

B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

February / March 2025 Semester End Main Examinations

Programme: B.E.

Branch: Common to all Branches

Course Code: 22ME1ESCED

Course: Computer Aided Engineering Drawing

Semester: I

Duration: 3 hrs

Max Marks: 100

Instructions: 1. Answer any FOUR full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

			UNIT – I (Sketching)	CO	PO	Marks
Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.	1	a)	A point is A is 30 mm below HP, 20 mm behind VP and 15 mm behind LPP. Draw its projections.	CO1	PO1	05
		b)	A straight line 70 mm long is inclined at 50° to HP and 30° to VP. Draw the projections of the line when one end point of the line is resting on HP and the other end point touches VP.	CO1	PO1	15
OR						
	2		A square lamina of 40 mm side rests on one of its sides on HP. The lamina is inclined at 30° to HP & the side on which the lamina rests is inclined at 45° to VP. Draw its projections	CO2	PO1 PO2	20
			UNIT – II (Solid edge)			
	3		A square prism of 40 mm sides of base and 60 mm axis length is suspended freely from a corner of its base. Draw the projections when the axis is inclined to VP at 20° .	CO2	PO1 PO5	30
			OR			
	4		A tetrahedron of 50mm sides rests on one of its corners such that a slant edge is inclined to HP at 50° and VP at 30° . Draw its projections.	CO2 CO3	PO2	30
			UNIT – III (Solid edge)			
	5		A pentagonal Prism 30 mm side of base and 60 mm axis length rests on HP on its base with one rectangular face perpendicular to VP. A cone of base diameter 30 mm and height 50 mm is placed on top of this prism. Sketch the ISO scale, front and top views and isometric projection of the combination.	CO3	PO5 PO12	30
			OR			

	6	A hemisphere of 20 mm diameter is placed centrally on the frustum of a hexagonal pyramid such that the flat surface is on the top face of the frustum. Frustum of the hexagonal pyramid has 25 mm side of base and 15 mm side at the top, and the axis 40 mm long. Create the solid modelling of the combination of solids and generate front, top and the isometric views.	CO3 PO5 PO12		30
		UNIT – IV (Sketching)			
	7	A square pyramid of 45mm sides of base and 70mm axis rests on its base on HP with an edge of the base parallel to VP. It is cut by a section plane inclined to HP at 40° and perpendicular to VP such that the section plane passes through a point on the axis at a height of 35mm from the base. Draw the development of the retained portion of the solid.	CO2 CO4 PO1 PO2		20
		OR			
	8	A vertical cylinder of base diameter 50 mm and axis length 60 mm is cut by two planes which are perpendicular to VP and inclined at 45° to HP and passing through either side the center point of the top face. Draw the development of the lateral surface of the cylinder	CO2 CO4 PO1 PO2		20
