AR16

CODE: 16ME1001 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI

(AUTONOMOUS)

I B.Tech I Semester Supplementary Examinations, April-2021

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. The distance between two stations by rail is 50 km and it is represented on a certain map by a 1 cm long time. Find the R.F. and construct a diagonal scale showing single kilometre and long enough to measure upto 700 km. Indicate a distance of 538 km on this side. 14M

(OR)

2. Draw a parabola whose focus is at a distance of 50 mm from the directrix. Draw a tangent and normal at any point on it. 14M

UNIT-II

3. A line MN 70 mm long has its end M 30 mm above the *HP* and end N 20 mm below the *HP*. If the line is 30 mm in front of and parallel to the *VP*, draw its projections and measure its inclination to the *HP*. 14M

(OR)

4. A line GH 90 mm long is parallel to and 30 mm above the *HP*. Its ends G and H are, respectively, 30 mm and 40 mm in front of the *VP*. Find its inclination with the *VP*. 14M

UNIT-III

5. The top view of a square lamina of side 60 mm is a rectangle of sides 60 mm × 20 mm, with the longer side of the rectangle being parallel to the *HP* and perpendicular to the *VP*. Draw the front view and top view of the square lamina. What is the inclination of the surface of the lamina with the *HP*? 14M

(OR)

6. Draw the projections of a circular plate, 50 mm diameter, resting on the ground on a point *A* on the circumference, with its plane inclined at 45 degrees to the *HP*. 14M

UNIT-IV

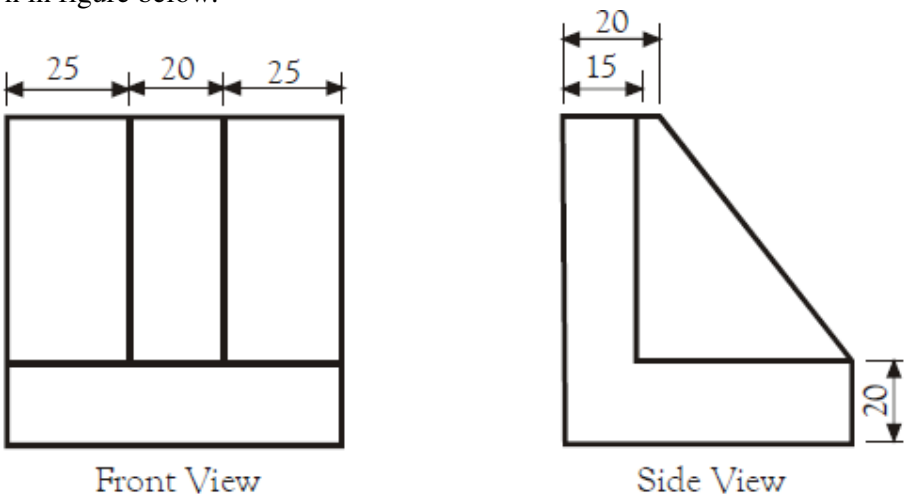
7. Draw the projection of a right circular cone of 30 mm diameter and 50 mm height when a generator lines on *HP* and axis is parallel to *VP*. 14M

(OR)

8. A cylinder of 40 mm diameter of the base and axis 80 mm long has its base inclined at 60 degrees to the *VP*. Draw its projections. 14M

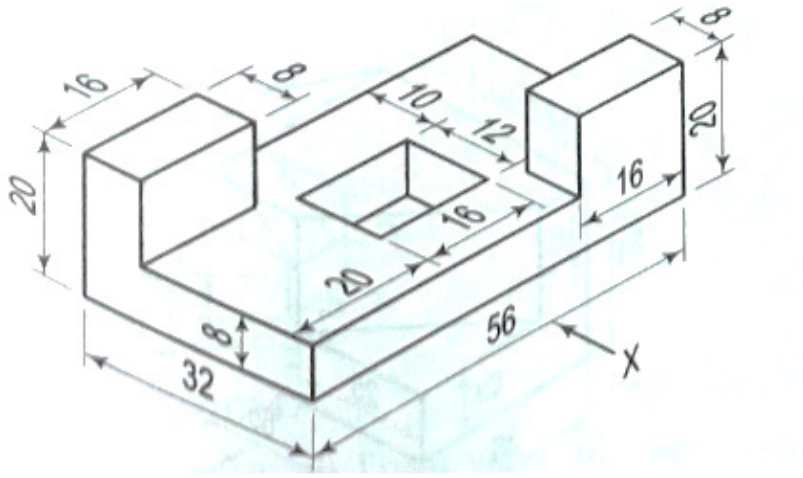
UNIT-V

9. Draw the isometric projection of the block whose orthographic projections are shown in figure below. 14M



(OR)

