



USN

Fifth Semester B.E./B.Tech. Degree Examination, June/July 2026
Computer Graphics

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.

2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Define Computer Graphics with its applications.	10	L1	CO1
	b.	Explain cathode ray tube with neat diagram.	10	L2	CO1
OR					
Q.2	a.	With the neat diagrams, explain coordinate reference frames.	10	L2	CO2
	b.	Illustrate performance characteristics of open GL.	10	L2	CO2
Module – 2					
Q.3	a.	Explain Six classes of input forms available to display a graphical application.	10	L2	CO2
	b.	With diagram, explain the application program to measure of a device in different modes.	10	L2	CO2
OR					
Q.4	a.	Explain the Display Structure Architecture.	10	L2	CO2
	b.	Explain the programming event driven model.	10	L2	CO2
Module – 3					
Q.5	a.	Illustrate rotation, translation and scaling for 3D.	10	L2	CO3
	b.	Explain in detail about geometric objects.	10	L2	CO3

OR					
Q.6	a.	Give a OpenGL program for colored cube.	10	L2	CO3
	b.	What is transformation, explain concatenation of transformation.	10	L2	CO3
Module – 4					
Q.7	a.	Describe the orthographic projection on OpenGL.	10	L2	CO4
	b.	Explain viewing in OpenGL with default camera.	10	L2	CO4
OR					
Q.8	a.	Describe the attenuation of spotlight with neat diagram.	10	L2	CO4
	b.	Describe the PHONG lighting model.	10	L2	CO4
Module – 5					
Q.9	a.	Explain Cohen-Southerland line clipping algorithm.	10	L2	CO5
	b.	Write the steps involved in Liang- Barsky Clipping.	10	L2	CO5
OR					
Q.10	a.	Explain DDA algorithm.	10	L2	CO5
	b.	Explain Bresenham's line algorithm end points (20, 10) and (30, 18).	10	L2	CO5
