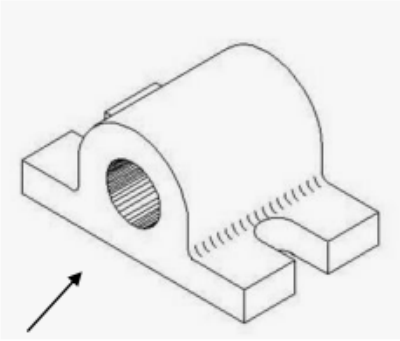
School of Computing Science and Engineering

B.Tech CSE
ETE - Jun 2024

Time : 3 Hours **Marks : 100**

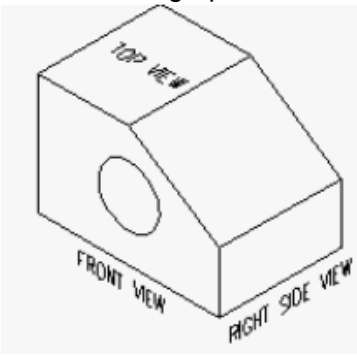
Sem II - G3UB120B - BMEO1T1001
Engineering Graphics and Introduction to Digital Fabrication
Your answer should be specific to the question asked
Draw neat labeled diagrams wherever necessary

1.	Describe what is meant by orthographic projection. Why aren't the projections from the second angle and fourth angle used?	K1 CO1	(5)
2.	Define CAD in the context of engineering graphics and highlight the drawbacks associated with manual drawing methods	K2 CO2	(5)
3.	Identify the differences between prism and pyramid. Illustrate with neat sketch.	K3 CO3	(5)
4.	Please find below the projections of the given points on a common reference line, with a distance of 20 mm between their projectors: (i) Point A: A is projected 30 mm below the Horizontal Plane (H.P.) and 40 mm in front of the Vertical Plane (V.P.). (ii) Point B: B is projected in the V.P. and 40 mm above the H.P. (iii) Point C: C is projected 40 mm in front of the V.P. and in the H.P. (iv) Point D: D is projected 30 mm above the H.P. and 30 mm behind the V.P. Draw their projections.	K1 CO3	(10)
5.	In the first quadrant, Line AB measures 75 mm in length. It is inclined at angles of 30 degrees and 40 degrees with respect to the horizontal plane (HP) and vertical plane (VP) respectively. Point A is positioned 12 mm above the horizontal plane and 10 mm in front of the vertical plane. Draw the projections for this line.	K2 CO3	(10)
6.	A regular pentagon of 30 mm sides is resting on HP, on one of its sides with its surface 45 degree inclined to HP. Draw its projections.	K4 CO3	(10)
7)	Please draw the orthographic views corresponding to the given pictorial representation of the object:	K4 CO4	(10)



OR

Draw the orthgraphic views of the given isometric view of the object: K4 CO4 (10)



8.	The length of line AB is 75 mm. The front view (FV) of the line measures 50 mm, while the top view (TV) measures 60 mm. One end of the line is positioned 10 mm above the horizontal plane (HP) and 15 mm in front of the vertical plane (VP). Draw the projections of line AB with end B located in the first quadrant. Determine the angle formed with the HP and VP.	K3 CO3	(15)

9.	Draw the projections of a regular hexagon of 25mm side, having one of its sides in the H.P. and inclined at 60 degrees to the V.P., and its surface making an angle of 45 degrees with H.P.	K3 CO3	(15)
10)	A cylinder with a diameter of 40 mm and an axis length of 50 mm is positioned such that one point of its base circle rests on the vertical plane (VP). The axis of the cylinder is inclined at an angle of 45 degrees with respect to the VP and the front view (FV) of the axis is inclined at an angle of 35 degrees with respect to the horizontal plane (HP). Draw the projections of the cylinder.	K4 CO3	(15)

OR

A cone of 35 mm base diameter and 60mm height has its axis inclined at 30° to HP and the plan of the axis is inclined at 45° to VP. Draw the projections of the solid	K4 CO3	(15)