True / False Questions

1. *(p. 4)*	Having a basic understanding of information systems is good, but not nearly as important as understanding other functional business areas. FALSE Having a basic understanding of information systems is just as important as understanding other functional business areas. TRUE
2. *(p. 4)*	Information technology can help all kinds of businesses improve the efficiency and effectiveness of their business processes and managerial decision making. TRUE
3. *(p. 18)*	Maintenance is one of the key activities in the development and management of a business information system. TRUE
4. *(p. 4)*	One system can be made up of other systems or can be a part of a bigger system. TRUE
5. *(p. 4)*	Smoke signals and library card catalogs are examples of an information system. TRUE
6. *(p. 7)*	The term "information technology" refers to all of the components and resources necessary to deliver the information and functions of a system to an organization. FALSE The term "information technology" refers to the various hardware, software, networking, and data management components necessary for the system to operate. "Information system" describes all of the components and resources necessary to deliver its information and functions to the organization. TRUE
7. *(p. 7)*	An information system can use hardware as simple as a pencil and paper to capture and store its data. TRUE
8. *(p. 9)*	Gaining a strategic advantage over competition requires the innovative application of information technologies. TRUE

9. *(p. 8)*	Integration of business systems allows greater flexibility and provides greater business support than any of the individual systems could provide alone. TRUE

10. *(p. 8)*	Most retail stores now use computer-based information systems to keep track of inventory, but few use them to evaluate sales trends. FALSE Most retail store now use computer-based information systems to both keep track of inventory and to evaluate sales trends. TRUE

11. *(p. 10)*	Decision support systems (DSS) provide managerial end users with ad hoc and interactive support of their decision-making processes. TRUE

12. *(p. 11)*	Expert systems can serve as consultants to users by providing expert advice in limited subject areas. TRUE

13. *(p. 12)*	An *extranet* is an Internet-like network inside the enterprise; an *intranet* is between the enterprise and its trading partners. FALSE An **intranet** is an Internet-like network inside the enterprise; an **extranet** is between the enterprise and its trading partners. TRUE

14. *(p. 13)*	Enterprise collaboration systems involve the use of software tools to support e-commerce functions with customers and suppliers. FALSE Enterprise collaboration systems involve the use of software tools to support communication, coordination, and collaboration among the members of **networked teams and workgroups**. TRUE

15. *(p. 14)*	A process control system is an example of an operation support system that records and processes data resulting from business transactions. FALSE A **transaction processing** system is an example of an operation support system that records and processes data resulting from business transactions. TRUE

16. *(p. 14)*	In real-time processing, data are processed immediately after a transaction occurs. TRUE

17. *(p. 14)*	Management information systems (MIS) provide information in the form of reports and displays. TRUE

18. *(p. 15)*	An information system that supports accounting is an example of a functional business system. TRUE

19. *(p. 15)*	Information systems that focus on operational and managerial applications in support of basic business functions, such as accounting, are known as *strategic information systems*. FALSE Information systems that focus on operational and managerial applications in support of basic business functions are known as **functional business systems**. TRUE

20. *(p. 15)*	An expert system can provide advice for operational chores, such as equipment diagnostics or loan portfolio management. TRUE

21. *(p. 17)*	Mismanagement or misapplication of information systems can ultimately result in business failure. TRUE

22. *(p. 20)*	A large-scale movement to outsource basic software programming functions to India, the Middle East, and Asia-Pacific countries has resulted because U.S. programmers have been inadequately trained. FALSE

	Outsourcing software programming functions has resulted because of rising labor costs in North America, Canada, and Europe. TRUE

23. *(p. 23)*	Falling prices of computer hardware and software should continue to induce more businesses to expand their computerized operations. TRUE

24. *(p. 23-24)*	Increased importance placed on cyber-security will reduce the need for workers skilled in information security. FALSE Increased importance placed on cyber-security will result in an increased need for workers skilled in information security. TRUE

25. *(p. 26)*	The human body and an oil refinery can both be classified as systems. TRUE

26. *(p. 26)*	In order for something to be classified as a "system", a computerized environment must be involved. FALSE Many examples of systems can be found in the physical and biological sciences, technology, and human society. TRUE

27. *(p. 29)*	A home temperature control system is an example of a cybernetic system. TRUE

28. *(p. 29)*	A sales manager exercises control when reassigning salespersons to new territories after evaluating feedback about their sales performance. TRUE

29. *(p. 29)*	An organization is considered an *open system* when it interfaces and interacts with other systems in its environment. TRUE

30. *(p. 29)*	Multiple systems never share an environment; each has its own. FALSE Several systems may share the same environment. TRUE

31. *(p. 31)*	Information systems are just like any other system, but their value to the modern organization is unlike any other system ever created. TRUE

32. *(p. 32)*	Anyone who uses an information system or the information it produces can be referred to as an end user. TRUE

33. *(p. 32)*	Most end users in business are referred to as knowledge workers, people who spend most of their time communicating, collaborating, and creating, using, and distributing information. TRUE

34. *(p. 32-33)*	Optical disks and plastic cards are examples of hardware resources, but paper forms are not. FALSE Optical disks, plastic cards, and paper forms are all examples of hardware resources. TRUE

35. *(p. 33)*	In the context of the information systems model, computer peripherals typically consist of hardware devices, such as keyboards, and productivity tools, such as word processing software. FALSE Computer peripherals typically consist of hardware devices that allow the input, output, or storage of data; word processing software is not a hardware resource. TRUE

36. *(p. 33)*	In the context of the information systems model, data resources are typically organized as *databases* and *expert systems*. FALSE Data resources are typically organized as databases and **knowledgebases**. TRUE

37. *(p. 34)*	In the context of the information systems model, information is subjected to a "value-added" process that converts it to data that meet the needs of end users. FALSE In the context of the information systems model, **data** is subjected to a value-added process that converts it to **information** that meets the needs of end users TRUE.

38. *(p. 34)*	Data can be thought of as context independent. This means that a list of numbers or name by themselves do not provide an understanding of the context in which they were recorded. TRUE

39. *(p. 34)*	Data are raw facts or observations, typically about physical phenomena or business transactions. TRUE

40. *(p. 35)*	In information systems activities, the processing of data resources typically takes the form of data entry activities. FALSE The **input** of data resources typically takes the form of data entry activities. TRUE

41. *(p. 35)*	In information systems activities, a *user interface* commonly refers to a more convenient and efficient method of end-user input and output with a computer system. TRUE

42. *(p. 35)*	Calculating employees' pay, federal taxes, and other payroll deductions is a business example of a computerized processing activity. TRUE

43. *(p. 35)*	After data has been entered into a computerized information system, it is usually not necessary to correct or update it. That is the benefit of a computerized system—once entered, always correct. FALSE The quality of any data stored in an information system must be maintained by a continual process of correcting and updating activities. TRUE

Multiple Choice Questions

44. *(p. 4)*	Information technology can be used to support _____. A. product development teams B. customer support processes C. any other business activity D. All the choices are correct.

45. *(p. 4)*	In its simplest form, a system consists of all the following *except*: A. A group of cooperative users B. A set of interrelated components C. A clearly defined boundary D. A common set of objectives

46. *(p. 5)*	According to the Real World case, eCourier embraced technology by: A. Doing the same things that all their competitors were doing successfully. B. Installing a new computerized bar-scanning system for packages. C. Enabling a new telephone system for customers. D. Giving all their couriers handheld GPS units for tracking and communication. Lufthansa plans to phase out the desktop computers that it had previously deployed in airports, thereby streamlining its infrastructure and cutting costs.

47. *(p. 5)*	According to the Real World case, eCourier uses SeeWhy software to: A. Track packages that have not been delivered. **B.** Provide business intelligence in terms of customer satisfaction. C. Interface with their accounting software. D. All of the above.

48. *(p. 6)*	According to the Real World Case, the goal of Bryan Cave is: A. To have the best value for their customers. B. To create increased profit per customer. **C.** To build the best long-term relationships in the world. D. All the above.

49. *(p. 6)*	According to the Real World Case, the Bryan Cave law firm had difficulty billing its real estate customers because: A. The developers could not afford their rates. **B.** Developers think in terms of square feet, not hours worked. C. Their lawyers did not understand the real estate profession. D. None of the above.

50. *(p. 6)*	According to the Real World Case, the big problem facing the Bryan Cave law firm in 2002 was: A. Communications between all their lawyers and offices. B. Dealing with the differences in laws around the world. C. Billing their clients correctly. **D.** Making the highest profits from their resources while delivering the highest customer value.

51. *(p. 7)*	All the following are examples of an information system, *except*: A. A day planner B. A cash register **C.** A group of marbles in a box D. A paper-based accounting ledger

52. *(p. 8)*	According to the text, most retail stores today use computer-based information systems to support business processes and operations. This support falls broadly into the categories of: **A.** Business decisions and strategies for competitive advantage. B. Operations and support strategies. C. Business decisions and operations. D. Strategic business decisions and tactical business decisions.

53. *(p. 8)*	How do information systems aid in decision making? A. Information systems help companies determine investments. B. Information systems help companies determine which products to sell or discontinue. C. Information systems can be used to gain competitive advantage. **D.** All of the choices are correct.

54. *(p. 8)*	All of the following are fundamental reasons for business applications of information technology *except*: A. Support of strategies for competitive advantage B. Support of business processes and operations **C.** Compliance with environmental regulations D. Decision making support

55. *(p. 9)*	According to the textbook case, Welch's uses BI software from Oco to: A. manage their gasoline usage. B. decide which products should be produced. **C.** ensure that its carriers are shipping full truckloads to customers. D. follow new competitive trends from its competitors.

56. *(p. 9)*	According to the textbook case, the Oco BI software used by Welch's: A. increases the number of deliveries made on Fridays. B. assures that most deliveries are not made on Fridays. C. assures that most deliveries are made on Fridays. **D.** helps them even out the number of delivery trucks used each day of the week.

57. *(p. 10)*	The expanding role of information systems from the 1950s to the present, in sequential order, are: A. Management reporting, decision support, electronic business and commerce, data processing, strategic and end user support B. Data processing, management reporting, strategic and end user support, electronic business and commerce, decision support **C.** Data processing, management reporting, decision support, strategic and end user support, electronic business and commerce D. Electronic business and commerce, management reporting, data processing, strategic and end user support, decision support
58. *(p. 10)*	The rapid development of microcomputer processing power, application software packages, and telecommunications networks gave birth to the phenomenon of _____. A. manufacturer-to-public direct sales B. MIS departments **C.** end user computing D. electronic monitoring

59. *(p. 11)*	Which of the following is a false statement? A. Today's information systems are doing the same basic things that they did over 40 years ago. B. Today there is a much higher level of integration of system functions. C. Today there is greater connectivity across dissimilar system components. **D.** None of the statements is false.

60. *(p. 12)*	Companies generally rely on e-business applications to do all of the following *except*: A. Re-engineer internal business processes B. Implement electronic commerce systems **C.** Monitor employee productivity D. Promote enterprise collaboration among business teams and workgroups

61. *(p. 12)*	In an e-business enterprise, an *intranet* refers to: **A.** An Internet-like network inside the enterprise B. A network between an enterprise and its trading partners C. A network between the members of a single workgroup D. All the choices are correct.

62. *(p. 12)*	E-business uses Internet technologies to work and empower _____. A. business processes B. electronic commerce C. collaboration among business teams **D.** All of the choices are correct.

63. *(p. 13)*	E-commerce _____. A. involves buying, selling, marketing, and servicing of products, services, and information over a variety of computer networks B. uses the Internet, intranets, and extranets to support every step of the commercial process, such as multimedia advertising, product information, and customer support C. involves Internet security and payment mechanisms that ensure completion of delivery and payment processes **D.** All of the choices are correct.

64. *(p. 13)*	The text classifies information systems as either *operations* or *management support* information systems. Which one of the following would *not* be classified as an operations support system? A. Transaction processing systems B. Process control systems C. Enterprise collaboration systems **D.** Decision support systems

65. *(p. 13)*	Electronic commerce systems generally include all of the following *except*: A. Internet websites for online sales **B.** Direct links to credit reporting services C. Extranet access of inventory databases D. Intranets that allow sales reps to access customer records

66. *(p. 14)*	Process control systems monitor and control _____ processes. **A.** physical B. transactional C. inter-departmental D. mechanical

67. *(p. 14)*	A nuclear power plant uses electronic sensors linked to computers to continually monitor processes and make instant (real-time) adjustments that control the power generation process. This is an example of a(n) _____. A. transaction processing system B. decision support system C. enterprise collaboration system **D.** process control system

68. *(p. 14)*	When employees in a project team use email to send and receive messages and use video conferences to hold electronic meetings and coordinate their activities, they are using _____. A. transaction processing systems B. process control systems **C.** enterprise collaboration systems D. decision support systems

69. *(p. 15)*	A database of customer purchases that provides end-user managers with interactive and ad hoc decision-making support is referred to as _____. A. a transaction processing system **B.** a decision support system C. an information reporting system D. an executive information system

70. *(p. 15)*	A production manager needs a system to help determine how much product to manufacture based on the expected sales associated with a future promotion, plus the location and availability of the raw materials necessary to manufacture the product. What type of system would meet this manager's needs? A. Transaction processing system B. Process control system C. Enterprise collaboration system **D.** Decision support system

71. *(p. 15)*	When information system applications focus on providing information and support for effective decision making by managers, they are called _____ support systems. A. decision **B.** management C. collaboration D. process

72. *(p. 16)*	An information system that supports the business functions of accounting, finance, human resource management, marketing, or operations would be classified as a(n) _____ system. **A.** functional business B. executive information C. management information D. decision support

73. *(p. 16)*	Information systems that focus on operational and managerial applications in support of basic business functions, such as accounting or marketing, are known as _____. **A.** functional business systems B. strategic information systems C. executive information systems D. knowledge management systems

74. *(p. 15)*	Most information systems are designed to _____. A. produce information and support decision making B. handle record-keeping C. handle transaction processing chores **D.** All the choices are correct.

75. *(p. 15)*	Executive information systems (EIS) are tailored to meet the strategic information needs of which of the following management levels? **A.** Top management (strategic) B. Middle management (tactical) C. Lower management (operational) D. All of the choices are correct.

76. *(p. 15)*	Business applications of information systems are typically combinations of several types of information systems. This integration is referred to as _____ systems. A. information reporting B. decision support **C.** cross-functional informational D. end user computing

77. *(p. 16)*	Success in today's dynamic business environment depends heavily on maximizing the use of Internet-based technologies and Web-enabled information systems to meet the competitive requirements of _____. A. customers B. suppliers C. business partners **D.** All of the choices are correct.

78. *(p. 16)*	A functional business system supports all of the following types of applications *except*: A. Accounting **B.** Customer problem resolution C. Marketing D. Human resource management

79. *(p. 16)*	Which of the following systems acts as a consultant to users? A. Knowledge B. Integrated information C. Executive information **D.** Expert

80. *(p. 17-18)*	According to the textbook case on responsibility and accountability, even if a project is not an IT project, who is held responsible for optimizing returns on IT-related investments? A. CEO B. CFO C. COO **D.** CIO

81. *(p. 17-18)*	According to the textbook case on responsibility and accountability: A. IT is always 100% responsible for any large project involving information technology. **B.** IT is never 100% responsible for any large project involving information technology. C. IT is sometimes 100% responsible for any large project involving information technology. D. None of the above is correct.

82. *(p. 18)*	Developing an information system solution involves all of the following steps *except*: A. Investigation B. Implementation **C.** Redesign D. Maintenance

83. *(p. 18)*	Computer-based information systems are usually conceived, designed, and implemented using some form of systematic development process. The investigation stage includes _____. **A.** determining the economic or technical feasibility of a proposed application B. acquiring and learning how to use the necessary software C. improving the system D. All of the choices are correct.

84. *(p. 18)*	Developing information system solutions to business problems in an organization is the responsibility of _____. A. information system specialists B. computer programmers C. systems analysts **D.** all information system users within the organization

85. *(p. 18)*	When applying a systematic development process for computer-based information systems, _____ would be part of the analysis phase. **A.** determining the business requirements of the system B. acquiring and learning how to use the necessary software C. implementing a trial system D. obtaining feedback from end users of the system

86. *(p. 19)*	According to the text, the steps of developing an information system, in their proper order, are: A. Investigate, analyze, implement, design, maintain B. Investigate, design, analyze, implement, maintain C. Maintain, implement, design, analyze, investigate **D.** Investigate, analyze, design, implement, maintain

87. *(p. 20-21)*	In the lawsuit filed against Hannaford Brothers, which of the following was not alleged as a reason for filing the suit? A. Hannaford has installed inadequate security measures. B. Hannaford did not disclose the security breach to the public quickly enough. **C.** Hannaford sold the data to spammers. D. All the choices are correct.

88. *(p. 24)*	The information systems function is equally as important to business success as the function of _____. A. accounting B. operations management C. human resources management **D.** All the choices are correct.

89. *(p. 26)*	In the information systems concept, the *processing* function involves: A. Capturing and assembling elements that enter the system to be processed **B.** Transformation processes that convert input into output C. Transferring elements that have been produced by a transformation process to their ultimate destination D. Monitoring and evaluating feedback to determine whether a system is moving toward the achievement of its goal

90. *(p. 27)*	According to the Real World case about the New York Times, the newspaper industry is in very deep trouble. What has become most important to them? **A.** Business model innovation B. Internet connectivity C. Technological innovation D. Communication initiatives

91. *(p. 29)*	If a system is one of the components of a larger system, it is considered a(n) _____. A. environment B. feedback loop **C.** subsystem D. interface

92. *(p. 29)*	A system that can change itself or its environment in order to survive is _____ system. A. a control B. a self-monitoring C. an environmental **D.** an adaptive

93. *(p. 29)*	Organizations are examples of _____ systems because they interface and interact with other systems in their environment. A. linked **B.** open C. dependent D. parallel

94. *(p. 29)*	The majority of organizations today would be classified as _____ systems. A. open B. closed **C.** open adaptive D. closed adaptive

95. *(p. 30)*	An information system depends on all of the following resources *except*: A. Hardware B. Software C. People **D.** Time

96. *(p. 31)*	All of the following would be considered a hardware resource *except*: A. A microcomputer B. A keyboard C. Magnetic and optical disks **D.** Programs and procedures
97. *(p. 31)*	All of the following would be considered a software resource in an information system *except*: A. A computer operating system B. A word processing software package **C.** A telecommunication network D. All of the choices are software resources.

98. *(p. 33)*	In an information system context, which one of the following would be the most applicable description of *application software*? A. It controls and supports the operations of a computer **B.** It consists of programs that direct particular processing activities C. It consists of operating instructions for people who will use an information system D. None of the choices are correct.

99. *(p. 33)*	In an information system, alphanumeric data normally takes the form of _____. **A.** numbers and alphabetical characters B. sentences and paragraphs C. graphic shapes and figures D. All of the choices are correct.

100. *(p. 33)*	In an information system, image data normally takes the form of _____. A. numbers and alphabetical characters B. sentences and paragraphs **C.** graphic shapes and figures D. voice and other sounds

101. *(p. 34)*	All of the following are good examples of information *except*: A. The social security number of the company's forklift operator B. The retail price of blue widgets C. How much the company owes to vender number 17 **D.** The numbers 1236789, 349875, and 340977

102. *(p. 34)*	Telecommunications networks consist of _____. A. computers, the Internet, intranets, and extranets B. communications processors C. devices interconnected by communication media and controlled by communications software **D.** All of the choices are correct.

