of the edges parallel to HP.

Part B

Answer one Question from Each Unit **[5 X 12 = 60]**

Unit – I

2. A line of 5 Kilometers is represented by a line of 20 cm. Construct a Vernier Scale to read up to 6 Kilometers. Mark a length of 4.37 Kilometers on it.

(OR)

3. Draw the ellipse when the major axis is 130 mm and minor axis is 65mm and also draw Normal and Tangent at any point on it.

Unit – II

4. a) There are two point A and B. The point A is 30 mm below HP and 40 mm behind VP. While the Point B is in the first quadrant. The Lines joining both the top views and both the front views of these two points are making 45^0 with the reference line. The distance between their projectors is 100 mm. Draw its projections and find the distances of the Point B from both HP and VP.
   b) A Line AB is parallel to HP and 20 mm above it. It is making an angle with VP. Its one end A is 30 mm in front of VP and the second end B is 90 mm in front of VP. The distance between the end projectors is 100 mm. Draw its projections and find the True Length of the line and the inclination of the line with VP.

(OR)

5. a) A Line of 100 mm long is parallel to VP and 30 mm in front of it and making an angle with HP. Its one end A is 20 mm above HP and the distance between their end projectors is 60 mm. Draw its Projections and find the inclination of the line with HP and the distance of the point B from HP.

b) A Line AB is parallel to VP and inclined to HP. Its one end is 30 mm in front of VP. The Top View of the line is 55 mm. Its one end A is 20 mm above HP and the second end B is 90 mm above HP. Draw its projections and find its True length and the inclination with HP.

Unit – III

6. A Hexagonal plate of negligible thickness and 30 mm sides is resting on one of its corners in HP having two of its edges parallel to VP. Its surface is perpendicular to VP and making 40^0 with HP. Draw its three views.

(OR)

7. A circular plate of negligible thickness is resting on a point of its circumference in VP. Its surface is making 45^0 with VP and is perpendicular to HP. Draw its three views.

Unit – IV

8. A Pentagonal Prism with base edges 30 mm and height 80 mm is resting on one of its base corners in HP. The edges containing the corner are making equal inclinations with HP. Its axis is inclined at 30^0 to HP. Draw its projections.

(OR)

9. A cylinder of 60 mm diameter and 90 mm long is resting on one of its generators in HP. Its axis is making 45^0 with VP. Draw its projections.

Unit – V

10. Draw the front view, top view and the right side view of the object shown in fig.1.

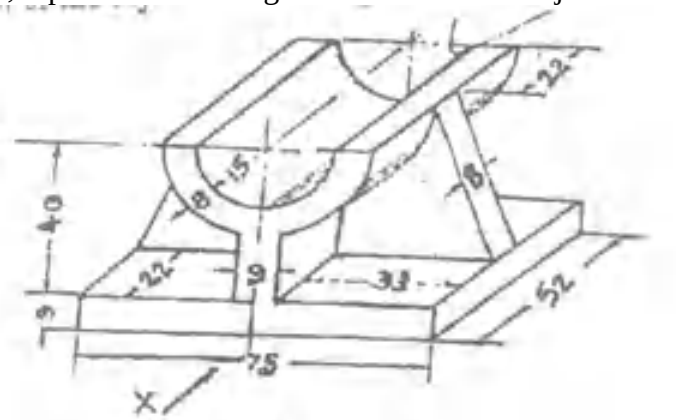

Figure 1

(OR)

11. Draw the isometric view of the object, the orthographic views of which are shown in Figure 2.

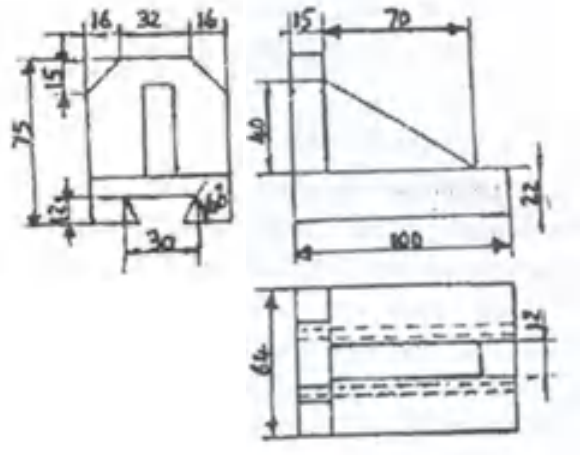

Figure 2