BTS(C) – VI – 06 – 019(C)

B.Tech. Degree VI Semester Examination, June 2006

CS 603 COMPUTER GRAPHICS

(2002Admissions)

Time: 3 Hours Maximum Marks: 100

I	a)	Describe about graphic output graphic devices bringing out clearly their salient features with respect to usability, quality and reliability.	(10)
	b)	Distinguish Raster Scan and Random Scan systems.	(10)
		OR	
II	a)	Digitalize a line from point (0,2) to point (4,5). Explain the steps clearly.	(10)
	b)	What is anti-aliasing? Explain.	(5)
	c)	Give a description of Bundled attributes.	(5)
III	a)	Given a triangle A(0,0), B(1,1) and C(6,2). Write down the transformation matrix to magnify the triangle to twice its size keeping C(6,2) fixed.	(10)
	b)	Explain the basic 2D transformations? Give the homogeneous matrix representations for each transformation.	(10)
		OR	
IV	a)	Derive a general window to view port mapping.	(10)
	b)	Illustrate Cohen-Sutherland algorithm to clip line segments with a suitable example.	(10)
V	a)	What are the important properties of B-spline curves? What are their advantages over Bezier curves?	(10)
	b)	Explain parallel and perspective projections.	(10)
		OR	
VI	a)	Explain the use of fractal geometry in graphics.	(7)
	b)	What are octrees? How do octress differ from quadtress?	(7)
	c)	What is view volume? How it is specified?	(6)
VII	a)	Explain depth buffer and A-buffer method for visible surface detection in 3D graphics.	(10)
	b)	Discuss Back-Face removal algorithm.	(10)
		OR	
VIII	a)	Explain Painter's algorithm. How is the depth of a polygon determined by painter's algorithm.	(10)
IX	a)	Explain the principle of Phong shading algorithm.	(10)
	b)	Explain RGB and HSV colour models.	(10)
		OR	
X	a)	What are key frame systems? Explain.	(10)
	b)	Write ***short notes*** on: (i) VRML (ii) Illumination models.	(5+5=10)

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