103. *(p. 34)*	All of the following normally happens to data during a value-added process *except*: **A.** Their useful life is determined B. Their form is aggregated, manipulated, and organized C. Their content is analyzed and evaluated D. They are placed in a proper context for a human user

104. *(p. 32-33)*	All of the following are considered computer hardware technology *except*: **A.** Operating system software B. Microcomputers C. Keyboards D. Printers

105. *(p. 36)*	Which of the following is an example of control of an information system's performance? A. A system malfunction wiped out two weeks of student registration records B. Programmers created a user friendly input screen for a new system **C.** Subtotals do not add up to total sales; IT staff investigates whether data entry or processing is the problem D. An extra $20 was added to every water bill by mistake

106. *(p. 35)*	The original, formal record of a transaction is called the: A. Updated form B. Paper form C. Transaction document **D.** Source document

107. *(p. 35)*	The source document is: A. The form of a document after its final update B. A transaction document that refers to the source of the product **C.** The original, formal record of a transaction D. The first update to any transaction

Fill in the Blank Questions

108. *(p. 4)*	An _____ system is an organized combination of people, hardware, software, telecommunications networks, and data resources that collects, transforms, and disseminates information in an organization. **information**

109. *(p. 11)*	With a strategic information system (SIS), information technology becomes an integral part of business processes, products, and _____. **services**

110. *(p. 12)*	_____ is defined as the use of Internet technologies to work and empower business processes, electronic commerce, and enterprise collaboration within a company and with its customers, suppliers, and other business stakeholders. **E-business**

111. *(p. 12)*	Enterprise collaboration systems use software tools to support _____ among the members of networked teams and workgroups. **communication, coordination, or collaboration**

112. *(p. 11)*	During the 1980s and 1990s, information technology helped companies gain a competitive advantage in the global marketplace. This is referred to as the _____ information systems concept. **strategic**

113. *(p. 13)*	A _____ team uses a corporate intranet and the Internet for electronic mail, videoconferencing, electronic discussion groups, and Web pages of work-in-progress information to collaborate on business projects. **virtual**

114. *(p. 13)*	Electronic _____ is the buying, selling, marketing, and servicing of products, services, and information over a variety of computer networks. **commerce**

115. *(p. 13)*	Types of information systems are generally classified as either *operations* information systems or _____ information systems. **management**

116. *(p. 13)*	Marketing and selling books to consumers over the Internet is an example of _____ commerce. **electronic or Internet or "E-"**

117. *(p. 13)*	A system that controls the industrial processes of an organization would be classified as a(n) _____ support system. **operations**

118. *(p. 14)*	Transaction processing systems process transactions in two basic ways, _____ processing or real-time. batch

119. *(p. 15)*	When a manager uses an interactive, computer-based information system to assist in his/her decision making, the manager is using a _____ support system. decision

120. *(p. 15)*	A system that provides pre-specified reports for the managers of an organization would be classified as a _____ system. management

121. *(p. 14)*	Enterprise collaboration systems enhance team and workgroup communication and productivity, and include applications that are sometimes called office _____ systems. automation

122. *(p. 15)*	The goal of knowledge management systems (KMS) is to help knowledge workers create, organize, and _____ important business knowledge wherever and whenever it is needed. share

123. *(p. 17)*	The success of an information system should be measured by both its efficiency and its _____. effectiveness

124. *(p. 18)*	The design of an information system application is based on an _____ of the business requirements of an organization. analysis

125. *(p. 20)*	As a manager, you must be aware of what uses of information technology might be considered improper, irresponsible, or harmful to individuals or to society. This dimension of the use of information technology is referred to in the text as an _____ responsibility. **ethical**

126. *(p. 26)*	A manufacturing system accepts raw materials as input and produces finished goods as output. An information system accepts data as input and processes them into _____ as output. **information**

127. *(p. 29)*	A system with feedback and _____ functions is sometimes called a cybernetic system. **control**

128. *(p. 29)*	The _____ component in a cybernetic system refers to the data about the performance of the system. **feedback**

129. *(p. 29)*	_____ is data about the performance of a system. **Feedback**

130. *(p. 29)*	_____ involves monitoring and evaluating feedback to determine whether a system is moving toward the achievement of its goal. **Control**

131. *(p. 31)*	People, hardware, software, _____, and networks are the five basic resources of information systems. **data**

132. *(p. 32)*	Information processing consists of the system activities of input, processing, output, _____, and control. **storage**

133. *(p. 33)*	In the context of the information system model, software resources include the sets of operating instructions called _____, which direct and control computer hardware. **programs**

134. *(p. 33)*	In the context of the information systems model, _____ are the operating instructions for the people who will use an information system. Examples are instructions for filling out a paper form or using a software package. **procedures**

135. *(p. 35)*	Information in various forms is transmitted to end users and made available to them in the _____ activity. **output**

136. *(p. 35)*	A _____ document is the original, formal record of a transaction. **source**

137. *(p. 36)*	_____ is the information systems activity in which data and information are retained in an organized manner for later use. **Storage**

138. *(p. 36)*	In an information system, the _____ activity would be considered the component that evaluates feedback in order to determine whether the system is moving toward the achievement of its goal. **control**

Chapter 02 Competing with Information Technology Answer Key

True / False Questio

1. When an organization uses information technology to develop products, services and capabilities in order to gain a strategic advantage over competitive forces in the global marketplace, it is using information systems in a *strategic* role.
(p. 46)

TRUE

2. Competition is a negative characteristic in business that can require significant resources to overcome.
(p. 49)

FALSE

Although competition can require significant resources, it is a positive characteristic in business that is natural and healthy.

3. Most products and services have some sort of substitute available to the consumer.
(p. 49)

TRUE

4. In the Internet world, a firm's biggest competitor may be one that is not yet in the marketplace but could emerge almost overnight.
(p. 49)

TRUE

5. The threat of *new entrants* is often at its strongest during periods of rising costs or inflation.
(p. 49) FALSE

The threat of **substitutes** is often at its strongest during periods of rising costs or inflation.

6. If a key supplier's bargaining power gets too strong, it can force the price of goods and services
(p. 49) to unmanageably high levels.

TRUE

7. An *innovation* strategy may allow a firm to focus its products or services and gain an advantage
(p. 50) in a particular segment or niche of a market.

FALSE

A **differentiation** strategy may allow a firm to focus its products or services and gain an advantage in a particular segment or niche of a market.

8. When a firm develops ways to differentiate its products from a competitor's, it is pursuing a *cost*
(p. 50) *leadership* strategy.

FALSE

When a firm develops ways to differentiate its products from a competitor's, it is pursuing a **differentiation** strategy.

9. When a firm uses IT to create virtual organizations of business partners, it is pursuing a *growth*
(p. 50) strategy.

FALSE

When a firm uses IT to create virtual organization of business partners, it is pursuing an **alliance** strategy.

10. A given activity can fall into one or more of the categories of competitive strategy.
(p. 50)

TRUE

11. If an organization offers its online package tracking system in a manner that allows its
(p. 50) customers to access shipment information not only via a computer, but via a mobile phone as well, then such an action could fall into both the differentiation and innovation strategy categories.

TRUE

12. When a firm makes such radical changes to its business processes for producing products and
(p. 50) services that it alters the fundamental structure of an industry, it is pursuing an *innovation* strategy.

TRUE

13. Not everything innovative will serve to differentiate one organization from another.
(p. 50)

TRUE

14. Investments in information technology can allow a business to lock in customers and suppliers,
(p. 50) and lock out competitors, by building valuable new relationships with them.

TRUE

15. Companies like Wal-Mart use information technology to implement competitive strategies for *(p. 51)* strategic advantage.

TRUE

16. When a business effectively builds in switching costs, its customers and/or suppliers become *(p. 52)* reluctant to switch to another competitor.

TRUE

17. A strategic use of information technology would be to leverage investment in information *(p. 52)* system specialists, hardware, software, databases, and networks from operational uses into strategic applications.

TRUE

18. A company that places a strategic focus on customer value recognizes that quality, rather than *(p. 54)* price, has become a primary determinant in a customer's perception of value.

TRUE

19. Companies that consistently offer the best value from the customer's perspective must provide *(p. 54)* two key services: keeping track of their individual customers' preferences and selling products or services at lowest price.

FALSE

Companies that consistently offer the best value from the customer's perspective (a) keep track of their customers' individual preferences, (b) keep up with market trends, (c) supply products, services, and information anytime, anywhere, and (d) provide customer services tailored to

individual needs.

20. *(p. 54)* Internet technologies can make customers the focal point of customer relationship management (CRM) and other e-business applications.

TRUE

21. *(p. 56)* The value chain framework can be used to view a firm as a series, a chain, or a network of basic activities that add value to its products and services, and thus add a margin of value to the firm.

TRUE

22. *(p. 56)* According to the value chain concept, primary processes include such things as the procurement of resources and human resource management that are directly related to the manufacturing of products or delivery of services to the customer.

FALSE

Human resource management is a **support process,** not a primary process.

23. *(p. 56)* When using the value chain concept, managers should seek to develop strategic information systems for those activities that they view as the "weakest link" in the value chain.

FALSE

Managers should try focus on the basic processes that add the most value to a company's products or services.

24. *(p. 56)* The value chain concept can help managers decide where and how to apply the strategic capabilities of information technology.

TRUE

25. Business process reengineering (BPR) is most often called streamlining.

(p. 58)

FALSE

Business process reengineering (BPR) is most often called **reengineering**.

26. Although the potential payback of reengineering is high, so is the risk of failure and level of
(p. 58) disruption to the organizational environment of the firm.

TRUE

27. Business process reengineering (BPR) combines a strategy of *promoting business innovation*
(p. 58) with a strategy of *making major improvements to business operations* so that a company can become a much stronger and more successful competitor in the marketplace.

TRUE

28. Many companies have found that organizational redesign approaches are an important enabler
(p. 58) of business process reengineering.

TRUE

29. All the employees within a marketing department, from clerical staff to top managers, form a
(p. 58) cross-functional team.

FALSE

A cross-functional team includes employees from several different departments or specialties.

30. Information technology plays a major role in the business process reengineering of most business processes. *(p. 58)*

TRUE

31. Becoming an agile company depends on customer perceptions of products and services, as much as any other strategy. *(p. 63)*

TRUE

32. An agile company cooperates with its suppliers and competitors. *(p. 63)*

TRUE

33. By nurturing an entrepreneurial spirit, an agile company provides powerful incentives for employee responsibility, adaptability, and innovation. *(p. 63)*

TRUE

34. Information technology can enable a company to develop relationships with its customers in virtual communities. *(p. 64)*

TRUE

35. Yahoo! transformed its service from a search engine into a portal by dedicating one branch of its business to providing content and other media-related services. *(p. 63)*

FALSE

Yahoo! transformed its service from a search engine into a portal by initiating numerous partnerships to provide content and other media-related services from its website.

36. One of the reasons people form virtual companies is to keep new entrants out of a market. *(p. 65)*

FALSE

The basic strategies of virtual companies include (a) share information and risk with alliance partners, (b) link complementary core competencies, (c) reduce concept-to-cash time, (d) increase facilities and market coverage, (e) gain access to new markets and share market or customer loyalty, and (f) migrate from selling products to selling solutions.

37. Knowledge-creating companies constantly create new business knowledge and then *(p. 66)* disseminate it throughout the company in order to quickly build the new knowledge into their products and services.

TRUE

38. Explicit knowledge involves the "how-to" knowledge that resides in workers. *(p. 66)*

FALSE

Explicit knowledge is made up of data, documents, and things written down.

39. Successful knowledge management creates *techniques*, *technologies*, and *rewards* for getting *(p. 66)* employees to share what they know and to make better use of accumulated workplace knowledge.

TRUE

40. As an organization's learning process continues and its knowledge base expands, the *(p. 67)* knowledge creating company works to integrate its knowledge into its *business processes*, *products*, and *services*.

TRUE

Multiple choice Questions

41. A strategic information system can be any kind of information system that uses information *(p. 46)* technology to help an organization _____.

A. gain a competitive advantage

B. reduce a competitive disadvantage

C. meet strategic enterprise objectives

D. all of the choices are correct.

42. A firm can survive and succeed in the long run if it successfully develops strategies to confront *(p. 46)* the _____ that shape the structure of competition in its industry.

A. technological innovations

B. competitive business processes

C. competitive forces

D. competitive strategies

43. A(n) _____ strategy is a competitive strategy by which a firm seeks to become a *(p. 49)* low-cost producer of products and services in the industry.

A. cost leadership

B. differentiation

C. innovation

D. alliance

44. A(n) _____ strategy is a competitive strategy by which a firm develops ways to *(p. 49)* differentiate its products and services from those of its competitors.

A. low cost leadership

B. innovation

C. differentiation

D. growth

45. A(n) _____ strategy is a competitive strategy by which a firm develops unique *(p. 49)* products or services from those of its competitors, or makes radical business changes that may alter the fundamental nature of the industry.

A. alliance

B. growth

C. differentiation

D. innovation

46. A(n) _____ strategy is a competitive strategy by which a firm significantly expands *(p. 49)* its capacity to produce goods and services, expanding and diversifying in the market.

A. alliance

B. growth

C. differentiation

D. innovation

47. A(n) _____ strategy is a competitive strategy by which a firm establishes new *(p. 49)* business linkages with customers, suppliers, competitors, and other companies.

A. growth

B. low cost leadership

C. differentiation

D. alliance

48. According to the text, competition is a _____ characteristic in business that *(p. 49)* _____.

A. positive, is natural and healthy

B. negative, can consume significant resources

C. neutral, can help a firm meet strategic enterprise objectives

D. none of the choices are correct.

49. According to the text, in the world of the Internet, a firm's biggest competitor: *(p. 49)*

A. Usually exists and is close in the physical world

B. Usually does not exist but will emerge close in the physical world

C. May not yet exist but could emerge almost overnight

D. Probably exists in an overseas location

50. According to the text, the Internet: *(p. 49)*

A. Has limited competition world-wide

B. Has created many ways to enter the market quickly, with relatively low cost

C. Has created new entry barriers to competition

D. Has decreased prices world-wide

51. Which of the following is a competitive strategy?

(p. 49)

A. New entries into the market

B. Innovation

C. Bargaining power

D. Substitutes

52. All the following are competitive strategies *except*:

(p. 49)

A. New entries into the market

B. Innovation

C. Cost leadership

D. Alliances

53. All of the following can be used to counter competitive forces in the marketplace *except*:

(p. 49)

A. Alliances

B. Growth

C. Innovation

D. Bargaining

54. All of the following are competitive forces in the marketplace *except*:

(p. 49)

A. Alliances

B. Competition

C. Substitutes

D. Bargaining

55. Which of the following is a competitive force in the marketplace?

(p. 49)

A. Cost leadership

B. Competition

C. Differentiation

D. Alliances

56. Developing a relationship with a customer such that the customer cannot afford to switch

(p. 50) suppliers is an example of:

A. Monopolistic enterprise

B. Locking in the customer

C. Growth strategies

D. None of the above is correct

57. The practice of becoming the largest purchaser of products from a given supplier is an example *(p. 50)* of:

A. Cost leadership

B. Growth strategies

C. Differentiation

D. Locking in the supplier

58. Becoming a low-cost producer of products and services in an industry is an example of a(n):

(p. 49) **A.** Cost leadership strategy

B. Differentiation strategy

C. Innovation strategy

D. Growth strategy

59. All of the following are basic competitive forces discussed in the text *except*:

(p. 49)

A. Rivalry of competitors

B. Threat of substitutes

C. Bargaining power of suppliers

D. Bargaining power of competitors

60. All of the following are basic competitive strategies discussed in the text *except*:

(p. 49)

A. Cost leadership

B. Innovation

C. Product differentiation

D. Strategic dominance

61. Expanding a company's product offering into global markets is an example of a(n) _____ strategy. *(p. 50)*

A. cost leadership

B. differentiation

C. growth

D. alliance

62. Investments in information technology that build valuable new relationships allow a firm to: *(p. 50)*

A. Lock in the supplier

B. Lock in the customer

C. Lock out competition

D. All the above

63. In addition to the five basic competitive strategies, the text describes several key strategies implemented with information technology. Which of the following is *not* one of those strategies? *(p. 52)*

A. Locking in customers

B. Building switching costs

C. Creating alliances

D. Raising barriers to entry

64. Using an information system to make customers and/or suppliers reluctant to change to another competitor is called: *(p. 52)*

A. Growth strategy

B. Building switching costs

C. Creating alliances

D. Raising barriers to entry

65. When a firm develops ways to differentiate their products and services from their competitors', it is pursuing a _____ strategy. *(p. 50)*

A. differentiation

B. alliance

C. innovation

D. marketing

66. A sales company such as eBay would be most likely to use information technology to promote _____. *(p. 51)*

A. online stock trading

B. point-of-sale inventory tracking

C. online auctions

D. virtual manufacturing alliances

67. When a firm strives to find ways to help its suppliers and customers reduce their costs or to increase the costs of their competitors, it is pursuing a strategy of _____. *(p. 51)*

A. innovation

B. alliance

C. cost leadership

D. growth

68. When customers become dependent on mutually beneficial inter-enterprise information systems, they become reluctant to switch to a company's competitors because they would incur all following costs *except*:
(p. 52)

A. Time

B. Money

C. Innovation

D. Effort

69. Companies like Wal-Mart extend their networks to their customers and suppliers in order to build innovative continuous inventory replenishment systems that would lock in their business. This creates a(n) _____ information system.
(p. 52)

A. leveraged

B. inter-enterprise

C. intra-enterprise

D. locked-in

70. A serious problem of competitive advantage is that:
(p. 53)

A. It normally doesn't last very long and it isn't sustainable over the long term

B. Competitors figure out how it was done and do the same thing

C. A competitive advantage can become a competitive necessity

D. All of the choices are correct.

71. A company that places a strategic focus on customer value recognizes that _____, rather *(p. 54)* than _____, has become a primary determinant in a customer's perception of value.

A. service, price

B. price, quality

C. quality, service

D. quality, price.

72. Companies that consistently offer the best value from the customer's perspective do all the *(p. 54)* following, *except*:

A. Keep track of their customers' individual preferences

B. Keep up with market trends

C. Supply products, services, and information anytime, anywhere

D. Offer lowest prices and fastest delivery

73. A customer-focused business can build customer value and loyalty by:

(p. 55)

A. Making a loyal customer feel special with website personalization

B. Letting customers place orders directly, or through distribution partners

C. Letting customers check order history and delivery status

D. All of the choices are correct.

74. A transaction database allows all of the following activities *except*:
(p. 55)

A. Linking employees and distribution partners to customers

B. Letting customers check order history

C. Giving employees a complete view of each customer

D. None of these activities are supported by a transaction database.

75. According to the textbook case, innovation in information systems at Universal Orlando comes
(p. 55- from thinking like a:
56)

A. Customer

B. Competitor

C. Employee

D. IT specialist

76. The value chain framework can be used to view a firm as a series, a chain, or a network of
(p. 56) basic activities that:

A. Add value to its products and services, and thus add a margin of value to the firm.

B. Lower costs along the product development chain.

C. Create the perception of value and goodwill to employees.

D. Create a smooth-flowing chain of events between the supplier and the customer.

77. Which of the following is a primary business process?

(p. 57)

A. Collaborative workflow intranet

B. Targeted marketing

C. Technology development

D. Procurement of resources

78. All of the following are primary business processes, *except*:

(p. 57)

A. Customer relationship management

B. Targeted marketing

C. Technology development

D. Just-in-time warehousing

79. Which of the following is a support process?

(p. 57)

A. Collaborative workflow intranet

B. Targeted marketing

C. Customer relationship management

D. Just-in-time warehousing

80. All of the following are support processes, *except*:

(p. 57)

A. Customer relationship management

B. Procurement of resources

C. Technology development

D. Employee benefits intranet

81. Business process reengineering is best defined as:

(p. 58)

A. A key technology to reduce customer late payments

B. A radical redesign of business processes to achieve improvements in cost, quality, speed, or service

C. A key way to ensure successful improvement in processing

D. All of the choices are correct.

82. Business process reengineering (BPR) is often referred to as:

(p. 58)

A. Streamlining

B. Reengineering

C. Quickening

D. None of the choices are correct.

83. Business process reengineering (BPR) incorporates all the following strategies, *except*:

(p. 58) **A.** Lowering prices as a competitive strategy

B. Promoting business innovation

C. Making major improvements to business operations

D. None of the choices are correct.

84. Traditional business improvement includes:

(p. 61)

A. Top-down participation

B. Long time requirements

C. Brand new business processes

D. Incremental levels of change

85. Business process engineering includes:

(p. 61)

A. Bottom-up participation

B. Short time requirements

C. Improved new versions of current processes

D. Radical levels of change

86. Traditional business improvement includes all the following, *except*:

(p. 61)

A. Bottom-up participation

B. Short time requirements

C. Improved new versions of current processes

D. Radical levels of change

87. Business process redesign includes all the following, *except*:

(p. 61)

A. Top-down participation

B. Long time requirements

C. Brand new business processes

D. Incremental levels of change

88. Organizations are changing from a competitive environment in which mass-market products and services were standardized, long-lived, information-poor, and exchanged in one-time transactions to an environment in which companies compete globally with niche-market products and services that are _____. *(p. 62)*

A. individualized

B. short-lived

C. exchanged on an ongoing basis with customers

D. All the choices are correct.

89. An agile company supports all the following *except*: *(p. 62)*

A. Short-lived products and services

B. Standardized products and services

C. Information-rich products and services

D. Niche market products and services

90. _____ agility is the ability to co-opt customers in the exploitation of innovation opportunities. *(p. 63)*

A. Customer

B. Partnering

C. Operational

D. Technological

91. _____ agility is the ability to leverage assets, knowledge, and competencies in the *(p. 63)* exploration and exploitation of innovation opportunities.

