TEST BANK – CHAPTER 1 – TRUE/FALSE:

1. A business process has a well-defined beginning and end.

2. Each business process has a direct effect on the financial status of an organization.

3. Few accounting information systems rely on computer hardware and software to track business processes.

4. The rethinking and redesigning that occur during business process reengineering are aided by the use of information technology.

5. There are very few business processes that have the potential to be improved by IT enablement.

6. Business process reengineering should leverage the capabilities of information technology to improve the efficiency of business processes.

7. It is important for accountants to have some understanding of basic computer terminology.

8. When files are organized as sequential access, and the user needs to access record number 250, the previous 249 records will be read by the computer before reading record number 250.

9. When files are organized as sequential access, the sequence is normally based on one key record in each file.

10. Batch processing is best suited to applications that have large volumes of similar transactions that can be processed as regular intervals.

11. Online processing is the opposite of real-time processing.

12. Batch processing is best suited to sequential access files.

13. Online processing is best suited to sequential access files.

14. Online processing is best suited to situations where there is a large volume of records but only a few records are needed to process any individual transaction.

15. Each time a new transaction is completed, parts of the data warehouse must be updated.
16. Data in the data warehouse are called nonvolatile because they do not change rapidly in the same way that operational data change.

17. A system of local area networks connected over any distance via other network connections is called a WAN, or wide area network.

18. E-business is a type of e-commerce.

19. The “intercompany” component of electronic data interchange means that two or more companies are conducting business electronically.

20. In order to have an automated matching system it is necessary to have access to paper copies of purchase orders and invoices.

21. When automated matching is used, the system will not approve an invoice for payment unless the items and quantities match with the packing slip and the prices match the purchase order prices.

22. The evaluated receipt settlement system is an IT enabled system that reduces the time and cost of processing customer payments.

23. ERP systems are based on a relational database system.

24. Traditional accounting software is much more comprehensive and encompassing that ERP software.

25. Before ERP software systems, modules such as human resources were in separate software but well integrated with the accounting software.

26. Although accountants are heavily involved in the creation, implementation, and monitoring of the control structure, management has the ultimate responsibility to establish a control environment.

27. Once a company has decided on the control processes needed, it is not necessary to have an ongoing assessment of risks.

28. A code of ethics should reduce opportunities for employees to conduct fraud if management emphasizes the cost and disciplines or discharges those who violate it.

29. IT systems are to be chosen and implemented to support the attainment of strategies and objectives.

30. It is likely that an accountant will select a career path, within accounting, that will not in some way, involve the use of an accounting information system.

31. An auditor cannot make informed decisions necessary to complete the audit without an understanding of the accounting information system.
32. The accounting information system is often the tool used to commit or cover up unethical behavior.

ANSWERS TO TEST BANK – CHAPTER 1 – TRUE/FALSE:


TEST BANK – CHAPTER 1 – MULTIPLE CHOICE

33. A prescribed sequence of work steps preformed in order to produce a desired result for the organization is called a(n):
   A. Accounting Information System.
   B. Business Process.
   C. Financial Transaction.
   D. Capital Transaction Process.

34. The process that must identify the transactions to be recorded, capture all the important details of the transactions, properly process the transaction details, and provide reports is termed the:
   A. Revenue Process.
   B. Expenditure Process.
   C. Accounting Information System.
   D. Business Process.

35. An accounting information system serves many functions - which of the following is NOT one of those functions?
   A. Capture the details of a transaction
   B. Implement the start of a transaction
   C. Provide reports of transactions
   D. Process the transactions details into appropriate accounts

36. The proper order of activity in an accounting information system would be as follows:
   A. Capture, Record, Process, Report.
   B. Process, Record, Capture, Report.
   C. Capture, Process, Report, Record.
   D. Record, Capture, Process, Report.
37. Which of the following is not one of the general types of business processes identified by the textbook?
   A. Revenue Processes
   B. Expenditure Processes
   C. Conversion Processes
   D. Human Resource Processes

38. Which of the following statements, related to business processes, is false?
   A. Each business process has a direct effect on the financial status of the organization.
   B. A business process is initiated by a particular kind of event.
   C. A business process has a well-defined beginning and end.
   D. Each business process is usually completed in a relatively short period.

