

Chapter 01: Introduction to the World of Technology

True / False

1. Just as you can learn to drive a car without knowing much about car engines, you can learn to use a computer without understanding the technical details of how a computer works.

- a. True
- b. False

ANSWER: True

2. Computer literacy is knowing about and understanding computers and their uses.

- a. True
- b. False

ANSWER: True

3. A computer does not always do whatever the instructions, or program, tell it to do.

- a. True
- b. False

ANSWER: False

4. Information processing is a vital activity today for all computer users, as well as for businesses and other organizations.

- a. True
- b. False

ANSWER: True

5. The slide rule is considered by many to be the earliest recorded calculating device.

- a. True
- b. False

ANSWER: False

6. Fourth-generation computers witnessed the development of computer networks, wireless technologies, and the Internet.

- a. True
- b. False

ANSWER: True

7. The external hardware components are located inside the main box or system unit of the computer.

- a. True
- b. False

ANSWER: False

8. Storage devices are used to store data on or access data from storage media, such as DVD discs and flash memory cards.

- a. True
- b. False

ANSWER: True

9. To begin to use a computer, the user first turns on the power by pressing the power button, and then the computer displays a prompt for the user to decide the next course of action.

- a. True
- b. False

ANSWER: False

10. There are application programs that help users write their own programs in a form the computer can understand using a programming language.

- a. True
- b. False

ANSWER: True

11. In addition to hardware, software, data, and procedures, the fifth major component of a computer system are codes.

- a. True
- b. False

ANSWER: False

12. Systems analysts design computer systems to be used within their companies.

- a. True
- b. False

ANSWER: True

13. Embedded computers are computers that host data and programs available to a small group of users.

- a. True
- b. False

ANSWER: False

14. Notebook computers (also called laptops) are about the size of a paper notebook and open to reveal a screen and keyboard.

- a. True
- b. False

ANSWER: True

15. Tablet computers are typically about the size of a notebook computer and are designed to be used with a digital pen/stylus or touch input.

- a. True
- b. False

ANSWER: True

16. A mainframe computer is a powerful computer used in many large organizations that need to manage large amounts of centralized data.

- a. True
- b. False

ANSWER: True

17. Small office networks enable workers to access company records stored on a network server.

- a. True
- b. False

ANSWER: True

18. Once you have an Internet connection, you are ready to begin programming the Web—that is, to use a Web browser to view Web pages.

- a. True
- b. False

ANSWER: False

19. Web browsers maintain a History list, which is a record of all Web pages visited during the period of time specified in the browser settings.

- a. True
- b. False

ANSWER: True

20. Satellite communication (more commonly called s-com) is the process of exchanging electronic messages between individuals over a network—usually the Internet.

- a. True
- b. False

ANSWER: False

21. Wireless networking allows the use of computers in virtually any location.

-
- a. True
 - b. False

ANSWER: True

22. A(n) display screen is a programmable, electronic device that accepts data, performs operations on that data, presents the results, and stores the data or results as needed.

-
- a. True
 - b. False

ANSWER: False

23. A user inputs data into a computer, and then the computer processes it.

-
- a. True
 - b. False

ANSWER: True

24. Dr. Herman Hollerith's Punch Card Tabulating Machine and Sorter was the first electromechanical machine that could read slide rules. _____

- a. True
- b. False

ANSWER: False

25. Fourth-generation computers typically use a keyboard and mouse for input, a monitor and printer for output, and hard drives, flash memory media, and optical discs for storage. _____

- a. True
- b. False

ANSWER: True

26. Communications hardware includes modems, network projectors, and routers.

-
- a. True
 - b. False

ANSWER: False

27. The background work area displayed on the screen for computers running Microsoft Windows is called the desktop. _____

