Name: **Enrolment No:**	

UPES

End Semester Examination, May 2025

Course: Engineering Graphics **Semester: II**

Program: B.Tech APE, Chemical, EE, E&CE **Time : 03 hrs.**

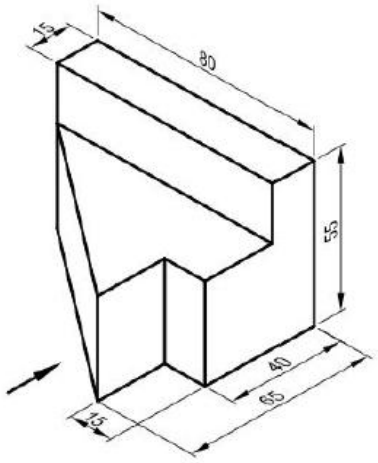
Course Code: MECH1001 **Max. Marks: 100**

Instructions: Assume suitable data if required

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Explain clearly the difference between the first angle projection method and the third angle projection method.	**4**	**CO1**
Q 2	What information should be contained in the title block of a drawing sheet?	**4**	**CO1**
Q 3	Differentiate between aligned and unidirectional systems of dimensioning.	**4**	**CO1**
Q 4	Draw a hexagon with 25 mm sides, keeping one of the side vertical.	**4**	**CO1**
Q 5	a) If both the views of a point coincide with each other and lie below the reference line, state the angle in which the point lies. b) If the top view of a point lies below the reference line, state the possible angles in which the point may lie.	**4**	**CO1**

SECTION B
(4Qx10M= 40 Marks)

Q 6	A peculiar view of an object is shown in the figure below. Draw the third-angle orthographic projection of the given object, including the front view, top view, and side view 	**10**	**CO2**

Q 7	A 60 mm long line PQ has its end A 25 mm above the H.P. and 40 mm in front of the V.P. Draw the projections of the line when it is parallel to both the reference planes.	**10**	**CO2**
Q 8	A Rectangle of 30 mm and 50 mm sides is resting on HP on one of its minor side, its surface is perpendicular to VP and makes 45^{o} inclination with HP. Draw its projections.	**10**	**CO2**
Q 9	A hexagonal pyramid of base side of 25mm and 55mm axis is resting on HP with one of its base corners, such that the axis is inclined at 45 deg to HP and parallel to VP. Draw its projections. (OR) A square pyramid, base 40 mm side and axis 65 mm long, has its base in the VP. One edge of the base is inclined at 30° to the H.P. and a corner contained by that edge is on the H.P. Draw its projections.	**10**	**CO3**
SECTION-C (2Qx20M=40 Marks)			
Q 10	a) Draw the isometric view of a hexagon of side 30 mm whose surface is parallel to the V.P. and a side perpendicular to the H.P. b) Draw the Isometric view of a cone, base 50 mm diameter and axis 70 mm long, lying on the H.P. on its base.	**20**	**CO2**
Q 11	A square pyramid, base 43 mm side and axis 68 mm long, has its base on the H.P. and all the edges of the base equally inclined to the V.P. It is cut by a section plane, perpendicular to the V.P., inclined at 48° to the H.P. and bisecting the axis. Draw its sectional top view, sectional side view and true shape of the section. (OR) A cylinder of 40 mm diameter, 60 mm height and having its axis vertical, is cut by a section plane, perpendicular to the V.P., inclined at 45° to the H.P. and intersecting the axis 32 mm above the base. Draw its front view, sectional top view, sectional side view and true shape of the section	**20**	**CO3**