A. Customer

B. Partnerin

C. Operational

D. Technological

92. _____ agility is the ability to accomplish speed, accuracy, and cost economy in the *(p. 63)* exploitation of innovation opportunities.

A. Customer

B. Partnering

C. Operational

D. Technological

93. Which of the following is *not* a strategy of a virtual company?

(p. 65)

A. Share infrastructure and risk with alliance partners

B. Link complementary core competencies

C. Migrate from selling products to selling solutions

D. Increase concept-to-case time

94. Explicit knowledge deals with:

(p. 66)

A. Data, documents, and things written down or stored on computers.

B. "How-to" knowledge, which resides in workers.

C. Using data mining techniques to capture external information.

D. All of the choices are correct.

95. Tacit knowledge deals with:

(p. 66) A. Data, documents, and things written down or stored on computers.

B. "How-to" knowledge, which resides in workers.

C. Using data mining techniques to capture external information.

D. None of the choices are correct.

96. Accessing and retrieving documents that have been stored online is a function of

(p. 66) _____.

A. document management

B. enterprise intelligence

C. information creation, sharing, and management

D. All of the choices are correct.

97. Real-time information management, communication, and collaboration are a function of

(p. 66) _____.

A. document management

B. enterprise intelligence

C. information creation, sharing, and management

D. All of the choices are correct.

98. Performance support, building expert networks, and leveraging organizational know-how are a *(p. 66)* function of _____.

A. document management

B. enterprise intelligence

C. information creation, sharing, and management

D. All of the choices are correct.

99. The goal of knowledge management systems (KMS) is to help knowledge workers *(p. 66)* _____ important business knowledge.

A. create

B. organize

C. distribute

D. All of the choices are correct.

100. According to the textbook case, the Matter Page System at Goodwin Proctor increases *(p. 67)* efficiency of their attorneys by.

A. Separating the client billing, documents, and contact data

B. Enabling the attorneys to launch more than one application at a time to find information

C. Requiring the attorneys to spend more time researching their cases

D. Pulling all the client billing, documents and contact data into a single "one-stop-shop" for users

Fill in the Blank Questions

101. A firm can survive and succeed in the long run if it successfully develops strategies to confront *(p. 46)* the five _____ forces that shape the structure of competition in its industry.

competitive

102. When an organization uses information technology to develop products, services and *(p. 46)* capabilities in order to gain a strategic advantage over competitive forces in the global marketplace, it is using information systems in a _____ role.

strategic

103. The competitive threat of _____ is often at its strongest during periods of rising costs *(p. 49)* or inflation.

substitutes

104. A _____ strategy is a competitive strategy by which a firm seeks to become a low- *(p. 49)* cost producer of products and services in the industry.

cost leadership

105. When using a(n) _____ strategy, a firm seeks to find new ways of producing or distributing its products and services that are so different from the way business has been conducted that they may alter the fundamental structure of the industry.
(p. 50)

innovation

106. _____ are the costs in time, money, effort, and inconvenience that it would take a customer or supplier to move its business to a firm's competitors.
(p. 52)

Switching costs

107. If a company has successfully increased the amount of investment or the complexity of the technology required to compete in an industry or a market segment, it has raised _____ that would discourage or delay other companies from entering the market.
(p. 53)

barriers to entry

108. Although large investments in technology can create entry barriers for present or prospective players in an industry, the barriers can evaporate over time as competitors employ the new technologies. This is an example of IT becoming a competitive _____.
(p. 53)

necessity

109. When a strategy or action becomes a(n) _____, it means that instead of creating an advantage, the strategy or action becomes necessary simply to compete and do business in the industry.
(p. 53)

competitive necessity

110. A customer-focused business has a strategic focus on customer _____, which recognizes that quality rather than price has become the primary determinant in a customer's perception of value. *(p. 54)*

value

111. In the _____ concept, some business activities are primary processes while others are support processes. *(p. 56)*

value chain

112. According to the value chain concept, _____ processes within the organization would include human resources management and technology development. *(p. 57)*

support

113. _____ is defined as the restructuring and transforming of a business process by a fundamental rethinking and radical redesign to achieve improvements in costs, quality, speed, and service. *(p. 58)*

Reengineering

114. Many companies have found that organizational _____ approaches are an important enabler of business process re-engineering. *(p. 58)*

redesign

115. A(n) _____ company can make a profit in markets with broad product ranges and short model lifetimes, and it can produce orders individually and in arbitrary lot sizes. *(p. 63)*

Agile

116. A _____ company can be defined as an organization that uses telecommunications networks and other information technology to link people, assets, and ideas. *(p. 64)*

virtual

117. Virtual companies develop alliances and extranet links that form _____ information systems with suppliers, customers, subcontractors, and competitors. *(p. 64)*

inter-enterprise

118. People and corporations are forming virtual companies as the best way to implement key business strategies and alliances that promise to ensure success in today's turbulent _____ climate. *(p. 64)*

business

119. The concept of _____-management refers to organizing and sharing the diverse forms of business information created within an organization. This includes managing project and enterprise document libraries, discussion databases, hypermedia web site databases, and other types of knowledge bases. *(p. 66)*

knowledge

120. _____ knowledge deals with "how-to" knowledge, which resides in workers. *(p. 66)*

Tacit

121. _____ knowledge is made up of data, documents, and things written down. *(p. 66)*

Explicit

122. Enterprise Intelligence, Information Creation, Sharing, and Management, and Document

(p. 66) Management are the three levels of _____.

knowledge management

123. *(p. 66)* Leveraging organizational "know-how", performance support, interacting with operational databases, and building expert networks are part of the _____ level of knowledge management.

enterprise intelligence

124. *(p. 66)* Capturing and distributing expert stories, real-time information management, communication and collaboration, and new content creation are part of the _____ level of knowledge management.

information creation, sharing, and management

125. *(p. 66)* Accessing and retrieving documents stored online are part of the _____ level of knowledge management.

document management

Chapter 03 Computer Hardware Answer Key

True / False Questions

1. All computers are systems of input, processing, output, storage, and distribution components. *(p. 78)*

   FALSE

   All computers are systems of input, processing, output, storage, and control components.

2. The first electronic digital computer was completed in the 1960s. *(p. 81)*

   FALSE

   The first electronic digital computer was completed in 1946 at the Moore School of Electrical Engineering.

3. *Personal computers*, *networkservers*, and *technicalworkstations* are terms used to highlight major uses of particular types of computers. *(p. 83)*

TRUE

4. Experts predict the merging or disappearance of several computer categories. For example, many midrange and mainframe systems have been made obsolete by the power and versatility of client/server networks composed of microcomputers and servers. *(p. 83)*

TRUE

5. Network servers are the most important category of computer systems for both businesspeople and individual consumers. *(p. 83)*

FALSE

Microcomputers are the most important category of computer systems for both businesspeople and individual consumers.

6. The computing power of microcomputers currently exceeds that of the mainframe computer of previous generations, at a fraction of the cost. *(p. 83)*

TRUE

7. Some microcomputers are powerful enough to support applications with heavy
(p. 83) mathematical computing and graphics display demands, such as computer-aided design (CAD) or investment analysis.

TRUE

8. Network servers are some of the less powerful microcomputers; they are used to
(p. 83) coordinate telecommunications and resource sharing in small LANs and in Internet and intranet websites.

FALSE

Network servers are usually the more powerful microcomputers.

9. The top criteria for corporate PC ownership are *operating systemready*, *connectivity*,
(p. 85) *solidperformance*, and *globalcompatibility*.

FALSE

The top criteria for corporate PC ownership are operating system ready, connectivity, solid performance, and *security equipped*.

10. Today's corporate buyers seek networked PCs equipped with reliable wireless
(p. 84) capabilities.

TRUE

11. Web-enabled personal digital assistants use touch screens, pen-based handwriting *(p. 86)* recognition, or keyboards, so mobile workers can send and receive e-mail, access the Web, and exchange information with their desktop PCs or Web servers.

TRUE

12. Midrange computers are often used as network servers in order to help manage large *(p. 87-88)* Internet websites, corporate intranets and extranets, and client/server networks.

TRUE

13. Microcomputers can act as powerful workstations for computer-aided design and other *(p. 88)* computation and graphics-intensive applications.

TRUE

14. A RIM Blackberry combines a mobile phone, a music and video player, and an *(p. 90)* Internet communications device.

FALSE

An iPhone does all this.

15. The function of an input device is to interpret computer program instructions and to transmit directions to the other components of the computer system. *(p. 93)*

FALSE

The function of an input device is to convert data into electronic form for entry into a computer system.

16. The central processing unit (CPU) is the main processing component of a computer system. *(p. 93)*

TRUE

17. The output devices of a computer system can include *videodisplayunits*, *scanners*, and *printers*. *(p. 93)*

FALSE

A scanner is an input device.

18. The control unit of the CPU interprets instructions and directs processing. *(p. 93)*

TRUE

19. The clock speed of a microprocessor today is commonly expressed in *teraflops*; earlier

(p. 94) microcomputer speeds were reported in *gigahertz*.

FALSE

The clock speed of a microprocessor today is commonly expressed in gigahertz; earlier microcomputer speeds were reported in megahertz.

20. Moore's Law refers to the exponential growth in the number of transistors per
(p. 94) integrated circuit, which quadruples computer power every six months.

FALSE

Moore's Law refers to the exponential growth in the number of transistors per integrated circuit, which quadruples computer power every 18 to 24 months.

21. When discussing the concept of a computer system, *peripherals* is the generic name
(p. 97) given to all input, output, and secondary storage devices that are part of a computer system.

TRUE

22. Peripherals depend on direct connections or telecommunications links to the central
(p. 97) processing unit of a computer system.

TRUE

23. Offline devices are separate from, but can be electronically connected to and controlled by, a CPU. *(p. 97)*

FALSE

Offline devices are not under the control of the CPU.

24. A pointing stick is the most popular pointing device used today. *(p. 97)*

FALSE

An electronic mouse is the most popular pointing device used today.

25. A *trackball* is a type of pointing device that converts drawings and other graphic images into digital data in order to enter it into a computer system. *(p. 97)*

FALSE

A trackball is a stationary device related to the mouse.

26. Some touch screens emit a grid of *infrared beams* or *soundwaves* that is broken when the screen is touched. *(p. 100)*

TRUE

27. Pen-based computing technologies are being used in many hand-held computers and personal digital assistants. *(p. 101)*

TRUE

28. Speech recognition systems typically require training the computer to recognize your voice and its unique sound patterns in order to achieve a high degree of accuracy. *(p. 101)*

TRUE

29. Speaker independent voice recognition systems allow a computer to understand a few words from a voice it has never heard before. *(p. 102)*

TRUE

30. Optical scanning enables the direct entry of data from source documents into a computer system. *(p. 103)*

TRUE

31. OCR technology is used to read codes on merchandise tags, product labels, credit card receipts, and other documents. *(p. 103)*

TRUE

32. The dark, magnetic stripe on the back of credit cards can hold about 200 gigabytes of information. *(p. 105)*

FALSE

The dark, magnetic stripe on the back of credit cards can hold about 200 bytes of information.

33. Smart cards, a form of input technology that contains an embedded microprocessor chip, are becoming popular in the United States for use in debit and credit cards. *(p. 105)*

TRUE

34. Digital cameras and digital video cameras enable users to shoot, store, and download still photos or full-motion video and audio onto their PCs. *(p. 105)*

TRUE

35. Video displays and printed documents have been, and still are, the most common forms of output from computer systems. *(p. 105)*

TRUE

36. Advances in video monitor technology, such as *activematrix* and *dualscan* capabilities, have improved the color, but not the clarity, of LCD displays. *(p. 106)*

FALSE

Advances in video monitor technology have improved both the color and the clarity of LCD displays.

37. Printing information on paper is the most common form of information output.
(p. 106)

FALSE

Printing information on a video display is the most common form of output.

38. One of the major trends in secondary storage has been toward massive capacities
*(p. 107-*using magnetic and optical media.
108)

TRUE

39. High speed storage media cost less per byte and provide higher capacities than
*(p. 107-*lower-speed storage media.
108)

FALSE

High-speed storage media cost more per byte and provide lower capacities.

40. Data are processed and stored in a computer system through the presence or
*(p. 108)*absence or electronic or magnetic signals to the computer. This is called a "bi-state"

representation of data, because the computer and the media can exhibit only two states or conditions.

FALSE

This is called a "two-state" or "binary" representation of data.

41. A byte typically consists of ten bits and represents one character of data in most computer coding schemes. *(p. 108)*

FALSE

A byte consists of eight bits.

42. Magnetic tape devices are frequently called direct access storage devices (DASDs), while magnetic disks are known as sequential access devices. *(p. 109)*

FALSE

Magnetic tape devices are sequential access devices; magnetic disks are DASDs.

43. The terms *directaccess* and *randomaccess* describe the same concept. *(p. 109)*

TRUE

44. The primary storage (main memory) of a computer consists of microelectronic semiconductor memory chips. *(p. 110)*

TRUE

45. Random Access Memory (RAM) is non-volatile memory. *(p. 110)*

FALSE

RAM is volatile.

46. ROM chips are widely used as a primary storage medium because they can be erased and overwritten. *(p. 101)*

FALSE

ROM chips can be read, but not erased or overwritten.

47. Magnetic disks are common forms of secondary storage because they provide fast access and high storage capacity at a reasonable cost. *(p. 112)*

TRUE

48. RAID disk units provide fault tolerant storage capacity because data can be recovered from backup copies stored on other disks should one disk fail. *(p. 113)*

TRUE

49. Magnetic tapes are no longer used by businesses today because the cost of storage on tape is very expensive compared to other types of storage media. *(p. 113)*

FALSE

Magnetic tape is a low-cost storage medium.

50. Most CD-ROM disks can hold more than 600 megabytes of information. *(p. 114)*

TRUE

51. The main advantage of CD-R (compact disk-recordable) disks is that they enable recorded data to be erased many times. *(p. 114)*

FALSE

The major limitation of CD-R disks is that recorded data cannot be erased.

52. DVD+RW+R with CD-RW provides an all-in-one drive for burning DVD-RW or DVD-R disks, burning CDs, and reading DVDs and CDs. *(p. 114)*

TRUE

53. Active RFID chips are self-powered and must be close to the reader to transmit their signal. *(p. 115)*

FALSE

Active RFID chips do not need to be close to the reader to transmit their signal.

54. RFID chips may be attached to objects, but cannot be injected into them because it interferes with radio signal transmission. *(p. 115)*

FALSE

RFID chips can be attached to objects, but they can also be injected into them. A recent use for RFID chips is the identification of pets, who have a chip imbedded under their skin.

55. The use of RFID technology poses concerns for privacy issues. *(p. 117)*

TRUE

56. It is predicted that in the future we will be able to back up our biological memories. *(p. 118)*

TRUE

Multiple Choice Questions

57. Computer systems rely on all the following components *except* _____.
(p. 78)

A. input

B. internet

C. processing

D. storage

58. Computer systems rely on which of the following components?
(p. 78)

A. Input, processing, output, storage, and control

B. Input, processing, output, storage, and the Internet

C. The Internet, processing, output, storage, and control

D. Input, processing, output, the Internet, and control

59. The mechanical loom was invented by _____.
(p. 78)

A. Blaise Pascal

B. Joseph Jacquard

C. Herman Hollerith

D. Keith Glennan

60. The first generation of computers relied on _____.

(p. 81)

A. miniaturized circuits

B. transistors

C. vacuum tubes

D. punch cards

61. The second generation of computers relied on _____.

(p. 81)

A. miniaturized circuits

B. transistors

C. vacuum tubes

D. punch cards

62. In the 1950s, _____ were invented and quickly replaced the thousands of vacuum tubes used in electronic computers.

(p. 81)

A. microchips

B. resistors

C. transistors

D. miniaturized circuits

63. The third generation of computers relied on _____.

(p. 81)

A. solid state technology and integrated circuits

B. transistors

C. vacuum tubes

D. punch cards

64. The first electronic digital computer was completed in the _____.

(p. 81)

A. 1870s

B. 1940s

C. 1950s

D. 1960s

65. The _____ generation of computers was characterized by further

(p. 82) miniaturization of circuits, increased multiprogramming, and virtual storage memory.

A. second

B. third

C. fourth

D. fifth

66. _____ are the most important category of computer systems for both *(p. 83)* businesspeople and individual consumers.

A. Microcomputers

B. Supercomputers

C. Network Servers

D. Mainframes

67. According to the text, which of the following is considered by millions of computer *(p. 83)* users to be the primary function of the desktop PC?

A. Allows access to the Internet

B. Increases productivity through the use of software applications

C. Facilitates creation of local area networks

D. All of the choices are correct

68. Which of the following statements best describes a workstation computer? *(p. 83)*

A. Supports applications with heavy mathematical computing and graphics display demands, such as computer-aided design (CAD)

B. Coordinates telecommunications and resource sharing in small, local area networks (LANS)

C. Allows convenient mobile communications and touch-screen computing

D. All of the choices are correct.

69. _____ are some of the more powerful microcomputers; they are used to coordinate telecommunications and resource sharing in small LANs and in Internet and intranet websites. *(p. 83)*

A. Mainframes

B. Supercomputers

C. Network Servers

D. None of the choices are correct.

70. According to the text, using web-enabled PDAs allows workers to realize all the following benefits *except*: *(p. 86)*

A. Send and receive email

B. Access the Web

C. Exchange information with desktop PCs or Web servers

D. Helps retain younger and more technologically savvy employees

71. An intelligent terminal that can perform data entry and some information processing tasks independently is called a _____ terminal. *(p. 86)*

A. transaction

B. dumb

C. Windows

D. remote

72. Which of the following does *not* apply to a personal digital assistant (PDA)? *(p. 86)*

A. Supports applications with heavy mathematical computing

B. Touchscreens

C. Pen-based handwriting recognition

D. Web access

73. Personal digital assistants most commonly use which of these technologies?
(p. 86)

A. Pen-based computing

B. Optical scanning

C. Jump drives

D. Back-lit keyboards

74. What sets the RIM BlackBerry apart from other wireless PDA solutions?
(p. 86)

A. Lower price

B. It is always on and connected

C. Smaller size and weight

D. Longer battery life

75. A BlackBerry _____.
(p. 86)

A. performs common PDA functions

B. doesn't have a visible antenna

C. uses the same network as most mobile phones

D. All of the choices are correct.

76. _____ are high-end network servers that handle large-scale processing of *(p. 88)* business applications.

A. Midrange computers

B. Mainframes

C. Supercomputers

D. All of the choices are correct.

77. _____ are popular as powerful network servers to help manage large *(p. 88)* Internet Websites, intranets, and extranets.

A. Workstations

B. Minicomputers

C. Supercomputers

D. Mainframes

78. Which of the following is a common application for a midrange computer? *(p. 88)*

A. Internet functions.

B. Integrated enterprise-wide manufacturing and distribution.

C. Financial applications.

D. All of the choices are correct.

79. According to the text, which of the following is not true of Mainframes? *(p. 89)*

A. Mainframes can process thousands of million instructions per second (MIPS).

B. Mainframes are large, fast, and powerful.

C. Mainframes have large storage capacities.

D. All of the choices are correct.

80. Which of the following would *not* be considered a characteristic of supercomputer systems? *(p. 90)*

A. Costs between $5 million and $50 million.

B. Used for global weather reports and military defense.

C. Runs the same software found on most home computers, but at faster speeds

D. Designed specifically for high-speed numeric computation

81. The function of an input device is:

(p. 93)

A. to interpret computer program instructions

B. to transmit directions to other components of the computer system

C. to convert data into electronic form for entry into a computer system

D. none of the above

82. The central processing unit (CPU):

(p. 93)

A. is the main processing component of a computer system

B. controls all the peripheral devices of a computer system

C. is controlled by the RAID unit

D. is also called a Fuzzy Logic unit

83. The output devices of a computer system include:

(p. 93)

A. printers and video displays

B. the Arithmetic-logic unit

C. scanners and RAID units

D. the Fuzzy Logic unit

84. The central processing unit (CPU) consists of:
(p. 93)

A. the Control unit and the RAID unit

B. Arithmetic-logic unit and the RAID unit

C. the RAID unit and the Fuzzy Logic unit

D. the Control unit and the Arithmetic-logic unit

85. Which of the following would perform the required mathematical and logic operations
(p. 93) of a central processing unit (CPU)?

