1. What type of display system scans the entire screen line by line?

a) Raster Scan
b) Random Scan
c) Vector Scan
d) Character Scan

Answer: a) Raster Scan
Explanation: In a raster scan display system, the electron beam moves across the screen line by line to create an image.

2. What is the smallest unit of display on a raster scan system?

a) Line
b) Vector
c) Pixel
d) Character

Answer: c) Pixel
Explanation: A pixel (short for picture element) is the smallest unit of display on a raster scan system, representing a single point in an image.

3. Which memory stores the pixel information for display in a raster scan system?

a) CPU
b) GPU
c) RAM
d) Frame buffer

Answer: d) Frame buffer

Explanation: The frame buffer is a dedicated portion of memory that stores pixel information for display on a raster scan system.

4. Which algorithm is used for generating characters and vectors on a raster display system?

a) Flood-fill algorithm

b) Boundary-fill algorithm

c) Midpoint Circle drawing algorithm

d) Bresenham's Algorithm

Answer: d) Bresenham's Algorithm

Explanation: Bresenham's Algorithm is commonly used for generating characters and vectors on a raster display system due to its efficiency in line drawing.

5. Which type of display system directly draws lines between specified points?

a) Raster Scan

b) Random Scan

c) Vector Scan

d) Character Scan

Answer: c) Vector Scan

Explanation: In a vector scan display system, lines are drawn directly between specified points, as opposed to being generated pixel by pixel like in raster scan systems.

6. Which scan conversion technique is used in random scan systems?

a) Boundary-fill

b) Flood-fill

c) Midpoint Circle

d) Bresenham's Algorithm

Answer: d) Bresenham's Algorithm

Explanation: Bresenham's Algorithm is commonly used for scan conversion in random scan systems for its efficiency in line drawing.

7. Which of the following is NOT a display device?

a) CRT

b) LCD

c) Plotter

d) CPU

Answer: d) CPU

Explanation: The CPU (Central Processing Unit) is not a display device; it is the main component of a computer responsible for executing instructions.

8. Which line drawing algorithm uses incremental calculations to draw lines?

a) Simple DDA

b) Bresenham's Algorithm

c) Midpoint Circle drawing

d) Boundary-fill

Answer: a) Simple DDA

Explanation: Simple DDA (Digital Differential Analyzer) uses incremental calculations to draw lines between two specified points.

9. Which algorithm is preferred for drawing circles due to its efficiency in integer arithmetic?

a) Simple DDA

b) Bresenham's Algorithm

c) Midpoint Circle drawing

d) Boundary-fill

Answer: b) Bresenham's Algorithm

Explanation: Bresenham's Algorithm is preferred for drawing circles due to its efficiency in integer arithmetic and its ability to produce accurate results.

10. Which polygon fill algorithm is based on a recursive approach?

a) Boundary-fill

b) Flood-fill

c) Midpoint Circle drawing

d) Bresenham's Algorithm

Answer: b) Flood-fill

Explanation: Flood-fill algorithm is based on a recursive approach to fill closed areas with a specified color.

11. In a raster scan display system, which component scans the entire screen line by line to create an image?

a) Electron beam

b) Frame buffer

c) CPU

d) GPU

Answer: a) Electron beam

Explanation: The electron beam in a raster scan display system moves across the screen line by line, illuminating pixels to create an image.

12. Which of the following algorithms is used for efficient line drawing on raster displays by considering integer values only?

a) Simple DDA

b) Bresenham's Algorithm

c) Midpoint Circle drawing

d) Boundary-fill

Answer: b) Bresenham's Algorithm

Explanation: Bresenham's Algorithm efficiently draws lines on raster displays using only integer arithmetic, making it suitable for hardware implementation.

13. Which type of display system generates images by directly specifying the positions of endpoints and controlling the electron beam accordingly?

a) Raster Scan

b) Random Scan

c) Vector Scan

d) Character Scan

Answer: c) Vector Scan

Explanation: Vector Scan systems generate images by directly specifying the positions of endpoints and controlling the electron beam accordingly.

14. Which algorithm is commonly used for drawing characters and symbols on computer screens with raster displays?

a) Bresenham's Algorithm

b) Midpoint Circle drawing

c) Flood-fill algorithm

d) Boundary-fill algorithm

Answer: a) Bresenham's Algorithm

Explanation: Bresenham's Algorithm is commonly used for drawing characters and symbols on computer screens with raster displays due to its efficiency.

15. Which type of scan conversion technique fills closed areas by starting from a seed point and recursively filling neighboring pixels with a specified color until a boundary is reached?

a) Boundary-fill

b) Flood-fill

c) Midpoint Circle drawing

d) Bresenham's Algorithm

Answer: b) Flood-fill

Explanation: Flood-fill algorithm fills closed areas by starting from a seed point and recursively filling neighboring pixels until a boundary is reached.

16. Which memory unit stores the pixel information that determines the color of each point on the screen in a raster scan display system?

a) CPU
b) GPU
c) RAM
d) Frame buffer

Answer: d) Frame buffer
Explanation: The frame buffer stores the pixel information that determines the color of each point on the screen in a raster scan display system.

17. Which algorithm is used for drawing circles by calculating the nearest pixel positions based on a given center and radius?

a) Simple DDA
b) Bresenham's Algorithm
c) Midpoint Circle drawing
d) Boundary-fill

Answer: c) Midpoint Circle drawing
Explanation: Midpoint Circle drawing algorithm is used for drawing circles by calculating the nearest pixel positions based on a given center and radius.

18. Which algorithm draws lines on raster displays using incremental calculations of pixel positions?

a) Simple DDA

b) Bresenham's Algorithm

c) Midpoint Circle drawing

d) Boundary-fill

Answer: a) Simple DDA

Explanation: Simple DDA draws lines on raster displays using incremental calculations of pixel positions between two specified endpoints.

19. Which type of display system uses a refresh buffer to store and display the image content?

a) Raster Scan

b) Random Scan

c) Vector Scan

d) Character Scan

Answer: b) Random Scan

Explanation: Random Scan systems use a refresh buffer to store and display the image content.

20. Which algorithm is used for filling closed areas by starting from a boundary point and filling inward until a specified color boundary is encountered?

a) Boundary-fill

b) Flood-fill

c) Midpoint Circle drawing

d) Bresenham's Algorithm

Answer: a) Boundary-fill

Explanation: Boundary-fill algorithm fills closed areas by starting from a boundary point and filling inward until a specified color boundary is encountered.

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