

Unit 01 Digital Content

Completion

1. _____ refers to the symbols that represent people, events, things, and ideas.

ANSWER: Data

True / False

2. Data refers to the symbols that represent people, events, things, and ideas.

a. True

b. False

ANSWER: True

Completion

3. Data becomes _____ when it is presented in a format that people can understand and use.

ANSWER: information

4. Data _____ refers to the form in which data is stored, processed, and transmitted.

ANSWER: representation

Multiple Choice

5. Digital data can be _____ that have been converted into discrete digits such as 0s and 1s.

a. text

b. numbers

c. graphics, sound, and video

d. all of the above

ANSWER: d

6. The process of converting information, such as text, numbers, photos, or music, into digital data that can be manipulated by electronic devices is called _____.

a. binary

b. digitization

c. representation

d. none of the above

ANSWER: b

True / False

7. A file name extension indicates the file format.

a. True

b. False

ANSWER: True

Completion

8. The 0s and 1s used to represent digital data are referred to as _____ digits.

ANSWER: binary

Multiple Choice

9. _____ data consists of numbers that can be used in arithmetic operations.

a. Text

b. Digital

c. Numeric

d. Binary

ANSWER: c

True / False

10. The binary number system has only two digits: 1 and 2.

a. True

b. False

ANSWER: False

Multiple Choice

11. The _____ number system allows digital devices to represent virtually any number simply by using 0s and 1s.

a. digital

b. text

c. numeric

d. binary

ANSWER: d

True / False

12. Character data is composed of letters, symbols, and numerals that are used in calculations.

a. True

b. False

ANSWER: False

Multiple Choice

13. ASCII requires _____ bits for each character.

- a. two
- b. six
- c. seven
- d. ten

ANSWER: c

14. Unicode uses _____ bits and provides codes for 65,000 characters.

- a. seven
- b. eight
- c. ten
- d. sixteen

ANSWER: d

True / False

15. Plain, unformatted text is sometimes called ASCII text.

- a. True
- b. False

ANSWER: True

16. ASCII text files contain formatting.

- a. True
- b. False

ANSWER: False

Completion

17. In a formatted text file, _____ signals the beginning and end of a formatting command.

ANSWER: delimiter, delimiters

True / False

18. All of the data stored and transmitted by digital devices is encoded as bits.

- a. True
- b. False

ANSWER: True

Multiple Choice

19. A group of eight bits is called a _____.

- a. byte
- b. megabit
- c. binary
- d. numeric data

ANSWER: a

20. Transmission speeds are expressed in _____, whereas storage space is expressed in _____.

- a. bits, bytes
- b. bytes, bits
- c. binary, numeric
- d. none of the above

ANSWER: a

Completion

21. Data _____ refers to any technique that recodes the data in a file so that it contains fewer bits.

ANSWER: compression

True / False

22. Lossy compression provides a way to compress data and reconstitute it into its original state.

- a. True
- b. False

ANSWER: False

23. Lossy compression throws away some of the original data during the compression process.

- a. True
- b. False

ANSWER: True

Multiple Choice

24. Compressed files usually have _____ at the end of the file name.

- a. .exe
- b. .zip
- c. .txt
- d. none of the above

ANSWER: b

25. _____ is music, speech, and other sounds represented in binary format for use in

digital devices.

- a. MIDI
- b. speech recognition
- c. speech synthesis
- d. Digital audio

ANSWER: d

Completion

26. To digitally record sound, _____ of a sound wave are collected at periodic intervals and stored as numeric data in an audio file.

ANSWER: samples, sample, sampling

Multiple Choice

27. Sampling _____ refers to the number of times per second that a sound is measured during the recording process.

- a. rate
- b. compression
- c. depth
- d. sound

ANSWER: a

True / False

28. To conserve space, applications that require high-quality sound use low sampling rates.

- a. True
- b. False

ANSWER: False

29. Regardless of sampling rate, digital audio file size can be reduced using audio compression techniques.

- a. True
- b. False

ANSWER: True

Multiple Choice

30. Most music for portable media players is stored in _____ audio file formats.

- a. uncompressed
- b. compressed
- c. lossless
- d. zipped

ANSWER: b

31. Digital audio is stored in a variety of file formats, including _____.

- a. WMA
- b. WAV
- c. MP3
- d. all of the above

ANSWER: d

32. Which of the following is NOT a format that is used for digital audio?

- a. MP3
- b. DOC
- c. WAV
- d. Ogg

ANSWER: b

Completion

33. A(n) _____ is software that works in conjunction with your computer's browser to manage and play audio that you are accessing from a Web page.

