AR16

CODE: 16ME1001 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

I B.Tech I Semester Supplementary Examinations, April, 2022

ENGINEERING DRAWING

(Common to CE, ME, CSE & IT)

Time: 3 Hours **Max Marks: 70**

Answer ONE Question from each Unit
All Questions Carry Equal Marks
All parts of the Question must be answered at one place

UNIT-I

1. Construct a scale of 1:50 to read metres and decimetres and long enough to measure 6m. Mark on it a distance of 5.5 m. 14M

(OR)

2. Draw an ellipse by concentric circles method by taking major axis as 100 mm and minor axis as 70 mm. 14M

UNIT-II

3. Illustrate the orthographic projections of the following points. 14M
   (a.) Point P is 30 mm. above H.P and 40 mm. in front of VP
   (b.) Point Q is 25 mm. above H.P and 35 mm. behind VP
   (c.) Point R is 32 mm. below H.P and 45 mm behind VP
   (d.) Point Sis 35 mm. below H.P and 42 mm in front of VP
   (e.) Point T is in H.P and 30 mm. is behind VP
   (f.) Point U is in VP and 40 mm. below HP
   (g.) Point V is in VP and 35 mm. above HP

(OR)

4. A point P is 15 mm above the H.P. and 20 mm in front of the V.P. Another point Q is 25 mm behind the VPand 40 mm below the H.P. Draw the projections of P and Q keeping the distance between their projectors equal to 90 mm. draw straight lines joining (1) their top views and (2) their front views. 14M

UNIT-III

5. Draw the projections of a circle of 50 mm diameter, having its plane vertical and inclined at 30° to the V.P. Its centre is 30 mm above the H.P and 20 mm in front of the V.P. 14M

(OR)

6. A hexagonal plane of side 30 mm has an edge on the H.P The surface is inclined at 45° to the HP and perpendicular to the VP. Draw its projections. 14M

UNIT-IV

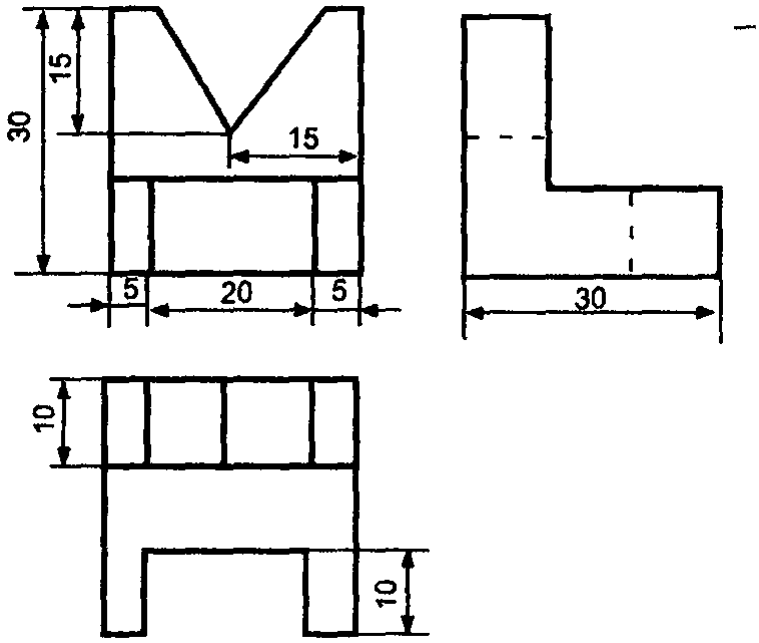
7. Draw the projections of a cone, base 75 mm diameter and axis 100 mm long, lying on the H.P. on one of its generators with the axis parallel to the V.P. 14M

(OR)

8. A pentagonal prism with side of base 30mm and axis 60mm long is resting with an edge of its base on HP, such that the rectangular face containing that edge is inclined at 60□ to HP. Draw the projections of the prism when its axis is parallel to V.P. 14M

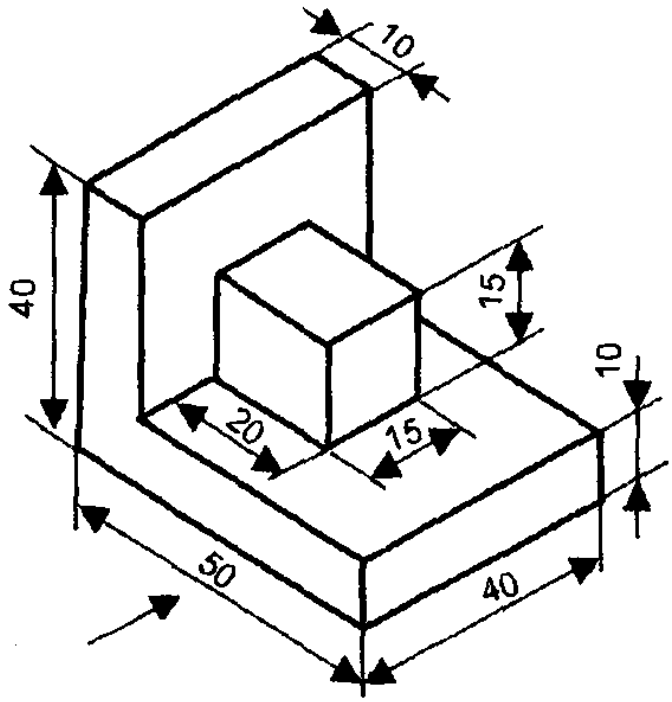
UNIT-V

9. Construct the isometric view from the given views below: 14M



(OR)