39. Which of the following is least likely to be part of an accounting information system function?
   A. Record the accounting data in the appropriate records
   B. Generation of data to be part of the information system.
   C. Process the detailed accounting data.
   D. Report the summarized accounting data.

40. Work steps that are internal controls within the business process would include:
   A. Using an electronic register to record all sales transactions.
   B. Combining both manual and computer based records.
   C. Reconciling a cash register at the end of each day.
   D. Preparation of internal reports to monitor the performance of a specific department.

41. Five different components of the accounting information system were presented in the textbook. Which of the following is not one of those components?
   A. Work steps within a business process intended to capture accounting data as the business process occurs.
   B. Work steps that are internal controls within the business process to safeguard assets and to ensure the accuracy and completeness of the data.
   C. Work steps that generate both internal and external reports.
   D. Work steps to assure that all business processes are recorded using computer-based procedures.

42. Output from an accounting information system would include:
   A. Checks to vendors.
   B. Invoices from vendors.
   C. Customer statements.
   D. Purchase orders.
43. The entities, processes, and information flows that involve the movement of materials, funds, and related information through the full logistics process, from the acquisition of raw materials to the delivery of the finished produces to the end use is a set of linked activities referred to as:
   - A. Management Information System.
   - B. Supply Chain.
   - C. Accounting Information System.
   - D. Logistics Management.

44. The management and control of all materials, funds, and related information in the logistics process, from the acquisition of raw materials to the delivery of finished products to the end user is referred to as:
   - A. Supply Chain Management.
   - B. Management Information System.
   - C. Logistics Management.
   - D. IT Enablement.

45. When discussing the supply chain:
   - A. Any concern about vendors would relate only to those vendors with which a company has direct contact.
   - B. Service providers would not be part of the supply chain.
   - C. Concern would not extend beyond the point where the product is shipped to a customer.
   - D. An entity may not be able to directly control all of the interrelated activities within the supply chain.

46. Using IT systems to enhance efficiency and effectiveness of internal or supply chain processes is called:
   - A. Information Technology Enablement.
   - B. Information Systems Control.
   - C. Information Technology Process Engineering.
   - D. Information Technology Business Processes.

47. The purposeful and organized changing of business processes to make them more efficient is referred to as:
   - A. Information Technology Engineering.
   - B. Information Systems Management.
   - C. Business Process Reengineering.
   - D. Business Process Supply Chain.

48. The use of BPR is a two-fold: (1) Aligns business processes with the IT systems used to recorded processes and, (2):
   - A. Improves the efficiency and effectiveness of these processes.
   - B. Reduces the cost of these processes.
   - C. Enhances the usefulness of these processes.
   - D. Increases the accuracy of the process.
49. The smallest unit of information in a computer system can have only one of two values, zero or one, and is referred to as a(n):
   A. Field.
   B. Record.
   C. Byte.
   D. Bit.

50. A unit of storage that represents one character is referred to as a:
   A. Byte.
   B. Bit.
   C. Bat.
   D. Field.

51. A set of related fields is referred to as a:
   A. File.
   B. Record.
   C. Byte.
   D. Binary Digit.

52. Each record is made up of related:
   A. Files.
   B. Bytes.
   C. Name.
   D. Fields.

53. A collection of data stored on a computer in a form that allows the data to be easily accessed, retrieved, manipulated, and stored is referred to as a(n):
   A. Accounting Information System.
   B. Information Technology.
   C. Database.
   D. Master File.

54. A collection of data stored in several small two-dimensional tables that can be joined together in many varying ways to represent many different kinds of relationships among the data is referred to as a(n):
   A. Database.
   B. Master File.
   C. Relational Database.
   D. Relation Based Accounting Software.

