U.S.N.										

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

Autonomous Institute Affiliated to VTU

February / March 2025 Semester End Main Examinations

Programme: B.E. **Semester: I**
Branch: Common to all Branches **Duration: 3 hrs**
Course Code: 22ME1ESCED **Max Marks: 100**
Course: Computer Aided Engineering Drawing

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

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.

			UNIT – I (Sketching)	*CO*	*PO*	Marks
1	a)		A point A is 20 mm above HP and is in the first quadrant. Its shortest distance from the line of intersection of HP and VP is 40 mm. Draw the projections of the point and determine its distance from VP. LPP is at a distance of 20 mm from the point.	*CO1*	*PO1*	**05**
	b)		A top view of line 75 mm long measures 50 mm. The end P is 30 mm in front of VP and 15 mm above HP. The other end Q is 15 mm in front of VP. Draw the projections of the line and determine true and apparent inclinations.	*CO1*	*PO1*	**15**
			OR			
2			A pentagonal lamina of sides 25 mm is resting on one of its edges on HP with the corner opposite to that edge touching VP. This edge is parallel to VP and the corner, which touches VP is at a height of 15 mm above HP. Draw the projections of the lamina. Determine the inclination of the lamina with HP and VP and the distance at which the parallel edge lies from VP.	*CO1*	*PO1*	**20**
			UNIT – II (Computer Aided Drafting)			
3			A pentagonal prism 25 mm of base and 60 mm axis length rests on HP on one of its corners of the base such that the two base edges containing the corner on which it rests make equal inclinations with HP. Draw the projections of the prism when the axis of the prism is inclined to HP at 30° and the plane containing the axis and the longer edge passing through the corner on which it rests is inclined to VP at 45°.	*CO3*	*PO1* *PO5*	**30**
			OR			
4			A tetrahedron of 55 mm sides rests on one of its corners such that a slant edge containing that corner is inclined to HP at 50°and VP at 30°. Draw its projections.	*CO3*	*PO1* *PO3*	**30**

			UNIT – III (Computer Drafting / Modeling)			
	5		A pentagonal prism 30 mm side of the base and 60 mm axis length rests on HP on its base with a rectangular face perpendicular to VP. A cone of base diameter 30 mm and height 50 mm is placed on top of this prism. Draw the top and front views of the combination of solids. Draft the isometric projection of the combination.	*CO1* *CO3*	*PO1* *PO5*	**30**
			OR			
	6		A cone of base diameter 40 mm and height 50 mm rests centrally over a frustum of a pentagonal pyramid of base side 45 mm, top side 35 mm and height 55 mm. Create solid model of the combination. Generate the top view, front view and isometric projection.	*CO1* *CO3*	*PO1* *PO5*	**30**
			UNIT – IV (Sketching)			
	7		A square prism of 36 mm edge of base and 64 mm height stands on HP with two of its base edges equally inclined to VP. It has a square hole of 24 mm side centrally cut right through the prism such that its faces are equally inclined to HP. Axis of the hole is parallel to HP and perpendicular to VP. Draw the development of the lateral surface of the prism showing the true shape of the square cutout formed in it.	*CO2*	*PO1* *PO5*	**20**
			OR			
	8		Draw the developments of the lateral surface of a funnel consisting of a cylinder and a frustum of a cone. The diameter of the cylinder is 20 mm and top face diameter of the funnel is 80 mm. The height of frustum and cylinder are equal to 60 mm and 40 mm respectively	*CO2*	*PO1* *PO5*	**20**

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