Question Paper Code: 37202

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

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. Digitize a line from (10, 12) to (15, 15) on a raster screen using Bresenhams straight line algorithm.

2. Define Affine transformation.

3. What are homogeneous co-ordinates?

4. What is viewing transformation?

5. What are blobby objects?

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) Enumerate the steps involved in line drawing algorithms with an example. (16)

Or

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

12. (a) Explain about translation, scaling and rotation of two dimensional geometric transformations. (16)

Or

(b) Defend the process of the following:

(i) Rotational transformation (8)

(ii) Curve clipping algorithm (8)

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

Or

(b) Explain about parallel and perspective projections and Also derive their projection matrices. (16)

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

Or

(b) (i) Explain about various approaches for object motion specifications. (8)

(ii) Write short notes on: Morphing. (8)

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

Or

(b) Explain in detail about the various types of multimedia authoring systems. (16)

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