

Seat No.:	Q. Paper Code: FTC-A-028		SET	P	
	Fabtech Technical Campus, College of Engineering & Research, Sangola				
	(An Autonomous Institute)				
	Civil Engineering, Mechanical Engineering				
	Academic Year: -2025-26, Semester-I				
Engineering Graphics and CAD (25UME11001)					
Regular End Semester Examination 2025-26 [Dec./Jan.]					
Class:	F. Y. B. Tech.	Day & Date:	Saturday, 17/01/2026		
Duration:	04 Hrs.	Max. Marks:	60 Marks		
Time:	10:00 AM TO 02:00 PM				
Instructions:					
1) Q. No. 1 is compulsory. It should be solved in the first 30 minutes in the Page No.3 of answersheet.					
2) Don't forget to mention the question paper set (P/Q/R) on the top of the page 3.					
Q. 1	Multiple Choice Questions (MCQs) Each question carries 1 mark			Marks: 10	
				CO	BL
1	The curve traced by a point on the circumference of a circle rolling on a straight line is called: A) Cycloid B) Spiral C) Helix D) Involute			1	1
2	The command used to copy an object is: A) CP B) COPY C) MOVE D) COPYOBJ			1	1
3	If a line is perpendicular to the HP, the top view of the line will appear as: A) A point B) True length C) Foreshortened D) Inclined line			2	1
4	If the front view and top view of a point lie on the XY line, then the point lies: A) On the HP B) On the VP C) On both HP and VP D) In the third quadrant			2	1

5	<p>A plane surface is said to be parallel to HP when:</p> <p>A) It is at an angle to HP B) It touches the VP only C) Its entire surface is parallel to HP D) It is perpendicular to HP</p>	3	1
6	<p>The top view of a plane parallel to HP shows:</p> <p>A) Foreshortened shape B) True shape C) Line D) Point</p>	3	1
7	<p>A pyramid is named according to:</p> <p>A) Number of edges B) Number of faces C) Shape of its base D) Shape of its apex</p>	4	1
8	<p>A solid is said to be a right solid when its axis is:</p> <p>A) Perpendicular to base B) Inclined to base C) Parallel to base D) None of the above</p>	4	1
9	<p>In first-angle projection, the right-side view is placed:</p> <p>A) Left of the front view B) Right of the front view C) Below the front view D) Above the front view</p>	5	1
10	<p>In first-angle projection, the object is placed:</p> <p>A) Between observer and plane B) Behind the plane C) On the plane D) Below the plane</p>	5	1

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Q. No.	Questions			Marks	CO	BL
Q. 2	Attempt any two of the following			10		
1	Construct an ellipse when the distance between focus and directrix is 50 mm and eccentricity is 3/4.			5	1	3
2	Draw an involute of a regular pentagon of 35 mm side.			5	1	3
3	Draw a cycloid for circular plane 50 mm diameter which roll on horizontal surface for one complete revolution.			5	1	3
Q. 3	Attempt any two of the following			10		
1	Draw the orthographic projections of the following points? (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 25 mm. below H.P and 45 mm behind VP (d.) Point S is 35 mm. below H.P and 45 mm in front of VP (e.) Point T is in H.P and 30 mm behind VP			5	2	3
2	A line AB, 65 mm long has its end A 20 mm above H.P. and 25 mm in front of VP. The end B is 40 mm above H.P. and 65 mm in front of V.P. Draw the projections of AB and shows its inclination with H.P.			5	2	3
3	The top view of a 75 mm long line AB measures 65 mm, while its front view measures 50 mm. It's one end A is 10 mm above HP and 12 mm in front of VP. Draw the projections of AB and determine its inclination with HP and VP			5	2	3
Q. 4	Attempt any one of the following			10		
1	A thin pentagonal plate negligible thickness and side 25 mm long is resting on one of its corner in V.P and its surface makes an angle of 30 degree with V.P and side opposite to that corner makes an angle of 60 degree with H.P .draw its projection.			10	3	3

