MAY-24-0470
CS-503 (Computer Graphics (CSE, IT))
B.Tech-5th (CBCS)

Time : 3 Hours   Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note: Attempt five questions in all, selecting one question each from section A, B, C and D. Q. No.9 is compulsory.

SECTION-A

1. (a) Distinguish b/w random 4 raster scan algorithms.   (5)

    (b) What is output primitive? What is point and lines in the computer graphics system?   (5)

2. Write midpoint circle generation algorithm. Draw circle having center (0,0) & radius 9 using this algorithm.   (10)

SECTION-B

3. What do you mean by windows and viewport? Describe window-to-viewport transformation.   (10)

4. (a) What is 2-D transformation? How is it different from composite transformation?   (5)

    (b) Explain Cohen Sutherland algorithm for line clipping.   (5)

SECTION-C

5. (a) Distinguish between Parallel and Perspective projections.   (5)

    (b) Discuss the scan line method for visible surface detection.   (5)

6. Write the significance of Bazier Curve in computer graphics. Given B0(1,1), B1(2,3), B2(4,3), B3 (3,1) as vertices of Bazier Curve. Determine the three (3) points on Bazier Curve.   (10)

SECTION-D

7. Write short note on the following.

    (a) RGB color models.

    (b) CMY color models.

    (c) YIQ color models.   (10)

8. Describe Fractals & also describe classification of the fractals.   (10)

SECTION-E (Compulsory)

9. Answer the following Briefly.

    a) What are spline curves?

    b) State DDA algorithm.

    c) List various region filling algorithm.

    d) Define clipping & its type.

    e) Define quadratic surfaces.

    f) Discuss matrix representation.

    g) Define computer graphic & list of various applications of computer.

    h) What is illumination? Write down the 3 components of illumination.

    i) What is computer graphics realism?

    j) Define shearing.   (10×2=20)