

Name: _____ Class: _____ Date: _____

Unit 01 Digital Content

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

ANSWER: Data

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

a. True

b. False

ANSWER: True

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

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

7. A file name extension indicates the file format.

a. True

b. False

ANSWER: True

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

ANSWER: binary

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

a. Text

b. Digital

c. Numeric

d. Binary

ANSWER: c

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

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a. True

b. False

ANSWER: False

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

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

a. True

b. False

ANSWER: False

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

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

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

ANSWER: delimiter, delimiters

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

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- a. True
- b. False

ANSWER: True

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

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

ANSWER: compression

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

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

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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

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

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

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

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

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

- a. True
- b. False

ANSWER: True

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

ANSWER: MIDI

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

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

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

ANSWER: Speech synthesis

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

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

ANSWER: phonemes, phoneme

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

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b. False

ANSWER: True

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

ANSWER: photosites, photosite

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

a. TIFF

b. RAW

c. PNG

d. ZIP

ANSWER: d

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

ANSWER: pixels

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

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

a. True

b. False

ANSWER: False

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

ANSWER: resolution

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

a. True

b. False

ANSWER: True

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

ANSWER: pixelation

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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

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

ANSWER: compression

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

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

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

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

ANSWER: path

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

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that the object appears to merge with the background?

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

ANSWER: a

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

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

ANSWER: vector

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

- a. True
- b. False

ANSWER: False

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

68. All bitmap graphics are photos.

- a. True
- b. False

ANSWER: False

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

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

ANSWER: c

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70. Both scanners and digital cameras produce vector graphics.

- a. True
- b. False

ANSWER: False

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

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

ANSWER: rasterizing, rasterization

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

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

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

ANSWER: rendering, render

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

77. 3-D graphics can be animated.

- a. True
- b. False

ANSWER: True

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

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

ANSWER: d

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

- a. True
- b. False

ANSWER: True

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

ANSWER: capture

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

ANSWER: cinematography

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

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

ANSWER: frame

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

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

ANSWER: b

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

- a. True
- b. False

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ANSWER: False

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

- a. True
- b. False

ANSWER: True

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

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

ANSWER: letterbox

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

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

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

ANSWER: compression

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

- a. True
- b. False

ANSWER: True

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 _____.

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ANSWER: ratio

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

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

ANSWER: container

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

- a. MP4
- b. AVI
- c. VOB
- d. PNG

ANSWER: d

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

- a. True
- b. False

ANSWER: False