

3. a) Develop the transformation matrix for reflection in the straight line $y = mx + k$

OR

- b) Explain the algorithm for clipping a given polygon

4. a) Explain in detail parallel projection and perspective projection

OR

- b) Explain how the transformation matrix for rotation about an arbitrary axis can be developed

5. a) What are Bezier curves? What are their properties?

OR

- b) Explain the Z-buffer algorithm for visible surface detection

6. a) Explain the importance of computer animation

OR

- b) What are the applications of Multimedia systems

[28/II Y/211]

[Aug-11]

[SPDCA-206]

MCA DEGREE EXAMINATION

II YEAR

COMPUTER GRAPHICS AND MULTIMEDIA

(Effective from the admitted batch 2009-10)

Time: 3 Hours

Max.Marks: 70

Instructions: All parts of the unit must be answered in one place only.
Figures in the right hand margin indicate marks allotted.

SECTION-A

1. Answer any four of the following (4x5=20)

- What are homogeneous coordinates? Why are they required?
- Write the DDA algorithm for drawing lines
- Distinguish between uniform scaling and differential scaling. Explain briefly their effect on a given image
- Distinguish between a window and a viewport. What is viewing transformation?
- Distinguish between 2-D rotation and 3-D rotation
- Explain the Painter's algorithm
- What are the applications of computer graphics?

SECTION-B

Answer all questions: (5x10=50)

2. a) Explain in detail the working of Raster graphics system

OR

- b) Explain the Mid-Point circle generation algorithm in detail