AR16

CODE: 16ME1001 **SET-I**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

I B.Tech I Semester Supplementary Examinations, December-2019

ENGINEERING DRAWING

(Common for 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
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UNIT-I

1. Draw a parabola whose focus is at a distance of 60 mm from the directrix. Draw a tangent and normal at any point on it. 14M

(OR)

2. Construct a diagonal scale to read 2 km when it's RF= 1: 20,000. Mark on it a distance of 1:15 km. 14M

UNIT-II

3. a. A point A is 2.5cm above the HP and 3cm infront of the VP. Draw its projections. 4M
   b. The end A of a line AB is in the HP and 25mm behind the VP. The end B is in the VP and 50mm above the HP. The distance between the end projectors is 75mm. Draw the projections of AB. 10M

(OR)

4. a. A point P is 20mm below the HP and lies in the third quadrant. Its shortest distance from xy is 40mm. Draw its projections. 7M
   b. A line EF 60mm long is in VP and inclined to HP. The top view measures 45mm. The end E is 15mm above HP. Draw the projections of the line. Find the inclination with HP. 7M

UNIT-III

5. Draw the projections of a circular plate of 60 mm diameter resting on the ground with its surface inclined at 30 degrees to the HP. Draw its projections. 14M

(OR)

6. A square plate of 40 mm side rests on the HP such that one of the diagonals is inclined at 45^{O} to the VP. Draw its projections. 14M

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UNIT-IV

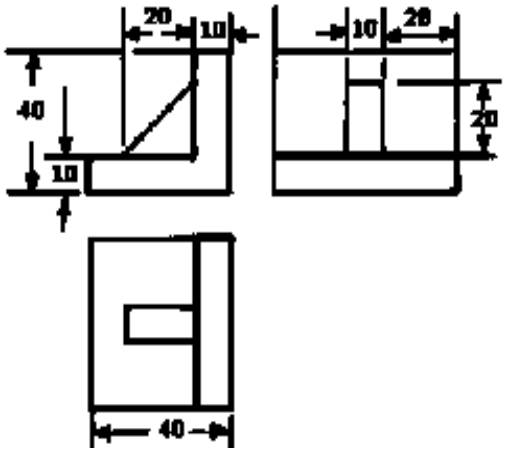
7. Draw the projections of a cone, base 75mm diameter and axis 100 mm long, lying on the HP on one of its generators with the axis parallel to the VP. 14M

(OR)

8. Draw the projections of a pentagonal prism, base 25mm side and axis 50mm long resting on one of its rectangular faces on the ground, with the axis inclined at 45^0 to the VP. 14M

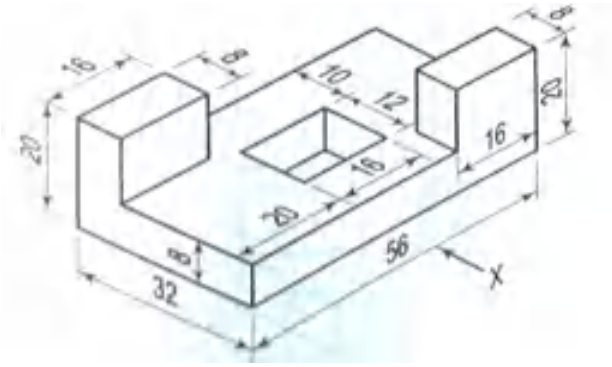
UNIT-V

9. Draw the isometric views of the below figure (All dimensions are in mm) 14M



(OR)

10. Draw front view, top view of the isometric drawing given below. All dimensions are in mm. 14M



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AR13

CODE: 13ME1001 **SET-1**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B.Tech I Semester Supplementary Examinations, December-2019

ENGINEERING DRAWING
(Common to Civil, ME, CSE & IT)

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

PART-A

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

1. a) What is the Representative Fraction (R.F.) or Scale Factor (S.F.)?
   b) Draw symbol for first angle projections.
   c) What are the uses of vernier scale?
   d) Define orthographic projections?
   e) Ratio of length and thickness of an arrow head in dimensioning is _____.
   f) A circle in isometric projection appears as _____.
   g) In first angle projection top view is drawn _____ the front view.
   h) Isometric length is equal to _____ times of true length.
   i) A cylinder is formed by rotation of _____ about its _____.
   j) If a plane is perpendicular to HP and parallel to VP, its projection on HP will reveal its ……. View.

PART-B

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

UNIT-I

2. Draw a parabola whose focus is at a distance of 60 mm from the directrix. Draw a tangent and normal at any point on it.

(OR)

3. Construct a diagonal scale to read 2 km when it's RF= 1: 20,000. Mark on it a distance of 1.15 km.

UNIT-II

4. A line PQ 40 mm long is parallel to VP and inclined at an angle of 30^0 to HP. The end P is 15 mm above HP and 20 mm in front of VP. Draw the projections of the line.

(OR)

5. A line 75 mm long is inclined at 50° to VP and one of the ends is on it. It is parallel to HP and 40 mm above it. The line is in front of VP. Draw its projections.

UNIT-III

6. A square plate of 40 mm side rests on the HP such that one of the diagonals is inclined at 45^O to the VP. Draw its projections.

(OR)

7. Draw the projections of a circular plate of 60 mm diameter resting on the ground with its surface inclined at 30 degrees to the HP. Draw its projections.

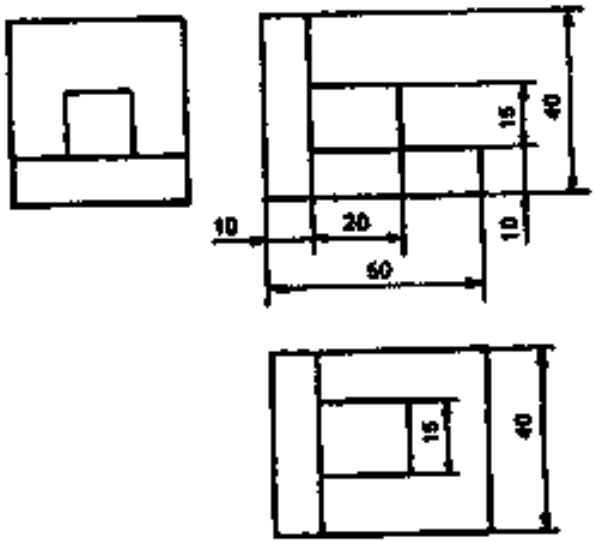
8. The axis of the cone with 50 mm base diameter and an axis of 60 mm is parallel to HP and inclined to VP by 45 degrees. Draw its projections.

(OR)

9. A pentagonal prism with 25 mm edges at its base and the axis 60 mm long is resting on one of the edges of its base with axis parallel to *VP* and inclined at 30^0 to the *HP*. Draw the projections of the prism.

UNIT-V

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



(OR)

11. Draw the front view, top view and left hand side view of the block shown in figure shown below