55. Accounting software traditionally uses two different types of files. The file type that is relatively permanent and used to maintain the detailed data for each major process is a(n):
   A. General Ledger.
   B. Master File.
   C. Transaction File.
   D. Subsidiary File.
56. Accounting software traditionally uses two different types of files. The file type that is the set of relatively temporary records that will be processed to update the permanent file is referred to as a(n):
   A. Master File.
   B. General File.
   C. Transaction File.
   D. Subsidiary File.

57. The chart of accounts would be a good example of a:
   A. Transaction File.
   B. Master File.
   C. Field.
   D. Record.

58. The organization of files in a computer system normally uses one of two different access methods. The access method where the files store records in sequence, with one record stored immediately after another is referred to as:
   A. Chronological Access.
   B. Sequential Access.
   C. Random Access.
   D. Numerical Access.

59. The organization of files in a computer system normally uses one of two different access methods. The access method where the files are not stored in sequence, one record not stored immediately after another, is referred to as:
   A. Indexed Access.
   B. Batch Access.
   C. Sequential Access.
   D. Random Access.

60. There are two modes of processing transactions in accounting systems. The mode that requires all similar transactions be grouped together and be processed at the same time, is referred to as:
   A. Batch Processing.
   B. Online Processing.
   C. Real-time Processing.
   D. Sequential Processing.

61. There are two modes of processing transactions in accounting systems. The mode that will record transactions, one at a time, is referred to as:
   A. Batch Processing.
   B. Online Processing.
   C. Real-Time Processing.
   D. Sequential Processing.
62. A type of online processing where a transaction is processed immediately so that the output is available immediately is termed:
   A. Virtual Processing.
   B. Sequential Processing.
   C. Real-Time Processing.
   D. Batch Processing.

63. An integrated collection of enterprise-wide data that includes five to ten fiscal years of non-volatile data, used to support management in decision making and planning is referred to as:
   A. Operational Database.
   B. Relational Database.
   C. Data Storage.
   D. Data Warehouse.

64. This type of database contains the data that are continually updated as transactions are processed and includes data for the current fiscal year and supports day-to-day operations is referred to as a(n):
   A. Data Warehouse.
   B. Data Storage.
   C. Relational Database.
   D. Operational Database.

65. The data in the data warehouse are said to be enterprise-wide because:
   A. The data relate to all areas of the business.
   B. The data are pulled from each of the operational databases and maintained in the data warehouse for many fiscal periods.
   C. All areas of the business are able to access the data warehouse.
   D. All transactions across the all areas of the business are recorded in the data warehouse.

66. The process of searching data within the data warehouse for identifiable patterns that can be used to predict future behavior is referred to as:
   A. Data mining.
   B. Data digging.
   C. Data housing.
   D. Data querying.

67. Two or more computers linked together to share information and / or resources is referred to as a(n):
   A. Computer Intranet.
   B. Computer Internet.
   C. Computer System.
   D. Computer Network.
68. This type of computer network is one that spans a relatively small area - often confined to a single building or group of buildings, and are intended to connect computers within an organization.
   A. Local Area Network
   B. Land Arena Network
   C. Extranet
   D. Internet

69. The global computer network, or “information super highway”, is the:
   A. WAN.
   B. Intranet.
   C. Internet.
   D. LAN.

70. A company’s private network, accessible only to the employees of that company is the:
   A. WAN.
   B. Intranet.
   C. Internet.
   D. LAN.

71. This computer network is similar to a company’s intranet except that it does allow access to selected outsiders, such as buyers, suppliers, distributors, and wholesalers.
   A. Ultranet
   B. Internet
   C. Extranet
   D. LAN

72. The use of electronic means to enhance business processes is termed:
   A. E-business.
   B. Electronic data interchange.
   C. Point of sale system.
   D. E-commerce.

73. The intercompany, computer-to-computer transfer of business documents in a standard business format is called:
   A. E-business.
   B. E-commerce.
   C. Local area network.
   D. Electronic data interchange.

