**Chapter 01**

Foundations of Information Systems in Business

**True / False Questions**

1. Having a basic understanding of information systems is good, but not nearly as important as understanding other functional business areas.

True False

1. Information technology can help all kinds of businesses improve the efficiency and effectiveness of their business processes and managerial decision making.

True False

1. Maintenance is one of the key activities in the development and management of a business information system.

True False

1. One system can be made up of other systems or can be a part of a bigger system.

True False

1. Smoke signals and library card catalogs are examples of an information system.

True False

1. 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.

True False

1. An information system can use hardware as simple as a pencil and paper to capture and store its data.

True False

1. Gaining a strategic advantage over competition requires the innovative application of information technologies.

True False

1. Integration of business systems allows greater flexibility and provides greater business support than any of the individual systems could provide alone.

True False

1. Most retail stores now use computer-based information systems to keep track of inventory, but few use them to evaluate sales trends.

True False

1. Decision support systems (DSS) provide managerial end users with ad hoc and interactive support of their decision-making processes.

True False

1. Expert systems can serve as consultants to users by providing expert advice in limited subject areas.

True False

1. An extranet is an Internet-like network inside the enterprise; an intranet is between the enterprise and its trading partners.

True False

1. Enterprise collaboration systems involve the use of software tools to support e-commerce functions with customers and suppliers.

True False

1. A process control system is an example of an operation support system that records and processes data resulting from business transactions.

True False

1. In real-time processing, data are processed immediately after a transaction occurs.

True False

1. Management information systems (MIS) provide information in the form of reports and displays.

True False

1. An information system that supports accounting is an example of a functional business system.

True False

1. Information systems that focus on operational and managerial applications in support of basic business functions, such as accounting, are known as strategic information systems.

True False

1. An expert system can provide advice for operational chores, such as equipment diagnostics or loan portfolio management.

True False

1. Mismanagement or misapplication of information systems can ultimately result in business failure.

True False

1. 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.

True False

1. Falling prices of computer hardware and software should continue to induce more businesses to expand their computerized operations.

True False

1. Increased importance placed on cyber-security will reduce the need for workers skilled in information security.

True False

25. The human body and an oil refinery can both be classified as systems.

True False

26. In order for something to be classified as a "system", a computerized environment must be involved.

True False

27. A home temperature control system is an example of a cybernetic system.

True False

28. A sales manager exercises control when reassigning salespersons to new territories after evaluating feedback about their sales performance.

True False

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

True False

30. Multiple systems never share an environment; each has its own.

True False

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

True False

32. Anyone who uses an information system or the information it produces can be referred to as an end user.

True False

33. 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 False

34. Optical disks and plastic cards are examples of hardware resources, but paper forms are not.

True False

35. 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.

True False

36. In the context of the information systems model, data resources are typically organized as databases and expert systems.

True False

37. 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.

True False

38. 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 False

39. Data are raw facts or observations, typically about physical phenomena or business transactions.

True False

40. In information systems activities, the processing of data resources typically takes the form of data entry activities.

True False

41. 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 False

42. Calculating employees' pay, federal taxes, and other payroll deductions is a business example of a computerized processing activity.

True False

43. 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.

True False

**Multiple Choice Questions**

44. Information technology can be used to support \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. product development teams
2. customer support processes
3. any other business activity
4. All the choices are correct.

45. In its simplest form, a system consists of all the following except:

1. A group of cooperative users
2. A set of interrelated components
3. A clearly defined boundary
4. A common set of objectives

46. According to the Real World case, eCourier embraced technology by:

1. Doing the same things that all their competitors were doing successfully.
2. Installing a new computerized bar-scanning system for packages.
3. Enabling a new telephone system for customers.
4. Giving all their couriers handheld GPS units for tracking and communication.

47. According to the Real World case, eCourier uses SeeWhy software to:

1. Track packages that have not been delivered.
2. Provide business intelligence in terms of customer satisfaction.
3. Interface with their accounting software.
4. All of the above.

48. According to the Real World Case, the goal of Bryan Cave is:

1. To have the best value for their customers.
2. To create increased profit per customer.
3. To build the best long-term relationships in the world.
4. All the above.

49. According to the Real World Case, the Bryan Cave law firm had difficulty billing its real estate customers because:

1. The developers could not afford their rates.
2. Developers think in terms of square feet, not hours worked.
3. Their lawyers did not understand the real estate profession.
4. None of the above.

50. According to the Real World Case, the big problem facing the Bryan Cave law firm in 2002 was:

1. Communications between all their lawyers and offices.
2. Dealing with the differences in laws around the world.
3. Billing their clients correctly.
4. Making the highest profits from their resources while delivering the highest customer value.

51. All the following are examples of an information system, except:

1. A day planner
2. A cash register
3. A group of marbles in a box
4. A paper-based accounting ledger

52. 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:

1. Business decisions and strategies for competitive advantage.
2. Operations and support strategies.
3. Business decisions and operations.
4. Strategic business decisions and tactical business decisions.

