

CONTINUOUS INTERNAL EVALUATION- 1

Dept: CSE	Sem / Div: 6 th A & B	Sub: Computer Graphics & Visualization	S Code: 18CS62
Date: 24/05/2021	Time: 3:00PM–4:30PM	Max Marks: 50	Elective: N
Note: Answer any 2 full questions, choosing one full question from each part.			

Q N	Questions	Marks	RBT	COs
PART A				
1 a	With a neat diagram, explain the architecture of a raster display system with integrated display processor.	8	L2	CO1
b	Explain DDA line drawing algorithm with procedure. With the help of a suitable example demonstrate the working principle of Bresenham's Line Drawing algorithm for different slopes of a line.	9	L3	CO1
c	What is Computer Graphics? Explain the applications of Computer Graphics with appropriate examples.	8	L2	CO1
OR				
2 a	Explain the basic operation of CRT with its primary components with neat diagram.	8	L2	CO1
b	Write mid-point circle algorithm. Given a circle with radius $r=10$ demonstrate the mid-point circle algorithm by determining positions along circle octant in first quadrant from $x=0$ to $x=y$ (Assume circle centre is positioned at origin).	9	L3	CO1
c	List and explain various OpenGL primitive and its attribute functions. Develop an OpenGL program to create human face like structure using suitable OpenGL primitive functions.	8	L2	CO1
PART B				
3 a	Explain with examples any two algorithms used for to identify the interior area of polygon.	8	L2	CO2
b	How do you classify the polygon? Explain OpenGL polygon fill primitives.	8	L2	CO2
c	Explain scan line polygon fill algorithm support your claim with a neat diagram. Explain the use of sorted edge table and active edge list. Determine the content of the active edge table to fill the polygon with vertices A(2, 4), B(4,6) and C(4, 1) for $y = 1$ to $y = 6$.	9	L3	CO2
OR				
4 a	Write short note on front and back polygon faces.	8	L2	CO2
b	Explain the different OpenGL routines used for manipulating display window.	8	L2	CO2
c	Explain the data structures used by scan line polygon fill algorithm. Determine the content of the active edge table to fill the polygon with vertices A(2, 4), B(2, 7), C(4, 9) and D(4, 6).	9	L3	CO2



