CRM08	Rev 1.8	CSE	22/06/2021

CONTINUOUS INTERNAL EVALUATION– 2

Dept: CSE	Sem / Div: 6th A & B	Sub: Computer Graphics & Visualization	S Code: 18CS62
Date: 24/06/2021	Time: 3:00PM–4:30PM	Max Marks: 50	Elective: N

Note: Answer any 2 full questions, choosing one full question from each part.

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QN		Questions	Marks	RBT	COs
		PART A			
1	a	What is clipping? Explain with example the Sutherland – Hodgman polygon clipping algorithm.	9	L2	CO3
	b	Define color model. With neat diagram explain RGB and CMY model. Explain the transformation between CMY and RGB color spaces.	8	L2	CO3
	c	With the help of openGL statements and diagram explain illumination and shading model	8	L2	CO5
		OR			
2	a	Define clipping. Briefly explain Cohen – Sutherland line clipping without code. Discuss four cases.	9	L2	CO3
	b	Define transformation matrix to rotate a 3D object about an axis that is parallel to one of the co – ordinate axes.	8	L2	CO3
	c	Explain Specular Reflection and Phong model.	8	L2	CO5
		PART B			
3	a	Design a transformation matrix for window to viewport transformation and explain how reshape function (glutReshapeFunc) works in openGL programming.	8	L2	CO3
	b	Explain general two dimensional pivot point rotation and derive the composite matrix.	8	L2	CO2
	c	Give the reasons to convert transformation matrix to homogeneous coordinate representation and show the process of conversion. Shear the polygon A(1, 1), B(3, 1), C(3, 3), D(2, 4), E(1, 3) along x – axis with a shearing factor of 0.2.	9	L2	CO2
		OR			
4	a	Explain the different types of light sources supported by openGL.	8	L2	CO3
	b	Explain two dimensional viewing transformation pipeline.	8	L2	CO2
	c	Develop homogeneous transformation matrix to rotate an object with respect to a pivot point. For the triangle A(3, 2), B(6, 2) and C(6, 6) rotate it in anticlockwise direction by 90 degree keeping A(3, 2) fixed, draw the new polygon.	9	L2	CO2

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