

AQ - 2640

Fourth Semester M.C.A. Examination

COMPUTER GRAPHICS

Elective - I

Paper - 4 MCA 5

P. Pages : 2

Time : Three Hours]

[Max. Marks : 80

- Note :** (1) Due credit will be given to neatness and adequate dimensions.
(2) Assume suitable data wherever necessary.
(3) Illustrate your answer wherever necessary with the help of neat sketches.

1. (a) Explain video Display Devices with example. 7
(b) Explain co-ordinate Representation and Graphics Function in Graphics software with example. 7

OR

2. (a) Explain Graphics Monitors and work stations with example. 7
(b) Explain Multiple Input Devices in Graphics system. 7
3. (a) Explain Bresenham's line algorithms in brief. 6
(b) Explain properties of circles and Midpoint circle algorithms with example. 7

OR

4. (a) Explain in brief polynomials and spline curves. 7
(b) Explain parallel curve Algorithm with example. 6
5. (a) Explain Line attributes and type with example. 7
(b) Explain colour and Grayscale levels with example. 6

OR

6. (a) Explain Bundled Line attributes and Bundled Area-fill Attributes. 7

(b) Explain the character attributes with example. 6

7. (a) Explain Matrix Representations and Homogenous co-ordinates. 7

(b) Explain transformations between co-ordinates system. 7

OR

8. (a) Explain the following composite Transformations :—

(i) General pivot-point Rotation. 7

(ii) General Fixed-point scaling. 7

(b) Explain Liang-Barsky Line clipping algorithms. 7

9. (a) Explain structure lists and the element pointer in editing structure. 7

(b) Explain Input function in brief :—

(i) Input Mode. 6

(ii) Request Mode. 6

OR

10. (a) Explain Virtual Reality Environments with example. 7

(b) Explain Initial values of four Input Device parameters. 6

OR

11. (a) Explain Design Techniques using Bezier curves with example. 7

(b) Difference between uniform B-splines and Non-uniform B-splines. 6

OR

12. (a) Explain Beta-splines and continuity conditions with example. 6

(b) Explain Rotation in three dimensional Geometric and Modeling transformations. 7