- a. True
- b. False

ANSWER: True

28. Computer programmers are the people who use computers to perform tasks or obtain information. _____

- a. True
- b. False

ANSWER: False

29. Mobile tablets are extremely powerful computers used for complex computations and processing. _____

a. True

b. False

ANSWER: False

30. The ISP is the largest and most well-known computer network in the world.

a. True

b. False

ANSWER: False

31. IP addresses and their corresponding domain names are used to identify computers available through the Internet. _____

a. True

b. False

ANSWER: True

32. An e-mail address consists of a(n) username, followed by the @ symbol, followed by the domain name for the computer that will be handling that person's e-mail (called a mail server). _____

a. True

b. False

ANSWER: True

33. Spam refers to harmful programs that can be installed on our computers without our knowledge. _____

a. True

b. False

ANSWER: False

34. Abbreviations or acronyms, such as BTW for "between the words," are commonly used to save time in all types of communications today. _____

a. True

b. False

ANSWER: False

35. Independent Web sites such as Snopes.com reports on the sources of current online rumors and stories. _____

a. True

b. False

ANSWER: False

Multiple Choice

36. Fifty years ago, computers were used primarily by researchers and ____.

- a. musicians
- b. scientists
- c. writers
- d. designers

ANSWER: b

37. In the early 1980s, ____ were invented and computer use increased dramatically.

- a. printers
- b. networks
- c. microcomputers
- d. computers

ANSWER: c

Computing technologies make it possible to have ____, traditional appliances with some type of built-in computer or communications technology.

38. Computing technologies make it possible to have , traditional appliances with some type of built-in ...

- a. design appliances
- b. smart computers
- c. home computers
- d. smart appliances

ANSWER: d

39. Many schools, particularly college campuses, today have wireless ____ that allow students to connect their devices wirelessly to the Internet and to campus resources from anywhere on campus.

- a. hotspots
- b. hotpoints
- c. com spots
- d. com points

ANSWER: a

40. Access control at many businesses and organizations is provided by ____, which allow only authorized individuals to enter an office building, punch in or out of work, or access the company network via an access card or a fingerprint or hand scan.

- a. bar codes
- b. virtual reality glasses
- c. collaboration systems
- d. authentication systems

ANSWER: d

41. ____ occurs when data is entered into the computer.

- a. Output
- b. Processing
- c. Input
- d. Storage

ANSWER: c

42. In addition to the four primary computer operations, today's computers almost always perform ____ functions.

- a. punching
- b. communications
- c. sorting
- d. programming

ANSWER: b

43. When data is processed into a meaningful form, it becomes ____.

- a. information
- b. code
- c. a program
- d. a database

ANSWER: a

44. Hollerith's machine was used to process the 1890 U.S. Census data in ____, as opposed to the decade it usually took to process the data manually.

- a. two and one-half years
- b. six and one-half years
- c. four and one-half years
- d. eight and one-half years

ANSWER: a

Integrated circuits incorporate many transistors and electronic circuits on a single tiny silicon chip, allowing ____ to be even smaller and more reliable than earlier computers.

45. Integrated circuits incorporate many transistors and electronic circuits on a single tiny silicon ch...

- a. second-generation computers
- b. third-generation computers
- c. fourth-generation computers
- d. fifth-generation computers

ANSWER: b

Common input devices include the keyboard, ____, and integrated video cameras.

46. Common input devices include the keyboard and

- a. printer
- b. mouse
- c. speaker
- d. monitor

ANSWER: b

A variety of ____ and network adapters are available to communicate electronically because there are different types of Internet and network connections.

47. A variety of ____ and network adapters are available because there are different types of Internet and network connections.

- a. punch cards
- b. licenses
- c. monitors
- d. modems

ANSWER: d

48. The term ____ refers to the programs or instructions used to tell the computer hardware what to do.

- a. hardware
- b. port
- c. software
- d. adapter

ANSWER: c

49. ____ that allow individuals to perform specific tasks are launched via the operating system, such as by using the Windows Start menu on Windows computers.

- a. Clouds
- b. Protocols
- c. Routers
- d. Apps

ANSWER: d

50. Application programs can help users write their own programs in a form the computer can understand using a programming language such as Visual Basic, COBOL, C++, Java, or ____.