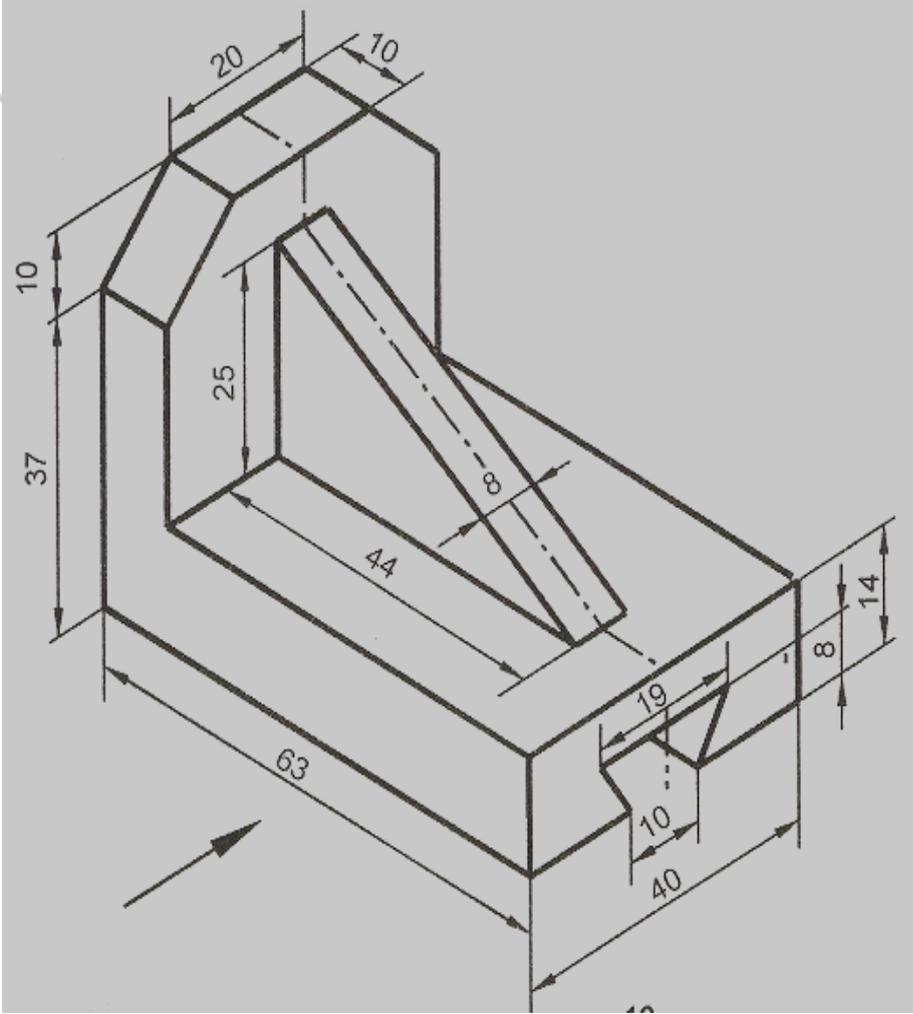
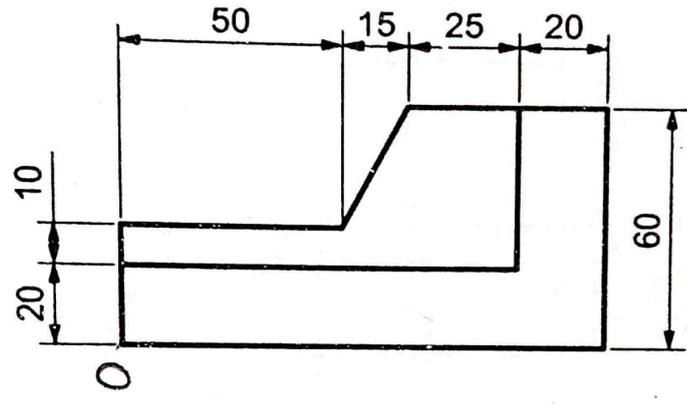
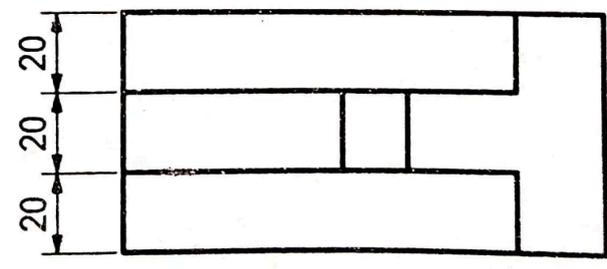
2	Draw the projection of a regular hexagon of 30 mm side having one of its side in HP and its surface making an angle of 45 degree with HP and inclined at 60 degree to the VP .	10	3	3
Q. 5	Attempt any one of the following	10		
1	A pentagonal pyramid side of base 25 mm and axis length 65 mm is kept on the H.P. on one of its base edges in such a way that the triangular face containing that base edge makes an angle of 50° to H.P. Draw the projections of the pyramid when the base edge on H.P. is parallel to V.P.	10	4	3
2	A square prism, side 40 mm and axis length 60 mm is kept on the H.P. on a corner of its base in such a way that the longer edge passing through that corner makes an angle of 50° to H.P. and top view of that edge makes an angle 35° to V.P. Draw the projections of the prism.	10	4	3
Q. 6	Attempt any one of the following	10		
1	<p>Draw following views i)Front view looking in direction of Arrow . ii)Top view iii)side view</p> 	10	5	3

