

MCQs (1-15)

1. What are the elements of a multimedia system?

- a) Audio and video only
- b) Text, audio, graphics, animation, and video
- c) Interactivity and text only
- d) Only video and animation

Correct Answer: b) Text, audio, graphics, animation, and video

2. Which of these characteristics defines a multimedia system?

- a) Operates offline
- b) Handles information in analog form
- c) Processes and stores multimedia data
- d) Supports single data type

Correct Answer: c) Processes and stores multimedia data

3. Which is an example of a hypermedia application?

- a) Word Processor
- b) The World Wide Web
- c) Audio Recorder
- d) Scanner

Correct Answer: b) The World Wide Web

4. Linear multimedia content:

- a) Progresses with user control
- b) Requires no navigation control
- c) Is primarily interactive
- d) Contains hyperlinks

Correct Answer: b) Requires no navigation control

5. Which device is a capture device for multimedia systems?

- a) CD-ROM
- b) Video Camera
- c) HDTV Monitor
- d) Printer

Correct Answer: b) Video Camera

6. Hypermedia refers to:

- a) Text and hyperlinks only
- b) Multimedia presentations that include dynamic content
- c) Data formats such as PDFs
- d) A subset of hypertext

Correct Answer: b) Multimedia presentations that include dynamic content

7. Which is not a storage device used in multimedia?

- a) DVD-ROM
- b) Color Printer
- c) Hard Disk
- d) CD-ROM

Correct Answer: b) Color Printer

8. What does the term "sampling" refer to in image digitization?

- a) Assigning colors to pixels
- b) Measuring image brightness continuously
- c) Converting continuous data into discrete intervals
- d) Scaling image resolution up

Correct Answer: c) Converting continuous data into discrete intervals

9. What is the typical resolution in pixels for CD-quality audio?

- a) 8-bit at 8 kHz
- b) 16-bit at 44.1 kHz
- c) 24-bit at 192 kHz
- d) 32-bit at 96 kHz

Correct Answer: b) 16-bit at 44.1 kHz

10. Which multimedia format is best for animations and transparency?

- a) JPEG
- b) PNG
- c) BMP
- d) GIF

Correct Answer: d) GIF

11. What is the main feature of lossless compression?

- a) Removes insignificant details
- b) Reduces file size with data loss
- c) Retains all original data
- d) Best for audio files

Correct Answer: c) Retains all original data

12. What does a histogram provide in image processing?

- a) Spatial pixel locations
- b) Distribution of pixel intensities
- c) Color depth of an image
- d) File size reduction

Correct Answer: b) Distribution of pixel intensities

13. Which of the following image formats supports lossy compression?

- a) GIF
- b) BMP
- c) PNG
- d) JPEG

Correct Answer: d) JPEG

14. A typical binary image uses:

- a) 8 bits per pixel
- b) 1 bit per pixel
- c) 16 bits per pixel
- d) 24 bits per pixel

Correct Answer: b) 1 bit per pixel

15. In RGB color images, each pixel is typically represented by:

- a) 8 bits
- b) 16 bits
- c) 24 bits
- d) 32 bits

Correct Answer: c) 24 bits

MCQs (16-30)

16. What does the Nyquist theorem state about sampling?

- a) Sampling rate must be at least twice the signal frequency
- b) Signals can be sampled at half their frequency
- c) Analog signals require no sampling
- d) Sampling affects compression

Correct Answer: a) Sampling rate must be at least twice the signal frequency

17. Which file format was designed to replace GIFs?

- a) BMP
- b) JPEG
- c) PNG
- d) TIFF

Correct Answer: c) PNG

18. The term "quantization" in image processing refers to:

- a) Reducing sampling intervals
- b) Converting spatial resolution
- c) Assigning discrete intensity values to pixels
- d) Increasing file size

Correct Answer: c) Assigning discrete intensity values to pixels

19. What is the purpose of anti-aliasing filters in audio processing?

- a) Enhance sound waves
- b) Remove noise after compression
- c) Eliminate frequencies above the sampling limit
- d) Add dynamic effects to audio

Correct Answer: c) Eliminate frequencies above the sampling limit

20. Which type of multimedia is interactive?

- a) Linear content
- b) Analog videos
- c) Hypermedia
- d) Cinema presentations

Correct Answer: c) Hypermedia

21. In image digitization, what determines the number of gray levels?

- a) Sampling rate
- b) File format
- c) Quantization level
- d) Compression type

Correct Answer: c) Quantization level

22. Which multimedia application is aimed at improving user interaction?

- a) Static PDF files
- b) Video teleconferencing
- c) non-interactive videos
- d) Digital fashion systems

Correct Answer: b) Video teleconferencing

23. What does "dynamic media" include?

- a) Still images
- b) Text and graphics
- c) Video and animation
- d) Binary images

Correct Answer: c) Video and animation

24. Which compression method is best for graphics images?

- a) Huffman coding
- b) Run-length encoding
- c) Pattern substitution
- d) JPEG

Correct Answer: b) Run-length encoding

25. Which multimedia system feature ensures global usability?

- a) Interactive content
- b) Digital representation
- c) Universal access
- d) Content security

Correct Answer: c) Universal access

26. Which operation helps in feature detection for binary images?

- a) Logical AND
- b) Logical OR
- c) Logical XOR
- d) All of the above

Correct Answer: d) All of the above

27. What is an application of histogram modification?

- a) Reducing file size

- b) Adjusting image contrast
- c) Detecting motion
- d) Enhancing sound clarity

Correct Answer: b) Adjusting image contrast

28. Which of these is an example of lossless image format?

- a) JPEG
- b) PNG
- c) GIF
- d) TIFF

Correct Answer: d) TIFF

29. What is one use of histogram equalization?

- a) Compressing images
- b) Enhancing image contrast
- c) Creating grayscale images
- d) Removing image noise

Correct Answer: b) Enhancing image contrast

30. Which device transforms sound waves into electrical signals?

- a) Amplifier
- b) Microphone
- c) Speaker
- d) Analog filter

Correct Answer: b) Microphone