UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Course: Engineering Graphics	**Semester : II**
Program: B. Tech Food Technology, Biotechnology,	
** int BT Food Technology MBA, int BT Biotechnology MBA.**	**Time : 03 hrs.**
Course Code: MECH1005	**Max. Marks : 100**

Instructions:

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Explain solids of revolution.	4	CO1
Q 2	Define the perspective projection and it applications.	4	CO1
Q 3	Explain the following in CAD 1. Translation 2. Rotate 3. Shear 4.Scaling	4	CO1
Q 4	Explain aligned system and unidirectional system with own diagrams	4	CO2
Q 5	Compare first-angle projection method and the third-angle projection method.	4	CO1

SECTION B
(4Qx10M= 40 Marks)

Q6	A regular pentagon of 25 mm side has one side on the ground. Its surface is inclined at 45° to the H.P and perpendicular to the V.P. Draw its projections.	10	CO2
Q7	A tetrahedron of 5 cm long edges is resting on the H.P. on one of its faces, with an edge of that face parallel to the V.P. Draw its projections and measure the distance of its apex from the ground.	10	CO2
Q8	Top view of a 75 mm long line AB measures 65 mm, while its front view is 50 mm. If its end A is in the HP and 12 mm in front of VP. Draw its projections and determine its inclinations.	10	CO3
Q9	A point P is 30 mm behind VP and 25 mm above HP, draw its FV, TV and SV. (OR)	10	CO2

	Draw the Projection (Draw FV, TV and SV) of a point P in the third quadrant where P is 40 mm behind VP, 50 mm below HP and 30 mm behind the right PP.		

SECTION-C
(2Qx20M=40 Marks)

Q10	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 H.P, with the axis inclined at 45º to the V.P.	**20**	**CO3**
Q11	Draw the development and isometric view of the pentagonal pyramid with base side 30 mm and height 55 mm, resting on the HP with one of its base side perpendicular to the VP. (OR) A square pyramid, base 40 mm side and axis 65 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 45° to the H.P. and bisecting the axis. Draw its sectional top view, sectional side view and true shape of the section.	**20**	**CO4**