- a. Virtual D
- b. Virtual RPG
- c. Fort
- d. Python

ANSWER: d

51. Some languages are traditional programming languages for developing applications; others, such as markup and scripting languages like HTML, XHTML, and ____, are designed to be used to create Web pages.

- a. TCP/IP
- b. Rextore
- c. PDF
- d. JavaScript

ANSWER: d

52. A ____ is loosely defined as a small device that has built-in computing or Internet capability.

- a. mainframe computer
- b. midrange server
- c. mobile device
- d. personal computer

ANSWER: c

53. Because many mobile devices and personal computers today are continually connected to the Internet, securing those devices against computer viruses and ____ is essential for both individuals and businesses.

- a. hackers
- b. scripts
- c. booters
- d. applets

ANSWER: a

54. A personal computer or PC, originally called a ____, is a small computer designed to be used by one person at a time.

- a. processor
- b. microcomputer
- c. microchip
- d. coprocessor

ANSWER: b

55. Conventional personal computers that are designed to fit on or next to a desk are often referred to as ____.

- a. desktop computers
- b. laptop computers
- c. office computers
- d. processor computers

ANSWER: a

56. Ultraportables conforming to Intel's standards can be marketed as ____.

- a. IntelBooks
- b. Ultrabooks

- c. hybrids
- d. smallframe computers

ANSWER: b

57. Hybrid notebook-tablet computers are also called convertible tablets or ____.

- a. 2-in-1 computers
- b. netbook computers
- c. laptop computers
- d. PDAs

ANSWER: a

58. A(n) ____ is a computer used to host programs and data for a network.

- a. mainframe computer
- b. super server
- c. midrange server
- d. Internet server

ANSWER: c

A ____ is a collection of computers and other devices that are connected in order to enable users to share hardware, software, and data, as well as to communicate electronically with each other.

59. A ____ is a collection of hardware and other devices that are connected together so that users can share...

- a. computer bank
- b. database
- c. data bank
- d. computer network

ANSWER: d

60. To request a Web page or other resource located on the Internet, use its ____.

- a. MAC address
- b. menu bar
- c. domain ID
- d. Internet address

ANSWER: d

Similar to the way an IP address or domain name uniquely identifies a computer on the Internet, a ____ uniquely identifies a specific Web page.

61. Similar to the way an IP address or domain name uniquely identifies a computer on the Internet, a u...

- a. universal resource identifier (URI)
- b. Web ID (WID)
- c. uniform resource locator (URL)

d. Web resource identifier (WRI)

ANSWER: c

62. To contact people using the Internet, you most often use their ____.

- a. domain names
- b. e-mail addresses
- c. usernames
- d. passwords

ANSWER: b

63. To navigate to a new Web page for which you know the URL, type that URL in the browser's ____ bar and press Enter.

- a. address
- b. domain
- c. data
- d. menu

ANSWER: a

There are a number of special Web pages, called ____, available to help you locate what you are looking for on the Internet.

64. There are a number of special Web pages, called ____, available to help you locate what you are looking for ...

- a. search sites
- b. virtual IDs
- c. domain sites
- d. Internet repositories

ANSWER: a

____ is typically free and virtually all ISPs used with personal computers include e-mail service in their monthly fee.

65. ____ is typically free and provided by virtually all ISPs used with personal computers....

- a. Short Message mail
- b. Web-based e-mail
- c. Web-com
- d. Program-based e-mail

ANSWER: b

66. A variety of problems have emerged from our extensive use of computers and related technology, ranging from stress and health concerns, to the proliferation of ____ and malware.

