

11. Which of the following is NOT an application area of computer graphics?

- a) Education and training
- b) Biology
- c) Architecture
- d) None of the above

2. The process of transforming and presenting information in a visual form is known as:

- a) Computer graphics
- b) Image processing
- c) Visualization
- d) Display generation

3. In non-interactive computer graphics:

- a) The user can control the structure of the object
- b) The user cannot make any changes to the rendered image
- c) There is two-way communication between the computer and the user
- d) None of the above

4. Which of the following is an advantage of interactive computer graphics?

- a) Lower quality
- b) Higher analysis and design cost
- c) Greater productivity
- d) None of the above

5. The main components of an interactive graphics system are:

- a) Input, processing, and display

- b) Frame buffer, monitor, and display controller
- c) CPU, GPU, and memory
- d) None of the above

6. In a raster scan display, the information about on and off pixels is stored in:

- a) Frame buffer
- b) Refresh buffer
- c) Both a and b
- d) None of the above

7. The shadow mask method in color CRT monitors is commonly used in:

- a) Random-scan systems
- b) Raster-scan systems
- c) Both a and b
- d) None of the above

8. In a plasma panel display, the displayable point is made by the crossing of:

- a) Horizontal and vertical grid
- b) Cathode and anode
- c) Fluorescent cells
- d) None of the above

9. Which of the following is a non-emissive display device?

- a) Plasma panel
- b) LED
- c) LCD

d) None of the above

10. In a look-up table approach for image representation, the color of a pixel is determined by:

a) The color value in the table entry that the value of the pixel references

b) The direct coding of RGB values for the pixel

c) The number of bits allocated for the pixel

d) None of the above

11. The term "frame buffer" refers to:

a) A large, contiguous piece of computer memory used to hold or map the image displayed on the screen

b) The monitor used to display the image

c) The video controller that generates the drive signals

d) None of the above

12. In a CRT monitor, the process of creating a source of electrons which are focused into a narrow beam directed at the face of the CRT is done by the:

a) Control electrode

b) Focusing system

c) Electron gun

d) Deflection yoke

13. The refresh rate for non-interlaced scanning in raster scan displays is typically:

a) 30 frames per second

b) 60 frames per second

c) 80 frames per second

d) 120 frames per second

14. In the beam penetration method for color CRT monitors, how many colors are possible?

a) 3 colors

b) 4 colors

c) 8 colors

d) 16 million colors

15. The triad arrangement in shadow mask CRT monitors refers to:

a) The arrangement of the electron guns

b) The arrangement of the phosphor dots

c) Both a and b

d) None of the above

16. In direct view storage tubes (DVSTs), which gun is used to maintain the picture display?

a) Primary gun

b) Flood gun

c) Electron gun

d) None of the above

17. Which of the following is an advantage of flat panel displays over CRT displays?

a) Higher resolution

b) Reduced volume, weight, and power requirement

c) Better image quality

d) None of the above

18. In plasma panel displays, what is the typical voltage level applied to the cells for continuous glow?

- a) 90 to 120 volts
- b) 150 to 200 volts
- c) 250 to 300 volts
- d) None of the above

19. Which of the following is an advantage of LED displays?

- a) High resolution
- b) Large screen size
- c) Both a and b
- d) None of the above

20. In liquid crystal displays (LCDs), the pixel position is determined by the intersection of:

- a) Vertical and horizontal conductors
- b) Cathode and anode
- c) Red, green, and blue filters
- d) None of the above

21. The display processor in a graphics system is responsible for:

- a) Converting display processor code into pictures
- b) Storing the picture information
- c) Generating the display signals
- d) All of the above

22. The display file memory in a graphics system is used for:

- a) Storing the picture information
- b) Interpreting the display instructions
- c) Generating the display signals
- d) None of the above

23. The display generator in a graphics system is used for:

- a) Generating character and curve primitives
- b) Handling interrupts and maintaining timings
- c) Interpreting display instructions
- d) None of the above

24. In a raster display system, the X and Y registers are used to store:

- a) The coordinate values of the screen pixels
- b) The color values for each pixel
- c) The memory addresses of the frame buffer
- d) None of the above

25. The process of fetching multiple adjacent pixel values from the frame buffer in a single access and storing them in a register is done to:

- a) Reduce the time required to access the frame buffer for each pixel
- b) Increase the refresh rate of the display
- c) Both a and b
- d) None of the above

26. In a look-up table approach for image representation, how many entries are typically used for a 24-bit color representation?

- a) 8 entries

- b) 256 entries
- c) 16.7 million entries
- d) None of the above

27. Which of the following statements about random scan displays (vector displays) is true?

- a) They can display realistic shaded scenes
- b) They produce smooth line drawings
- c) They are suitable for dynamic graphics applications
- d) Both b and c

28. The aspect ratio of a display refers to:

- a) The ratio of the width to the height of the display
- b) The resolution of the display
- c) The refresh rate of the display
- d) None of the above

29. In a graphics system, the display console typically contains:

- a) CRT, light pen, and keyboard
- b) Deflection system
- c) Both a and b
- d) None of the above

30. The persistence of a CRT monitor refers to:

- a) The duration of phosphorescence
- b) The resolution of the display

- c) The aspect ratio of the display
- d) None of the above

Here are the answers to the 30 multiple-choice questions:

- 1. d
- 2. a
- 3. b
- 4. c
- 5. a
- 6. c
- 7. b
- 8. a
- 9. c
- 10. a
- 11. a
- 12. c
- 13. a
- 14. b
- 15. c
- 16. b
- 17. b
- 18. a
- 19. c
- 20. a
- 21. a



22. a

23. a

24. a

25. c

26. b

27. b

28. a

29. c

30. a