13ME1001

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B.Tech., I Semester, Regular Examinations, February – 2014
ENGINEERING DRAWING
(Common to CSE & IT)

Time: 3 Hours Max Marks : 70

Part – A

Answer all Questions [10X1 = 10 M]

1. a) What is the RF when a distance of 100 Km is represented by a 5 cm line?
   b) What is the shape of the cut portion when a cone is cut by a plane perpendicular to the base?
   c) Represent the projections of any point in First angle and Third angle projections.
   d) Draw the Left Side View of a Point A, 50 mm above HP and 40 mm in front of VP.
   e) What is the Top View of a Square Plane Surface of 80 mm sides when it is Perpendicular to VP and making 30^0 with HP?
   f) Where do you draw the Left Side view of a Hexagonal Pyramid resting on HP with its axis vertical?
   g) How do you draw the Projections of a Pentagonal Pyramid, whose base edge length and height of the Pyramid is given, when it is resting on the base in HP and one of its base edges is parallel to VP?
   h) Roughly draw the projections of a Tetrahedron.
   i) What is the difference between an Isometric Projection and an Isometric View?
   j) Draw the Isometric view of a Rectangular Plane having its surface parallel to HP and two edges are parallel to VP.

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 Diagonal Scale to read Kilometers, Hectameters and Decimeters and to read up to 6 Kilometers. Mark a length of 5.26 Kilometers on it.

(OR)

3. The major axis and the minor axis of an Ellipse are given as 100 mm and 70 mm. Find the Foci and construct the Ellipse by Arcs of Circles in the Left half and by Concentric Circles in the right half. Draw a tangent and normal at any point on the curve.

Unit – II

4. a) There are two points A and B. Point A is in HP and also in VP. The Point B is in the first quadrant. The distance between their projectors is 100 mm. The Line joining their front views is making 45^0 and the line joining their top views is making 60^0 with the reference line. Find the distances of the Point B from both HP and VP.
   b) A Line AB is parallel to VP and 40 mm in front of it. It is making an angle with HP. Its top view measures 70 mm. Its one end A is 30 mm above HP and the second end B is 100 mm above HP. Draw its projections and find the True Length of the line and the inclination of the line with HP.

(OR)

5. a) A Line AB is parallel to HP and 50 mm above it and is inclined to VP. Its one end A is 20 mm in front of VP. Its front view measures 100 mm. Draw its projections and find its true length and inclination with VP and the distance of the point B in front of VP.

b) A Line AB of 100 mm is parallel to VP and making an angle with HP. Its one end A is 30 mm above HP and 40 mm in front of VP. The distance between their end projectors is 60 mm. Draw its projections, find the angle with HP and the distance of the point B above HP.

Unit – III

6. A Hexagonal Plate of negligible thickness and 30 mm sides has one of its edges making 20^0 with VP and the surface making 30^0 with HP. Draw its projections.

(OR)

7. An Elliptical plate of negligible thickness and major axis of 100 mm is resting on one a point of its circumference in HP. Its surface is making an angle with HP and the plate appears to be a circle of 60 mm radius in the top view. Draw Projections.

Unit – IV

8. A Hexagonal Pyramid with base edges 25 mm and slant edges 80 mm is resting on one of its base edges in HP. Its axis makes 30^0 with HP. Draw its projections.

(OR)

9. A Cone of 60 mm diameter and 90 mm height is resting on its apex in HP. Its axis is making 45^0 with HP. Draw its projections.

Unit – V

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

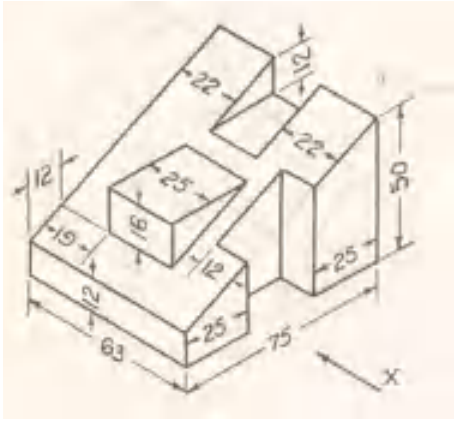

Figure 1

(OR)

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

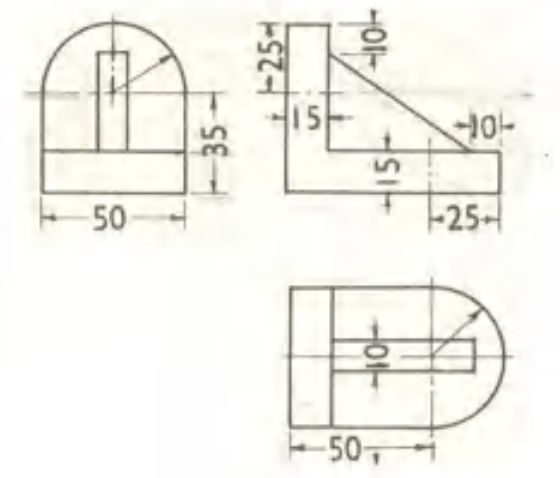

Figure 2.