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.

				CO	PO	Marks
			UNIT – I (Sketching)	*CO*	*PO*	**Marks**
1	a)		A point A is 25 mm below HP and is in III quadrant. Its shortest distance from the line of intersection of HP and VP is 45 mm. Draw the projections of the point and determine its distance from VP.	*CO1* *CO2*	*PO1*	**05**
	b)		A line has its end A, 15 mm above HP and 10 mm in front of VP. The end B is 55 mm above HP and the line is inclined at 30° to HP. The distance between the end projectors when measured parallel to the XY line is 50 mm. Draw the projections of the line. Determine the true length of the line and its inclination with VP.	*CO1* *CO2*	*PO1*	**15**
			OR			
2			A square lamina ABCD of sides 40 mm is resting on its corner C on HP such that the two sides CB & CD make equal inclinations with HP. The diagonal AC is inclined at 30° to HP and appears to be inclined at 45° to VP. Draw the projections such that the corner on which the lamina rests is nearer to VP.	*CO1* *CO2*	*PO1*	**20**
			UNIT – II (Computer Drafting)			
3			A cone of 50 mm base diameter and 60 mm axis length rests on HP on one of its generators. Draw its projections when the axis is inclined to VP at 30°.	*CO3* *CO4*	*PO1* *PO5* *PO12*	**30**
			OR			
4			A square pyramid 35 mm sides of base and 60 mm axis length is suspended freely from a corner of its base. Draw the projections of the pyramid when the axis appears to be inclined to VP at 45°.	*CO3* *CO4*	*PO1* *PO5* *PO12*	**30**

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 – III (Computer Drafting / Modeling)			
5		A regular pentagonal prism of base edge 30 mm and axis 60 mm is mounted centrally over a cylindrical block of 80 mm diameter and 25 mm thick. Draw the top and front views of the combination. Draft the isometric projection of the combined solids.	*CO3* *CO4*	*PO1* *PO5* *PO12*	**30**
		OR			
6		A sphere of diameter 30 mm rests on the frustum of a hexagonal pyramid base 30 mm, top face 18 mm side and height 50 mm, such that their axes coincide. i) Create solid model of the combination using solid edge software. ii) Generate front view, top view, side view and Isometric projection of the combination.	*CO3* *CO4*	*PO1* *PO5* *PO12*	**30**
		UNIT – IV (Sketching)			
7		Draw the development of the truncated portion of the lateral faces of a pentagonal prism of 20 mm sides of base and 50 mm height standing vertically with one of its rectangular faces parallel to VP and nearer to it so as to produce a one-piece development. The inclined face of the truncated prism is 30° to its axis and passes through the right extreme corner of the top face of the prism.	*CO1* *CO2*	*PO1*	**20**
		OR			
8		A funnel is made of sheet metal. The funnel tapers from 60 mm to 30 mm diameters to a height 50 mm. And then forms to a cylinder with a height of 50 mm. Bottom of funnel is beveled off completely at an angle of 45° to axis. Draw the development of funnel.	*CO1* *CO2*	*PO1*	**20**

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