Register No: ……..

B.E. DEGREE EXAMINATIONS: APRIL/MAY 2011

Sixth Semester

COMPUTER SCIENCE AND ENGINEERING

U07CS604: Graphics and Multimedia

Time: Three Hours **Maximum Marks: 100**

Answer ALL Questions:-

PART A (10 x 1 = 10 Marks)

1. DDA stands for

   A) Differential Digital Analyser B) Direct Differential Analyser

   C) Differential Direct Analyser D) Digital Differential Analyser

2. Shearing occurs when: _____

   A) a 2D object is translated by different values along X& Y axis

   B) a 2D object is rotated about its center point

   C) a 2D object is sealed by different X & Y values

   D) both a & c

3. XYZ color model is defined by

   A) C=xX+yY+zZ b) C=2xX+yY+zZ c) 3xX+yY+xZ d) 4xX+yY+zZ

4. Color gamut is a combination of

   A) White and Gray B) Red and White C) Black and Red D) Any Three Colors

5. Converting World co-ordinate scene into device co-ordinate is called

   A) Window to View-port transformation B) View-Port to Window transformation

   C) World to window Transformation D) Window to World Transformation

6. MIDI stands for

   A) Movie Instrument Digital Interface B) Multimedia Independent Digital Instrument

   C) Musical Instrument Digital Interface D) Movie Instrument Data Interface

7. CCITT Group 3 compression is otherwise known as

   A) Quantization B) Run length Encoding C) Picture Encoding D) Data Interfacing

8. Process of writing two copies of every file on two separate drives in RAID is called _____

   A) Disk Striping B) Bit Interleaving C) Disk Mirroring D) Block interleaving

9. _____ associated multimedia objects with documents

   A) Linking and Embedding B) Cut and Copy C) Store and Retrieve D) Edit and Link

10. _____interface is used to accept speech as direct input and provide an oral response to the user actions

A) Hypermedia Interface B) Audio Interface

C) Music Interface D) Aural User Interface

PART B (10 x 2 = 10 Marks)

11. What are the attributes of line?
12. What is a viewing pipeline? List its components.
13. Define the term complementary colors.
14. Define Vanishing point with an example.
15. What are the issues to be considered for multimedia databases?
16. List any 4 applications of multimedia systems.
17. What are the image processing methods?
18. What are the binary image compression techniques?
19. What are the issues for multimedia authoring?
20. Give the types of multimedia object servers.

PART C (5 x 14 = 70 Marks)

21. a) Explain about midpoint circle drawing algorithm with an example. What are its defects? How can it be over come?

(OR)

b) Can a line clipping algorithm be used for polygon clipping? Reason out. Explain Sutherland-Hodgeman algorithm for polygon clipping.

22. a) (i) Draw the CIE chromaticity diagram and explain. (5)

(ii) Explain different types of color model in detail. (9)

(OR)

b) Write in brief about the following

(i) 3D transformation matrix for rotation about an arbitrary axis (7)

(ii) Bezier Splines (7)

23. a) Explain the different file formats used in multimedia.

(OR)

b) (i) What is multimedia? What are the elements of multimedia systems? (7)

(ii) Write about the compression and its types in detail. (7)

24. a) Explain the different types of video and image display systems.

(OR)

b) Explain how a video data is stored and retrieved.

25. a) What is an authority system? List the main attribute, benefits and drawbacks of different types of authority systems.

(OR)

b) What is the need for distribution in multimedia systems? Explain in detail the components of distributed multimedia systems with a diagram.

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