74. Which of the following is NOT one of the three components of electronic data interchange?
   A. Commerce - encompasses all forms of electronic trading.
   B. Intercompany - two or more companies conducting business electronically.
   C. Standard business format - necessary so that the various companies can interact and trade electronically.
   D. Computer to computer - indicates that each company’s computers are connected via a network.
75. This term refers to a system of hardware and software that captures retail sales transactions by standard bar coding.
   A. E-business
   B. Electronic data interchange
   C. Point of sale system
   D. E-commerce

76. When a point of sale system is used and a customer checks out through a cash register, which of the following processes occurs?
   A. Net income is computed
   B. Inventory values are updated
   C. Accounts payable balances are updated
   D. Replacement inventory is purchased

77. A system of computer hardware and software in which the software matches an invoice to its related purchase order and receiving report is called:
   A. Point of sale system.
   B. Electronic data interchange.
   C. Automated matching.
   D. Evaluated receipt settlement.

78. An invoice-less system in which computer hardware and software complete an invoice-less match that is a comparison of the purchase order with the goods received is termed:
   A. Evaluated receipt settlement.
   B. Automated matching.
   C. Electronic invoice presentation and payment.
   D. Enterprise resource planning.

79. This system enables a vendor to present an invoice to its trading partner via the Internet, eliminating the paper, printing, and postage costs of traditional paper invoicing.
   A. Evaluated receipt settlement
   B. Electronic invoice presentation and payment
   C. Automated matching
   D. Electronic data interchange

80. A multi-module software system designed to manage all aspects of an enterprise usually broken down into modules such as financials, sales, human resources, and manufacturing, is referred to as a(n):
   A. Electronic data system.
   B. Electronic data interchange.
   C. Enterprise resource planning.
   D. Electronic resource program.
81. The ability to lessen risks or risk impacts is true of nearly all risks that organizations face. Management can undertake steps to lessen the risk or reduce the impact of the risk, these processes are called:
   A. Programs.
   B. Risk assessment.
   C. Information evaluation.
   D. Controls.

82. Which of the following groups of professionals within an organization have a history of designing and implementing the controls to lessen risks?
   A. Management
   B. Accountants
   C. Human Resources
   D. Lawyers

83. Which of the following is not one of broad categories of controls?
   A. The risk that assets will be stolen or misused.
   B. The risk of errors in accounting data or information.
   C. The risk of loss due to a natural disaster.
   D. The risk of fraudulent activity by employees.

84. Which of the following is not a risk inherent in an IT system?
   A. Computer security breaches.
   B. Computers being stolen.
   C. Erroneous input of data.
   D. Hardware or software failure.

85. A comprehensive report on enterprise risk management was issued by this organization is 2004.
   A. American Accounting Association
   B. New York Stock Exchange
   C. Institute of Internal Auditors
   D. Committee on Sponsoring Organizations

86. A process, affected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives is referred to as:
   A. Enterprise resource planning.
   B. Enterprise risk management.
   C. IT system control structure.
   D. Corporate governance structure.

87. In order to achieve the objective of managing risk, management should establish control structures that include, at a minimum:
   A. Accounting internal controls.
   B. Accounting internal controls, IT controls, corporate governance, enterprise risk management, and IT governance.
   C. IT controls IT governance, corporate governance, and accounting internal controls.
   D. IT controls and accounting internal controls.
88. The company’s development and adherence to this should reduce the opportunities for managements or employees to conduct fraud.
   A. Code of ethics
   B. Internal control structure
   C. Application controls
   D. Corporate governance

89. The COSO report, Internal Controls – Integrated Framework, issued in 1992, identified interrelated components of internal control. Which of the following is not one of those components?
   A. Monitoring
   B. Risk assessment
   C. Control activities
   D. Enterprise risk management

90. IT controls can be divided into two categories. Which of the following is a correct statement of one of those categories?
   A. Application controls apply overall to the IT accounting system. 
   B. Application controls apply to the prevention of erroneous or incomplete input or processing of data.
   C. Application controls are used specifically in accounting applications to control inputs, processing, and output.
   D. Application controls are used to prohibit fraudulent financial reporting.

91. An elaborate system of checks and balances, whereby a company’s leadership is held accountable for building shareholder value and creating confidence in the financial reporting processes, is referred to as:
   A. Enterprise risk management.
   B. Corporate governance.
   C. Application controls.
   D. Internal control structure.