53. How do information systems aid in decision making?

1. Information systems help companies determine investments.
2. Information systems help companies determine which products to sell or discontinue.
3. Information systems can be used to gain competitive advantage.
4. All of the choices are correct.

54. All of the following are fundamental reasons for business applications of information technology except:

1. Support of strategies for competitive advantage
2. Support of business processes and operations
3. Compliance with environmental regulations
4. Decision making support

55. According to the textbook case, Welch's uses BI software from Oco to:

1. manage their gasoline usage.
2. decide which products should be produced.
3. ensure that its carriers are shipping full truckloads to customers.
4. follow new competitive trends from its competitors.

56. According to the textbook case, the Oco BI software used by Welch's:

1. increases the number of deliveries made on Fridays.
2. assures that most deliveries are not made on Fridays.
3. assures that most deliveries are made on Fridays.
4. helps them even out the number of delivery trucks used each day of the week.

57. The expanding role of information systems from the 1950s to the present, in sequential order, are:

1. Management reporting, decision support, electronic business and commerce, data processing, strategic and end user support
2. Data processing, management reporting, strategic and end user support, electronic business and commerce, decision support
3. Data processing, management reporting, decision support, strategic and end user support, electronic business and commerce
4. Electronic business and commerce, management reporting, data processing, strategic and end user support, decision support

58. The rapid development of microcomputer processing power, application software packages, and telecommunications networks gave birth to the phenomenon of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. manufacturer-to-public direct sales
2. MIS departments
3. end user computing
4. electronic monitoring

59. Which of the following is a false statement?

1. Today's information systems are doing the same basic things that they did over 40 years ago.
2. Today there is a much higher level of integration of system functions.
3. Today there is greater connectivity across dissimilar system components.
4. None of the statements is false.

60. Companies generally rely on e-business applications to do all of the following except:

1. Re-engineer internal business processes
2. Implement electronic commerce systems
3. Monitor employee productivity
4. Promote enterprise collaboration among business teams and workgroups

61. In an e-business enterprise, an intranet refers to:

1. An Internet-like network inside the enterprise
2. A network between an enterprise and its trading partners
3. A network between the members of a single workgroup
4. All the choices are correct.

62. E-business uses Internet technologies to work and empower \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. business processes
2. electronic commerce
3. collaboration among business teams
4. All of the choices are correct.

63. E-commerce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. involves buying, selling, marketing, and servicing of products, services, and information over a variety of computer networks
2. uses the Internet, intranets, and extranets to support every step of the commercial process, such as multimedia advertising, product information, and customer support
3. involves Internet security and payment mechanisms that ensure completion of delivery and payment processes
4. All of the choices are correct.

64. 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?

1. Transaction processing systems
2. Process control systems
3. Enterprise collaboration systems
4. Decision support systems

65. Electronic commerce systems generally include all of the following except:

1. Internet websites for online sales
2. Direct links to credit reporting services
3. Extranet access of inventory databases
4. Intranets that allow sales reps to access customer records

66. Process control systems monitor and control \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ processes.

1. physical
2. transactional
3. inter-departmental
4. mechanical

67. 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) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. transaction processing system
2. decision support system
3. enterprise collaboration system
4. process control system

68. 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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. transaction processing systems
2. process control systems
3. enterprise collaboration systems
4. decision support systems

69. A database of customer purchases that provides end-user managers with interactive and ad hoc decision-making support is referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. a transaction processing system
2. a decision support system
3. an information reporting system
4. an executive information system

70. 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?

1. Transaction processing system
2. Process control system
3. Enterprise collaboration system
4. Decision support system

71. When information system applications focus on providing information and support for effective decision making by managers, they are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ support systems.

1. decision
2. management
3. collaboration
4. process

72. An information system that supports the business functions of accounting, finance, human resource management, marketing, or operations would be classified as a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ system.

1. functional business
2. executive information
3. management information
4. decision support

73. Information systems that focus on operational and managerial applications in support of basic business functions, such as accounting or marketing, are known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. functional business systems
2. strategic information systems
3. executive information systems
4. knowledge management systems

74. Most information systems are designed to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. produce information and support decision making
2. handle record-keeping
3. handle transaction processing chores
4. All the choices are correct.

75. Executive information systems (EIS) are tailored to meet the strategic information needs of which of the following management levels?

1. Top management (strategic)
2. Middle management (tactical)
3. Lower management (operational)
4. All of the choices are correct.

76. Business applications of information systems are typically combinations of several types of information systems. This integration is referred to as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ systems.

1. information reporting
2. decision support
3. cross-functional informational
4. end user computing

77. 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 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. customers
2. suppliers
3. business partners
4. All of the choices are correct.

78. A functional business system supports all of the following types of applications except:

1. Accounting
2. Customer problem resolution
3. Marketing
4. Human resource management

79. Which of the following systems acts as a consultant to users?

1. Knowledge
2. Integrated information
3. Executive information
4. Expert

80. 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?

