

Model Question Paper with effect from 2022-23 (CBCS Scheme)

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Fourth Semester B.E. Degree Examination Subject Title: Computer Graphics and Visualization

TIME: 03 Hours

Max. Marks: 100

Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.

Module -1			*Bloom's Taxonomy Level	Marks
Q.01	a	What is Computer Graphics? Explain the applications of computer graphics.	2	10M
	b	Explain coordinate reference frames in OpenGL.	2	10M
OR				
Q.02	a	Explain Bresenham's Line Drawing Algorithm with an example.	2	10M
	b	Explain OpenGL fill area functions.	2	10M
Module-2				
Q. 03	a	What is the need of homogenous coordinate system? Explain translation, rotation and scaling in 2D homogenous coordinate system with matrix representation.	2	10M
	b	Explain OpenGL Raster Transformations.	2	5M
	c	Illustrate 2D geometric transformations.	2	5M
OR				
Q.04	a	Explain transformation between 2D coordinate systems.	2	10M
	b	Explain translation process in 3D geometric transformation.	2	5M
	c	Explain OpenGL geometric transformation functions in 3D.	2	5M
Module-3				
Q. 05	a	Explain any five input devices used for logical classification.	2	10M
	b	Explain: i) Computer-Animation Languages ii) Character Animation	2	10M
OR				
Q. 06	a	Explain any five different ways of designing graphical user interface.	2	10M
	b	Explain: i) Design Animation Sequence ii) Traditional Animation Techniques	2	10M
Module-4				

Q. 07	a	Explain clipping window and view port transformations with an example.	2	10M
	b	Differentiate between color models: RGB and CMY.	2	10M
OR				
Q. 08	a	Explain Cohen Sutherland Line Clipping Algorithm with an example.	2	10M
	b	Explain illumination models: i) Ambient light ii) Diffuse Reflection	2	10M
Module-5				
Q. 09	a	Explain 3D viewing concepts.	2	10M
	b	Explain OpenGL 3D viewing functions.	2	10M
OR				
Q. 10	a	Explain orthogonal projections with help of 3D viewing.	2	10M
	b	Explain Depth Buffer method with algorithm.	2	10M

*Bloom's Taxonomy Level: Indicate as L1, L2, L3, L4, etc. It is also desirable to indicate the COs and POs to be attained by every bit of questions.