Q. Code: 115618

Reg. No. | | | | | | | | | | | | | |

B.E. / B.TECH. DEGREE EXAMINATIONS, MAY 2024

Second Semester

ME22251 – TECHNICAL DRAWING

(Common to AD, CS, IT)

(Regulation 2022)

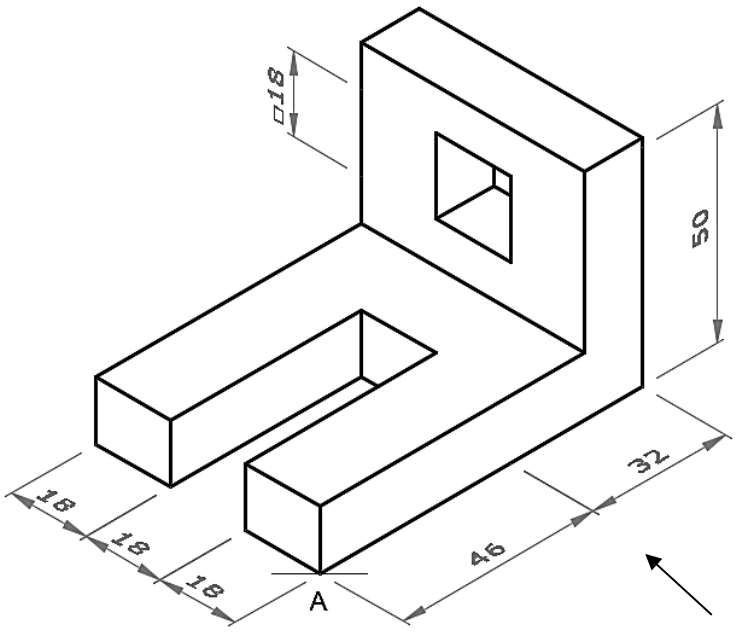
TIME: 3 HOURS **MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Construct conic sections, cycloid and involutes as per drawing standards.	**2**
CO 2	Draw orthographic projections of lines and plane surfaces.	**3**
CO 3	Sketch orthographic projections of simple solids.	**3**
CO 4	Develop the lateral surfaces of simple solids.	**3**
CO 5	Sketch the orthographic projections of a given isometric view using free hand.	**3**

PART- A (5 x 16 = 80 Marks)

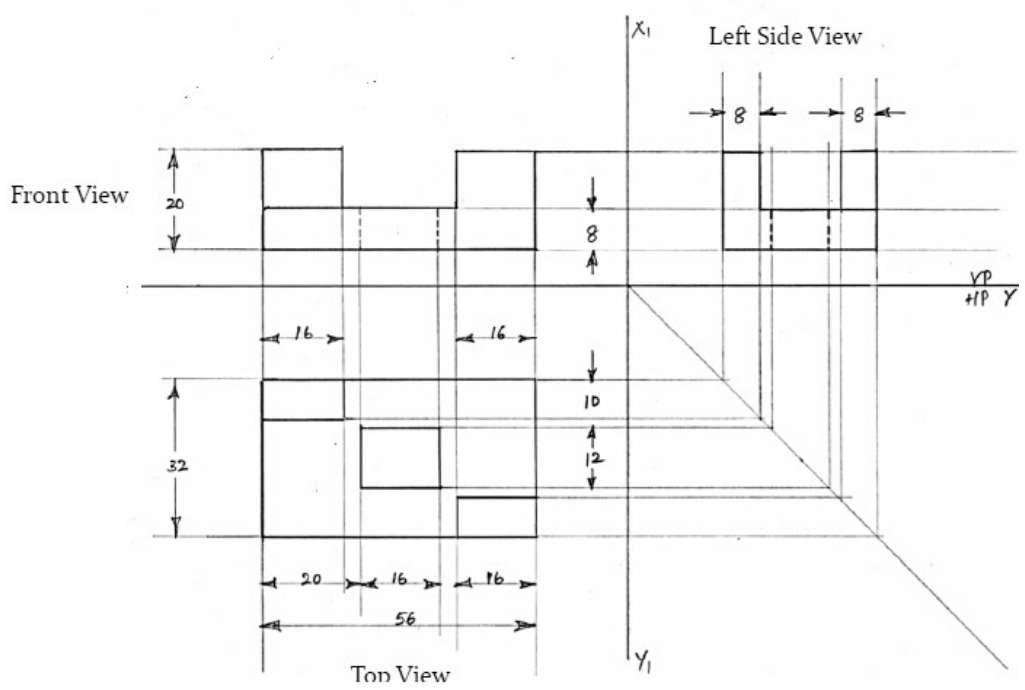
		Marks	CO	RBT LEVEL
1. (a)	Construct a curve if the distance between its focus and directrix is 70 mm when the vertex is located in between the focus and directrix. Also, draw a tangent and normal to the curve.	**(16)**	**1**	**3**
	(OR)			
(b)	A ring of 60 mm diameter rolls along a straight line without slipping. Draw the curve traced by a point on the circumference, for one complete revolution of the ring. Name the curve. Draw the normal and tangent to the curve at a point 40 mm from the straight line.	**(16)**	**1**	**3**
2. (a)	A line AB of length 80 mm is inclined at 45° to HP and 30° to VP. The point C is on the line which is situated 20 mm from the end A and is 60 mm above HP and 40 mm infront of VP. Draw the projections of the line.	**(16)**	**2**	**3**
	(OR)			
(b)	**(i)** A circular lamina of diameter 80 mm is resting on HP on one of its circumferential points. Draw its projections when its top view is an ellipse of minor axis 40 mm.	**(8)**	**2**	**3**
	(ii) A Pentagonal plate of side 25 mm has one of its side on VP. Draw its projections when the plane surface is inclined at 30° to VP and perpendicular to HP.	**(8)**	**2**	**3**

3. (a)	Draw the projections of the square pyramid of base side 60 mm and altitude 100 mm when it lies on the ground on one of its triangular faces and the solid axis is parallel to the VP.	**(16)**	**3**	**3**
	(OR)			
(b)	A hexagonal prism of base side 25 mm and axis length 60 mm rest on the HP on one of its base corners such that the solid diagonal passing through that corner is perpendicular to the HP. Draw its projections.	**(16)**	**3**	**3**
4. (a)	A hexagonal prism, 30 mm base side and 60 mm axis is standing on HP on its base with two of its sides of the base is perpendicular to VP. Draw the development of surface of the given solid.	**(16)**	**4**	**3**
	(OR)			
(b)	A pentagonal pyramid, 30 mm base side and 55 mm axis is standing on HP on its base with one side of the base parallel to VP. Draw the development of surface of the given solid.	**(16)**	**4**	**3**
5. (a)	Draw the orthographic views from the given isometric view of a simple Solid.	**(16)**	**5**	**3**



(OR)

(b) Draw the isometric view of the given solid from the below orthographic views **(16)** **5** **3**



PART- B (1 x 20 = 20 Marks)

(Q.No.6 is compulsory)

		Marks	CO	RBT LEVEL
6.	A running track is plotted with a major axis of 110 m and a minor axis of 70 m. Consider the major axis to be horizontal and draw the tangent and normal to the curve at any chosen point on its circumference. Use Suitable scale.	**(20)**	1	**3**

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