A. Control unit

B. Arithmetic-logic unit

C. RAID unit

D. Fuzzy logic unit

86. The function of an output device is to:

(p. 93)

A. Convert data into an electronic machine-readable form for direct entry into a computer system

B. Perform the arithmetic and logic functions required in computer processing

C. Convert electronic information produced by the computer system into human-intelligible form for presentation to end-users

D. Store the data and program instructions needed for processing

87. Which of the following is a secondary storage device?

(p. 93)

A. Primary memory

B. Random access memory

C. Magnetic disk

D. The CPU

88. According to Moore's Law, _____ doubles every 18 to 24 months.

(p. 94)

A. computing power

B. computer prices

C. computer storage capacity

D. the number of functioning computers

89. Which of the following would *not* fit the typical classification of a computer peripheral?
(p. 97)

A. Monitors and printers

B. Scanners and hard disk drives

C. CD-ROM drives and backup systems

D. Central processing unit

90. Offline devices:
(p. 97)

A. are directly attached to the CPU

B. are not controlled by the CPU

C. are controlled by the CPU

D. can replace the CPU

91. The most popular pointing device used today is the _____.
(p. 97)

A. pointing stick

B. light pen

C. trackball

D. electronic mouse

92. All of the following relate to Peripherals *except*:
(p. 97)

A. input devices

B. output devices

C. CPU devices

D. secondary storage devices

93. One device used as an input device in a computer system is a pointing stick, which is
(p. 97) best described as:

A. A small gearshift lever set in a box

B. A stationary device containing a roller ball whose top is exposed outside its case

C. A pen-shaped device with a ballpoint at the end

D. A small, button-like device, sometimes likened to the eraser head of a pencil

94. A touchpad is best described as a:

(p. 97)

A. Small, rectangular, touch-sensitive surface usually placed below the keyboard

B. Stationary device containing a roller ball whose top is exposed outside its case

C. Pen-shaped device with a ballpoint at the end

D. Device rolled along the desktop in order to move the cursor on the screen

95. Continuous speech recognition systems:

(p. 101)

A. Compare speech patterns to a dictionary

B. Allow a computer to understand a few words from a voice it has never heard before

C. Require users to pause between each spoken word

D. Recognize conversationally paced speech

96. Speech recognition devices in work situations allow operators to perform all the following except:

(p. 101)

A. Enter data without using their hands.

B. Input data faster.

C. input data more accurately.

D. Input data without using a computer.

97. Speaker independent voice recognition systems:

(p. 102)

A. Compare speech patterns to a dictionary

B. Allow a computer to understand a few words from a voice it has never heard before

C. Require users to pause between each spoken word

D. All of the choices are correct.

98. Which of the following best describes optical scanning devices?

(p. 103-104)

A. Hand-held wands used to read data on merchandise tags

B. Photoelectric devices that scan data

C. Converts reflected light patterns into electronic impulses, which are accepted as input into the computer system

D. All of the choices are correct.

99. Which of the following best describes magnetic stripe technology?

(p. 105)

A. A form of data entry that helps computers read credit cards

B. A form of computing where debit and credit cards have an embedded microprocessor chip

C. Technology that enables users to download full-motion video into a computer system

D. Technology commonly used in banks in order to magnetically read checks and deposit slips

100. The dark, magnetic stripe on the back of credit cards can hold about
*(p. 105)*_____ of information.

A. 200 gigabytes

B. 200 kilobytes

C. 200 bytes

D. Immaterial, as this technology is not yet available in the United States

101. Smart card technology:
(p. 105)

A. Allows debit cards to store a cash balance on a card and electronically transfer some of it to others to pay for items and services

B. Is not yet available in the United States

C. Is commonly used by banks to read and process checks

D. All of the choices are correct.

102. Banks use _____ technologies for check processing.

(p. 105)

A. voice response

B. magnetic ink character recognition

C. laser printer

D. optical scanner

103. The most common output trend is _____.

(p. 106)

A. printed reports and documents

B. audio responses

C. voice responses

D. video displays

104. Which of the following is *not* a valid storage medium?

(p. 107-

108)

A. Paper documents

B. Optical disks

C. Magnetic tape

D. All of the choices are valid storage media.

105. High speed storage media _____ than lower-speed storage media.

(p. 107-

108)

A. cost less per byte and provide higher capacities

B. cost less per byte and provide lower capacities

C. cost more per byte and provide higher capacities

D. cost more per byte and provide lower capacities

106. _____ bytes of storage are needed to represent the name "Sarah."

(p. 108)

A. Two

B. Three

C. Five

D. Ten

107. Data are processed and stored in a computer system through the presence or absence of electronic or magnetic signals to the computer. This is called a _____ representation of data, because the computer and the media can exhibit only two states or conditions. *(p. 108)*

A. Ternary

B. Trinary

C. Binary

D. Bipolar

108. Data are processed and stored in a computer system through the presence or absence of electronic or magnetic signals to the computer. This is called a "binary" representation of data, because the computer and the media can exhibit only _____ states or conditions. *(p. 108)*

A. two

B. three

C. five

D. ten

109. A bit, the smallest element of data, can have values of:

(p. 108)

A. 0 or 1

B. 0, 1, or 8

C. 0 through 7

D. 0 through 8

110. A gigabyte (GB) is used to express which of the following approximate measures?

(p. 108)

A. 1,000 byes of storage

B. 1,000,000 bytes of storage

C. 1,000,000,000 bytes of storage

D. 1,000,000,000,000 bytes of storage

111. Which of the following is an advantage of RAID?

(p. 109)

A. It provides virtually unlimited online storage

B. It provides high access speeds

C. It provides fault-tolerant storage capacity

D. All of the choices are advantages.

112. The primary storage (main memory) of a computer is also called:

(p. 110)

A. ROM

B. RAID

C. RAM

D. None of the choices are correct.

113. Which of the following storage types is volatile?

(p. 110)

A. RAM

B. ROM

C. PROM

D. All the choices are volatile.

114. Which of the following applies best to CD-RW optical disk technology?

(p. 114)

A. Users are unable to record their own data on the disks

B. Users can record their own data, but only once

C. Users are able to record and then erase the disks

D. None of the choices are correct.

115. Which of the following statements about optical disks is true?

(p. 114)

A. They can be read only, recordable, or rewritable

B. They can hold approximately 50 megabytes on a single disk

C. They have totally replaced "3.5" diskettes

D. They have totally replaced magnetic tape as secondary storage

116. According to the text, what are the current types of RFID chips?

(p. 115-117)

A. Electrical and magnetic

B. Positive and negative

C. Active and passive

D. Red and Green

Fill in the Blank Question

117. The word *calculate* is derived from calculus, the Latin word for _____.
(p. 78)

small stone

118. A computer that uses vacuum tube technology is called a _____-generation
(p. 81) computer.

first

119. The principal drawback of the Electronic Numerical Integrator and Computer (ENIAC)
(p. 81) was its _____ and processing ability.

size

120. In the 1950s, _____ replaced the vacuum tubes used in electronic
(p. 81) computers.

transistors

121. Industry experts predict that the emergence of network computers and
(p. 83) _____ appliances for applications on the Internet and corporate intranets will replace many personal computers.

information

122. _____ are the most important category of computer systems for both business people and individual consumers. *(p. 83)*

Microcomputers

123. A _____ server is a powerful microcomputer that is used to coordinate telecommunications and resource sharing in small local area networks (LANs) and Internet and intranet web sites. *(p. 83)*

network

124. The _____ is a recent entrant into PDA technology that enables the user to manage information, such as appointments, to-do lists, and sales contracts. It also allows them to receive E-mail, access the Web, and exchange such information with a desktop PC or network server. *(p. 86)*

BlackBerry

125. The most recent entries to the information appliance and PDA market, from Apple, are _____. *(p. 86)*

the iPhone and the iPad

126. _____ systems include high-end network servers that handle large-scale processing of many business applications. *(p. 87-88)*

Midrange

127. A special type of parallel computing that relies on complete computers connected to a *(p. 92)* network by a conventional network interface is called _____.

Distributed or Grid Computing

128. _____ computers continue to handle the information processing needs of *(p. 89)* major corporations and governmental agencies with high transaction processing volumes or complex computational problems.

Mainframe

129. A _____ is an extremely powerful mainframe computer system, which is *(p. 90)* specifically designed for high-speed numeric computations and is used by government research agencies and national weather forecasting agencies.

supercomputer

130. A computer is a system, an interrelated combination of components that perform the *(p. 93)* basic system functions of _____, processing, output, storage, and control.

input

131. The _____ is the main processing component of a computer system.

(p. 93)

central processing unit (CPU)

132. The _____ devices of a computer system include video display units,
(p. 93) printers, audio response units, and so on.

output

133. A computer is a _____, an interrelated combination of components that
(p. 92) performs the basic system functions of input, processing, output, storage, and control.

system

134. The central processing unit (CPU) of a computer system is divided into two major
(p. 93) subunits: the arithmetic-logic unit and the _____ unit.

control

135. Computers today operate in the nanosecond range, which is one _____ of
(p. 94) a second.

billionth

136. Most computers today can process program instructions in *MIPS*, which is
(p. 94) _____.

millions of instructions per second

137. Moore's Law states that the number of transistors on an integrated circuit will *(p. 94)* _____ every _____.

double; 18-24 months

138. A _____ user interface presents a user with icons, bars, buttons, boxes, *(p. 97)* and other images to initiate computer-based tasks.

graphical

139. An electronic _____ is a pointing device that is used to move the cursor on *(p. 97)* the screen, as well as to issue commands and make icon and menu selections. It is the most popular pointing device used today.

mouse

140. A _____ is a stationary pointing device. You turn a roller with only its top *(p. 97)* exposed outside its case to move the cursor on the screen.

trackball

141. According to the text, the _____ is one of several commercial devices that takes

(p. 126) the human-computer interface to a new level.

iPhone

142. A _____ allows users to use a computer by touching the surface of its
(p. 100) video display screen.

touch screen

143. Computing technology that can be used to draw or write on a pressure-sensitive
(p. 101) graphics table is called _____-based technology.

pen

144. When using _____ speech recognition, software recognizes continuous,
(p. 101) conversationally paced speech.

continuous

145. Optical _____ devices read text or graphics and then convert them into
(p. 103) digital input for your computer.

scanning

146. OCR stands for _____.

(p. 103)

optical character recognition

147. _____ technology is a form of input technology commonly used by banks
(p. 105) on their ATM cards.

Magnetic stripe

148. _____ cards are a form of input technology. These cards have an
(p. 105) embedded microprocessor chip and several kilobytes of memory.

Smart

149. _____ ink allows the computer systems of the banking industry to read
(p. 105) checks and deposit slips.

Magnetic

150. Use of _____ panel video monitors for desktop systems has become more
(p. 106) common as their cost has become more affordable.

flat

151. The capacity of memory chips is usually expressed in terms of bytes. A
(p. 108) _____ is a basic grouping of bits that the computer operates as a single

unit.

byte

152. The storage capacities in computer systems are frequently measured in kilobytes (KB), megabytes (MB), _____ (GB), or terabytes (TB).

(p. 109)

gigabytes

153. There are two basic types of semiconductor memory: Read Only Memory (ROM) and _____.

(p. 110-111)

Random Access Memory (RAM)

154. A _____ drive is a new, innovative form of storage that uses semiconductor memory and transistors that can be programmed to store data for virtually unlimited periods without power.

(p. 111)

flash or jump

155. Floppy disks consists of a polyester film disk covered with an _____ compound.

(p. 112)

iron oxide

156. The primary advantage of CD-RW disks over CD-ROM and CD-R disks is that they can be recorded and _____ many times.

(p. 114)

erased

157. RFID stands for _____.

(p. 115)

radio frequency identification

Chapter 04 Computer Software Answer Key

True / False Questions

1. *(p. 130)* Software is considered the variable part of the computer, whereas the hardware is considered the invariable part.

TRUE

2. *(p. 130)* Unlike hardware, which has several categories, software has only one category—computer applications.

FALSE

There are two general types of software; application software and system software.

3. *(p. 130)* General purpose application programs perform common information processing jobs for end users.

TRUE

4. *(p. 130)* COTS software is custom, off-the-shelf software that is purchased and then modified to meet the needs of the customer.

FALSE

COTS iscommercial, off-the-shelf software, and COTS software cannot be customized.

5. The specifications and functionality of custom software are controlled or retained by the developing organization.

(p. 132-133)

TRUE

6. System software are programs that manage and support the operation of computer systems and networks.

(p. 133)

TRUE

7. An accounting program is an example of application-specific software.

(p. 133)

TRUE

8. According to the text, operating systems are a type of general purpose application program.

(p. 133)

FALSE

An operating system is a system management program.

9. One of the biggest advantages offered by software suites is that all the programs within the suite use a similar graphical user interface (GUI). This gives them the same look and feel, and makes them easier to learn and use.

(p. 135)

TRUE

10. *(p. 135)* Although Microsoft Office has a large share of the software suite market, Lotus, Corel, and Sun all offer competing productivity suites.

TRUE

11. *(p. 136)* Web browsers are the key software interface used to point and click through the hyperlinked resources of the Internet, as well as corporate intranets and extranets.

TRUE

12. *(p. 136)* Web browsers are becoming the universal software platform from which end users launch into information searches, multimedia file transfer, discussion groups, and many other *Internet*, *intranet*, and *extranet* applications.

TRUE

13. *(p. 137)* Instant messaging is quite popular in today's society, outside of the workplace. It is not yet being used in the business environment.

FALSE

Instant messaging is also being used by business professionals, who use it to communicate and collaborate in real time.

14. *(p. 137)* A weblog is a website on which a company advertises its products in a very brief, yet commercial way.

FALSE

A weblog is a website of personal or noncommercial origin.

15. *(p. 137-138)* Blogs are online diaries from a particular point of view. They are personal in origin, not commercial.

FALSE

Blogs can be personal or commercial in origin.

16. *(p. 138)* Some powerful word processing packages have built-in capabilities that end users can use to convert documents to HTML format for publication as web pages.

TRUE

17. *(p. 139-140)* When a spreadsheet is used to answer "what if" questions, the user must reenter the values and formulas into the cells in order to see the impact of the changes.

FALSE

To answer "what if" questions, one must only change a selected variable to see the impact of the changes. It is not necessary to reenter all the data.

18. *(p. 140)* Presentation graphics packages help end users design and manage computer-generated slide shows that can contain text, graphics, and multimedia displays.

TRUE

19. *(p. 140)* Presentation graphics packages have gotten more powerful in recent years, but not even the top-end packages enable end users to publish to the World Wide Web.

FALSE

Top-end presentation graphics packages allow graphics and multimedia presentations to be transferred in HTML format to websites on corporate intranets or the World Wide Web.

20. *(p. 141)* A personal information manager helps users store, organize, and retrieve information about customers and prospects, and schedule and manage appointments.

TRUE

21. *(p. 143)* Web sites built with collaborative development tools can integrate a wide variety of individual applications in order to increase team productivity. However, they do little to improve individual productivity.

FALSE

Websites built with collaborative development tools can help increase both individual and team productivity.

22. A number of large and fast-growing companies are turning to application service providers instead of developing or purchasing the application software they need to run their businesses. *(p. 143)*

TRUE

23. Application service providers rely on the Internet to provide their services to customers. *(p. 143)*

TRUE

24. A company without enterprise resource planning expertise can call upon an application service provider to deliver, support, and maintain an ERP for a fixed monthly fee. *(p. 143)*

TRUE

25. One key disadvantage of an application service provider is that a "pay as you go" structure is often more expensive than what a company would pay if it had purchased the software outright. *(p. 143)*

FALSE

Companies can save millions of dollars by using a "pay as you go" structure because they do not have to purchase the platform infrastructure and upgrade hardware before rolling out software.

26. Regardless of whether a software application is purchased off the shelf or is accessed via an ASP, it must be licensed for use. *(p. 145)*

TRUE

27. *(p. 145-146)* Software licensing is a complex topic that involves considerations of the special characteristics of software in the context of the underlying intellectual property, including copyright, trademark, and trade secrets.

TRUE

28. *(p. 146)* Contrary to what many believe, when an individual or a company buys a software application, they have actually purchased the rights of ownership.

FALSE

When an individual or company buys a software application, they have not purchased the rights of ownership.

29. *(p. 146)* As a software purchaser, the license you agree to typically prohibits reverse engineering or modifying the software.

TRUE

30. *(p. 147)* Purchasing an operating system is an unnecessary expense because off-the-shelf application software packages contain a built-in operating system.

FALSE

The computer must contain an operating system in order to execute application software packages.

31. Linux is considered an *opensource* operating system because it offers unrestricted access to its source code. *(p. 153)*

TRUE

32. An advantage of open source software is that programmers can read and modify the source code, so they can improve it, adapt it, and fix bugs. *(p. 153)*

TRUE

33. Utility programs are used to perform miscellaneous housekeeping and file conversion functions, including data backup, data recovery, virus protection, data compression, and file defragmentation. *(p. 156)*

TRUE

34. Performance monitor programs are designed to monitor the performance and usage of computer systems in order to achieve system and data security. *(p. 157)*

FALSE

Performance monitor programs are designed to monitor the performance and usage of computer systems in order to achieve maximum efficiency.

35. Performance monitor programs are designed to monitor and control the use of computer systems, provide warning messages, and record evidence of unauthorized use of computer resources. *(p. 157)*

FALSE

Security monitor programs monitor and control the use of computer systems, provide warning messages, and record evidence of unauthorized use of computer resources.

36. Machine languages are high-level languages whose instructions closely resemble human language or the standard notation of mathematics. *(p. 157-158)*

FALSE

Machine languages are low level languages that use binary code instructions.

37. When high-level programming languages are used, programmers must learn a different language for each type of computer that uses the program. *(p. 158)*

FALSE

High-level languages are machine-independent.

38. Most fourth-generation programming languages encourage programmers and users to specify the results they want, while the computer determines the sequence of instructions that will accomplish those results. *(p. 159)*

TRUE

39. A key characteristic of object-oriented programming languages is that they separate the data elements from the procedures or actions that will be performed upon that data.
(p. 160)

FALSE

Although most other programming languages separate data elements from the procedures or actions that will be performed upon them, object-oriented languages tie them together into objects.

40. When programming in an object-oriented language, an example of an *object* would be a set of data about a customer's account and the operations that are performed on the data.
(p. 160)

TRUE

41. Of the different programming languages, third-generation COBOL is the most widely used today.
(p. 161)

FALSE

Object-oriented languages are the most widely used programming languages because they are efficient and easier to use.

42. HTML, XML, and COBOL are all popular programming languages for building multimedia web pages, websites, and web-based applications.
(p. 161)

FALSE

COBOL is not used for building multimedia web pages, websites, or web-based applications.

43. Extensible Markup Language (XML) classifies data in such a way that it makes website information easier to search, sort, and analyze. *(p. 162)*

TRUE

44. XML-enabled search software can easily find the exact product you specify if the product data at a website is labeled with identifying HTML tags. *(p. 162)*

FALSE

XML-enabled search software can easily find the exact product you specify if the product data at a website is labeled with identifying XML tags.

45. The ease of creating Java applets and distributing them from network servers to client PCs and network computers is one of the major reasons for Java's popularity. *(p. 164)*

TRUE

46. Microsoft's .NET is a relatively new collection of programming support for what are known as Web services, the ability to use the Web without limit. *(p. 164)*

FALSE

Microsoft's .NET is a relatively new collection of programming support for what are known as Web services, the ability to use the Web rather than your own computer for various services.

47. *(p. 165)* Web services can link key business functions for the exchange of data in real time within the Web-based applications a business might share with its customers, suppliers, and other business partners.

TRUE

48. *(p. 167)* A language *compiler* translates computer programs written in another programming language into the computer's own machine language instruction codes.

FALSE

A language translator translates computer programs written in another programming language into the computer's own machine language instruction codes.

49. *(p. 167)* In programming packages, a compiler is used to translate high-level language statements into machine language instructions.

TRUE

50. *(p. 168)* Software developers can use CASE tools at different stages of the software development processes.

TRUE

51. Open source software is typically not encumbered by licensing restrictions.

(p. 153)

FALSE

Open source software is typically provided under a license.

52. Whatever a person builds using open-source software, he or she must provide the same capabilities to anyone else under the same open-source license terms.