- a. wardriving
- b. domain theft
- c. spam

d. caching

ANSWER: c

67. ____ refers to guidelines for online behavior.

a. Net rules

b. Web etiquette

c. Internet Rules

d. Netiquette

ANSWER: d

68. ____ refers to typing your entire e-mail message or online post using capital letters.

a. Spamming

b. Phishing

c. Calling

d. Shouting

ANSWER: d

69. ____ are illustrations of faces showing smiles, frowns, and other expressions that are created with keyboard symbols.

a. Spams

b. Phishes

c. Emoticons

d. Trojan horses

ANSWER: c

70. By their very nature, online communications lend themselves to ____.

a. patriotism

b. anonymity

c. caching

d. plaguing

ANSWER: b

Case-Based Critical Thinking Questions
Case 1-1 Sarah is a busy real estate agent with a growing clientele. She is looking to purchase a new computer and software so that she can keep track of her client's accounts, access the Internet from anywhere in the city, and touch up photos of real estate properties. Sarah stores digital photographs of houses she is previewing. She needs to be able to copy these to the computer at her office. What type of storage device should she use?

71. Sarah stores digital photographs of houses she is previewing. She needs to be able to copy t...

a. data projector

b. router

c. scanner

d. USB flash drive

ANSWER: d

Case-Based Critical Thinking QuestionsCase 1-1Sarah is a busy real estate agent with a growing clientele. She is looking to purchase a new computer and software so that she can keep track of her client's accounts, access the Internet from anywhere in the city, and touch up photos of real estate properties. Sarah has hired a programmer to create a Web page for her business. What type of programming language will the programmer most likely use?

72. Sarah has hired a programmer to create a Web page for her business. What type of programming language...

a. Python

b. COBOL

c. XHTML

d. BASIC

ANSWER: c

Case-Based Critical Thinking QuestionsCase 1-1Sarah is a busy real estate agent with a growing clientele. She is looking to purchase a new computer and software so that she can keep track of her client's accounts, access the Internet from anywhere in the city, and touch up photos of real estate properties. What kind of computer would most likely fit Sarah's needs?

73. What kind of computer would most likely fit Sarah's needs?...

a. midrange server

b. embedded device

c. notebook computer

d. docking station

ANSWER: c

Case-Based Critical Thinking QuestionsCase 1-2Jamie is interested in pursuing some aspect of computer technology as a career. He is very comfortable working with PCs and has a broad knowledge of the typical systems and applications software that people use. He has always enjoyed working closely with people and has a good facility for explaining how technical systems work. Jamie's mother is a computer programmer and would like Jamie to follow in her footsteps. What course would she most likely suggest that Jamie take in college?

74. Jamie's mother is a computer programmer and would like Jamie to follow in her footsteps. What course...

a. systems analysis

b. history of computing

c. computer literacy

d. Java

ANSWER: d

Case-Based Critical Thinking Questions Case 1-2 Jamie is interested in pursuing some aspect of computer technology as a career. He is very comfortable working with PCs and has a broad knowledge of the typical systems and applications software that people use. He has always enjoyed working closely with people and has a good facility for explaining how technical systems work. From the description provided, what type of computer-related job would Jamie probably enjoy the most?

75. From the description provided, what type of computer-related job would Jamie probably enjoy the most?

- a. hardware designer
- b. computer operations personnel
- c. graphic designer
- d. end user

ANSWER: b

Completion

76. Because of _____, many devices today are single units with multiple computing or Internet capabilities.

ANSWER: convergence

77. _____ are traditional appliances with some type of built-in computer or communications technology.

ANSWER: Smart appliances

78. _____ is an alternative to traditional classroom learning in which students participate, typically at their own pace, from their current location instead of physically going to class.

ANSWER: Distance learning

79. Consumer _____ are small self-service computer-based stations that provide information or other services to the public, including those used for ATM transactions and bridal registries.

ANSWER: kiosks

80. _____ payment systems allow individuals to pay for purchases using a smartphone or other device.

ANSWER: Mobile

81. The _____ used with a computer determine the tasks that the computer is able to perform.

ANSWER: programs

82. The progression of input, processing, output, and storage is sometimes referred to as the _____ cycle or the information processing cycle.

ANSWER: IPOS

83. _____—technically an input or output operation, depending on which direction the information is going—is often considered the fifth primary computer operation.

