CHAPTER 6:
GRAPHICS, DIGITAL MEDIA, AND MULTIMEDIA

Multiple Choice:

1. ____________ created the World Wide Web, the URL scheme, HTML and HTTP
   
   A. Bill Gates
   B. Andy Grove
   C. Jeff Bezos
   D. Tim Berners-Lee

   Answer: D   Reference: Tim Berners-Lee Weaves the Web for Everybody   Difficulty: Challenging

2. Pixels are:
   
   A. dots of ink from an inkjet printer.
   B. dots on a computer screen arranged in rows.
   C. points of light used by a cordless, wireless, optical mouse.
   D. points on the end of a PDA handheld device.

   Answer: B   Reference: Painting: Bitmapped Graphics   Difficulty: Easy

3. A bit can contain one of two possible values:
   
   A. 0 or 1.
   B. 0 or 256.
   C. 1 or 2.
   D. A or B.

   Answer: A   Reference: Painting: Bitmapped Graphics   Difficulty: Easy
4. When a program assigns 8 bits to a pixel, that pixel can display one of up to __________ different shades of gray.
   A. 8
   B. 64
   C. 256
   D. 1,024
   Answer: C  Reference: Painting: Bitmapped Graphics  Difficulty: Challenging

5. The density of pixels on a screen is known as:
   A. resolution.
   B. pixility.
   C. pixel depth.
   D. “jaggies”.
   Answer: A  Reference: Painting: Bitmapped Graphics  Difficulty: Moderate

6. The number of bits devoted to each pixel is called:
   A. resolution.
   B. bit depth.
   C. byte depth.
   D. vector graphics.
   Answer: B  Reference: Painting: Bitmapped Graphics  Difficulty: Moderate

7.  A(n) __________ graphic is composed of a grid of dots.
   A. roster
   B. vector
   C. object-oriented
   D. bitmap
   Answer: D  Reference: Painting: Bitmapped Graphics  Difficulty: Moderate
8. A bitmap graphic is also called a(n) ____________ graphic.
   A. vector
   B. raster
   C. analog
   D. 3-D
   **Answer: B**  **Reference:** Painting: Bitmapped Graphics  **Difficulty:** Moderate

9. Software that stores lines and shapes rather than individual pixels is known as:
   A. vector graphics software.
   B. raster graphics software.
   C. bit-mapped graphics software.
   D. resolution software.
   **Answer: A**  **Reference:** Drawing: Object-Oriented Graphics  **Difficulty:** Moderate

10. ____________ is a standard page-description language built into many high-end output devices.
    A. Subscript
    B. XML
    C. HTML
    D. PostScript
    **Answer: D**  **Reference:** Drawing: Object-Oriented Graphics  **Difficulty:** Easy

11. An artist can use ____________ software to draw, rotate, stretch and combine model objects inside a complex “walk through” environment.
    A. 3-D modeling
    B. photo database
    C. photo management
    D. CAM
    **Answer: A**  **Reference:** 3-D Modeling Software  **Difficulty:** Moderate
12. CAD software is primarily used in:
   A. engineering.
   B. software development.
   C. desktop publishing.
   D. accounting.
   Answer: A  
   Reference: CAD/CAM: Turning Pictures into Products  Difficulty: Moderate

13. CAD stands for:
   A. central-assisted design.
   B. computer application design.
   C. computer-aided database.
   D. computer-aided design.
   Answer: D  
   Reference: CAD/CAM: Turning Pictures into Products  Difficulty: Moderate

14. CAM stands for:
   A. computer-assembly manufacturing.
   B. computer application and manifestation.
   C. computer-aided manufacturing.
   D. computer application and marketing.
   Answer: C  
   Reference: CAD/CAM: Turning Pictures into Products  Difficulty: Moderate

15. Guidelines for creating a first-rate PowerPoint presentation include all of the following EXCEPT:
   A. consider using predesigned templates for a consistent design.
   B. focus each slide on one idea.
   C. limit yourself to seven lines per list.
   D. use a large variety and quantity of sounds, animation, and fonts.
   Answer: D  
   Reference: Working Wisdom: Making Powerful Presentations  Difficulty: Easy
16. PowerPoint is an example of:
   A. presentation graphics software.
   B. animation software.
   C. photo management software.
   D. 3-D modeling software.

   **Answer:** A  **Reference:** Presentation Graphics: Bringing Lectures to Life  **Difficulty:** Easy

17. The creation of a presentation of slides is done using:
   A. desktop publishing software.
   B. picture editing software.
   C. presentation graphics software.
   D. 3-D modeling software.