(p. 154)

TRUE

Multiple Choice Questions

53. Which of the following is true of off-the-shelf software?

(p. 130)

A. It is developed with the intent to sell multiple copies

B. The company buying the software has no control over the specifications, schedule, or evolution of the software

C. The company that develops the software is not the intended audience

D. All of the choices are correct.

54. Software is considered the _____ part of the computer, whereas the hardware is considered the _____ part.

(p. 130)

A. expensive, inexpensive

B. inexpensive, expensive

C. variable, invariable

D. invariable, variable

55. The two general classifications of software are:

(p. 130)

A. Systems and application

B. Programming and CASE

C. Commercial and custom

D. Programming languages and development tools

56. _____ application programs perform common information processing jobs for end users.

(p. 130)

A. Systems

B. CASE

C. Commercial

D. General purpose

57. _____ software are programs that manage and support the operation of computer systems and networks.

(p. 133)

A. System

B. CASE

C. Commercial

D. General purpose

58. An accounting program is an example of _____ software.

(p. 133)

A. System

B. CASE

C. Application-specific

D. General purpose

59. According to the text, operating systems are a type of _____ program.

(p. 133)

A. CASE

B. System management

C. Application-specific

D. General purpose

60. Application software can be subdivided into two categories:

(p. 130)

A. COTS and POTS

B. First generation and second generation

C. Custom and commercial

D. General purpose and function specific

61. COTS software stands for:

(p. 130)

A. Custom off-the-shelf software

B. Commercial off-the-shelf software

C. Combined off-the-shelf software

D. Contaminated on-the-surface software

62. According to the Real World Case, GE spends $150 million each year to purchase all of its desktop and laptop computers from how many vendors? *(p. 131)*

A. Two
B. One
C. Ten
D. Nobody is certain

63. According to the Real World Case, GE spends $150 million each year to purchase all of its desktop and laptop computers from which vendor? *(p. 131)*

A. Dell
B. Hewlett-Packard
C. Gateway
D. None of the above

64. According to the Real World Case, GE's Global Supplier Library lacked which of the following? *(p. 131)*

A. A central repository
B. Multi-language capabilities
C. Self-management of data
D. All the above

65. According to the Real World Case, which of the following is a problem with SaaS?

(p. 131-132)

A. SaaS is open-source software.

B. GE owns the software and is responsible for making it work daily.

C. GE does not own the software, it's on lease. If the vendor goes bankrupt, everything shuts down.

D. SaaS refuses to license its software to GE.

66. Which of the following are considered application software packages?

(p. 133)

A. Word processing programs

B. Operating systems

C. System utilities

D. System development programs

67. Which of the following are considered general purpose application software packages?

(p. 133)

A. Education and entertainment

B. Electronic mail

C. System utilities

D. Programming languages

68. Which of the following are considered application specific software packages?

(p. 133)

A. Education and entertainment

B. Electronic mail

C. System utilities

D. Programming languages

69. Which of the following is *not* considered a system management software packages?

(p. 133)

A. Database management

B. CASE tools

C. System utilities

D. Application servers

70. According to the text, which of the following describes system software?

(p. 133)

A. Used for developing new systems as required for business purposes

B. Performs information processing tasks for end users

C. Allows anyone to contribute to the development of a specific application

D. Manages and supports operations of computer systems and networks

71. According to the text, function-specific application software does which of the following?

(p. 134)

A. It supports specific applications of end users in business and other fields

B. Provides CASE tools for developing new applications

C. Allows anyone to contribute to the development of a specific application

D. Manages and supports operations of computer systems and networks

72. One of the biggest advantages offered by software suites is that:

(p. 135)

A. All the programs within the suite use a similar graphical user interface (GUI)

B. The packages take up a lot of disk space

C. There is a custom graphical user interface for each application in the suite

D. They cost more than the total cost of buying the individual packages separately

73. Which of the following statements is *not* a characteristic of software suites?

(p. 135)

A. They contain software tools that can help increase productivity, collaborate with colleagues, and access intranets, extranets, and the Internet

B. All components of the software use a similar graphical user interface

C. There is a custom graphical user interface for each application in the suite

D. They cost less than the total cost of buying the individual packages separately

74. Which of the following software suites is an open-source product?

(p. 135)

A. Microsoft Office

B. Lotus Smartsuite

C. WordPerfect Office

D. OpenOffice

75. One disadvantage of software suites is that:

(p. 135)

A. Users may be paying for features that they never use

B. The packages take up a lot of disk space

C. Upgrade costs are often expensive

D. All of the choices are correct.

76. Which of the following, according to the text, are the basic components found in a comprehensive software suite?

(p. 135)

A. Word processing, spreadsheet, and accounting

B. Word processing, spreadsheet, and email

C. Word processing, spreadsheet, database manager, and presentation graphics

D. Word processing, database manager, presentation graphics, and email

77. According to the text, the most important software component for many computer users today is the once simple and limited, but now powerful and feature rich, _____.

(p. 136)

A. word processing application
B. presentation graphics package
C. web browser
D. database management system

78. According to the text, Web browsers are sometimes called the _____.

(p. 136)

A. HTML client
B. communication tool of the future
C. universal client
D. online collaboration client

79. According to the text, which of the following is true of integrated packages?

(p. 136)

A. They have more features than software suites
B. They are more powerful than software suites
C. They are cheaper than software suites
D. They require more disk space than software suites

80. According to the text, which of the following is *not* true of integrated packages?

(p. 136)

A. They require less disk space than software suites

B. They have fewer features than software suites

C. They are more powerful than software suites

D. They are cheaper than software suites

81. According to the text, experts predict the Web browser will be the model for:

(p. 137)

A. Internet development tools for the future

B. How most people use networked computers in the future

C. New graphical user interfaces in the future

D. Cloud computing

82. According to the text, e-mail:

(p. 137)

A. Is a fad that will soon disappear

B. Will be replaced by instant messaging

C. Works best in cloud computing

D. Has changed the way people work and communicate

83. All of these statements regarding web logs or blogs are false *except*:

(p. 137)

A. Blogs are websites of personal origin, not commercial.

B. Each blog is a developing commentary on a particular theme that uses a dated log format.

C. Blogs are declining in popularity because they are difficult to update.

D. The information on a blog can only be written by the site owner.

84. All of the following are considered characteristics of a word processing package *except*:

(p. 138-139)

A. Spell checker and thesaurus

B. Grammar and punctuation correction

C. Instant messaging

D. Web page design capability

85. All of the following are considered characteristics of a desktop publishing package *except*:

(p. 139)

A. Used to print newsletters and brochures

B. Imports text and graphic files from other programs

C. Used for business analysis and modeling

D. Used to print books and manuals

86. According to the text, spreadsheet packages are used by virtually every business for _____. *(p. 139)*

A. analysis, planning, and modeling

B. maintaining accounting records, such as a general ledger

C. keeping up-to-the-minute inventory records

D. tracking human resources

87. When using a spreadsheet package to answer "what if" questions, the user must change: *(p. 139)*

A. Only a selected variable to see the impact of that change

B. A number of variables to make a single change to the spreadsheet output

C. All the formulas in order to calculate new values

D. Nothing - spreadsheets cannot be used to answer "what if" questions

88. Which one of the following would typically not be accomplished with presentation graphics software? *(p. 140)*

A. Converting numerical data into graphics and displays

B. Incorporating multimedia files into presentations

C. Preparing a computerized slideshow to accompany an oral presentation

D. Preparing a text report for management

89. Presentation graphics have become more powerful in recent years and can now:

(p. 140)

A. Calculate formulas for business planning

B. Enable collaboration within teams

C. Organize appointments and calendars

D. Prepare graphics and presentations for transfer to Web sites in HTML format

90. Groupware aids collaboration by providing users with _____.

(p. 141)

A. electronic mail, scheduling, and task management

B. electronic mail and spreadsheet software

C. electronic mail and word processing software

D. All of the choices are correct.

91. Groupware is best described as a(n) _____ program.

(p. 141)

A. general purpose application

B. application specific

C. system management

D. system development

92. Cloud computing is best described as:

(p. 145)

A. Grid computing
B. A style of computing where applications are provided by unknown sources "hidden in the clouds"
C. A style of computing where resources are provided as a service over the Internet
D. A style of computing where a network is not connected to the Internet

93. Cloud computing is *not*:

(p. 145)

A. Grid computing
B. A style of computing users need not have knowledge, expertise, or control over the technological infrastructure
C. A style of computing where resources are provided as a service over the Internet
D. A metaphor for the Internet

94. When a company purchases software, it has:

(p. 145-146)

A. Purchased the rights of ownership
B. Purchased a license to use the software under the terms of the agreement
C. A difficult time obtaining a license because of legality issues
D. None of the choices are correct.

95. System management programs:

(p. 147)

A. Manage the hardware, software, networking, and data resources of computer systems during the execution of information processing jobs

B. Manage e-mail and CASE tools for both end users and developers

C. Help users develop information system programs and procedures

D. All of the choices are correct.

96. Which of the following is a basic function that an operating system performs in the operation of a computer system?

(p. 147)

A. User interface and support services

B. Resource and task management

C. File management and utilities

D. It performs all of the functions above.

97. The user interface function of an operating system typically:

(p. 147)

A. Allows end users to communicate with it so they can load programs, access files, and accomplish other tasks

B. Manages the hardware resources of a computer system

C. Controls the creation, deletion, and access of files of data and programs

D. Manages the accomplishment of the computing tasks of end users

98. Which of the following is the most popular type of user interface?

(p. 147)

A. Graphical

B. Command-driven

C. Menu-driven

D. Voice

99. Which statement best describes open source software?

(p. 153)

A. The primary enhancements are made by teenagers

B. It is a very insecure operating system because of its huge security holes

C. It is more reliable than traditional software because it is subject to more rigorous code review

D. It is more costly than propriety software

100. Open-source licensing is defined by all of the following *except*:

(p. 154)

A. The license must not discriminate against any person or group of persons

B. The license must not contaminate other software by placing restrictions on any software distributed along with the licensed software

C. The license must allow modifications and derived works, and must allow them to be distributed under the same terms as the license of the original software

D. The license must be specific to a product

101. According to the text, Linux' popularity is due to all the following except:

(p. 153)

A. Performance and price

B. Flexibility and reliability

C. It is Open Source software

D. All of the choices are correct.

102. Machine languages are _____.

(p. 157)

A. first-generation programming languages

B. written using binary codes

C. difficult languages in which to program compared to more recent languages

D. All of the choices are correct.

103. The text outlines four levels of languages that allow a programmer to develop the sets of instructions that constitute a computer program. Which of the following is *not* one of those languages?

(p. 157-159)

A. Machine languages

B. Graphical languages

C. Assembler languages

D. High-level languages

104. Which of the following characteristics does a high-level language possess?

(p. 158)

A. They are also known as machine or assembler languages

B. They are designed to be utilized by specific types of computers

C. High-level instructions resemble mathematical expressions

D. They are more efficient than assembler language programs

105. Which of the following is *not* considered a high-level language?

(p. 158)

A. BASIC

B. COBOL

C. FORTRAN

D. Ruby on Rails

106. Fifth generation languages, which are designed to be as much as possible like spoken languages, are referred to as _____ languages.

(p. 159)

A. natural

B. macro

C. generator

D. syntax

107. Object-oriented programming languages:

(p. 160)

A. Are a type of assembler language

B. Separate data elements from the procedures that will be performed on them

C. Use programming statements that tell objects to perform actions on themselves

D. Are useful for numerical processing, but not for graphics-oriented applications

108. _____ is a major benefit of object-oriented programming.

(p. 160)

A. Reusability of objects

B. Conformity of objects

C. A simplified programmer interface

D. Faster compilation time

109. All of the following are popular programming languages for developing multimedia web pages, websites, and web-based applications *except*:

(p. 161)

A. XML

B. HTML

C. Java

D. COBOL

110. The acronym HTML stands for:

(p. 161)

A. High Transfer Machine Language

B. High Transmission Markup Language

C. Hypertext Markup Language

D. Hypermedia Markup Language

111. Which of the following statements is applicable to the Java programming language?

(p. 164)

A. It is a page description language that creates hypertext or hypermedia documents

B. It inserts control codes within a document that create links to other parts of the document or to other documents anywhere on the World Wide Web

C. It embeds control codes in the ASCII text of a document, which designates titles, headings, graphics, and multimedia components, as well as hyperlinks within the document

D. It consists of small application programs called applets that can be executed by any computer and any operating system anywhere in a network

112. Linux, an open source product, is a _____-like operating system that is rapidly gaining market share as a high-performance operating system for network and Web servers.

(p. 153)

A. Unix

B. BASIC

C. COBOL

D. Windows

113. Program editors, debuggers, and code analyzers are types of _____.

(p. 173)

A. Unix tools

B. Programming languages

C. CASE tools

D. Operating Systems

114. Those CASE tools that support activities early in the life cycle of a software project (e.g., requirements, design support tools) are sometimes called _____.

(p. 173)

A. Pre-CASE tools

B. Post-CASE tools

C. Front-end or Upper CASE tools

D. Back-end or Lower CASE tools

115. Those CASE tools that are used later in the life cycle (e.g., compilers, test support tools) are sometimes called _____.

(p. 173)

A. Pre-CASE tools

B. Post-CASE tools

C. Front-end or Upper CASE tools

D. Back-end or Lower CASE tools

Fill in the Blank Questions

116. *(p. 130)* Because general purpose application programs, such as those for word processing and database management, significantly increase the productivity of end users, they are sometimes known as _____ packages.

productivity

117. *(p. 130)* COTS is an acronym for _____ off-the-shelf software.

commercial

118. *(p. 135)* Microsoft Office and Corel WordPerfect Office are examples of a combination of individual software packages that share a common graphical user interface and are designed for easy transfer of data between applications. Collectively, this software is referred to as a software _____.

suite

119. Because of limited functionality, _____ packages require less disk space than software suites, even though they also offer word processing, spreadsheet, and other general-purpose applications.
(p. 136)

integrated

120. Browsers are sometimes called the _____ client. That is, the software component installed on all of the networked computing and communications devices of the clients (users) throughout an enterprise.
(p. 136)

universal

121. _____ allows groups of business professionals to send and receive electronic messages instantly. Thus, they can communicate and collaborate in real time in a near conversational mode.
(p. 137)

Instant messaging or IM

122. _____ packages have computerized the creation, editing, and printing of documents by electronically processing text data.
(p. 138)

Word processing or desktop publishing

123. End users and organizations can use _____ software to produce their own printed materials that look professionally published.
(p. 139)

desktop publishing (DTP) or word processing

124. When an end user wants to analyze numerical data by applying formulas and then graphing the results, _____ packages are the correct choice of software. *(p. 139)*

spreadsheet

125. Presentation graphics packages help users convert _____ data into graphics displays, such as line charts, bar charts, pie charts, and other types of graphics that can help users prepare multimedia presentations. *(p. 140)*

numeric

126. _____ software helps end users store, organize, and retrieve information about customers, clients, and prospects. It also helps them schedule and manage appointments, meetings, and tasks, thus enhancing productivity and collaboration. *(p. 141)*

Personal information management

127. _____ is software used to support and enhance communication, coordination, and collaboration among networked teams and workgroups. It generally includes software tools for electronic communications, electronic conferencing, and cooperative work management. *(p. 141)*

Groupware

128. The primary purpose of an operating system is to maximize the _____ of a computer system by operating it in the most efficient manner. *(p. 147)*

productivity

129. _____ software consists of programs that manage and support a computer system and its information processing activities. *(p. 147)*

System

130. An _____ system is an integrated set of programs that supervise the processing operations of the CPU, control the input/output functions of the computer system, and provide various support services. *(p. 147)*

operating

131. The trend in user interfaces is toward an easy-to-use, _____ user interface, which uses icons, bars, buttons, boxes, and other images. *(p. 147)*

graphical

132. Three main types of user interfaces are _____-driven, menu-driven, and graphical. *(p. 147)*

command

133. A computer equipped with _____ memory capability can process larger programs and greater amounts of data than the capacity of its memory circuits would normally allow. *(p. 150)*

virtual

134. *(p. 150)* The component of the operating system that keeps track of the physical location of files on magnetic disks and other secondary storage devices and controls the creation, deletion, and access of files is the _____ program.

file management

135. *(p. 151)* An example of _____ is a computer that appears to perform several computing tasks in a seemingly simultaneous fashion.

multitasking

136. *(p. 153-154)* To be considered open-source software, the program must allow distribution in source code as well as in _____ form.

compiled

137. *(p. 157)* _____ is software that helps diverse software applications and networked computer systems exchange data and work together more efficiently.

Middleware

138. *(p. 157)* _____ language is considered the most basic level of programming languages and involves the difficult task of writing instructions in the form of strings of binary digits.

Machine

139. _____ is a page description language that creates hypertext or hypermedia documents. The language is an important tool for developing multimedia web pages, websites, and web-based applications.

(p. 161)

Hypertext Markup Language (HTML)

140. _____ is an object-oriented programming language defined for programming real-time, interactive web-based applications in the form of applets.

(p. 164)

Java

141. The term _____ is commonly used to describe the Web-based business and computing functions or services accomplished by Web services software technologies and standards.

(p. 165)

Web services

142. The _____ language is one of the key technologies that enable Web services to make applications work between different computing platforms.

(p. 165-166)

XML

143. UDDI, an acronym for a Web-based technical standard, stands for _____.

(p. 166)

Universal Description Discovery and Integration

144. Simple Object Access Protocol (SOAP) is used to link _____ running on different computer platforms. *(p. 166)*

applications

145. Most software development programs now include powerful graphics-oriented *programming editors* and _____. *(p. 167)*

debuggers

146. At the simplest level, open source refer to software that is delivered with unrestricted access to its _____. *(p. 153)*

source code

Chapter 05 Data Resource Management Answer Key

True / False Questions

1. Variable-length records contain a variable number of fields with fixed field lengths.

(p. 181)

FALSE

Variable-length records contain both a variable number of fields and variable field lengths.

2. When independent of any other files related to it, a single table is referred to as a compressed file.

(p. 181)

FALSE

When independent of any other files related to it, a single table is referred to as a flatfile.

3. Files are frequently classified by the application for which they are primarily used, such as a payroll file or an inventory file.

(p. 181)

TRUE

4. A master file is an integrated collection of logically related data elements.

(p. 181)

FALSE

A database is an integrated collection of logically related data elements.

5. Databases contain data elements that describe both entities and the relationships among entities.
(p. 182)

TRUE

6. Database management packages based on the relational model can link data elements from various
(p. 184) tables to provide information to users.

TRUE

7. The project operation is used to create a subset of the columns contained in the temporary tables
(p. 185) created by the select and join operations.

TRUE

8. A major benefit of multidimensional databases is that they are a compact and easy-to-understand
(p. 185) way to visualize and manipulate data elements that have many interrelationships.

TRUE

9. Multidimensional databases have become the least popular structure for analytical databases that
(p. 185) support online analytical process (OLAP) applications, in which fast answers to complex queries are expected.

FALSE

Multidimensional databases are the most popular database structure for OLAP applications.

10. *(p. 185)* The multidimensional database structure is considered one of the key technologies of a new generation of Web-based applications.

FALSE

The object-oriented model is one of the key technologies of a new generation of Web-based applications.

11. *(p. 187)* A database with a network data structure can easily handle a many-to-many data relationship, whereas a hierarchical model cannot.

TRUE

12. *(p. 187)* The network model can easily handle ad hoc requests for information, whereas the hierarchical model cannot.

FALSE

Because its relationships must be specified in advance, the network model is unable to handle ad hoc requests for information.

13. All of the relationships between the data elements in a relationally organized database need to be specified when the database is created. *(p. 187)*

FALSE

Not all of the relationships between data elements need to be specified when the database is created. Database management software can create new tables of data relationships by using parts of the data from existing tables.

14. Relational databases are more difficult for programmers to work with and more difficult to maintain than the hierarchical and network models. *(p. 187)*

FALSE

Because database management software can create new tables of data relationships from existing tables, relational databases are easier for programmers to work with and maintain than the hierarchical and network models.

15. Large organizations usually place control of enterprise-wide database development in the hands of database administrators (DBAs) and other database specialists. *(p. 188)*

TRUE

16. An active data dictionary will prevent a data entry program from using a nonstandard definition of a customer record. *(p. 189)*

TRUE

17. A data model serves as a logical framework on which to base the physical design of a database.

(p. 190)

TRUE

18. Distributed databases can reside on network servers on the World Wide Web, on corporate intranets, or on corporate extranets.

(p. 193)

TRUE

19. A large database system is often distributed into smaller databases based on some logical relationship between the data and the location of the databases.

(p. 196)

TRUE

20. In a distributed database system, each location gains control of its local data, but loses access to data in other locations.

(p. 197)

FALSE

Each location has control of its local data, but all locations can access any other database in the company.