ANSWER: Communications

84. The first computers were powered by thousands of _____ that needed to be constantly replaced, required a great deal of electricity, and generated a lot of heat.

ANSWER: vacuum tubes

85. Fifth-generation computers are most commonly defined as those that are based on _____, allowing them to think, reason, and learn.

ANSWER: artificial intelligence

86. The physical parts of a computer are collectively referred to as _____.

ANSWER: hardware

87. HTML is a(n) _____ or scripting language.

ANSWER: markup

88. _____ are computer professionals who write the programs that computers use.

ANSWER: Programmers

89. One trend involving servers is _____, which means creating virtual (rather than actual) versions of a computing resource.

ANSWER: virtualization

90. Unlike mainframe computers, which typically run multiple applications simultaneously to serve a wide variety of users, _____ generally run one program at a time, as fast as possible.

ANSWER: supercomputers

91. Individual users connect to the Internet by connecting their computers or mobile devices to servers belonging to a(n) _____.

ANSWER: ISP

92. ISP servers are continually connected to a larger network, called a regional network, which, in turn, is connected to one of the major high-speed networks within a country, called a(n) _____ network.

ANSWER: backbone

93. The World Wide Web refers to one resource—an enormous collection of documents called _____—available through the Internet.

ANSWER: Web pages

94. One of the most common online security risks today is your computer becoming infected with a(n) _____.

ANSWER: malware program

95. _____ are being used with increased frequency in text messaging and e-mail exchanged via mobile phones to speed up the text entry process.

ANSWER: Abbreviations

Essay

96. Discuss the role of computers on the job.

ANSWER: Although computers have been used on the job for years, their role is continually evolving. Computers were originally used as research tools for computer experts and scientists, and then as productivity tools for office workers. Today, computers are used by all types of employees in all types of businesses—including corporate executives, retail store clerks, traveling sales professionals, artists and musicians, engineers, police officers, insurance adjusters, delivery workers, doctors and nurses, auto mechanics and repair personnel, and professional athletes. In essence, the computer has become a universal tool for on-the-job decision making, productivity, and communications. Computers are also used extensively for access control at many businesses and organizations, such as authentication systems that allow only authorized individuals to enter an office building, punch in or out of work, or access the company network via an access card or a fingerprint or hand scan.

97. Define the four primary operations of a computer.

ANSWER: The four primary operations of a computer can be defined as follows: Input—entering data into the computer. Processing—performing operations on the data. Output—presenting the results. Storage—saving data, programs, or output for future use.

98. Discuss the development and characteristics of second-generation computers.

ANSWER: The second generation of computers began when the transistor—a small device made of semiconductor material that acts like a switch to open or close electronic circuits—started to replace the vacuum tube. Transistors allowed second-generation

computers to be smaller, less expensive, more powerful, more energy-efficient, and more reliable than first-generation computers. Typically, programs and data were input on punch cards and magnetic tape, output was on punch cards and paper printouts, and magnetic tape was used for storage. Hard drives and programming languages (such as FORTRAN and COBOL) were developed and implemented during this generation.

99. What does an output device do?

ANSWER: An output device accepts processed data from the computer and presents the results to the user, most of the time on the display screen (monitor), on paper (via a printer), or through a speaker. Other common output devices include headphones and headsets (used to deliver audio output to a single user) and data projectors (used to project computer images onto a projection screen).

100. Define the six categories into which computers are generally classified.

ANSWER: Computers are generally classified by the following categories, based on size, capability, and price.- Embedded computers—tiny computers embedded into products to perform specific functions or tasks for that product.- Mobile devices—smartphones, small tablets, and other small personal devices that contain built-in computing or Internet capabilities.- Personal computers—fully functioning portable or desktop computers that are designed to be used by a single individual at a time.- Servers—computers that host data and programs available to a small group of users.- Mainframe computers—powerful computers used to host a large amount of data and programs available to a wide group of users.- Supercomputers—extremely powerful computers used for complex computations and processing.