U.S.N.										

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

Autonomous Institute Affiliated to VTU

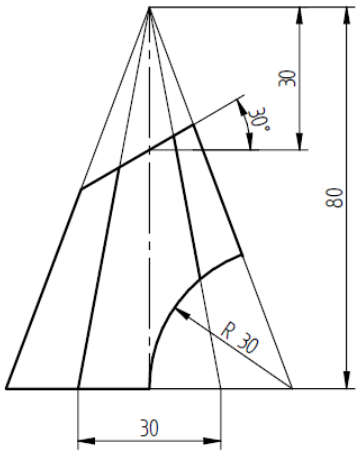
February / March 2025 Semester End Main Examinations

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 FIVE 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)	Front view of a point is 20 mm below XY line and 40 mm from X_1Y_1 line. Its side view is 30 mm from X_1Y_1 line. Draw three views of the point if the point is in III quadrant. How far is the point from VP?	CO1	PO1	**5**
	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		The front view of a rhombus lamina of major diagonal 50 mm and minor diagonal 30 mm is a square. Draw the projections of the lamina if the minor diagonal is inclined at 30° to HP. What is the inclination of major diagonal with VP?	CO1	PO1	**20**
		UNIT – II (Computer Aided Drafting)			
3		A hexagonal pyramid of 25 mm sides of base and altitude 60 mm is placed on HP on one of its triangular faces with its axis inclined at 30° to VP. Draw the projections of the pyramid when the apex of pyramid is nearer to the observer. What is the inclination of the axis with HP?	CO1 CO3	PO1 PO5	**30**
		OR			
4		A cube of 40 mm sides is suspended freely about a corner. Draw the top and front views of the solid when the axis appears to be inclined at 45° to VP. Measure the inclination of axis with HP.	CO1 CO3	PO1 PO5	**30**

			UNIT – III (Computer Aided Drafting / Solid Modeling)			
	5		A cone of base diameter 35 mm and height 50 mm is resting centrally on top face of a pentagonal slab of 40 mm sides of base and thickness 20 mm such that one of the base edges of slab is parallel to VP and nearer to it. Draw the top and front views of the combination. Draft the isometric projection of the combination of solids. (Note: Solid modeling is not to be used for this solution.)	*CO1* *CO3*	*PO1* *PO5*	**30**
			OR			
	6		A hemisphere of 40 mm diameter is resting centrally on top face of frustum of a hexagonal pyramid of top face 20 mm sides, base 40 mm sides and height 60 mm. Two base edges of hexagon are perpendicular to VP and the curved surface of hemisphere is touching top face of frustum. Prepare the solid model (3D) of the combination of solids. Use the solid model to generate front view, top view and isometric projection of the combination.	*CO1* *CO3* *CO4*	*PO1* *PO2* *PO5*	**30**
			UNIT – IV (Sketching)			
	7		A vertical pentagonal prism 30 mm side of base and height 60 mm has one of its rectangular faces parallel to VP and nearer to it. A through square hole of 25 mm sides is made in the centre of the prism such that the axis of the hole bisects the axis of the prism at right angles. The edges of the hole are equally inclined to HP. Draw the top and front views of the solid. Obtain the development of the prism showing the shape of the hole produced by it.	*CO2*	*PO1* *PO2*	**20**
			OR			
	8		Figure Q8 shows the front view of a cut hexagonal pyramid. Draw the development of the lateral surface of the remaining portion of the pyramid.  Fig. Q8	*CO2*	*PO1* *PO2*	**20**

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