21. One drawback to the database duplication process is that no changes can ever be made to any database other than the master. Otherwise, local changes will be overwritten during the duplication process.

(p. 197)

TRUE

22. Distributed databases require fewer resources when it comes to computing power and bandwidth.

(p. 197)

FALSE

Distributed databases require extra computing power and bandwidth to access multiple databases in multiple locations.

23. In a traditional file processing approach, each business application is designed to use one or more specialized data files containing only specific types of data records.

(p. 202)

TRUE

24. Having data in independent files makes it easier to provide end users with information for ad hoc requests.

(p. 203)

FALSE

Having data in independent files makes it difficult to provide end users with information for ad hoc requests.

25. In file processing systems, application programs typically contain references to the specific format of the stored data.

(p. 203)

TRUE

26. In file processing systems, it was easy for data elements, such as stock numbers and customer addresses, to be defined differently by different end users and applications.

(p. 203)

TRUE

27. Boolean logic was developed during the latter part of the 1900s.

(p. 207)

FALSE

Boolean logic was developed by George Boole in the mid-1800s.

28. The Internet is nothing more than the world's largest database.

(p. 207)

TRUE

29. DBMS packages play a major role in application development.

(p. 208)

TRUE

Multiple Choice Questions

30. In all information systems, data resources must be organized and structured in some logical manner, so that they can be: *(p. 178)*

A. Easily accessed
B. Processed efficiently
C. Retrieved quickly
D. All of the choices are correct.

31. From a logical point of view, a(n) _____ is the smallest data element that can be observed and manipulated. *(p. 178)*

A. character
B. bit
C. attribute
D. byte

32. A record represents a collection of _____ that describe an entity. *(p. 178)*

A. characters
B. fields
C. files
D. attributes

33. All the fields used to describe the attributes of an entity are grouped to form a(n) _____.

(p. 178)

A. field

B. record

C. file

D. database

34. A group of related records is a data file, or a _____.

(p. 181)

A. field

B. record

C. table

D. database

35. Variable-length records contain:

(p. 181)

A. both a variable number of fields and variable field lengths.

B. both a variable number of fields and fixed field lengths.

C. both a fixed number of fields and variable field lengths.

D. both a fixed number of fields and fixed field lengths.

36. Fixed-length records contain:

(p. 181)

A. both a variable number of fields and variable field lengths.

B. both a variable number of fields and fixed field lengths.

C. both a fixed number of fields and variable field lengths.

D. both a fixed number of fields and fixed field lengths.

37. When independent of any other files related to it, a single table is referred to as a(n):

(p. 181)

A. Independent file

B. Flat file

C. Hierarchical file

D. Non-variable file

38. A(n) _____ is an integrated collection of logically related data elements.

(p. 181)

A. master file

B. program base

C. database

D. integrated file

39. Databases contain data elements that describe both entities and the _____ among entities. *(p. 182)*

A. relationships
B. disparities
C. subsets
D. applications

40. Database management packages based on the _____ model can link data elements from various tables to provide information to users. *(p. 184)*

A. object-oriented
B. relational
C. network
D. hierarchical

41. Early mainframe DBMS packages used the _____ structure, in which all records are dependent and arranged in multilevel structures, consisting of one root record and any number of subordinate levels. *(p. 184)*

A. network
B. relational
C. hierarchical
D. object-oriented

42. In a(n) _____ database structure, all of the relationships among records are one-to-many, because each data element is related to only one element above it.
(p. 184)

A. hierarchical
B. relational
C. network
D. object-oriented

43. Which database model allows many-to-many relationships among records so that a data element can be accessed by following one of several paths?
(p. 184)

A. Hierarchical
B. Network
C. Object-oriented
D. Relational

44. The _____ model is the most widely used database structure today.
(p. 184)

A. network
B. object-oriented
C. relational
D. hierarchical

45. In the relational database model, all data elements within the database are viewed as being stored in the form of simple two-dimensional tables, sometimes referred to as _____. *(p. 184)*

A. records
B. rows
C. columns
D. relations

46. The tables in a relational database are flat files which have rows and columns. Each row represents a _____ in the file. *(p. 184)*

A. field
B. record
C. file
D. relation

47. The tables in a relational database are flat files which have rows and columns. Each column represents a _____ in the file. *(p. 184)*

A. field
B. record
C. file
D. relation

48. The _____ operation is used to create a subset of the columns contained in the temporary tables created by the select and join operations.
(p. 185)

A. link
B. relate
C. project
D. merge

49. Using a relational database, a user can temporarily combine two or more tables so that he/she can see relevant data in a form that looks like it is in one big table. This is the _____ operation.
(p. 185)

A. join
B. link
C. merge
D. select

50. _____ is the most commonly used database application for the PC.
(p. 185)

A. Oracle 10g
B. Microsoft Access
C. DB2
D. SQL Server

51. _____ databases have become the most popular structure for analytical databases that support online analytical process (OLAP) applications, in which fast answers to complex queries are expected. *(p. 185)*

A. Relational
B. Object-oriented
C. Inter-relational
D. Multidimensional

52. The _____ database structure is considered one of the key technologies of a new generation of Web-based applications. *(p. 185)*

A. hierarchical
B. relational
C. object-oriented
D. multidimensional

53. The object-oriented database model supports _____. That is, new objects can be automatically created by replicating some or all of the characteristics of one or more parent objects. *(p. 185)*

A. inheritance
B. morphing
C. duplication
D. cloning

54. Object technology allows designers to do all of the following *except*:

(p. 185)

A. Develop product designs

B. Replicate product designs and then modify them to create new product designs

C. Save designs as objects in an object-oriented database

D. Substantially reduce the file size of designs

55. Which database structure works effectively with complex data types, such as video clips, audio segments, and other subsets of Web pages, and is considered one of the key technologies of Web-based applications?

(p. 187)

A. Hierarchical

B. Network

C. Object-oriented

D. Relational

56. A database with a(n) _____ data structure can easily handle a many-to-many data relationship.

(p. 187)

A. hierarchical

B. network

C. relational

D. object-oriented

57. A database with a(n) _____ data structure can easily handle ad hoc requests for information.
(p. 187)

A. hierarchical
B. network
C. relational
D. object-oriented

58. According to one database pioneer, the future development of databases and data warehouses will depend on _____.
(p. 188)

A. rows
B. columns
C. transaction
D. All of the choices are correct.

59. Large organizations usually place control of enterprise-wide database development in the hands of _____.
(p. 188)

A. Database administrators (DBAs)
B. Automated CASE tools
C. End users
D. All of the choices are correct.

60. According to the text, most data warehouses will run _____ in a column format.

(p. 188)

A. 20 times faster

B. 50 times faster

C. 50 times slower

D. None of the choices are correct.

61. Database administrators and database design analysts work with end users and systems analysts to do all of the following *except*:

(p. 189)

A. Model business processes and the data they require

B. Determine what data definitions should be included in the database

C. Determine what structure or relationships should exist among the data elements

D. Enter live data into the system until it has proven to be reliable

62. _____ are used to model the relationships among the many entities involved in business processes.

(p. 189)

A. Entity-relationship diagrams

B. Data-flow diagrams

C. Schema diagrams

D. Subschema diagrams

63. The physical design stage of database development:

(p. 190)

A. Develops a model of business processes

B. Translates conceptual models into the data models

C. Determines the data storage structures and access methods

D. Defines the information needs of end users in a business process

64. The _____ stage of database development translates the conceptual models into the data model of a DBMS.

(p. 190)

A. data planning

B. requirements specification

C. conceptual design

D. logical design

65. A _____ is an overall logical view of the relationships among the data elements in a database.

(p. 190)

A. schema

B. subschema

C. logical data model

D. conceptual design

66. A _____ is an overall logical view of the relationships needed to support specific end-user application programs that will access the database. *(p. 191)*

A. schema

B. subschema

C. logical data model

D. conceptual design

67. According to the textbook case, the innovation of the open-source product Hadoop is _____. *(p. 192)*

A. that it has not been sued by Google

B. that it actually works

C. that it has no proprietary predecessor

D. its algorithms run contrary to contemporary mathematics

68. According to the textbook case, file processing in Hadoop is not halted by hardware failures because _____. *(p. 192)*

A. Hadoop is a software product

B. Open-source products are not affected by hardware failures

C. Hadoop is an Internet product and does not need hardware

D. Hadoop keeps three (3) copies of all data

69. Operational databases store the detailed data needed to support the business processes and operations of a company. They are also called _____.

(p. 193)

A. Subject area databases
B. Transaction databases
C. Production databases
D. All of the choices are correct.

70. The primary challenge of a distributed database is:

(p. 197)

A. Data accuracy
B. Data transmission speed
C. Storage costs
D. Data security

71. Which of the following statements concerning the *replication* and *duplication* process for updating distributed databases is correct?

(p. 197)

A. The two terms are interchangeable because the processes work the same way
B. Duplication is the more complicated process because it has to identify one database as a master and prevent changes being made to any database other than the master
C. Replication is the more complicated process because it must find changes in each distributed database and make appropriate changes to make each database identical
D. None of the choices are correct.

72. What type of databases are employees using when they access online data banks, whether those data banks are free or paid for through subscriptions? *(p. 197)*

A. Common databases
B. Distributed databases
C. External databases
D. Local databases

73. A central source of data that have been cleaned, transformed, and cataloged so that they can be used for business analysis, market research, and decision support is called a _____. *(p. 199)*

A. data mart
B. data warehouse
C. transaction processing mart
D. data repository

74. A data warehouse contains data that have been processed in all the following ways except: *(p. 199)*

A. Separated
B. Cleaned
C. Transformed
D. Cataloged

75. Which of the following is true of data marts?

(p. 199)

A. They hold data from many different data warehouses.

B. They are a subset of a data warehouse.

C. They focus on many generalized aspects of a company.

D. None of the choices are correct.

76. Which of the following is true of data in a data warehouse?

(p. 199-200)

A. Data in operational databases is ever changing; data in data warehouses is static

B. Data in operational databases is static; data in data warehouses is ever changing

C. Data in operational databases can be cataloged; data in data warehouses cannot

D. None of the choices are correct.

77. Which of the following is a legitimate use for data mining?

(p. 201)

A. Performing "market-basket analysis" to identify new product bundles

B. Profiling customers

C. Finding the root cause of a quality or manufacturing problem

D. All of the choices are correct.

78. All of the following contribute to problems when using a file management approach *except*:
(p. 203)

A. Data redundancy
B. Lack of integration of data
C. Data independence
D. Lack of data integrity

79. Database management involves the use of database management software to control how databases are _____.
(p. 204)

A. created
B. interrogated
C. maintained
D. All of the choices are correct.

80. In mainframe and server computer systems, the database management system controls the _____ of the databases of computer-using organizations.
(p. 204)

A. maintenance
B. development
C. use
D. All of the choices are correct.

81. All of the following are major functions of a database management system *except*:

(p. 206)

A. Creating new databases and database applications

B. Identifying insufficient data processing or storage needs

C. Maintaining the quality of the data in an organization's databases

D. Using the databases of an organization to provide the information needed by its end users

82. Database development involves defining and organizing the _____ of the data needed to build a database.

(p. 206)

A. structure

B. content

C. relationships

D. All of the choices are correct.

83. A DBMS query language is designed to:

(p. 206)

A. Support information systems professionals in the development of complex application software

B. Support end users who wish to obtain ad hoc reports

C. Provide efficient batch mode processing of the database

D. Specify the content, relationships, and structure of a database

84. The database maintenance process is accomplished via:

(p. 206)

A. Hierarchical database systems that provide flexibility and network databases

B. Transaction processing systems and other end user applications, with the support of the DBMS

C. Graphical query languages correctly phrasing SQL

D. File processing systems with the support of 4GLs

85. The basic form of a SQL query is:

(p. 207)

A. SELECT … AND … OR

B. SELECT … WHERE … FROM …

C. SELECT … FROM … WHERE …

D. AND … OR … NOT …

86. Boolean logic deals with three logical operators:

(p. 207)

A. AND, OR, and BUT

B. AND, NOT, and BUT

C. OR, BUT, and NOT

D. AND, OR, and NOT

87. *(p. 208)* Many end users have trouble correctly phrasing database language search queries, so most end-user DBMS packages now offer _____ methods.

A. speech recognition

B. command line

C. GUI

D. All of the choices are correct.

Fill in the Blank Questions

88. All of the fields used to describe the attributes of an entity are grouped to form a _____.

(p. 178)

record

89. _____ contain both a variable number of fields and variable field lengths.

(p. 181)

Variable-length records

90. _____ contain both a fixed number of fields and fixed field lengths.

(p. 181)

Fixed-length records

91. A group of related records is a data file, or a _____.

(p. 181)

table

92. A _____ is an integrated collection of logically related data elements.

(p. 181)

database

93. Databases contain data elements that describe both entities and the _____ among entities.

(p. 182)

relationships

94. In the relational database model, all data elements within the database are viewed as being stored in the form of simple, two-dimensional *tables*, sometimes referred to as _____. *(p. 184)*

relations

95. The tables in a relational database are flat files, which have rows and columns. Each row presents a single _____ in the file. *(p. 184)*

record

96. The tables in a relational database are flat files, which have rows and columns. Each column represents a _____. *(p. 184)*

field

97. The _____ operation is used to create a subset of the columns contained in the temporary tables created by the select and join operations. *(p. 185)*

project

98. An _____ consists of data values describing the attributes of an entity, plus the operations that can be performed upon the data. *(p. 185)*

object

99. A weakness in the hierarchical model is that it cannot handle _____ data relationships. *(p. 187)*

many-to-many

100. A weakness in the network model is that it cannot handle _____ for information.

(p. 187)

ad hoc requests

101. A database of data definitions and specifications is called a *metadata repository*, or a _____.

(p. 188)

data dictionary

102. Database administrators and designers work with corporate and end user management to develop an _____ model that defines the basic business process of the enterprise.

(p. 189)

enterprise

103. _____ relationship diagrams are used to model the relationships among the many entities involved in business processes.

(p. 189)

Entity

104. A _____ is an overall logical view of the relationships among the data elements in a database.

(p. 190)

schema

105. _____ database design takes a physical view of the data that describes how data are to be physically stored and accessed on the storage devices of a computer system.

(p. 191)

Physical

106. Data models represent _____ views of the data and relationships of the database.

(p. 190)

logical

107. Entity Relationship Diagrams are _____ of the various files and their relationships within a database system.

(p. 189)

graphical models

108. A website stores hyperlinked pages of multimedia (text, graphics, photographs, video, and audio) in a _____ database.

(p. 197)

hypermedia

109. The duplication process basically identifies one database as a _____ and then duplicates that database at a prescribed time so that each distributed location has the same data.

(p. 197)

master

110. Data warehouses may be subdivided into _____, which hold subsets of data from the warehouse that focus on specific aspects of a company, such as a department or a business process.

(p. 199)

data marts

111. _____, data that define the data in the data warehouse, are stored in a metadata repository and cataloged by a metadata directory.
(p. 199)

Metadata

112. In _____, the data in a data warehouse are analyzed to reveal hidden patterns and trends in historical business activity.
(p. 200)

data mining

113. To solve the problems encountered with the file processing approach, the _____ management approach was conceived. It is the foundation of modern methods of managing organizational data.
(p. 203)

database

114. Database _____ involves using transaction processing systems and other tools to add, delete, update, and correct the data in a database.
(p. 208)

maintenance

115. SQL is an acronym for _____. It is an international standard query language found in many DBMS packages.
(p. 206-207)

Structured Query Language

116. The basic form of a SQL query is SELECT…FROM… _____.

(p. 207)

WHERE

117. Boolean logic consists of three logical operators: AND, OR, and _____.

(p. 207)

NOT

Chapter 06 Telecommunications and Networks Answer Key

True / False Questions

1. A change in technology often induces social, political, and economic system changes long before a critical mass of users is reached. *(p. 221)*

FALSE

Until a critical mass of users is reached, a change in technology only affects the technology.

2. The telecommunications industry has changed from a deregulated market to government-regulated monopolies. *(p. 221-222)*

FALSE

The opposite is true; the telecommunications industry has gone from government-regulated monopolies to a deregulated market.

3. Middleware is an essential component of any IT infrastructure because it allows disparate systems to be isolated. *(p. 222)*

FALSE

Middleware is an essential component of any IT infrastructure because it allows disparate systems to be joined together in a common framework.

4. Business-to-business electronic commerce websites can be used by businesses to establish strategic relationships with their customers and suppliers. *(p. 225)*

TRUE

5. The Internet has a central computer system that is the most powerful in the world. *(p. 225)*

FALSE

The Internet has no central computer system or telecommunications center.

6. The Internet provides electronic discussion forums and bulletin board systems that are formed and managed by special-interest newsgroups. *(p. 226)*

TRUE

7. Booking a reservation over the Internet costs an airline about 50 percent less than
(p. 228) booking the same reservation over the telephone.

FALSE

Booking a reservation over the Internet costs an airline about 90 percent less than booking the same reservation over the telephone.

8. An *intranet* is a network inside an organization that uses Internet technologies to provide
(p. 229) an Internet-like environment within the enterprise.

TRUE

9. Intranets seldom have much impact on communications and collaboration within an
(p. 230) enterprise.

FALSE

Intranets can significantly improve communications and collaboration within an enterprise.

10. Software that is installed on intranet Web servers can be accessed by employees within the company or by external business partners who are using Web browsers, if access is allowed by the company. *(p. 231)*

TRUE

11. If access to data is not restricted with passwords and other security mechanisms, the integrity of the data can be easily compromised. *(p. 231)*

TRUE

12. An extranet is a network inside a company that uses Internet technologies to provide a private Internet-like network environment to the firm. *(p. 232)*

FALSE

An intranet does this.

13. Web browser technology makes customer and supplier access of intranet resources a lot easier and faster than with previous business methods. *(p. 232)*

TRUE

14. A client/server network of several interconnected local area networks can replace a large mainframe-based network with many end user terminals. *(p. 242)*

TRUE

15. The network-centric concept views the PC as the central computing resource of any computing environment. *(p. 242)*

FALSE

The network-centric concept views networks as the central computing resource of any computing environment.

16. In the central server architecture of P2P networking, the P2P software connects your PC to a central server with the directory of all users of the network. *(p. 243)*

TRUE

17. In the pure peer-to-peer architecture of P2P networking, the P2P software connects your PC to a central server with the directory of all users of the network. *(p. 243)*

FALSE

In the central server architecture of P2P networking, the P2P software connects your PC to a central server with the directory of all users of the network.

18. The Internet, as originally conceived in the late 1960s, was a *pure peer-to-peer* system.8 *(p. 244)*

FALSE

The Internet was conceived as a peer-to-peer system.

19. The unique achievement of Napster was the empowerment of the peers, in association with a central index, to quickly and efficiently locate available content. *(p. 244)*

TRUE

20. Output from analog devices must be converted into digital form in order to input it into a computer. *(p. 245)*

TRUE

21. Today, ordinary telephone wire is the least used medium for telecommunications. *(p. 246)*

FALSE

Ordinary telephone wire is still the most widely used medium for telecommunication.

22. Newly developed optical routers will be able to send optical signals up to 2,500 miles without regeneration. *(p. 246)*

TRUE

23. Communications satellites can use microwave radio as their telecommunications medium. *(p. 247)*

TRUE

24. PCS phone systems cost substantially more to operate and use than cellular systems, but have lower power consumption requirements. *(p. 248)*

FALSE

PCS phone systems cost substantially less to operate and use than cellular system, and they have lower power consumption requirements.

25. Wi-Fi is faster and less expensive than Standard Ethernet and other common wire-based LAN technologies. *(p. 299)*

TRUE

26. A Bluetooth chip is designed to replace cables; it takes the information normally carried by a cable and transmits it to a receiver Bluetooth chip. *(p. 249)*

TRUE

27. In frequency division multiplexing (FDM), a multiplexer effectively divides one high-speed channel into multiple high-speed channels. *(p. 252)*

FALSE

A multplexer divides a high-speed channel into multiple slow-speed channels.

28. Multiplexers work to increase the number of transmissions possible, while also increasing the number of physical data channels. *(p. 253)*

FALSE

Multiplexers work to increase the number of transmissions possible without increasing the number of physical data channels.

