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Question Paper Code : 11289

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2012.

Seventh Semester

Computer Science and Engineering

CS 2401/CS 71 — COMPUTER GRAPHICS

(Common to Information Technology)

(Regulation 2008)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write down the shear transformation matrix.
2. Define text clipping.
3. Differentiate oblique and orthogonal projections.
4. Define spline curves.
5. State the difference between CMY and HSV color models.
6. What are keyframe systems?
7. What is a shadow?
8. Define texture.
9. List down the properties of Bezier curves.
10. Write down some of the boolean operations on objects.

PART B — (5 × 16 = 80 marks)

11. (a) Explain the following
- (i) Line drawing algorithm. (8)
 - (ii) Line clipping algorithm. (8)

Or

- (b) With suitable examples, explain the following
- (i) Rotational transformation. (8)
 - (ii) Curve clipping algorithm. (8)
12. (a) (i) Differentiate parallel and perspective projections. (8)
- (ii) Write notes on 3D viewing. (8)

Or

- (b) (i) With suitable examples, explain the 3D transformations. (8)
- (ii) Write notes on quadric surfaces. (8)
13. (a) (i) Explain RGB color model in detail. (8)
- (ii) Explain how 3D scenes are drawn. (8)

Or

- (b) (i) Discuss the computer animation techniques. (10)
- (ii) Explain how 3D objects are drawn. (6)

14. (a) Differentiate flat and smooth shading models.

Or

- (b) Discuss the methods to draw and add shadows to objects.
15. (a) Write notes on the following
- (i) Mandelbrot sets (8)
 - (ii) Julia sets. (8)

Or

- (b) (i) Describe the creation of images by iterated functions. (8)
- (ii) Explain the method for adding surface texture. (8)