1. CEO
2. CFO
3. COO
4. CIO

81. According to the textbook case on responsibility and accountability:

1. IT is always 100% responsible for any large project involving information technology.
2. IT is never 100% responsible for any large project involving information technology.
3. IT is sometimes 100% responsible for any large project involving information technology.
4. None of the above is correct.

82. Developing an information system solution involves all of the following steps except:

1. Investigation
2. Implementation
3. Redesign
4. Maintenance

83. Computer-based information systems are usually conceived, designed, and implemented using some form of systematic development process. The investigation stage includes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. determining the economic or technical feasibility of a proposed application
2. acquiring and learning how to use the necessary software
3. improving the system
4. All of the choices are correct.

84. Developing information system solutions to business problems in an organization is the responsibility of

1. information system specialists
2. computer programmers
3. systems analysts
4. all information system users within the organization

85. When applying a systematic development process for computer-based information systems, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ would be part of the analysis phase.

1. determining the business requirements of the system
2. acquiring and learning how to use the necessary software
3. implementing a trial system
4. obtaining feedback from end users of the system

86. According to the text, the steps of developing an information system, in their proper order, are:

1. Investigate, analyze, implement, design, maintain
2. Investigate, design, analyze, implement, maintain
3. Maintain, implement, design, analyze, investigate
4. Investigate, analyze, design, implement, maintain

87. In the lawsuit filed against Hannaford Brothers, which of the following was not alleged as a reason for filing the suit?

1. Hannaford has installed inadequate security measures.
2. Hannaford did not disclose the security breach to the public quickly enough.
3. Hannaford sold the data to spammers.
4. All the choices are correct.

88. The information systems function is equally as important to business success as the function of

1. accounting
2. operations management
3. human resources management
4. All the choices are correct.

89. In the information systems concept, the processing function involves:

1. Capturing and assembling elements that enter the system to be processed
2. Transformation processes that convert input into output
3. Transferring elements that have been produced by a transformation process to their ultimate destination
4. Monitoring and evaluating feedback to determine whether a system is moving toward the achievement of its goal

90. 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?

1. Business model innovation
2. Internet connectivity
3. Technological innovation
4. Communication initiatives

91. If a system is one of the components of a larger system, it is considered a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. environment
2. feedback loop
3. subsystem
4. interface

92. A system that can change itself or its environment in order to survive is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ system.

1. a control
2. a self-monitoring
3. an environmental
4. an adaptive

93. Organizations are examples of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ systems because they interface and interact with other systems in their environment.

1. linked
2. open
3. dependent
4. parallel

94. The majority of organizations today would be classified as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ systems.

1. open
2. closed
3. open adaptive
4. closed adaptive

95. An information system depends on all of the following resources except:

1. Hardware
2. Software
3. People
4. Time

96. All of the following would be considered a hardware resource except:

1. A microcomputer
2. A keyboard
3. Magnetic and optical disks
4. Programs and procedures

97. All of the following would be considered a software resource in an information system except:

1. A computer operating system
2. A word processing software package
3. A telecommunication network
4. All of the choices are software resources.

98. In an information system context, which one of the following would be the most applicable description of application software?

1. It controls and supports the operations of a computer
2. It consists of programs that direct particular processing activities
3. It consists of operating instructions for people who will use an information system
4. None of the choices are correct.

99. In an information system, alphanumeric data normally takes the form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. numbers and alphabetical characters
2. sentences and paragraphs
3. graphic shapes and figures
4. All of the choices are correct.

100. In an information system, image data normally takes the form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. numbers and alphabetical characters
2. sentences and paragraphs
3. graphic shapes and figures
4. voice and other sounds

101. All of the following are good examples of information except:

1. The social security number of the company's forklift operator
2. The retail price of blue widgets
3. How much the company owes to vender number 17
4. The numbers 1236789, 349875, and 340977

102. Telecommunications networks consist of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. computers, the Internet, intranets, and extranets
2. communications processors
3. devices interconnected by communication media and controlled by communications software
4. All of the choices are correct.

103. All of the following normally happens to data during a value-added process except:

1. Their useful life is determined
2. Their form is aggregated, manipulated, and organized
3. Their content is analyzed and evaluated
4. They are placed in a proper context for a human user

104. All of the following are considered computer hardware technology except:

1. Operating system software
2. Microcomputers
3. Keyboards
4. Printers

105. Which of the following is an example of control of an information system's performance?

1. A system malfunction wiped out two weeks of student registration records
2. Programmers created a user friendly input screen for a new system
3. Subtotals do not add up to total sales; IT staff investigates whether data entry or processing is the problem
4. An extra $20 was added to every water bill by mistake

106. The original, formal record of a transaction is called the:

1. Updated form
2. Paper form
3. Transaction document
4. Source document

107. The source document is:

1. The form of a document after its final update
2. A transaction document that refers to the source of the product
3. The original, formal record of a transaction
4. 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