Reg. No. :

Question Paper Code: 31722

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

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. Define Spline.

4. State any four 3D transformation function.

5. List any four real time animation techniques.

6. How are mouse data sent to an OpenGl application.

7. Difference Mandelbrot and Julia sets.

8. Define ray tracing.

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) Depict the midpoint circle drawing algorithm. Assume 10 *cm* as the radius and co-ordinate origin as the centre of the circle generating algorithm.   (16)

12. (a) Illustrate the iterations of Cohen-Sutherland Hodgeman polygon clipping?   (16)

Or

    (b) Defend the process of the following:

       (i) Rotational transformation   (8)

      (ii) Curve clipping algorithm   (8)

13. (a) Discuss on area subdivision method of hidden surface identification algorithm.   (16)

Or

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

14. (a) Compare and contrast the RGB and YIQ color model.   (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)

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