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 is 40 mm below HP, 30 mm behind VP and 20 mm behind LPP. Draw its projections.	CO1	PO1	**05**
	b)	A line PQ has its end P 15 mm above HP and 10 mm in front of VP. The end Q is 55 mm above HP and the line is inclined at 30° to HP. The distance between the end projectors of the line when measured parallel to the line of intersection of HP and VP is 50 mm. Draw the projections of the line. Determine the true length of the line. What is the inclination of line with VP?	CO1	PO1	**15**
		OR			
2		A pentagonal lamina of edges 25 mm is placed on one of its corners on VP such that the surface makes 30º with VP and the perpendicular bisector of the edge passing through the corner on which the lamina rests is inclined at 45º to HP. Draw the projections.	CO2	PO1 PO2	**20**
		UNIT – II (Computer aided drafting)			
3		A pentagonal pyramid of base side 30 mm and height 65 mm rests on HP on one of its slant edges and its axis appears to be inclined at 45^0 to VP. Draw its top and front views.	CO3	PO1 PO2	**30**
		OR			
4		A cone of base diameter 40 mm and axis length 50 mm is resting on HP on a point on the circumference of its base such that its apex is at 40 mm above the HP and top view of the axis is inclined at 60^0 to VP, Draw the top and front view of solid, Also, determine the inclinations of the axis when the base is nearer to the observer.	CO3	PO1 PO2	**30**

			UNIT – III (Computer aided drafting / Solid modelling)			
	5		A hemisphere of 40 mm diameter is supported co-axially on the vertex of a cone of base diameter 60 mm and axis length 50 mm. The flat circular face of the hemisphere is facing up. Draw the top view, front view, and isometric projection of the combination of solids.	*CO3*	*PO1* *PO2*	**30**
			OR			
	6		On a hollow cylinder of outer diameter 60 mm, inner diameter 30 mm and axis length 40 mm rests a hexagonal prism of 20 mm sides of base and 50 mm axis length. The prism has a through hole of diameter 20 mm drilled from its top face to base such that the axis of the hole coincides with the axis of the hole. (i) Create solid model of the combination using Solid edge software (ii) Generate front view with right half in section, top view, side view and isometric projection.	*CO3*	*PO1* *PO2*	**30**
			UNIT – IV (Sketching)			
	7		A square pyramid of side of base 45 mm, altitude 70 mm is resting with its base on HP with two sides of the base parallel to VP. The pyramid is cut by a section plane which is perpendicular to the VP and inclined at 40° to the HP. The cutting plane bisects the axis of the pyramid. Obtain the development of the lateral surface of the truncated pyramid.	*CO1*	*PO1* *PO2*	**20**
			OR			
	8		Draw the half portion development of a transition piece that connects a circular duct of cross section 30 mm diameter and a square duct of 50 mm sides. The two ducts are separated by a distance of 50 mm.	*CO1*	*PO1* *PO2*	**20**

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