29. Telecommunications and network management software can reside in communications processors, such as multiplexers and routers. *(p. 253)*

TRUE

30. Mainframe-based wide area networks frequently use *telecommunications* monitors or *teleprocessing* monitors. *(p. 253)*

TRUE

31. The Open System Interconnection (OSI) model was officially adapted as an international standard by the International Organization of Standards (ISO). *(p. 255)*

TRUE

32. The Internet uses a system of telecommunications protocols that have become so widely used that they are now accepted as a network architecture. *(p. 257)*

TRUE

33. An IP address is expressed as four decimal numbers separated by periods, such as 127.154.95.6. *(p. 257)*

TRUE

34. IP addressing can identify a particular PC connected to the Internet, but not the network to which it is attached. *(p. 257)*

FALSE

IP addressing can identify a specific network because the IP space is divided into three address classes, A, B, and C. The Class B portion of the address identifies networks.

35. Skype software allows telephone conversations through a PC and over the Internet instead of a separate phone connection. *(p. 258)*

TRUE

36. Each IP address is divided into three address classes, which are A, B, and C. Class C addresses are normally owned by large Internet service providers or major corporations. *(p. 257)*

FALSE

Class A addresses are normally owned by large Internet service providers or major corporations.

37. New technologies are extending IP addresses beyond computers to TVs, toasters, and coffeemakers.
(p. 257)

TRUE

38. Developed to work Internet2, IPv6 increases the IP address size from 32 bits to 256 bits to support more levels of the address hierarchy.
(p. 258)

FALSE

IPv6 increases the IP address size from 32 bits to 128 bits.

39. IPv6 supports over 300 trillion trillion trillion addresses.
(p. 258)

TRUE

40. Voice over IP is a technology that allows a remote worker to function as if he or she were directly connected to a regular telephone network, even while at home or in a remote office.
(p. 258)

TRUE

41. Skype users can call to any non-computer-based landline or mobile telephone in the world for just pennies a minute.

(p. 258-259)

FALSE

Calls made to non-computer-based landlines or mobile telephones via Skype are free.

42. "Bandwidth" is typically measured in characters per second (CPS).

(p. 260)

FALSE

"Bandwidth" is typically measured in bits per second.

43. Narrow-band channels typically use microwave, fiber optics, or satellite transmission.

(p. 260)

FALSE

Narrow-band channels are usually unshielded twisted-pair lines used for telephone and modem communications.

44. Frame relay technology is slower than X.25 and not as well suited to handle the heavy communications traffic of interconnected local area networks. *(p. 260-261)*

FALSE

Frame relay is considerably faster than X.25.

45. Although we tend to think of the FCC as the oversight body for radio and television, it is equally involved in all aspects of data and voice communications. *(p. 261)*

TRUE

46. Regular telephone service relies on Packet Switching, while the Internet relies on Circuit Switching. *(p. 260)*

FALSE

Regular telephone service relies on Circuit Switching, while the Internet relies on Packet Switching.

47. Packet Switching involves dividing a message into multiple packets which are transmitted over a network to the receiver. *(p. 260)*

TRUE

48. The Internet is owned by the government of the United States. *(p. 225)*

FALSE

Nobody owns the Internet.

Multiple Choice Questions

49. Telecommunications and network technologies are internetworking and revolutionizing _____. *(p. 218)*

A. business and society

B. business and globalization

C. society and politics

D. globalization and politics

50. Which of the following statements best defines a network?

(p. 218)

A. The usefulness or utility that comes from linking computers together

B. An interrelated or interconnected chain, group, or system

C. Computers linked together via cabling or wireless technology

D. A group of individuals linked via hardware and software

51. A network with 100 nodes has 9,900 possible connections. A network with 1,000 nodes has _____ possible connections.

(p. 218)

A. 9,900,000

B. 999,000

C. 99,000

D. over one million

52. Metcalfe's law states that:

(p. 220-221)

A. The usefulness or utility of a network equals the square of the number of users

B. More network nodes equals more usefulness to network members

C. Networks with too many nodes rapidly lose their effectiveness

D. The usefulness or utility of a network equals the number of users times the number of nodes

53. A change in technology induces social, political, and economic system changes _____.

(p. 221)

A. long before a critical mass of users is reached.

B. before the technology is well understood.

C. only after a critical mass of users is reached.

D. when it is used as a political tool by radical countries.

54. The telecommunications industry has changed _____.

(p. 221-222)

A. from a deregulated market to government-regulated monopolies.

B. not at all since 1900.

C. from government-regulated monopolies to a deregulated market.

D. none of the above.

55. Open systems are a recent telecommunications trend. Open systems:

(p. 222)

A. Use common standards for hardware, software, applications, and networking

B. Create a computing environment that is easily accessed by end users and their networked computer systems

C. Provide greater connectivity, and a high degree of network interoperability

D. All of the choices are correct.

56. Programming that serves to "glue together" or mediate between two separate, and usually already existing, programs is known as _____. *(p. 222-223)*

A. front-line software

B. software handshaking

C. middleware

D. back-line software

57. Local and global telecommunications networks are rapidly converting to digital transmission technologies. Digital technology provides all of the following benefits over analog technology *except*: *(p. 223)*

A. Much lower error rates

B. Equivalent transmission speeds

C. Movement of larger amounts of information

D. Greater economy

58. Telecommunications networks now play vital and pervasive roles in Web-enabled _____.

(p. 223)

A. e-business processes

B. electronic commerce

C. enterprise collaboration

D. All of the choices are correct.

59. Which of the following statements regarding Internet2 is *true*?

(p. 223)

A. Internet2, like the first Internet, is open to all users

B. Internet2 uses the same infrastructure as the current Internet, so it will be easy to learn

C. The purpose of Internet2 is to build a roadmap that can be followed during the next stage of innovation for the current Internet

D. Internet2 will someday replace the original Internet

60. *(p. 224)* Most of the institutions and commercial partners on the Internet2 network are connected via _____, a network backbone that will soon support throughput of 10 Gbps.

A. Abilene
B. Phoenix
C. Enterprise
D. Indiana

61. *(p. 225)* Traveling salespeople and those at regional sales offices can use the Internet, extranets, and other networks to transmit customer orders from their laptop or desktop PCs, thus breaking _____ barriers.

A. physical
B. competition
C. structural
D. geographic

62. Telecommunications-based business applications can help a company overcome all of the following barriers to business success *except*:

(p. 224)

A. Time barriers

B. Geographic barriers

C. Human resource barriers

D. Cost barriers

63. All of the following statements about the Internet revolution are true *except*:

(p. 225)

A. The Internet has become the largest and most important network today, and has evolved into a global information superhighway

B. The central computer system of the Internet is the most powerful communications center in the world

C. The Internet is constantly expanding, as more and more businesses and other organizations join its global web

D. The Internet does not have a headquarters or governing body

64. Which of the following statements regarding Internet Service Providers is *correct*?

(p. 225)

A. ISPs provide individuals and organizations with access to the Internet for a fee

B. ISPs are independent organizations; they have no connection to one another

C. ISPs are no longer necessary for access to the Internet

D. ISPs provide a direct connection between a company's networks and the Internet

65. ISPs are connected to one another through network _____.

(p. 226)

A. touch points

B. portals

C. access points

D. hubs

66. Which of the following is a key business use of the Internet?

(p. 228)

A. Internet websites for interactive marketing and electronic commerce

B. E-mail, file transfer, and discussion forums

C. Intranet links with remote employee sites

D. All of the choices are correct.

67. Applications that use the Internet and Internet-based technologies are typically less expensive to _____ than traditional systems. *(p. 228)*

A. develop
B. operate
C. maintain
D. All of the choices are correct.

68. Most companies are building e-business and e-commerce websites to achieve all of the following goals *except*: *(p. 229)*

A. Generate new revenue from online sales
B. Increase foot traffic at brick and mortar locations
C. Reduce transaction costs
D. Increase the loyalty of existing customers via Web customer service and support

69. An _____ is a network inside an organization that uses Internet technologies to provide an Internet-like environment within the enterprise. *(p. 229)*

A. extranet
B. omninet
C. intranet
D. none of the above

70. An _____ is a network link that uses Internet technologies to interconnect the intranet of a business with the intranets of its customers, suppliers, or other business partners. *(p. 229)*

A. extranet
B. omninet
C. intranet
D. none of the above

71. The use of an intranet in an organization _____.

(p. 229)

A. can significantly improve communications and collaboration within an enterprise.

B. can significantly hinder communications and collaboration within an enterprise.

C. has no effect communications and collaboration within an enterprise.

D. is only possible if the organization is using WiFi.

72. All of the following would typically be supported by an organization's intranet information portal *except*:

(p. 230-231)

A. Communication and collaboration

B. Business operations and management

C. Web publishing

D. Recruitment

73. The comparative _____ of publishing and accessing multimedia business information internally via intranet websites has been one of the primary reasons for the explosive growth in the use of intranets in business. *(p. 230)*

A. attractiveness
B. lower cost
C. ease
D. All of the choices are correct.

74. Based on the information presented in the text, *telecommunications terminals* are best described as: *(p. 235)*

A. Any input/output device that uses telecommunications networks to transmit or receive data, including telephones
B. Devices that support data transmission and reception between terminals and computers
C. Channels over which data are transmitted and received
D. Programs that control telecommunications activities and manage the functions of telecommunications networks

75. *(p. 235)* The text lists five basic categories of components in a telecommunications network. One of these categories includes telecommunications processors, which:

A. Support data transmission and reception between terminals and computers
B. Are channels over which data are transmitted and received
C. Consist of programs that control telecommunications activities and manage the functions of telecommunications networks
D. Include input/output terminals

76. *(p. 235)* The five basic categories of components in a telecommunications network include:

A. Protocols, telecommunications channels, computers, telecommunications control software, and modems
B. Terminals, telecommunications processors, telecommunications channels, computers, and telecommunications control software
C. Terminals, telecommunications channels, computers, and modems
D. Terminals, telecommunications processors, computers, modems, and protocols

77. A network that covers a large geographic distance, such as a state or a country, is considered a _____ network.

(p. 238)

A. client/server

B. local area

C. small area

D. wide area

78. Which of the following best describes a local area network?

(p. 239)

A. A network that covers a large geographic area, such as a city or state

B. A network that connects computers within a limited physical area, such as inside a single building

C. A network that covers no more than a single state

D. A private network that uses the Internet as its main backbone

79. To communicate over a network, each PC usually has a circuit board called a _____.

(p. 239)

A. printed circuit card

B. modem

C. router

D. network interface card

80. All of the following statements about a virtual private network are correct *except*:

(p. 239)

A. Uses the Internet as its main backbone network

B. Connects the intranets of a company's different locations, or establishes extranet links between a company and its customers, suppliers, and business partners

C. Relies on modem, twisted-pair wire, and router technology

D. Relies on network firewalls, encryption, and other security features to provide a secure network

81. All the following describe a VPN except:

(p. 239)

A. A VPN uses the Internet as its main backbone network.

B. A VPN relies on network firewalls, encryption, and other Internet and intranet security features.

C. A VPN uses the Internet to establish secure intranets between its distant offices and locations.

D. A VPN is available for use by anyone with access to the Internet.

82. Older, traditional mainframe-based business information systems are called _____ systems.

(p. 242)

A. historical

B. standard

C. legacy

D. application

83. Most Linux distributions are released via BitTorrent to help with _____ needs.

(p. 244)

A. security

B. bandwidth

C. user registration

D. file compression

84. The Internet, as originally conceived in the late 1960's was a _____ system.

(p. 244)

A. client-server

B. central server

C. pure peer-to-peer

D. peer-to-peer

85. In telecommunications networks, twisted-pair wire:

(p. 266)

A. Is the least commonly used medium

B. Facilitates mobile data communication

C. Is used for both voice and data transmission

D. Is commonly laid on the floors of lakes and oceans

86. A communications medium that consists of one or more central wires surrounded by thick insulation is called _____ cable.
(p. 266)

A. coaxial
B. fiber optic
C. twisted-pair
D. packet-transmission

87. Compared to coaxial cable, standard twisted-pair telephone lines:
(p. 266)

A. Support lower data transmission speeds
B. Are virtually the same as coaxial cable in speed and service provided
C. Have less interference and distortion because of their insulation
D. None of the choices are correct.

88. Fiber optics uses cables consisting of one or more hair-thin filaments of _____ fiber wrapped in a protective jacket.
(p. 246)

A. glass
B. plastic
C. ceramic
D. nylon

89. Fiber optics are regarded as the communications media of the future, primarily due to its _____.

(p. 246)

A. availability

B. greater speed and capacity

C. lower installation costs

D. greater compatibility with existing communications media

90. As it relates to telecommunications media, the problem of *the last mile* is:

(p. 246-247)

A. A low voltage drop at the end of the line

B. Tying into older technology

C. Finding the money to complete the project

D. None of the choices are correct.

91. Which of the following technologies transmits data at the fastest rate?

(p. 252)

A. Modem

B. Cable modem

C. ISDN

D. Home satellite

92. An internetworking unit that connects networks based on different protocols is a _____.
(p. 252)

A. bridge
B. router
C. gateway
D. hub

93. In a telecommunications network, a hub is a communications processor that:
(p. 252)

A. Connects two LANS based on the same network standards or protocols
B. Connects different communications architectures
C. Facilitates port switching
D. None of the choices are correct.

94. In a telecommunications network, a gateway is a communications processor that:
(p. 252)

A. Is used for port switching
B. Connects different communications architectures
C. Connects two LANS based on the same network standards or protocols
D. Connects LANs to Wi-Fi networks

95. In telecommunications networks, multiplexers:

(p. 252)

A. Convert digital signals to analog and vice versa

B. Allow a single communications channel to carry multiple simultaneous data transmissions

C. Include bridges, routers, hubs, and gateways, which interconnect a local area network with other local and wide area networks

D. Make connections between communications circuits in a network

96. Network management package functions include all of the following *except*:

(p. 253-254)

A. Managing network resources and traffic to avoid congestion

B. Providing security

C. Informing network administrators of potential problems before they occur

D. All of the choices are functions of network management packages.

97. *(p. 254)* Security is a top concern of network management today, so telecommunications software must provide all of the following *except*:

A. Authentication

B. Encryption

C. Firewalls

D. Central processing

98. *(p. 254)* A network configuration that consists of a central computer system with a number of smaller computers tied directly to it, but not to each other, is a _____ network.

A. bus

B. ring

C. central processing

D. star

99. Which of the following best describes how star, ring, and bus networks differ?

(p. 255)

A. Performance and reliability

B. Performance, reliability, and cost

C. Reliability and cost

D. Performance and cost

100. A(n) _____ is a standard set of rules and procedures for the control of communication in a network.

(p. 255)

A. amplification

B. algorithm

C. protocols

D. transponders

101. Which one of the following statements regarding a telecommunications network is *false*?

(p. 255)

A. A protocol is a standard set of rules and procedures for the control of communications in a network

B. The communications control information needed for "handshaking" between terminals and computers is a protocol

C. A protocol deals with the control of data transmission/reception in a network

D. Protocols are not applicable to hardware, such as cables and modems

102. The _____ layer in an OSI model provides communications services for end users.

(p. 256)

A. application

B. data link

C. network

D. transport

103. In an OSI model, the _____ layer does the routing and forwarding.

(p. 256)

A. physical

B. data link

C. network

D. application

104. When IP was first standardized, the specification required that each system attached to the Internet be assigned a unique, _____ Internet address value.

(p. 257)

A. 4-bit

B. 8-bit

C. 16-bit

D. 32-bit

105. All of the following statements regarding Internet telephony are correct *except*:

(p. 258)

A. It is often referred to as voice over IP or VOIP

B. It involves using an Internet connection to pass voice data using IP instead of a standard public telephone network

C. It incurs standard long-distance telephone call charges

D. It demands a very well-configured network to run smoothly

106. Communications channels such as microwave, fiber optics, or satellite transmission that provide high-speed transmission rates typically use _____ channels. *(p. 260)*

A. broadband

B. narrow-band

C. wireless

D. voice-band

107. ATM (asynchronous transfer mode) is an emerging high-capacity _____ switching technology. *(p. 261)*

A. node

B. packet

C. cell

D. network

108. VoIP works by digitizing a voice signal, chopping it into _____, and then sending them over a company's computer network or the Internet, much like data or email.
(p. 258)

A. bits
B. packets
C. characters
D. waves

109. IPv4, the current Internet addressing protocol, can accommodate about _____ addresses.
(p. 257)

A. 4 trillion
B. 4 billion
C. 4 million
D. None of the above

Fill in the Blank Questions

110. _____ systems are information systems that use common standards for hardware, software, applications, and networking. *(p. 222)*

Open

111. Open systems provide greater _____. That is, the ability of networked computers and other devices to easily access and communicate with each other and share information. *(p. 222)*

connectivity

112. Internet2 is all about high-speed telecommunications and infinite _____. *(p. 224)*

bandwidth

113. We can think of the _____ as a network made up of millions of smaller, private networks, each with the ability to operate independent of, or in harmony with, all the other millions of connected networks. *(p. 225)*

Internet

114. Companies can create private secure Internet links between themselves, called _____ private networks. *(p. 232)*

virtual

115. A communications *network* is any arrangement where a *sender* transmits a message to a *receiver* over a _____, consisting of some type of *medium*. *(p. 235)*

channel

116. Devices such as modems, switches, and routers, which support data transmission and reception between terminals and computers, are known as telecommunications _____. *(p. 235)*

processors

117. Thin clients provide a browser-based user interface for processing small application programs called _____. *(p. 242)*

applets

118. Network computing is sometimes called a _____ client/server model,
(p. 243) because it consists of thin clients, application servers, and database servers.

three-tier

119. The terms *analog* and _____ refer to the methods used to convert
(p. 244) information into an electrical signal so that it can be transmitted or processed.

digital

120. If the temperature being measured by an electronic analog thermometer is 83 degrees,
(p. 244-245) the analog system would put out _____ volts.

830, 83, 8.3, or .83

121. Dense wave division multiplexing (DWDM) can split a strand of glass fiber into _____
(p. 246) channels, which enables each strand to carry 5 million calls.

40

122. Terrestrial microwave involves earthbound microwave systems that transmit high-speed
(p. 247) _____ signals in a line-of-sight path between relay stations spaced approximately 30 miles apart.

radio

123. All cellular and PCS telephone systems divide a geographic area into small areas, or
(p. 248) _____, typically from one to several square miles in area.

cells

124. Smart telephones, pagers, PDAs, and other portable communications devices have
(p. 249) become very thin clients in _____ networks.

wireless

125. The WAP standard specifies how Web pages in HTML and XML are translated into a
(p. 249) wireless markup language (WML) by _____ software.

filter

126. _____ are the most common type of communications processor.

(p. 251)

Modems

127. A modem converts digital signals into analog frequencies and then back again. This process is known as modulation and _____.

(p. 251)

demodulation

128. The main idea in OSI is that the process of communication between two endpoints in a telecommunication network can be divided into _____.

(p. 255)

layers

129. The first part of an Internet address identifies the network on which the host resides, while the second part identifies the particular _____ on the given network.

(p. 257)

host

130. Regular telephone service relies on circuit _____, in which a switch opens a circuit to establish a link between a sender and receiver. It remains open until the communication session is completed. *(p. 260)*

switching

131. In the X.25 protocol, packets are _____ characters long, while in frame relay technology they are of variable length. *(p. 260)*

128

Chapter 07:e-Business Systems

True / False Questions

1. *(p. 272)*	Cross-functional enterprise systems cross the boundaries of traditional business functions in order to reengineer and improve vital business processes all across the enterprise. TRUE

2. *(p. 272)*	Networked enterprises view cross-functional enterprise systems as a strategic way to use IT to centralize information resources. FALSE Networked enterprises view cross-functional enterprise systems as a strategic way to use IT to share information resources and improve the efficiency and effectiveness of business processes.

3. *(p. 275)*	Partner relationship management concentrates on the efficiency of a firm's internal production, distribution, and financial processes. FALSE Enterprise resource planning concentrates on the efficiency and effectiveness of a firm's internal production, distribution, and financial processes.

4. *(p. 275)*	Knowledge management applications focus on providing a firm's employees with tools that support *group collaboration*, *decision making*, and human resources management. FALSE Knowledge management applications provide a firm's employees with tools that support group collaboration and decision making, but not human resources management.

5. *(p. 266)*	Enterprise application integration (EAI) software enables users to model the business processes and interactions that should occur between business applications. TRUE

6. *(p. 276)*	Enterprise application integration (EAI) software provides *legacy systems* that perform data conversion and coordination, and application communication and messaging

	services. **FALSE** Enterprise application integration (EAI) software provides middleware that performs data conversion and coordination, and application communication and messaging services.

7. *(p. 277)*	Distribution and manufacturing are considered front office systems; customer service and sales order entry are back office systems. FALSE Distribution and manufacturing are back office systems; customer service and sales order entry are front office system.

