Name: **Enrolment No:**	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023

Course: Engineering Graphics **Semester : II**
Program: B. Tech ASE, ECE, SE, Electronics& computer **Time : 03 hrs.**
Course Code: MECH1005 **Max. Marks : 100**
Instructions:

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	What are the two systems of placing dimensions on a drawing? Illustrate your answer with sketches.	**4**	**CO1**
Q 2	Sketch neatly the symbols used for indicating the method of projection adopted in a drawing. State where this symbol is drawn on a drawing sheet.	**4**	**CO1**
Q 3	Define the perspective projection. Explain the significance of it.	**4**	**CO1**
Q 4	A point is 30 mm behind VP, 20 mm above HP and 25 mm from the RPP. Draw its projection.	**4**	**CO2**
Q 5	Explain the following in CAD 1. Translation 2. Rotate 3. Shear 4.Scaling	**4**	**CO1**
	SECTION B **(4Qx10M= 40 Marks)**		
Q6	Three points A B and C form an equilateral triangle of 25 mm side in the side view. Point A is above points B and C and all three points lie in the 1st quadrant. Point B is 20 mm above the HP and 20 mm in front of the VP. Draw the projections of the three points.	**10**	**CO2**
Q7	A semicircular plate of 70 mm diameter has its straight edge in the VP. The surface of the plate makes an angle of 30^o with the VP. Draw its projections.	**10**	**CO2**
Q8	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**
Q9	A 70 mm long line lies in the first quadrant and it is inclined to HP and parallel to VP. One end of line lies 20 mm above HP while another end lies 50 mm above HP. Line is 30 mm in front of VP. Draw its projections and find out its inclination with HP and its apparent length. (OR) A line AB, 75 mm long, is inclined at 45° to the H.P. and 30° to the V.P. Its end B is in the H.P. and 40 mm in front of the V.P. Draw its projections.	**10**	**CO2**

SECTION-C (2Qx20M=40 Marks)			
Q10	Draw the Isometric view of a cone, base 50 mm diameter and axis 70 mm long, lying on the H.P. on its base. Develop the surface of the cone.	**20**	**CO3**
Q11	A pentagonal prism, 30 mm base side & 50 mm axis is standing on HP on it's base whose one side is perpendicular to VP. It is cut by a section plane 45^o inclined to HP, through mid-point of axis. Draw FV, Sectional TV & Sectional SV. Also draw true shape of section. (OR) A cone, 50 mm base diameter and 70 mm axis is standing on it's base on HP. It cut by a section plane 45^o inclined to HP through base end of end generator. Draw projections, sectional views and true shape of section.	**20**	**CO4**