   **Answer:** C  **Reference:** Presentation Graphics: Bringing Lectures to Life  **Difficulty:** Easy

18. The free add-on program for PowerPoint called ________ lets users publish video presentations to the Web or CD/DVD.
   A. Flash
   B. Producer
   C. FrontPage
   D. Director MX

   **Answer:** B  **Reference:** Presentation Graphics: Bringing Lectures to Life  **Difficulty:** Challenging

19. Programs such as PowerPoint are also known as:
   A. 3-D modeling software.
   B. vector graphics programs.
   C. Web design tools.
   D. multimedia-presentation tools.

   **Answer:** D  **Reference:** Presentation Graphics: Bringing Lectures to Life  **Difficulty:** Moderate
20. The creation of motion from still pictures is called:
   A. sampling.
   B. 3-D modeling.
   C. transition.
   D. animation.

**Answer:** D  **Reference:** Animation: Graphics in Time  **Difficulty:** Moderate

21. In comparison to animated GIFs, vector-graphics animations
   A. download slower.
   B. occupy more space.
   C. describe images in terms of objects and locations.
   D. describe images in terms of colored pixels.

**Answer:** C  **Reference** Animation: Graphics in Time  **Difficulty:** Challenging

22. Hardware used to convert analog signals into digital data is called a(n)
   A. analoger.
   B. digitizer.
   C. FireWire medium.
   D. broadcast converter.

**Answer:** B  **Reference:** Analog and Digital Video  **Difficulty:** Moderate

23. When you use a digital camera, your photo is stored as a __________ image.
   A. bitmapped
   B. vector
   C. raster
   D. roster

**Answer:** A  **Reference:** Image Processing: Photographic Editing by Computer  **Difficulty:** Easy
24. When something is displayed at the same time as it is created, accessed, or imported, it is known as:

A. digital time.
B. real time.
C. online time.
D. batch time.

Answer: B  Reference: Analog and Digital Video  Difficulty: Moderate

25. A video project usually starts with an outline and a ____________ that describes the action.

A. story edit
B. flow chart
C. storyboard
D. flow script

Answer: C  Reference: Video Production Goes Digital  Difficulty: Easy

26. Adobe Premiere, Apple iMovie, and Microsoft Windows Movie Maker 2 are examples of ____________ software.

A. video editing
B. presentation
C. graphics
D. digital camera

Answer: A  Reference: Video Production Goes Digital  Difficulty: Easy

27. What is the process that condenses files so they can be stored in less space and transmitted over the Internet at a faster rate?

A. Data downloading
B. Data compression
C. Digitization
D. Defragmentation

Answer: B  Reference: How It Works: Data Compression  Difficulty: Moderate
28. Before condensed files can be opened and used, they must be:
   A. decompressed.
   B. zipped.
   C. upgraded.
   D. defragmented.
Answer: A  Reference: How It Works: Data Compression  Difficulty: Moderate

29. Computer sounds can be synthesized or:
   A. morphed.
   B. animated.
   C. analoged.
   D. digitized.
Answer: D  Reference: The Synthetic Musician: Computers and Audio  Difficulty: Easy

30. The process of copying files to a CD is known as:
   A. burning.
   B. zipping.
   C. digitizing.
   D. ripping.
Answer: A  Reference: Digital Audio Basics  Difficulty: Easy

31. All EXCEPT __________ can squeeze music files into a fraction of their original size.
   A. AAC
   B. MP3
   C. WMA
   D. P2P
Answer: D  Reference: Digital Audio Basics  Difficulty: Challenging
32. Music played on a computer but never downloaded is known as:
   A. P2P.
   B. streaming.
   C. MP3.
   D. electronica.

   **Answer:** B **Reference:** Working Wisdom: Digital Audio Do’s and Don’ts  
   **Difficulty:** Moderate

33. Streaming audio
   A. stops playing when the user disconnects from the Internet.
   B. is automatically stored on the local computer.
   C. must be recorded and played using a synthesizer.
   D. must be stored on a MIDI instrument.

   **Answer:** A **Reference:** Working Wisdom: Digital Audio Do’s and Don’ts  
   **Difficulty:** Moderate

34. The following are all used to compress music files EXCEPT:
   A. Advanced Audio Codec
   B. MP3
   C. Windows Media Audio
   D. MIDI

   **Answer:** D **Reference:** Digital Audio Basics  
   **Difficulty:** Moderate

35. _________ commands can be interpreted by a variety of music synthesizers.
   A. Windows Media Audio
   B. MIDI
   C. MP3
   D. Advanced Audio Codec

   **Answer:** B **Reference:** Samplers, Synthesizers, and Sequencers: Digital Audio and MIDI  
   **Difficulty:** Easy
36. MIDI stands for:
   A. Multimedia Instruction and Digital Interface.
   C. Musical Integrated Direct Interface.
   D. Musical Interface Digitally Integrated.