8. *(p. 277)*	The integration of enterprise application clusters has little, if any, impact on customer call center responsiveness. FALSE The integration of enterprise application clusters has been shown to dramatically improve customer call center responsiveness and effectiveness.

9. *(p. 278-279)*	Transaction processing systems play a vital role in supporting the operations of an e-business enterprise. TRUE

10. *(p. 279)*	Online transaction processing (OLTP) is generally considered a post-event system because transactions are entered nightly. FALSE Online transaction processing is considered a real-time system because it captures and processes transactions immediately.

11. *(p. 280)*	Transaction processing systems update the corporate databases of an organization to reflect changes resulting from day-to-day business transactions. TRUE

12. *(p. 280)*	Transaction reports can take the form of a transaction listing, such as a payroll register. TRUE

13. *(p. 281)*	Enterprise collaboration systems are cross-functional e-business systems that enhance communication, coordination, and collaboration among the members of business teams

	and workgroups. TRUE

14. *(p. 283)*	Training in a virtual world is effective, but obstacles include both technology and culture. TRUE

15. *(p. 283)*	Training in a virtual world can both lower costs and increase efficiency. TRUE

16. *(p. 283)*	Collaborative work management tools help people accomplish or manage individual work activities. FALSE Collaborative work management tools help people accomplish or manage group work activities.

17. *(p. 284)*	The term interactive marketing has been coined to describe a *supply chain management* process that is based on using the Internet, intranets, and extranets to establish **a two-way transactions** between a business and its customers. FALSE The term interactive marketing has been coined to describe a customer-focused management process.

18. *(p. 289)*	Increasingly, sales people are using Web browsers and contact management software to connect to their company's marketing websites. TRUE

19. *(p. 289)*	Many companies view sales force tracking as a way to gain a strategic advantage in sales productivity and marketing responsiveness. FALSE

	Many companies view sales force automation as a way to gain a strategic advantage.

20. *(p. 290)*	Firms such as transportation companies, wholesalers, retailers, financial institutions, and service companies must use production/operations information systems to plan and control their operations. **TRUE**

21. *(p. 291)*	The overall goal of computer-integrated manufacturing is to segregate the production and support processes. **FALSE** The overall goal of computer-integrated manufacturing is to integrate the production and support processes.

22. *(p. 291)*	Computer aided manufacturing systems are those that automate the production process, such as employing humanlike robots to complete the step of painting the product being manufactured. **TRUE**

23. *(p. 292)*	A *process control* computer system uses special sensing devices that measure physical phenomena, such as temperature or pressure changes. **TRUE**

24. *(p. 292)*	Human resource information systems are designed to support most common human resource functions, such as recruitment, selection, hiring, job placement, performance appraisals, and training over corporate intranets. **TRUE**

25. *(p. 292-294)*	Human resource management applications offered over corporate intranets can enable managers and other employees to perform HRM tasks with little intervention by the HRM department. **TRUE**

26. *(p. 295)*	Accounting information systems are among the newest, yet are the most widely used information systems in business. **FALSE**

	Accounting information systems are among the oldest systems.

27. *(p. 295)*	Operational accounting systems emphasize legal and historical record-keeping and the production of accurate financial statements. **TRUE**

28. *(p. 302-303)*	According to the Real World case, some of Cisco's employees are full-time telecommuters, living and working in places such as Illinois while telecommuting to the firm's offices in California. **TRUE** Whirlpool would like to work with a single vendor to provide the bulk of its supply chin needs.

29. _____ is defined as the use of the Internet and other networks and information technologies to support electronic commerce, enterprise communication and collaboration, and Web-enabled business processes, both within a networked enterprise and with customers and business partners. *(p. 272)*

A. Electronic business

B. Enterprise collaboration

C. Cross-functional system management

D. Supply chain management

---

30. _____ systems cross the boundaries of traditional business functions in order to reengineer and improve vital business processes all across the enterprise. *(p. 272)*

A. Electronic business

B. Enterprise collaboration

C. Cross-functional enterprise

D. Supply chain management

---

31. Networked enterprises view _____ systems as a strategic way to use IT to share information resources and improve the efficiency and effectiveness of business processes. *(p. 272)*

A. electronic business

B. enterprise collaboration

C. cross-functional enterprise

D. supply chain management

---

32. *(p. 272)* Moving from mainframe-based legacy systems to integrated, cross-functional client/server applications typically involves installing _____ software.

A. enterprise resource planning

B. supply chain management

C. customer relationship management

D. all of the choices are correct.

---

33. *(p. 272)* Instead of focusing on the information processing requirements of business functions, enterprise software focuses on supporting integrated clusters of _____ involved in the operations of a business.

A. application software

B. business processes

C. customer relationships

D. all of the choices are correct.

---

34. *(p. 272)* A(n) _____ architecture illustrates the inter-relationships of the major cross-functional enterprise applications that many companies have, or are installing, today.

A. enterprise application

B. enterprise operation

C. cross-functional

D. none of the choices are correct.

---

35. Which of the following applications focuses on the *efficiency* of a firm's internal production, distribution, and financial processes?
(p. 275)

A. Customer relationship management

B. Enterprise resource planning

C. Knowledge management

D. Supply chain management

---

36. Which of the following applications focuses on acquiring and retaining profitable customers via marketing, sales, and service processes?
(p. 275)

A. Customer relationship management

B. Enterprise resource planning

C. Knowledge management

D. Supply chain management

---

37. Which of the following applications focuses on developing the most efficient and effective sourcing and procurement processes? *(p. 275)*

A. Customer relationship management

B. Enterprise resource planning

C. Knowledge management

D. Supply chain management

---

38. Which of the following applications focuses on tools that support group collaboration and decision support? *(p. 275)*

A. Customer relationship management

B. Enterprise resource planning

C. Knowledge management

D. Supply chain management

---

39. Which of the following applications aims to acquire and retain partners who can enhance the sale and distribution of a firm's products and services? *(p. 275)*

A. Customer relationship management

B. Enterprise resource planning

C. Partner Relationship Management

D. Supply chain management

---

40. As described in the text, partner relationship management focuses on:

(p. 275)

A. Developing the most efficient and effective sourcing and procurement processes

B. Acquiring and retaining profitable customers via delivery of timely products

C. Acquiring and retaining partners who can enhance the selling and distribution of a firm's products and services

D. Providing a firm's employees with tools that support group collaboration and decision support

41. As described in the text, supply chain management focuses on:

(p. 275)

A. Developing the most efficient and effective sourcing and procurement processes

B. Acquiring and retaining profitable customers via delivery of timely products

C. Acquiring and retaining partners who can enhance the selling and distribution of a firm's products and services

D. Providing a firm's employees with tools that support group collaboration and decision support

---

42. According to the text, customer relationship management focuses on:

(p. 275)

A. Developing the most efficient and effective sourcing and procurement processes

B. Acquiring and retaining profitable customers via marketing and delivery of timely products and services

C. Acquiring and retaining partners who can enhance the selling and distribution of a firm's products and services

D. Providing a firm's employees with tools that support group collaboration and decision support

---

43. According to the text, enterprise resource planning focuses on:

(p. 275)

A. Developing the most efficient and effective sourcing and procurement processes

B. Acquiring and retaining profitable customers via delivery of timely products

C. The efficiency of a firm's internal production, distribution, and financial processes

D. Providing a firm's employees with tools that support group collaboration and decision support

---

44. As described in the text, knowledge management focuses on:

(p. 275)

A. Developing the most efficient and effective sourcing and procurement processes

B. Acquiring and retaining profitable customers via delivery of timely products

C. Acquiring and retaining partners who can enhance the selling and distribution of a firm's products and services

D. Providing a firm's employees with tools that support group collaboration and decision support

---

45. Enterprise application integration (EAI) software enables users to model the business processes and interactions that should occur between:

(p. 276)

A. International divisions

B. Suppliers and customers

C. End users

D. Business applications

---

46. Enterprise application integration (EAI) software provides _____ that performs data conversion and subordination, and application communication and messaging services.

(p. 276)

A. middleware

B. a legacy system

C. the telecommunication protocol

D. a business application

---

47. Distribution and manufacturing are _____.

(p. 277)

A. middleware

B. legacy systems

C. back office systems

D. front office systems

---

48. _____ software can integrate the front-office and back office systems applications of a business so they work together in a seamless, integrated way.

(p. 277)

A. Customer relationship management (CRM)

B. Knowledge management (KM)

C. Enterprise application integration (EAI)

D. Supply chain management (SCM)

---

49. Customer service and sales order entry are _____.

(p. 277)

A. middleware

B. legacy systems

C. back office systems

D. front office systems

---

50. _____ are events that occur as part of doing business, such as sales, purchases, deposits, withdrawals, refunds, and payments.

(p. 278)

A. Items

B. Transactions

C. Occurrences

D. Processes

---

51. A transaction is _____.

(p. 278)

A. any exchange of goods

B. any business event that must be captured and recorded

C. an event requiring an exchange of money

D. any business process where an exchange of resources occurs

---

52. Transaction processing systems play a vital role in supporting the _____ of an e-business enterprise.

(p. 278-279)

A. customer service

B. product distribution

C. operations

D. systems architecture

---

53. Transaction processing systems are _____ information systems that process data resulting from the occurrence of business transactions. *(p. 278)*

A. customer relationship management (CRM)

B. knowledge management (KM)

C. operational accounting

D. cross-functional

---

54. Online transaction processing is considered a _____ system because it captures and processes transactions immediately. *(p. 279)*

A. customer service

B. post-event

C. batch processing

D. real time

---

55. The first step of the transaction processing cycle is _____. *(p. 280)*

A. inquiry processing

B. document generation

C. transaction processing

D. data entry

---

56. _____ update the corporate databases of an organization to reflect changes resulting from day-to-day business transactions. *(p. 280)*

A. Online transaction processing (OLTP) systems
B. Enterprise application integration systems
C. Accounting processing systems
D. Transaction processing systems

---

57. Transaction processing systems process data in two basic ways: _____ and _____. *(p. 280)*

A. Online processing, offline processing
B. Online/real-time processing, batch processing
C. Distributed processing, centralized processing
D. Replicated processing, distributed processing

---

58. _____ systems are cross-functional information systems that enhance communication and coordination among the members of business teams and workgroups. *(p. 281)*

A. Enterprise coordination
B. Enterprise integration
C. Enterprise collaboration
D. Transaction processing

---

59. The capabilities and potential of _____ are driving the demand for better

---

(p. 281) enterprise collaboration tools in business.

A. the Internet

B. intranets

C. extranets

D. All of the choices are correct.

---

60. Electronic mail, voice mail, faxing, Web publishing, bulletin board systems, and paging are considered _____ tools.

(p. 281-282)

A. electronic communication

B. collaborative work management

C. electronic conferencing

D. All of the choices are correct.

---

61. Video-conferencing, chat systems, and discussion forums are considered _____ tools.

(p. 281-282)

A. electronic communication

B. collaborative work management

C. electronic conferencing

D. All of the choices are correct.

---

62. Workflow systems, document sharing, and knowledge management are considered _____ tools.

(p. 281-282)

A. electronic communication

B. collaborative work management

C. electronic conferencing

D. All of the choices are correct.

---

63. Which of the following is considered a *collaborative work management* tool?

(p. 283)

A. Calendaring and scheduling

B. Instant messaging

C. Voice conferencing

D. Paging

---

64. Which of the following is considered an *electronic communications* tool?

(p. 283)

A. Calendaring and scheduling

B. Instant messaging

C. Voice conferencing

D. Chat systems

---

65. Which of the following is considered an *electronic conferencing* tool?

(p. 283)

A. Calendaring and scheduling

B. Instant messaging

C. Data conferencing

D. Paging

---

66. Training in a virtual world is effective, but obstacles include both _____.

(p. 283)

A. technology and culture

B. hardware and software

C. front office and back office

D. suppliers and customers

---

67. Training in a virtual world can both _____.

(p. 283)

A. increase costs and increase efficiency

B. lower costs and lower efficiency

C. increase costs and lower efficiency

D. lower costs and increase efficiency

---

68. _____ tools help people accomplish or manage group work activities.

(p. 283)

A. Calendaring and scheduling

B. Task and project management

C. Collaborative work management

D. Knowledge management

---

69. Collaborative work management tools include all of the following *except*:

(p. 282-283)

A. Calendaring and scheduling tools

B. Task and project management

C. Faxing, paging, and bulletin board systems

D. Knowledge management

---

70. A(n) _____ business system is a type of information system that supports the business functions of accounting, finance, marketing, operations management, and human resource management.

(p. 284)

A. functional

B. inter-enterprise

C. collaboration

D. enterprise resource

---

71. Marketing information systems can help marketing managers with:

(p. 284)

A. Customer relationship management

B. Product planning and pricing

C. Targeted marketing strategies

D. All of the choices are correct.

---

72. Which of the following is considered a human resource business function?

(p. 287)

A. Compensation analysis

B. Payroll

C. Customer relationship management

D. Sales force automation

---

73. Which of the following is considered a production/operations business function?

(p. 287)

A. Personnel requirements forecasting

B. Process control

C. Investment management

D. Sales force automation

---

74. Which of the following is supported by the marketing business function?

(p. 287)

A. Compensation analysis

B. Process control

C. Credit management

D. Sales force automation

---

75. All of the following are supported by the accounting business function *except*:

(p. 287)

A. General ledger

B. Inventory control

C. Capital budgeting

D. Payroll

---

76. Providing website visitors with chat rooms, Web forms and questionnaires, and e-mail correspondence opportunities enables companies to use _____ to encourage customers to become involved in product development, delivery, and service issues.

(p. 287)

A. order processing

B. interactive marketing

C. sales force automation

D. None of the choices are correct.

---

77. Targeted marketing includes all of the following components *except*:

(p. 288)

A. Online behavior

B. Content

C. Credit

D. Demographics/psychographics

---

78. Advertising and promotion efforts can be tailored to each visit to a site by an individual.

(p. 288) This strategy is based on a variety of tracking techniques, such as Web "_____" files recorded on the visitor's disk drive from previous visits.

A. Virus

B. Donut

C. Cookie

D. Compressed

---

79. Many companies view sales force automation as a way to gain _____ in sales productivity and marketing responsiveness. *(p. 289)*

A. customer loyalty

B. strategic advantage

C. higher profits

D. demographic/psychographic customer statistics

---

80. _____ information systems support the production/operations function that includes all activities concerned with the planning and control of the processes producing goods and services. *(p. 290)*

A. Finance

B. Management

C. Marketing

D. Manufacturing

---

81. Computer integrated manufacturing is an overall concept that stresses using computer-based systems in manufacturing to do all the following, *except*:
(p. 291)

A. Simplify production processes
B. Automate production processes
C. Integrate all production and support processes
D. Integrate collaboration and communication throughout the organization

---

82. Computer-integrated manufacturing systems do all the following for activities that are needed to produce products, except:
(p. 291)

A. simplify
B. automate
C. segregate
D. integrate

---

83. The overall goal of computer-integrated manufacturing is to create flexible, agile, manufacturing processes that do what? *(p. 291)*

A. Support the knowledge management processes of the organization.

B. Create products leading specifically to high customer satisfaction.

C. Efficiently produce products of the highest quality.

D. Integrate well into Supply Chain information systems.

---

84. Computer-integrated manufacturing systems support all of the following concepts *except*: *(p. 291)*

A. Flexible manufacturing systems

B. Inquiry processing

C. Agile manufacturing

D. Total quality management

---

85. When a manufacturer automates production of a product by installing computer systems to monitor processes and robots to do some of the assembly tasks, it is an example of _____. *(p. 292)*

A. computer integrated manufacturing

B. computer-aided manufacturing

C. process control

D. task control

---

86. When a manufacturer installs performance-monitoring information systems for factory floor operations, it is an example of _____. *(p. 292)*

A. computer integrated manufacturing

B. computer-aided manufacturing

C. process control

D. manufacturing execution systems

---

87. When a manufacturer uses computers to control ongoing physical processes, it is an example of _____. *(p. 292)*

A. computer integrated manufacturing

B. computer-aided manufacturing

C. process control

D. manufacturing execution systems

---

88. Machine control is the use of computers to control the actions of machines. This is also known as _____. *(p. 292)*

A. numerical control

B. computer-aided manufacturing

C. process control

D. manufacturing execution systems

---

89. Accounting systems are among the _____, yet _____ information systems in business. *(p. 295)*

A. newest, least used

B. newest, most widely used

C. oldest, least used

D. oldest, most widely used

---

90. According to the text, _____ emphasize legal and historical record-keeping and the production of accurate financial statements. *(p. 295)*

A. operational accounting systems

B. management accounting systems

C. cross-functional accounting systems

D. financial accounting systems

---

91. Which of the six essential accounting business systems mentioned in the text reflects changes in inventory and provides shipping and reorder information? *(p. 296)*

A. Accounts payable
B. Accounts receivable
C. Inventory control
D. Order processing

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92. Which of the six essential accounting business systems mentioned in the text records purchases from, amounts owed to, and payments to suppliers? *(p. 296)*

A. Accounts payable
B. Accounts receivable
C. Inventory control
D. Order processing

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93. Computer-based _____ systems support business managers and professionals in decisions concerning the financing of a business, and the allocation and control of financial resources within a business. *(p. 296)*

A. accounting information

B. financial management

C. marketing information

D. management information

Fill in the Blank Questions

94. Instead of focusing on the *information processing* requirements of business functions, enterprise software focuses on supporting integrated clusters of business _____ involved in the operations of a business. *(p. 272)*

processes

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95. An enterprise _____ architecture illustrates the inter-relationships of the major cross-functional enterprise applications that many companies have, or are installing, today.
(p. 272)

application

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96. _____ systems cross the boundaries of traditional business functions in order to reengineer and improve vital business processes all across the enterprise.
(p. 272)

Cross-functional enterprise

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97. _____ focuses on the *efficiency* of a firm's internal production, distribution, and financial processes.
(p. 275)

Enterprise resource planning

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98. EAI software can integrate the front-office and _____ applications of a business so they work together in a seamless, integrated way.
(p. 277)

back-office

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99. A transaction is _____.

(p. 278)

any business event that must be captured and recorded

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100. Transaction processing systems (TPS) are _____ information systems that process data resulting from the occurrence of business transactions.

(p. 278)

cross-functional

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101. Transaction processing systems process data in two basic ways: batch processing and _____ processing.

(p. 280)

real-time or online

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102. Many online systems depend on the capabilities of _____ tolerant computer systems that can continue to operate if parts of the system fail.

(p. 280)

fault

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103. Electronic conferencing options include electronic meeting systems and other group support systems where team members can meet at the same time and place in a _____ room setting.

(p. 282)

decision

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104. The goal of interactive marketing is to enable a company to profitably use networks to attract and _____ customers who will become partners with the business. *(p. 287)*

keep or retain

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105. Advertising and promotion efforts can be tailored to each visit to a site by an individual. This strategy is based on a variety of tracking techniques, such as Web "_____" files recorded on the visitor's disk drive from previous visits. *(p. 288)*

cookie

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106. The production/operations function is concerned with the management of the operational processes and _____ of all business firms. *(p. 290)*

systems

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107. _____ is an overall concept that stresses that the objectives of computer-based systems in manufacturing must be to *simplify*, *automate*, and *integrate* all production and support processes. *(p. 291)*

Computer-integrated manufacturing (CIM)

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108. Manufacturing information systems help companies plan the types of material needed in the production process. This is called _____ planning (MRP). *(p. 291)*

material requirements

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109. Manufacturing execution systems monitor, track, and control the five essential components in a production process: materials, equipment, _____, instructions and specifications, and production facilities. *(p. 292)*

personnel

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110. _____ control is the use of computers to control an ongoing physical process. *(p. 292)*

Process

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111. Machine control is the use of computers to control the actions of machines. This is also popularly known as _____ control. *(p. 292)*

numerical

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112. _____ information systems are designed to support planning to meet the personnel needs of the business, development of employees to their full potential, and control all personnel policies and programs.

(p. 292)

Human resource

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113. Human resource information systems support the strategic, tactical, and _____ use of the human resources of an organization.

(p. 293)

operational

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114. Management accounting systems focus on the planning and _____ of business operations.

(p. 295)

control

115. The _____ budgeting process involves evaluating the profitability and financial impact of proposed capital expenditures.

(p. 297)

capital

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116. _____ planning software can help determine the financing needs of a business and analyze alternative methods of financing. *(p. 297)*

Financial

117. EAI software can integrate _____ and _____ applications so they work together in a seamless, integrated way. *(p. 277)*

front office; back office

118. Syntellect Interactive Services developed _____ for cable pay-per-view systems. *(p. 279)*

online transaction processing system