Fig. shows F.V and T.V of an object .draw isometric view

F. V.



T. V.



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1	The top view of a plane parallel to HP shows: A) Foreshortened shape B) True shape C) Line D) Point			3	1
2	A pyramid is named according to: A) Number of edges B) Number of faces C) Shape of its base D) Shape of its apex			4	1
3	A solid is said to be a right solid when its axis is: A) Perpendicular to base B) Inclined to base C) Parallel to base D) None of the above			4	1
4	In first-angle projection, the right-side view is placed: A) Left of the front view B) Right of the front view C) Below the front view D) Above the front view			5	1

5	In first-angle projection, the object is placed: A) Between observer and plane B) Behind the plane C) On the plane D) Below the plane	5	1
6	The curve traced by a point on the circumference of a circle rolling on a straight line is called: A) Cycloid B) Spiral C) Helix D) Involute	1	1
7	The command used to copy an object is: A) CP B) COPY C) MOVE D) COPYOBJ	1	1
8	If a line is perpendicular to the HP, the top view of the line will appear as: A) A point B) True length C) Foreshortened D) Inclined line	2	1
9	If the front view and top view of a point lie on the XY line, then the point lies: A) On the HP B) On the VP C) On both HP and VP D) In the third quadrant	2	1
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3	The top view of a 75 mm long line AB measures 65 mm, while its front view measures 50 mm. It's one end A is 10 mm above HP and 12 mm in front of VP. Draw the projections of AB and determine its inclination with HP and VP			5	2	3
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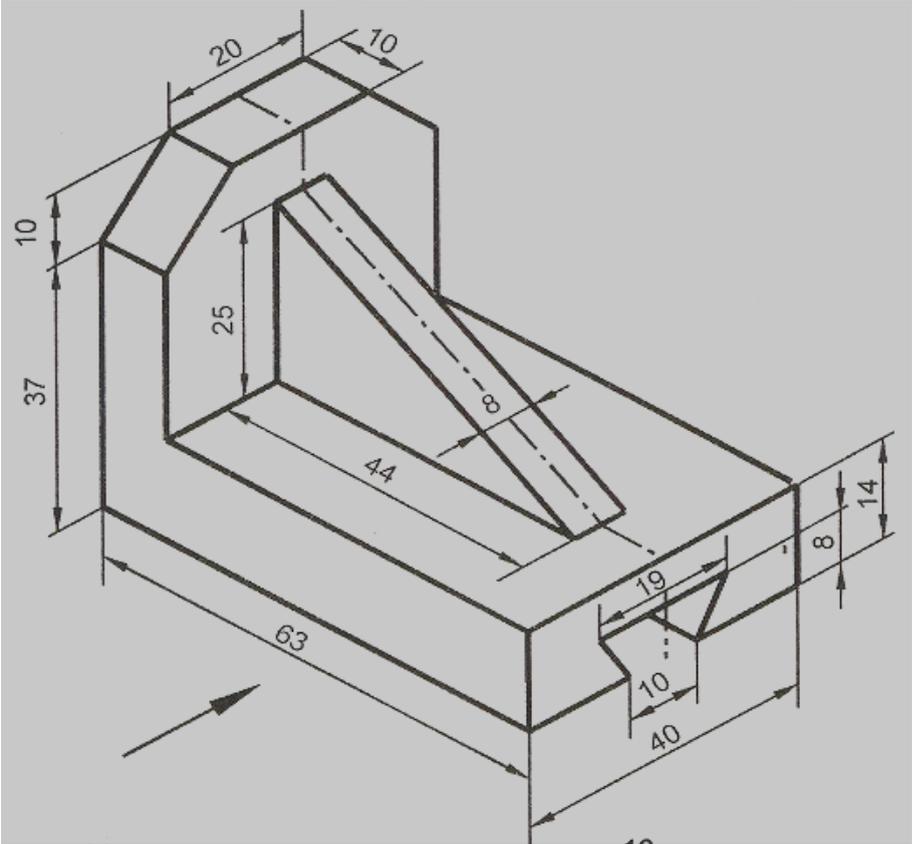
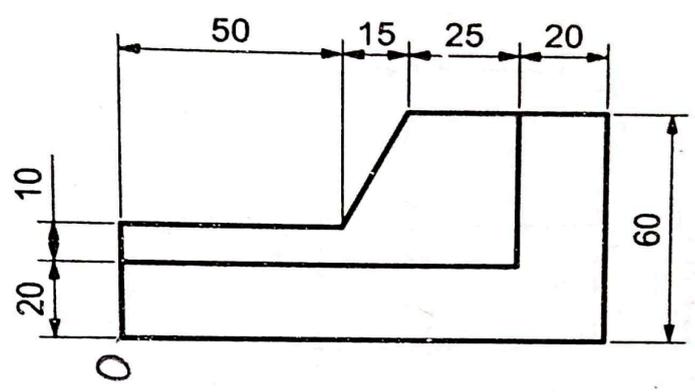
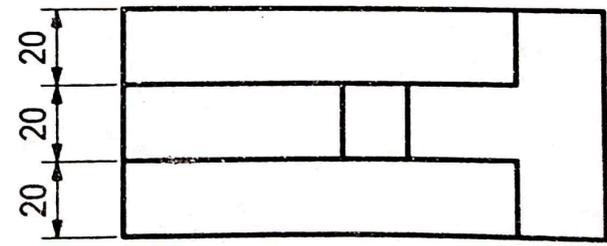
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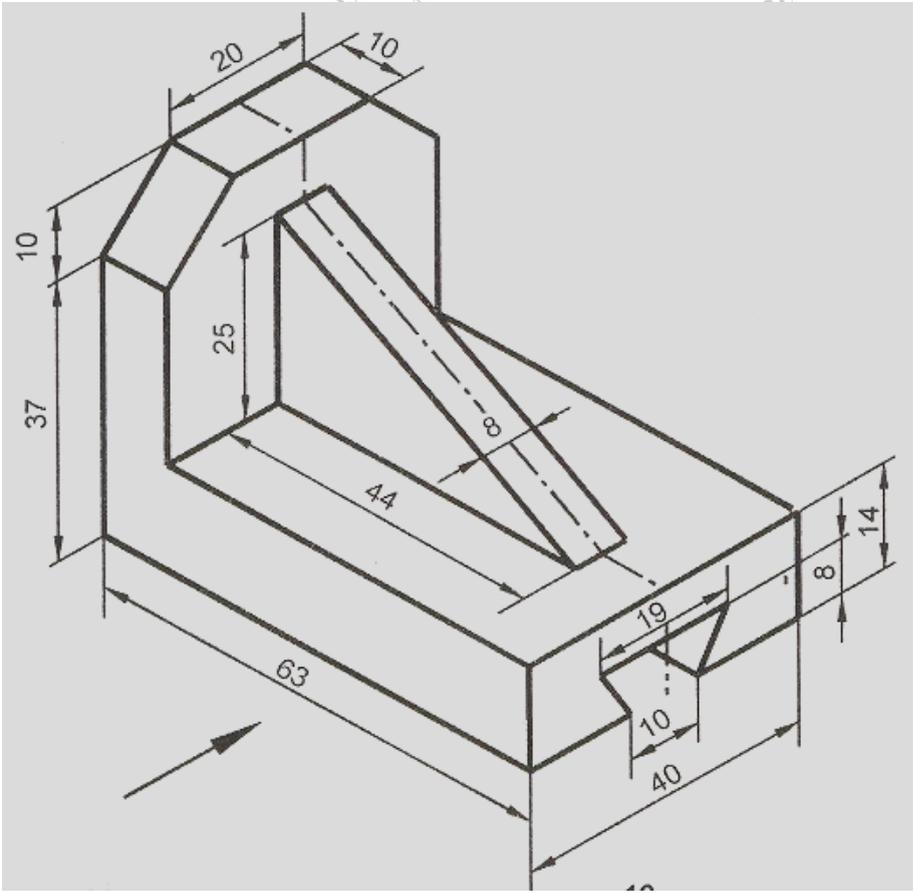
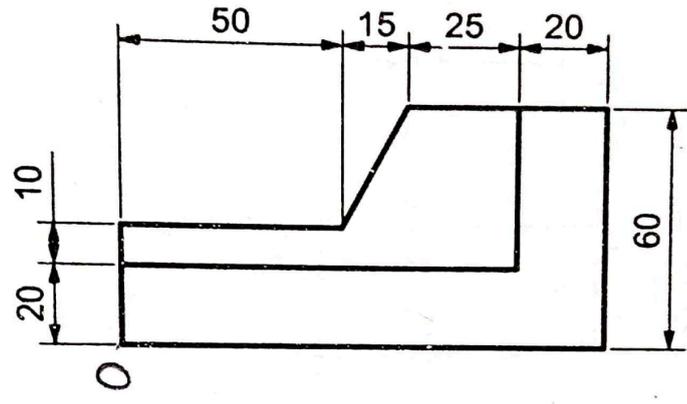
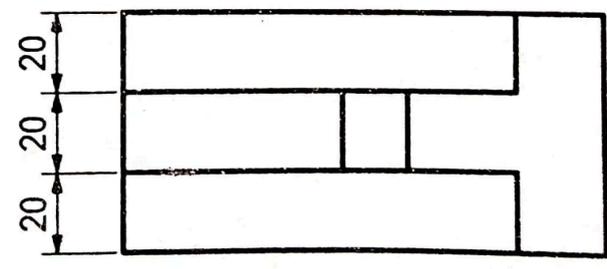
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