ANSWER: audio plugin

True / False

34. The technical term for ripping music tracks is digital audio extraction.

- a. True
- b. False

ANSWER: True

Completion

35. _____ specifies a standard way to store music data for synthesizers and computers.

ANSWER: MIDI

True / False

36. MIDI files are less compact than digital audio files.

- a. True
- b. False

ANSWER: False

37. One of the main disadvantages of MIDI is that it cannot produce vocals.

- a. True
- b. False

ANSWER: True

Multiple Choice

38. _____ enables people to control software with spoken commands, as well as dictate text into a word processing document.

- a. MIDI
- b. Speech synthesis
- c. Speech recognition
- d. Phonemes

ANSWER: c

Completion

39. _____ is the process by which machines produce sound that resembles spoken words.

ANSWER: Speech synthesis

True / False

40. Text-to-speech software analyzes the words in a section of text, finds corresponding phonemes, and combines them into sentences for output.

- a. True
- b. False

ANSWER: True

Completion

41. Speech recognition software analyzes the sounds of your voice and converts each word into groups of _____.

ANSWER: phonemes, phoneme

True / False

42. A bitmap graphic is composed of a grid of tiny rectangular cells.

- a. True
- b. False

ANSWER: True

43. Digital photographs are stored as bitmap files.

- a. True
- b. False

ANSWER: True

Completion

44. In a digital camera, a CCD's _____ correspond to pixels.

ANSWER: photosites, photosite

Multiple Choice

45. Which of the following is NOT a type of bitmap format?

- a. TIFF
- b. RAW
- c. PNG
- d. ZIP

ANSWER: d

Completion

46. Bitmap images are formed by a grid of ____.

ANSWER: pixels

Multiple Choice

47. Today's color display devices represent color using the _____ color model.

- a. RGB
- b. PNG
- c. BMP
- d. none of the above

ANSWER: a

48. The number of colors available in a graphic is referred to as color _____.

- a. depth
- b. range
- c. RGB
- d. PNG

ANSWER: a

True / False

49. 8-bit color depth is also called True Color.

- a. True
- b. False

ANSWER: False

Completion

50. The dimensions of the grid that forms a bitmap graphic are referred to as image _____.

ANSWER: resolution

True / False

51. Bitmap graphics are resolution dependent because each element is a discrete pixel.

a. True

b. False

ANSWER: True

Completion

52. An undesirable jagged appearance of a graphics image is referred to as _____.

ANSWER: pixelation

Multiple Choice

53. Most graphics software uses a process called pixel _____ to create new pixels by averaging the colors of nearby pixels.

a. polarization

b. interpolation

c. compression

d. resolution

ANSWER: b

Completion

54. Image _____ refers to any technique that recodes the data in an image file so that it contains fewer bits.

ANSWER: compression

True / False

55. TIFF, PNG, and GIF graphics formats offer lossy compression.

a. True

b. False

ANSWER: False

56. JPEG files are compressed using lossy compression.

a. True

b. False

ANSWER: True

57. Lossy compression techniques discard some data from an image to shrink its file size.

- a. True
- b. False

ANSWER: True

Completion

58. Bitmap graphics are coded as a series of bits. Each bit represents the color of one

_____.

ANSWER: pixel

59. Image editors provide an image _____ that can be used to adjust the brightness values for various ranges of dark, mid-range, or light pixels

ANSWER: histogram

Multiple Choice

60. In the context of bitmap graphics editing, what technique employs algorithms that pull pixels from one area of an image and then apply them to another area?

- a. inpainting
- b. cloning
- c. noise reduction
- d. image enhancement

ANSWER: b

Completion

61. A clipping _____ essentially cuts an object out of an image and knocks out the background to make it transparent.

ANSWER: path

Multiple Choice

62. What is the term used to describes altering the pixel colors where the edges of the object and the background meet, so that the object appears to merge with the background?

- a. Alpha blending
- b. Clipping path
- c. Cloning
- d. Inpainting

ANSWER: a

True / False

63. A vector graphic consists of a set of instructions for creating a picture.

- a. True
- b. False

ANSWER: True

64. Instead of storing the color value for each pixel, a vector graphics file contains instructions that a computer uses to create the shape, size, position, and color for each object in an image.

