DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

UT- II

Class:SE   **Semester:III**

Date: 04/11/2022   **Max marks: 40**

Subject: Computer Graphics

Note the following instructions
1. **Attempt all questions.**
2. **Draw neat diagrams wherever necessary.**
3. **Write everything in ink (no pencil) only.**
4. **Assume data, if missing, with justification.**

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Q1	Attempt any two	Marks	CO
	A] Explain Back Surface Detection method.	[5]	CO6
	B] Explain Image Space method.	[5]	CO6
	C] Explain Object Space Method.	[5]	CO6
	D] Explain the 12 Animation principles.	[5]	CO6
Q2	Attempt any two		
	A] Demonstrate Cohen Sutherland line clipping algorithm. Solve to find the clipping coordinates of the line segment with end coordinates P(4,1) and Q(6,4) against the window having vertices A(3,2) B (7,2) C(7,6) D(3,6).	[10]	CO4
	B] Demonstrate Sutherland Hodgeman Polygon clipping algorithm with a suitable example and comment on its shortcoming.	[10]	CO4
	C] Derive the equation forwindow to viewport coordinate transformation. Solve to find the clipping coordinates of the line segment with end coordinates P1(10,30) and P2(80,90) against the window having vertices A(20,20), B(90,20) ,C(90,70),	[10]	CO4

	D(20,70)using Liang Barsky Line Clipping Algorithm.		
Q3	**Attempt any one**		
	A] Compare Bezier Curve and B-Spline Curves. Derive the equation of Bezier Curve and state its properties.	[10]	CO5
	B] Compare Parallel and Perspective Projections. Derive a matrix for Perspective Projection.	[10]	CO5