

14/5/13
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B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2013

COMPUTER SCIENCE AND ENGINEERING

Seventh Semester

CS 9401- Graphics and Multimedia

(Regulation - 2008)

Time: 3 Hours

Answer ALL Questions

Max. Marks. 100

PART-A (10 x 2 = 20 Marks)

1. How computer graphics is used in education domain?
2. List the drawbacks of DDA algorithm?
3. Write the steps of 3D viewing?
4. Define antialiasing?
5. List out the popular animation techniques?
6. What are the primitives of OPENGL?
7. Give any four application areas of multimedia?
8. Why compression is needed?
9. What are the various types of servers?
10. Define object identity?

Part – B (5 x 16 = 80 marks)

11. i. Write Bresenham's straight line drawing algorithm. Use the algorithm to draw a line from (10,12) to (20,18). Show the result on a cartesian graph? (10)
ii. Compare and contrast DDA with Bresenham's algorithm? (6)
 12. a) i. List the properties of Bezier curve? Write its parametric representation and also write the joining condition of Bezier curves? (8)
ii. Write the 3D transformation matrices for rotation, reflection, scaling & shearing? (8)
- OR**
- b) i. Discuss with neat diagram about orthographic and oblique projection? (8)
ii. Explain the visible surface identification methods: Z- buffer, A-buffer? (8)

13. a) i. Explain various color model conversion schemes? (8)
ii. Derive the steps for 3D rotation about an arbitrary axis in space? (8)

OR

- b) i. What are OpenGL, GLU and GLUT? (6)
ii. Write an OPEGL code to display a window with title –“Graphics Programming” on the screen & explain all the functions used in the code. (10)

14. a) Discuss in detail all the binary image compression schemes? (16)

OR

- b) i. Explain the MPEG encoder architecture in detail? (8)
ii. Write short notes on RIFF file format? (8)

15. a) i. Discuss about the architecture of multimedia system? (8)
ii. Write short notes on User interface design? (8)

OR

- b) i. Explain about hypermedia messaging? (8)
ii. How to manage distributed objects? (8)