10. Construct the front view, top view and view from right hand side for the component shown below: 14M



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AR13

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ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B.Tech I Semester Supplementary Examinations, April, 2022
ENGINEERING DRAWING
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Time: 3 Hours **Max Marks: 70**

PART-A

ANSWER ALL QUESTIONS **[1 x 10 = 10 M]**

1. a) What is representative fraction?
   b) What are the possible positions of a straight line with respect to the planes of projection?
   c) Define eccentricity
   d) List out the main differences between first angle projection and third angle projection
   e) When a plane is perpendicular to a reference plane its projection on that plane is _____
   f) What is an oblique plane?
   g) What are the solids of revolution?
   h) What are the dimensions of the solid that can be seen in the side view?
   i) What is the difference between Isometric view and Isometric projection?
   j) How are the invisible features of an object represented in orthographic projection?

PART-B

Answer one question from each unit **[5x12=60M]**

UNIT-I

2. Construct a diagonal scale of R.F.=1:32,00,000 to show kilometres and long enough to measure upto 400km. Show distances of 257 km and 333 km on your scale. [12M]

(OR)

3. Draw an ellipse by concentric circles method by taking major axis as 100 mm and minor axis as 70 mm. [12M]

UNIT-II

4. A 90 mm long line is parallel to and 25 mm in front of the VP. Its one end is in the HP. While the other is 50 mm above the HP. Draw its projections and find its inclination with the HP. [12M]

(OR)

5. A line AB is 75 mm long. A is 50 mm in front of VP and 15 mm above HP. B is 15 mm in front of VP and is above HP. Top view of AB is 50 mm long. Draw and measure the front view. Find the true inclinations. [12M]

UNIT-III

6. Draw the projections of regular hexagon of 25 mm side having one of its edge in HP and inclined at 60^0 to VP and its surface making an angle of 60^0 to HP. [12M]

(OR)

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7. Draw the projections of a circle of 50 mm diameter, having its plane vertical and inclined at 30° to the V.P. Its centre is 30 mm above the H.P and 20 mm in front of the V.P. [12M]

UNIT-IV

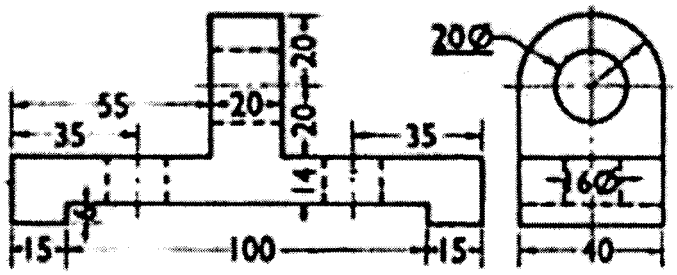
8. Draw the projections of a cone, base 75 mm diameter and axis 100 mm long, lying on the H.P. on one of its generators with the axis parallel to the V.P. [12M]

(OR)

9. A tetrahedron of 40 mm side lies with one of its edges on HP and inclined at 45^0 to VP. The triangular face containing that edge is inclined at 30^0 HP. Draw the top and front views of the solid. [12M]

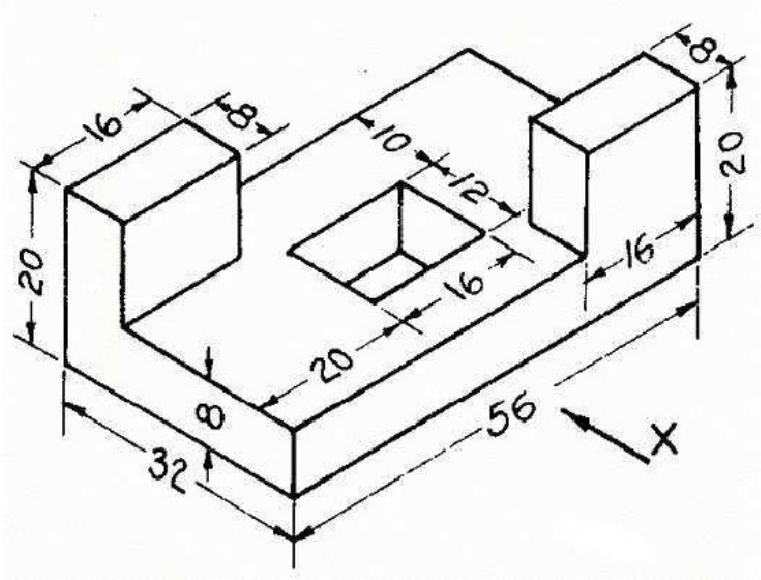
UNIT-V

10. Two views of a casting are shown below. Provide isometric view of the casting. [12M]



(OR)

11. Draw the front view, top view and left side of the object shown below. [12M]



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