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Question Paper Code: 37202

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Seventh Semester

Computer Science and Engineering

01UCS702 - INTERACTIVE COMPUTER GRAPHICS

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Compare Raster Graphics with Vector Graphics.
2. Write the working principles of random scan systems.
3. What are homogeneous co-ordinates?
4. What is viewing transformation?
5. Define spline curves and Bezier curves.
6. Differentiate oblique and orthographic parallel projections.
7. Define intensity of light, brightness and hue.
8. What are key frame systems?
9. List the use of virtual reality.
10. Write a short note on authoring in multimedia

PART - B (5 x 16 = 80 Marks)

11. (a) (i) Explain about the Bresenham's line drawing algorithm. (8)
(ii) Digitize a line from (10, 12) to (15, 15) on a raster screen using Bresenham's straight line. (8)

Or

(b) Explain briefly about the working principles of Random scan system and Raster scan system with neat diagram. (16)

12. (a) Explain 2D Geometric Transformations. (16)

Or

(b) Illustrate the iterations of Cohen-Sutherland Hodgeman polygon clipping. (16)

13. (a) Analyze and justify the concept of 3D Viewing. (16)

Or

(b) Differentiate parallel and perspective projections and derive their projection matrices. (16)

14. (a) Explain in detail about halftone patterns and dithering techniques. (16)

Or

(b) Characterize the procedure of Raster animations. (16)

15. (a) Demonstrate the steps used in multimedia authoring. (16)

Or

(b) Interpret the file format used data representations in multimedia. (16)