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



AR13

CODE: 13ME1001 **SET-2**

ADITYA INSTITUTE OF TECHNOLOGY AND MANAGEMENT, TEKKALI
(AUTONOMOUS)
I B.Tech I Semester Supplementary Examinations, April,2021

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)	Give the symbolic representation of first and third angle projection.	1
	b)	Why the projection of an object is not drawn in 2^{nd} and 4^{th} quadrants?	1
	c)	Name the different types of scales used in engineering practice.	1
	d)	Differentiate between plain and diagonal scale.	1
	e)	What are the various systems of dimensioning?	1
	f)	What is the difference between cylinder and cone?	1
	g)	Cone is obtained from rotation of a _____	1
	h)	If a line is parallel to VP and perpendicular to HP, in which view we can get the true length of the line?	1
	i)	Name the methods to determine the true length and true inclinations of a straight line.	1
	j)	What do you mean by single stroke letters?	1

PART-B

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

UNIT-I

2. Draw a diagonal scale of R.F =3/100, showing meters, decimeters and centimeters, and to measure up to 5 meters. Show the length of 3.69 meters on it. 12

(OR)

3. Draw a hyperbola when the distance of its focus from its directrix is 50 mm and the eccentricity is 3/2. 12

UNIT-II

4. a) Draw the projections of the following points , keeping the distance between the projectors as 25mm on the same reference line. 6
   i) P- 25mm above HP and 45 in front of VP
   ii) Q- on HP and 25 mm behind VP.
   iii) R- 45mm below HP and on VP
   b) A line MN 50mm long is parallel to V.P. and inclined at 30° to H.P. The end M is 20 mm above H.P. and 10 mm in front of V.P. Draw the projections of the line. 6

(OR)

5. a) A Point P is at a distance of 30 mm from HP and VP. Draw the projections of the point for all possible position 6
   b) A line AB is 30 mm long and inclined at 30° to VP and parallel to HP. The end A of the line is 15 mm above HP and 20 mm in front of VP. Draw its projections. 6

UNIT-III

6. A 60^0 set square of 125mm longest side is so kept that the longest side is in the HP making an angle of 30^0 with the VP and the set square itself inclined at 45° to the HP. Draw the projections of the set square. 12

(OR)

7. A regular hexagon of 30 mm has a corner in the HP. Its surface is inclined at 45° to the HP and the top view of the diagonal through the corner which is in the HP makes an angle of 60° with the VP. Draw its projections. 12

UNIT-IV

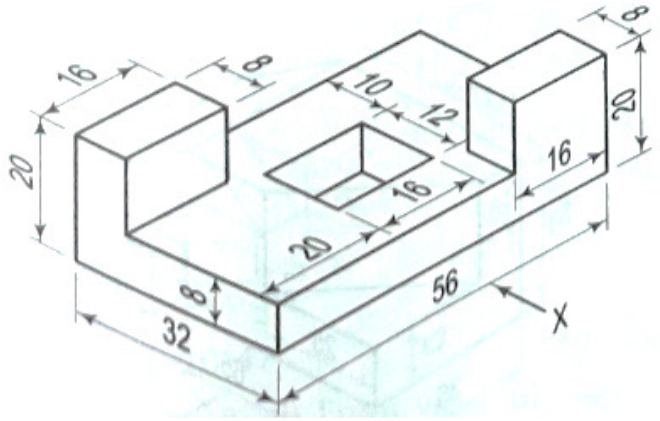
8. Draw the projections of a pentagonal prism, base 25 mm side and axis 50 mm long, resting on one of its rectangular faces on the HP with the axis inclined at 45° to the VP. 12

(OR)

9. Draw the projections of a cylinder 75 mm diameter and 100 mm long, lying on the ground with its axis inclined at 30° to the VP and parallel to the ground. 12

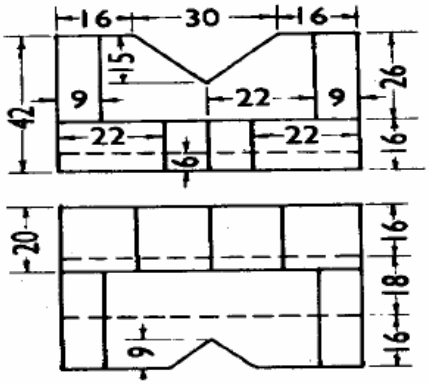
UNIT-V

10. Draw front view, top view of the isometric drawing given below. All dimensions are in mm. 12



(OR)

11. Two views of a casting are shown in figure. Draw the isometric view of the casting (all dimensions are in mm). 12



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