   **Answer:** B  **Reference:** Samplers, Synthesizers, and Sequencers: Digital Audio and MIDI
   **Difficulty:** Moderate

37. A standard interface used to send commands between computers and musical instruments is:
   A. Hypermedia.
   B. RealAudio.
   C. MIDI.
   D. AAC.

   **Answer:** C  **Reference:** Samplers, Synthesizers, and Sequencers: Digital Audio and MIDI
   **Difficulty:** Moderate

38. Hypertext was developed to allow textual information to be linked in a ____________ manner.
   A. sequential
   B. real time
   C. nonsequential
   D. linear

   **Answer:** C  **Reference:** Hypertext and Hypermedia
   **Difficulty:** Moderate

39. The term ____________ refers to a combination of text, graphics, animation, video, music, voice, and sound effects used to communicate a message.
   A. multitasking
   B. hyperlinking
   C. multicasting
   D. multimedia

   **Answer:** D  **Reference:** Interactive Multimedia: What Is It?
   **Difficulty:** Easy
40. The ___________ world creates the illusion of immersion.
   A. virtual
   B. hypermedia
   C. MIDI
   D. CIM

Answer: A  Reference: Inventing the Future: Shared Virtual Spaces  Difficulty: Easy

41. ___________ combines virtual reality techniques with new vision technologies allowing users to move around in shared virtual spaces, while keeping their unique points of view.
   A. Streaming
   B. Hypermedia
   C. CAM
   D. Tele-immersion

Answer: D  Reference: Inventing the Future: Shared Virtual Spaces  Difficulty: Easy

Fill in the Blank:

42. ___________ was the developer of HTTP, HTML and the Web.

Answer: Tim Berners-Lee  Reference: Tim Berners-Lee Weaves  Difficulty: Challenging

43. The ___________ is an organization dedicated to helping evolve the Web in positive directions.

Answer: W3C or World Wide Web Consortium  Reference: Tim Berners-Lee Weaves  Difficulty: Challenging

44. A picture shown on a computer screen is made up of a number of dots called ___________.

Answer: pixels  Reference: Painting: Bitmapped Graphics  Difficulty: Moderate

45. Bitmapped graphics are also called ___________ graphics.

Answer: raster  Reference: Painting: Bitmapped Graphics  Difficulty: Challenging

46. The number of bits devoted to each pixel is called ___________.

Answer: bit depth or color depth  Reference: Painting: Bitmapped Graphics  Difficulty: Challenging
47. The density of the pixels for a monitor is known as _________.

   **Answer:** resolution  **Reference:** Painting: Bitmapped Graphics  **Difficulty:** Moderate

48. DPI stands for _________.

   **Answer:** dots per inch  **Reference:** Painting: Bitmapped Graphics  **Difficulty:** Moderate

49. ________ photographs, drawings, text, or company logos should not be used without permission from the creator.

   **Answer:** Copyrighted  **Reference:** Working Wisdom: Creating Smart Art  **Difficulty:** Easy

50. ________ software allows a photographer to manipulate digital photos and other high-resolution images with tools similar to those found in paint programs.

   **Answer:** Image-processing  **Reference:** Image Processing: Photographic Editing by Computer  **Difficulty:** Challenging

51. When printing an object-oriented graphic, resolution is limited only by the ________ device.

   **Answer:** output  **Reference:** Drawing: Object-Oriented Graphics  **Difficulty:** Moderate

52. ________ graphic software stores a picture not as a collection of dots, but as a collection of lines and shapes.

   **Answer:** Vector or object-oriented  **Reference:** Drawing: Object-Oriented Graphics  **Difficulty:** Moderate

53. A standard page-description language for describing text fonts, illustrations, and other elements of the printed page is called _________.

   **Answer:** PostScript  **Reference:** Drawing: Object-Oriented Graphics  **Difficulty:** Challenging

54. ________ software is used by engineers to design products.

   **Answer:** CAD  **Reference:** CAD/CAM: Turning Pictures into Products  **Difficulty:** Moderate

55. ________ software is used to control manufacturing of products.

