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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

INSTRUCTIONS TO CANDIDATE:

1. *Section-A is compulsory.*
2. *Attempt any four questions from Section-B.*
3. *Attempt any two questions from Section-C.*

SECTION-A

(10x2=20)

Q1. Write Briefly:

- a) What are spline curves?
- b) What is clipping?
- c) Define the term aspect ratio.
- d) Define the term antialiasing.
- e) Differences between Windowing and Viewing.
- f) What do you mean by shading of objects?
- g) Write down shear transformation matrix.
- h) Define fractals.
- i) What is scaling?
- j) What is Raytracing.

SECTION-B

(4x5=20)

- Q.2. Differentiate parallel and perspective projections and derive their projection matrices.
- Q.3. Explain the midpoint circle drawing algorithm. Also draw as you Assume 10 cm as the radius and co-ordinate origin as the centre of the circle.
- Q.4. What are vanishing points? What are the specifications of 3D view?

Q.5. Write short notes on : (any two)

- a) Bezier curves
- b) B-spline curves
- c) Rendering

Q.6. Give DDA line drawing algorithm. Explain with suitable example.

SECTION-C

(2x10=20)

Q.7. What are the different video display devices. Explain (any one) its working in detail.

Q.8. Explain the z-buffer algorithm. What are the advantages and disadvantages of using a z-buffer algorithm?

Q.9. Describe scan line polygon filling algorithm with a suitable example.

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