

Register Number.....

M.C.A DEGREE EXAMINATIONS: OCTOBER / NOVEMBER – 2008

Third Semester

P07CA304: COMPUTER GRAPHICS AND MULTIMEDIA SYSTEMS

Time: Three Hours

Maximum Marks: 100

Answer All Questions: -

PART A (20 x 1= 20 Marks)

1. The maximum number of points that can be displayed without overlap on a CRT is referred to as the _____.
(A). Resolution (B). Frame buffer.
(C). Pixmap (D). Refresh buffer.
2. The _____ is a scan-conversion line algorithm based on calculating either using $\Delta y = m\Delta x$ or $\Delta x = \Delta y / m$.
(A). Bresenham's Line Algorithm (B). Differential Digital Analyzer
(C). Digital Differential Analyzer (D). Parallel Line Algorithm
3. _____ is not a Line Clipping Algorithm.
(A). Liang-Barsky (B). Nicholl-Lee-Nicholl
(C). Cohen-Sutherland (D). Weiler-Atherton
4. Which type of text clipping strategy rejects an entire character string that overlaps a window boundary?
(A). all-or-none character-clipping (B). all-or-none string-clipping
(C). exterior clipping (D). part of character clipping.
5. When an input device is placed in _____ mode, the application program and input device operate simultaneously.
(A). request (B). sample
(C). event (D). Locator
6. _____ representations describe a three-dimensional object as a set of surfaces that separate the object interior from the environment.
(A). Boundary (B). Space-partitioning
(C). Object-partitioning (D). Surface-partitioning
7. The convex polygon boundary that encloses a set of control points is called the _____.
(A). control polygon (B). control graph
(C). convex hull (D). spline curve
8. The window defines *what* is to be viewed, the _____ defines *where* it is to be displayed.
(A). view port (B). view point
(C). window port (D). window point

9. In a _____ projection, parallel lines in the world-coordinate scene project onto parallel lines on the two-dimensional display plane.
- (A). Perspective (B). Parallel
(C). depth cue (D). surface rendering
10. Which visible surface detection method decides the visibility point by point at each pixel position on the projection plane?
- (A). Object space (B). Image-space
(C). Back face (D). Object face
11. Transformation of object shapes from one form to another is called _____
- (A). Animation (B). Dithering
(C). Morphing (D). Texture mapping
12. The Three dimensional representation of the HSV model is derived from the _____ cube.
- (A). RGB (B). YIQ
(C). CMY (D). XYZ
13. _____ is the human hearing frequency range.
- (A). 0 to 20 Hz (B). 20 Hz to 20 kHz
(C). 20 kHz to 1 GHz (D). 1 GHz to THz
14. The _____ displays the image stored in the frame buffer, accessing the memory through a separate access port.
- (A). Video Controller (B). Video digitizer
(C). Video Processor (D). Video Buffer
15. _____ are used for designing, interactivity and the user interface, for presenting the project on screen, and for assembling multimedia elements into a single, cohesive project.
- (A). Text and Graphics editors (B). Hypermedia editors
(C). Multimedia Editors (D). Authoring Tools
16. The expansion of TIFF image file format is _____
- (A). Tagged Image File Format (B). Title Image File Format
(C). Thin Image File Format (D). Tagged image Inverse File Format
17. _____ is used for the monitoring the Quality of Service and for conveying information about the participants in an ongoing session.
- (A). Xpress Transport Protocol (B). RTP-Control Protocol
(C). Transmission Control Protocol (D). User Datagram Protocol
18. _____ services represent a class of applications where video information is accessed from one or more video servers.
- (A). Video On Demand (B). Video Conferencing
(C). Interactive TV (D). Multimedia conferencing

19. In Multimedia synchronization , _____ relations define a dependency of media objects from some data.
- (A). Spatial (B). Content
(C). Time dependent (D). Temporal
20. _____ is used to describe user interfaces ranging from synthesized physical environments presented on head mounted displays, to ordinary graphics displayed on conventional CRT.
- (A). Video Conferencing (B). motion based simulators
(C). Location based Entertainment (D).Virtual Reality

PART B (5 x 16= 80 Marks)

21. (a). Explain the Bresenham's Line Drawing Algorithm. Write the Procedure. (16)
- (OR)
21. (b). Discuss briefly about the Cohen-Sutherland Line Clipping Algorithm. Give the procedure. (16)
22. (a). Demonstrate the Two-dimensional geometric transformations briefly. (16)
- (OR)
22. (b). Elaborately discuss about the Bezier Curves. (16)
23. (a). Explain the following:
- (i). Depth-Buffer Method (8)
(ii). Scan-Line Method (8)
- (OR)
23. (b). Explain briefly about the Polygon-Rendering methods. (16)
24. (a). Illustrate briefly about the Animation. (16)
- (OR)
24. (b). Describe the basic principles of Image synthesis and Image Analysis. (16)
25. (a). Explain the Multimedia Data base Systems in detail. (16)
- (OR)
25. (b). Discuss briefly about the Synchronization Presentation requirements. (16)
