| Time: 1hr. | Class Test-2 on Computer Graphics & Geometric Modeling, 2023 | Set-1 | Full Marks: 30 |

CO4	a. Find out CMY and YIQ color vectors whose equivalent RGB vector is (50, 100, 150).	4
	b. Describe Ray-casting as a technique of rendering.	5
	c. Compare ambient light, diffusion reflection, and specular reflection types of illumination models.	4
CO5	a. Explain with examples of various feasible set operations in CSG modeling. How is polygon mesh useful in modeling solids?	6
	b. How is scene graph used in 3D modeling? What is the fastest way to insert and move a rectangle object into a linear octree?	4
CO6	a. What can we do to reduce people's resistance towards a VR or AR, or MR product? What are the alternatives for VR/AR/MR? Why AR is better than VR for artists and creatives?	7

| Time: 1hr. | Class Test-2 on Computer Graphics & Geometric Modeling, 2023 | Set-2 | Full Marks: 30 |

CO4	a. What is half toning and how dithering technique is related with it? Find the YIQ vector of white, black and perfect grey colors.	4
	b. Describe Ray-tracing as a technique of rendering.	5
	c. Differentiate (with examples) among flat, gouraud and phong shadings.	4
CO5	a. Differentiate octree from quadtree. Write the disadvantages of wireframe model.	5
	b. Differentiate between Euclidean dimensions and Fractal dimensions? How to use Ray-casting typically to implement CSG operators?	5
CO6	a. What is morphing? Write the generic steps of morphing. What is the role of 3D Visualizer? Name some generalized authoring metaphors.	7

| Time: 1hr. | Class Test-2 on Computer Graphics & Geometric Modeling, 2023 | Set-3 | Full Marks: 30 |

CO4	a. Find out RGB and CMY color vectors whose equivalent YIQ vector is (50, 60, 70)	4
	b. Describe Rediosity as a technique of rendering.	5
	c. Define depth peeling. How to determine it? Write some issues of depth peeling.	4
CO5	a. Find the total length after 5th order of Koch Curve fractal where number of segments and scaling factor are 5 and 1/4 respectively. Hence find out its fractal dimension.	6
	b. What is content modeling? How to use wireframes in content modeling?	4
CO6	a. Is VR and 3D the same? What are the various types of VR and how it is distinguished from AR? Write the disadvantages of VR.	7