

**B.TECH DEGREE EXAMINATIONS: NOV/DEC 2010**

Seventh Semester

**INFORMATION TECHNOLOGY**

U07CS604: Graphics and Multimedia

**Time: Three Hours**

**Maximum Marks: 100**

**Answer All Questions: -**

**PART A (10 x 1 = 10 Marks)**

1. Relational databases have adopted a data type commonly known as \_\_\_\_  
a. Binary data type    b. BLOB    c. Character data type    d. All the above
2. CCITT Group 3 1D compression scheme is also known as  
a. Run-length encoding    b. Modified Run-length encoding  
c. Two dimensional encoding    d. All the above
3. The early standards of Microsoft's AVI starts playing frames at  
a. 60 frames/sec    b. 56 frames/sec    c. 15 frames/sec    d. 10 frames/sec
4. Creating a unique photographic image without using the lens  
a. Hypermedia    b. Hologram    c. Multimedia    d. Conferencing
5. Dedicated resource on a network accessible to a number of applications.  
a. Multimedia object management    b. Distributed data servers  
c. Multiple data structures    d. All the above
6. \_\_\_\_\_ is defined as the radiant energy emitted per unit time, per unit solid angle, and per unit projected area of the source.  
a. Intensity    b. Brightness    c. Luminance    d. Chromacity
7. Quadric surfaces are described with\_\_\_\_\_  
a. linear equation    b. second-degree equation    c. cubic equqtion    d .partial equations.
8. Bezier curve always passes through\_\_\_\_\_  
a. only the first control point    b. only the last control point  
c. only the first and last control point    d. none of the point
9. \_\_\_\_\_is applied to an object by repositioning it along a straight-line path from one coordinate location to another.  
a. reflection    b. scaling    c. rotation    d. translation
10. -----is a form of Zooming  
a. Panning    b. Rubberbanding    c. Scaling    d. Interleaving

**PART B (10 x 2 = 20 Marks)**

11. Give the matrix for 2D rotation.
12. Define Bezier curves.
13. What are the advantages and disadvantages of DDA algorithm?
14. How are polygon data stored in graphics applications?
15. Justify the need for data compression.
16. List some of the multimedia Elements.
17. Name the models that represent color mathematically.
18. Define lossless compression.
19. What is work flow?
20. What are the common ways of including multimedia objects in messages?

**PART C (5 x 14 = 70 Marks)**

21. a) (i) Compare and Contrast DDA and Bresenham algorithm. (6)  
(ii) Explain Sutherland line clipping algorithm with example. (8)  
(OR)  
b) Explain Ellipse drawing algorithm.
22. a) Write notes on 3D object transformation. (OR)  
b) Derive the 3D transformation matrix to transform world coordinates to view coordinates.
23. a) Explain the architecture of multimedia systems. (OR)  
b) (i) List the various multimedia data interface standards and their purpose. (10)  
(ii) Explain the key issues of data organization for multimedia systems. (4)
24. a) Explain the components and methodology of JPEG. (OR)  
b) Briefly explain RAID .Discuss the pros and cons of different RAID levels.
25. a) Describe the components of a distributed multimedia system. (OR)  
b) Explain about Virtual reality Design.

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