

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (CSE) (Sem.–5th)
COMPUTER GRAPHICS
Subject Code : CS-309
Paper ID : [A0468]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Answer the following :

- a. What is parallel and perspective projection? Explain.
- b. What is constant intensity shading?
- c. What is aspect ratio?
- d. How can the effect of aliasing be minimized?
- e. Consider a raster system with a resolution of 1024 by 768. What is the time required to load the raster if 1,00,000 bytes can be transferred per second?
- f. What steps are required to plot a line whose slope is between 0 to 60 degree using Bresenham's method?
- g. Give an equation for the plane containing the point (0,0,0) and normal to vector (-1,0,-1).
- h. Why is the electron beam allowed to overscan?
- i. What is the difference between a flatbed plotter and a drum plotter?
- j. What is a fractal?

SECTION-B

2. Write a note on **two** topics :
 - (i) Plasma Panel
 - (ii) LED & LCD Monitors
3. Write different clipping algorithms and describe the windowing concept.
4. Explain concept of positioning & pointing devices.
5. Write a procedure to perform a two-point perspective projection of an object.
6. Write the three dimensional homogeneous transformation matrix for scale z to double of its size.

SECTION-C

7. Define design techniques of Bezier curves & form Bezier matrix for cubic curves which draws the desired curve.
8. For each of the various display technologies used in video monitor, list some applications in which that type of monitor might be appropriate.
9. Explain all the possible transformation for a two dimensional object.