- a. True
- b. False

ANSWER: True

Completion

65. When you change the size of a(n) _____ graphic, the objects change proportionally and maintain their smooth edges.

ANSWER: vector

True / False

66. Vector graphics usually require more storage space than bitmaps.

- a. True
- b. False

ANSWER: False

Multiple Choice

67. Which of the following options are well suited for using vector graphics?

- a. line art
- b. logos
- c. diagrams
- d. all of the above

ANSWER: d

True / False

68. All bitmap graphics are photos.

- a. True
- b. False

ANSWER: False

Multiple Choice

69. Which of the following file extensions is NOT a vector graphic?

- a. .svg
- b. .eps
- c. .tif
- d. .ai

ANSWER: c

True / False

70. Both scanners and digital cameras produce vector graphics.

- a. True
- b. False

ANSWER: False

Multiple Choice

71. What is another term for vector graphics software?

- a. Drawing software
- b. Photo editing software
- c. Digital compositing
- d. All of the above

ANSWER: a

Completion

72. A vector graphic can be converted into a bitmap graphic through a process called _____.

ANSWER: rasterizing, rasterization

True / False

73. After a vector graphic is converted to a bitmap, the resulting graphic no longer has the qualities of a vector graphic.

- a. True
- b. False

ANSWER: True

Multiple Choice

74. 3-D graphics are based on vectors stored as a set of instructions describing the coordinates for lines and shapes in a three-dimensional space. What do these vectors

form?

- a. a bitmap graphic
- b. a zipped file
- c. a wireframe
- d. all of the above

ANSWER: c

Completion

75. The process of covering a wireframe with surface color and texture is called _____.

ANSWER: rendering, render

Multiple Choice

76. Which of the following is the technique for adding light and shadows to a 3-D image?

- a. rendering
- b. ray tracing
- c. wireframe
- d. rasterize

ANSWER: b

True / False

77. 3-D graphics can be animated.

- a. True
- b. False

ANSWER: True

Multiple Choice

78. Which of the following tools would be found in 3-D graphics software?

- a. rendering tools
- b. ray tracing tools
- c. surface texture tools
- d. all of the above

ANSWER: d

True / False

79. Digital video uses bits to store color and brightness data for each video frame.

- a. True
- b. False

ANSWER: True

Completion

80. Analog footage can be digitized using video ____ equipment.

ANSWER: capture

81. Digital _____ captures moving images as bits, rather than on film.

ANSWER: cinematography

Multiple Choice

82. Digital video is a core technology for which of the following?

- a. digital television
- b. videoconferencing systems
- c. video messaging
- d. all of the above

ANSWER: d

83. Which of the following is NOT a factor in the quality of digital video?

- a. frame rate and resolution
- b. color and bit depth
- c. compression technique
- d. memory technology in your camera

ANSWER: d

Completion

84. In digital video, each bitmap image is referred to as a(n) _____.

ANSWER: frame

Multiple Choice

85. The number of frames that are displayed per second is measured in _____.

- a. compression
- b. fps
- c. color depth
- d. bps

ANSWER: b

True / False

86. Digital videos look sharpest when they are displayed at a resolution that is larger than the frame size.

- a. True
- b. False

ANSWER: False

87. Video resolutions can be expressed as width x height.

- a. True
- b. False

ANSWER: True

Multiple Choice

88. Today's widescreen devices, such as laptops and smartphones, are designed for the 16:9 _____.

- a. resolution
- b. aspect ratio
- c. frame rate
- d. all of the above

ANSWER: b

Completion

89. When 4:3 videos are displayed in a widescreen player, they are bordered by the black bars of a(n) _____.

ANSWER: letterbox

True / False

90. In digital video, as long as the proportion of horizontal and vertical pixels remains the same, the aspect ratio is consistent.

- a. True
- b. False

ANSWER: True

Multiple Choice

91. _____ is the number of bits that are processed during a specific unit of time, usually during one second.

- a. Bit rate
- b. Bit depth
- c. Color depth
- d. none of the above

ANSWER: a

Completion

92. Bit rate can be scaled down by reducing the resolution and applying _____

techniques.

ANSWER: compression

True / False

93. In digital video, a lower resolution reduces the bit rate.

a. True

b. False

ANSWER: True

Completion

94. _____ compression can be applied to each frame of a video.

ANSWER: Intraframe

95. _____ compression stores only the pixels that change color from one frame to the next.

ANSWER: Interframe

96. Video compression can be expressed as a compression _____.

ANSWER: ratio

Multiple Choice

97. A(n) _____ is the software that compresses a video stream when a video is stored, and decompresses the file when the video is played.

a. compression

b. codec

c. bitmap

d. resolution

ANSWER: b

Completion

98. Video files are stored in _____ formats that hold the compressed video stream and an audio stream.

ANSWER: container

Multiple Choice

99. Which of the following is NOT a type of digital video container file?

a. MP4

b. AVI

- c. VOB
- d. PNG

ANSWER: d

True / False

100. Transcoding digital videos does not cause a loss of quality.

- a. True
- b. False

ANSWER: False