AR13 **SET 01**

Code: 13ME1001

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B. Tech I Semester Regular Examinations, February-2014
ENGINEERING DRAWING
Mechanical Branch

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

PART-A

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

1. a) What are the systems of placing dimensions on a drawing?
   b) When measurements are required in three units which type of scale is used?
   c) Define representation fraction.
   d) List out the different types of scales.
   e) Define eccentricity.
   f) What are the methods to construct an ellipse, given the major and minor axes.
   g) Define Ellipse.
   h) Explain differences between first angle projection and third angle projection method with graphical symbol.
   i) Define orthographic projection.
   j) What is the difference between orthographic projection and isometric projection?

PART- B

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

Unit - I

2. The area of a field is 50,000 Sqm. The length and breadth of the field on the map is 10 cm and 80 mm respectively. Construct a diagonal scale which can read up to one meter. Make the length of 235 meter on the scale. What is the R.F. of the scale.

(OR)

3. A point moves such that the difference of its distances from two fixed points is constant and is equal to 100 mm. The fixed points are located 200 mm apart. Draw the locus of the moving point. Name the curve. Make on it transverse axis, foci and asymptotes.

Unit - II

4. The front view of a 95 mm long line measures 65 mm. The line is parallel to the H.P. and one of its ends is in the V.P. and 25 mm above the H.P. Draw the projections of the line and determine its inclination with the V.P.

(OR)

5. A line RS 35 mm long is in H.P. and inclined at angle of 45^0 to V.P. The end R is 10 mm in front of V.P. Draw the projections.

Unit - III

6. A thin triangular lamina having sides 40 mm, 60 mm and 70 mm is held in such a way that the smallest of its sides is parallel to H.P. and perpendicular to V.P. The plane of the lamina is inclined at 60^0 to H.P. Draw front view and top view of lamina.

(OR)

7. A composite plate of negligible thickness is made up of a rectangle 60 mm X 40 mm and a semi circle on its longer side. Draw its projections when the longer side is parallel to H.P. and inclined at 45^0 to V.P. The surface of the plate makes 30^0 with the H.P.

Unit - IV

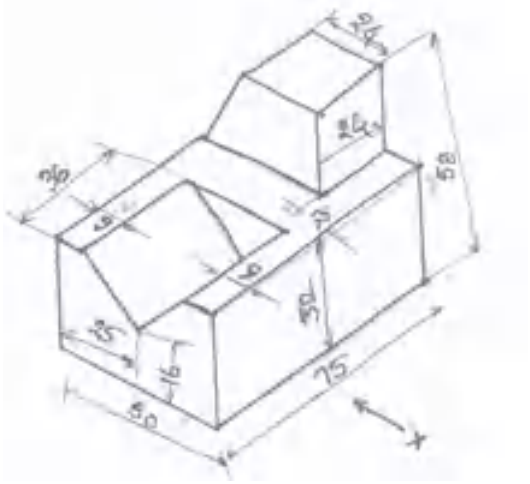
8. A hexagonal pyramid base 75 mm side and axis 80 mm long and an edge of its base on the H.P. The base is lifted up until the highest base corner is 30 mm above the H.P. The axis is parallel to V.P. Draw its projections.

(OR)

9. Draw the projections of a cone – base diameter 40 mm, length of axis 50 mm, when it is resting on a generator in the V.P. with that generator making an angle of 40^0 with XY vertex being away from H.P.

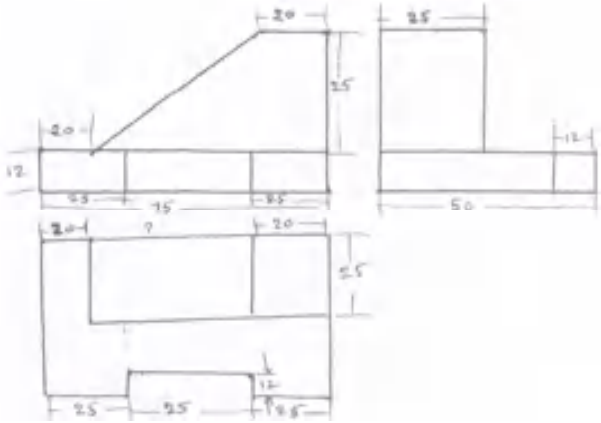
Unit - V

10. Draw the front view, top view and side view of the block shown in the figure below:



(OR)

11. Draw the isometric projection of the block whose orthographic projections are shown in figure below:



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