   **Answer:** CAM  **Reference:** CAD/CAM: Turning Pictures into Products  **Difficulty:** Moderate

56. CIM stands for _________.

   **Answer:** computer-integrated manufacturing  **Reference:** CAD/CAM: Turning Pictures into Products  **Difficulty:** Moderate

57. The combination of CAD and CAM is called _________.

   **Answer:** CIM  **Reference:** CAD/CAM: Turning Pictures into Products  **Difficulty:** Moderate
58. SVG stands for ____________.


59. A(n) ____________ converts analog video signals from a TV broadcast or videotape into digital data.

Answer: video digitizer  Reference: Analog and Digital Video  Difficulty: Moderate

60. In ____________ time, a video digitizer imports signals from a source and displays them on the computer screen immediately.

Answer: real  Reference: Analog and Digital Video  Difficulty: Moderate

61. When a video clip merges and transforms into another image, it is known as ____________.

Answer: morphing  Reference: Video Production Goes Digital  Difficulty: Moderate

62. A(n) ____________ describes the action, dialogue and music for each scene of a video.

Answer: storyboard  Reference: Video Production Goes Digital  Difficulty: Moderate

63. ____________ rate refers to the number of sound “snapshots” the sound recording equipment takes each second.

Answer: Sampling  Reference: Digital Audio Basics  Difficulty: Moderate

64. To compress a word into a two-byte code, the computer looks up every word in the code ____________.

Answer: dictionary  Reference: How it Works: Data Compression  Difficulty: Moderate

65. ____________ is the standard interface which enables a computer to connect to different digital musical instruments.

Answer: MIDI  Reference: Samplers, Synthesizers, and Sequencers: Digital Audio and MIDI  Difficulty: Easy

66. Electronica is sequenced music that is designed from the ground up with ____________ audio technology.

Answer: digital  Reference: Digital Audio Do’s and Don’ts  Difficulty: Moderate

67. When using MIDI instruments, ____________ is used to correct a musician’s timing.

Answer: quantizing  Reference: How It Works: Computer-Based Music Production  Difficulty: Challenging

68. In 1987, Apple introduced HyperCard, a(n) ____________ system that combined text, numbers, graphics, animations, sound effects, music and other media into hyperlinked documents.

Answer: hypermedia  Reference: Hypertext and Hypermedia  Difficulty: Moderate
69. __________ software is used to create and edit documents that can include graphics, text, video clips and sounds.

Answer: Multimedia authoring  Reference: Multimedia Authoring: Making Mixed Media  Difficulty: Moderate

70. __________ combines virtual reality techniques with new vision technologies so that a user can keep his/her own perspective while moving around virtual spaces that he/she is sharing with others.


71. __________ reality is the use of a computer display to add virtual information to a user’s sensory perceptions.

Answer: Augmented  Reference: Inventing the Future: Shared Virtual Spaces  Difficulty: Challenging

72. AR stands for __________.


Matching:

73. Match the following software programs with their capabilities:

   I. image-processing software  
      A. can store a picture as a collection of lines and shapes

   II. painting software  
       B. can create pixels on the screen using a pointing device

   III. sequencing software  
        C. can eliminate “red eye” and brush away blemishes

   IV. drawing software  
       D. can create objects or models that can be rotated or stretched

   V. 3-D modeling software  
       E. can turn a computer into a musical composing, recording, and editing machine

   VI. presentation-graphics software  
        F. can automate the creation of visual aids for lectures

Answers: C, B, E, A, D, F  Reference: Multiple locations  Difficulty: Challenging
74. Match the following software programs with their capabilities:

I. CIM 
   A. squeezes data into smaller sizes

II. compression software 
   B. used to automate a factory using computers to both
design and manufacture

III. CAD 
   C. used to control the manufacturing of parts

IV. video-editing software 
   D. helps automate the creation of visual aids for lectures,
speeches, etc.

V. CAM 
   E. used by engineers and designers to design products

VI. presentation-graphics software 
   F. used to combine clips into coherent scenes, splice together
   scenes, and insert visual transitions

Answers: B, A, E, F, C, D

Reference: Multiple locations

Difficulty: Challenging

75. Match the following terms to their meanings:

I. compressing 
   A. expanding a file into its original form

II. streaming 
   B. combining text, graphics, animation, video, music, and
   voice

III. multimedia 
   C. playing audio or video in real time

IV. decompressing 
   D. squeezing data into a smaller file

V. morphing 
   E. transforming an audio signal into a sound file

VI. sampling 
   F. displaying images as they are imported

VII. real time 
   G. changing and merging one computer image into another

Answers: D, C, B, A G, E, F

Reference: Multiple locations

Difficulty: Moderate