AR13

Code: 13ME1001 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B. Tech I Semester Regular/ Supplementary Examinations, December, 2015

ENGINEERING DRAWING
(Mechanical Engineering)

Time: 3 hours **Max Marks: 70**

PART-A

Answer all questions **[10 x 1=10M]**

1. a) How hidden lines are represented?
   b) What is a regular polygon?
   c) What is projection?
   d) When will be the front view of a straight line show the true length of the line?
   e) When are both the views of a plane are straight lines?
   f) What is an edge view of a plane?
   g) What is meant by frustum?
   h) State the shape and number of faces of a Dodecahedron?
   i) How the isometric axes are positioned?
   j) Isometric projection or Isometric view of a square will be a _____

PART- B

Answer one question from each unit **[5X12=60M]**

UNIT– I

2. a) Construct a diagonal scale of R.F=1/4000 to show metres and long enough to measure upto 500 metres. **8 M**
   b) Construct a regular hexagon of 35 mm side with one of its side vertical? **4 M**

(OR)

3. Construct an ellipse when the major axis is 120 mm and the distance between the foci is 108 mm. Determine the length of the minor axis. **12 M**

UNIT– II

4. a) The top view of a 75 mm long line measures 55 mm. The line is in the V.P, its one end being 25 mm above the H.P. Draw its projections. **6 M**
   b) A point P is 15 mm above H.P and 20 mm in front of the V.P. Another point Q is 25 mm behind the V.P and 40 mm below the H.P. Draw projections of P and Q keeping thedistance between their projectors equal to 90 mm. Draw straight lines joining (i) their top views and (ii) their front views. **6 M**

(OR)

5. a) The front view of a line inclined at 30^0 to the V.P is 65 mm long. Draw the projections of the line, when it is parallel to and 40 mm above the H.P, its one end being 30 mm in front of the V.P. **6 M**
   b) Mark the projections of the following points on a common reference line, keeping theprojectors 35 mm apart.
      i) A, 25mm above H.P and 35mm in front of V.P
      ii) B, 25mm above H.P and 40 mm behind V.P
      iii) C, 30mm below H.P and 45 mm behind V.P **6 M**

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UNIT– III

6. A square plate PQRS of negligible thickness having 35 mm side is lying on a corner R on H.P. One of the diagonals RP is inclined at 35^0 to H.P and 40^0 to V.P. The two sides QR and RS containing the corner R are equally inclined with H.P. Draw its projections. **12 M**

(OR)

7. A 60^0 set-square of 125 mm longest side is so kept that the longest side in the H.P making an angle of 30^0 with the V.P and the set-square itself inclined at 45^0 to the H.P. Draw the projections of the set- square. **12 M**

UNIT- IV

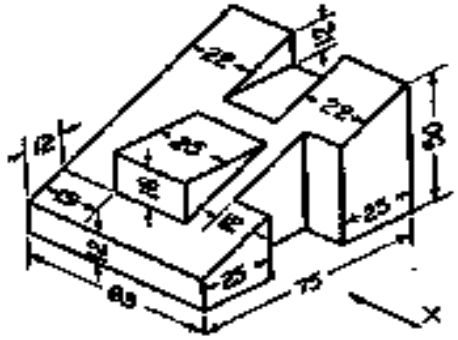
8. Draw the projections of a pentagonal pyramid of base 25 mm side and axis 60 mm longwhen it is lying on H.P on one of its base edges, such that the axis is parallel to VP and inclined at 30^0 to HP. **12 M**

(OR)

9. Draw the projections of a cylinder 75mm diameter and 100 mm long, lying on the ground with its axis inclined at 30^0 to the V.P and parallel to the ground. **12 M**

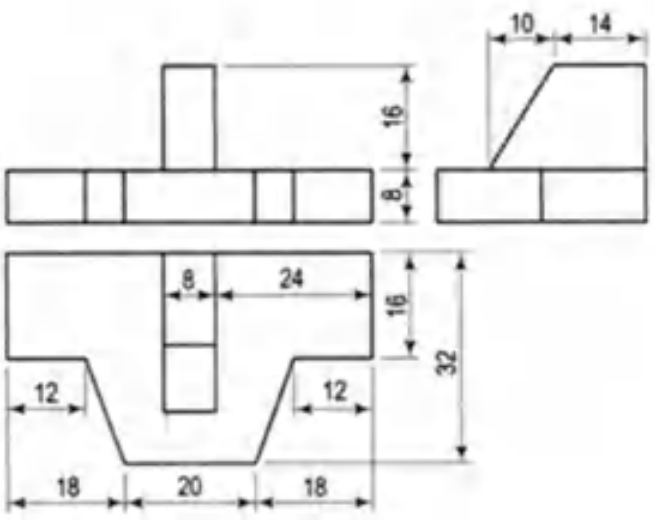
UNIT – V

10. Draw (i) front view (ii) side view from the left (iii) top view **12 M**



(OR)

11. Draw the isometric view **12 M**



Note: All dimensions are in mm