

Name:	
Enrolment No:	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**

**Online End Semester Examination, Jan. 2020**

**Programme Name: B.Tech. ADE, ME, Mechatronics, FSE, CIVIL, Chemical +RP, APE+Gas**

**Semester : I**

**Course Name : Engineering Graphics**

**Time : 03 hrs**

**Course Code : MECH1005**

**Max. Marks : 100**

**Nos. of page(s) :2**

**Instructions: Attempt all questions**

**SECTION A**

**1. Each question carries 5 marks.**

S. No.		<b>CO</b>
Q1.	Differentiate between first angle projection and third angle projection method	<b>CO1</b>
Q2.	Define orthographic projection.	<b>CO1</b>
Q3.	Differentiate between the perspective projection and isometric projection.	<b>CO1</b>
Q4.	Write the type of the line for following 1. Centre line 2. Hidden edge 3. Outline of drawing 4. Dimension line 5. Section plane	<b>CO1</b>
Q5.	Explain the types of solid.	<b>CO1</b>
Q6.	Explain the terms Translations, Scaling , Shear , Reflections, and Rotations	<b>CO1</b>

**SECTION B**

**All questions will carry 10 marks**

Q1.	Point A is 25 mm above HP, 35 mm in front of VP and 25 mm from the PP. Find out the shortest distance from the intersection of HP and VP.	<b>CO2</b>
Q2.	Top view of a 75 mm long line AB, measures 50 mm. End A is in horizontal plane and 50 mm in front of vertical plane. End B is 15 mm in front of vertical plane and it is above horizontal plane. Draw the projections of AB and find its inclination with horizontal plane and vertical plane.	<b>CO2</b>
Q3.	A circular plate of 60 mm diameter is resting on the VP by one point on circumference and inclined at 45 degrees to the VP. Draw its projections.	<b>CO3</b>

Q4.	An isosceles triangle of base side 30 mm and slant height of 50 mm rests on one of the side, which is perpendicular to HP. Its surface is inclined in such a way that it looks like an equilateral triangle in the front view. Draw its projections	<b>CO3</b>
Q5.	<p>A Tetrahedron with a 60 mm edge is resting on a face on the H.P. such that an edge is parallel to both H.P. and V.P. and 20 mm in front of the V.P. Draw its projection.</p> <p style="text-align: center;">OR</p> <p>A hexagonal prism having base with a 30mm side and 75mm long axis, has an edge of its base on the H.P. Its axis is parallel to the V.P. and inclined at 45 degree to the HP. Draw the projections.</p>	<b>CO4</b>
<p><b>SECTION C</b></p> <p><b>Each Question carries 20 Marks.</b></p>		
Q1.	<p>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.</p> <p style="text-align: center;">OR</p> <p>A cone, with a 60 mm base diameter and a 70 mm long axis, is resting on its base on the H. P. It is cut by an A.I.P. passing through 25mm below the apex and is parallel to one of the extreme generators. Draw its sectional top view and obtain true shape of the section</p>	<b>CO4</b>