92. The purpose of this 2002 act was to improve financial reporting and reinforce the importance of corporate ethics.
   A. Foreign Corrupt Practices Act
   B. Sarbanes-Oxley Act
   C. Securities and Exchange Act
   D. Treadway Act

93. Which of the following is not one of the corporate functions interrelated within the corporate governance system?
   A. Management Oversight
   B. Ethical Conduct
   C. Risk Assessment
   D. Financial Stewardship
94. The proper management, control, and use of IT systems are known as:
   A. IT Governance.
   B. IT Controls.
   C. IT Risk Management.
   D. IT Code of Ethics.

95. Accountants have several possible roles related to accounting information systems. Which of the following is not normally one of those roles?
   A. Auditor of an AIS
   B. User of the AIS
   C. Programmer of the AIS
   D. Design of the AIS

96. There are many reasons for accountants to become aware of potential unethical behaviors. Which of the following is not one of the reasons identified by the authors?
   A. Accountants are responsible for identifying unethical and illegal activities.
   B. Accounts assist in developing and implementing internal control structures that should decrease the chance of unethical actions.
   C. Accountants are often pressured to assist in, or cover up, unethical actions.
   D. Accountants deal with assets or records that could easily tempt accountants to engage in unethical behavior.

ANSWERS TO TEST BANK – CHAPTER 1 – MULTIPLE CHOICE:
34. C  47. C  60. A  73. D  86. B
38. A  51. B  64. D  77. C  90. C
42. B  55. B  68. A  81. D  94. A
44. A  57. B  70. B  83. C  96. A

TEST BANK – CHAPTER 12 – END OF CHAPTER QUESTIONS

97. When a customer returns goods that were purchased, the business process to accept the return would most likely be a(n):
   A. Administrative process.
   B. Conversion process.
   C. Expenditure process.
   D. Revenue process.
98. Which of the following is least likely to be an output of the accounting information system?
   A. A check
   B. A report
   C. An invoice
   D. A bar code

99. Which of the following is not true of the supply chain?
   A. The supply chain includes vendors.
   B. The supply chain excludes customers.
   C. The supply chain includes information flows.
   D. The supply chain include secondary suppliers.

100. Which of the following is not an objective of IT enablement?
    A. Increased accuracy of data
    B. Reduced cost
    C. Reduced security problems
    D. Increased efficiency

101. The correct order of the computer data hierarchy is:
     A. Byte, bit, record, field, file, database.
     B. Bit, byte, record, field, file, database.
     C. Bit, byte, field, record, file, database.
     D. Bit, byte, field, record, database, file.

102. The process of searching for identifiable patterns in data is called:
     A. Sequential processing.
     B. Data warehousing.
     C. Data mining.
     D. Real-time processing.

103. An IT enabled system for purchasing that is an “invoice-less” system is called a(n):
     A. Automated matching system.
     B. Evaluated receipt settlement.
     C. E-payables.
     D. Point of sale system.

104. The COSO report written for the purpose of assisting managers in the challenge of managing risk in their organization is entitled:
     A. Internal Control – Integrated Framework.
     C. Corporate Governance.
     D. IT Governance.

105. Accountants have some form of use of the AIS in all but which role?
     A. User
     B. Programmer
     C. Auditor
     D. Designer
106. Which of the following is not true of unethical behavior?
   A. The only category of unethical behavior for accountants is inflating revenue.
   B. Accountants are often pressured to help commit or cover-up unethical behavior.
   C. Hacking is an unethical behavior that accountants should be concerned about.
   D. An accounting information system can be used to cover up unethical behavior.

TEST BANK – CHAPTER 12 – ANSWERS TO END OF CHAPTER QUESTIONS
97. D 102. C
98. D 103. B
99. B 104. A
100. C 105. B
101. C 106. A

TEST BANK – CHAPTER 12 – SHORT ANSWER QUESTIONS
107. How might the sales and cash collection processes at a Wal-Mart store differ from the sales and cash collection processes at McDonald’s?
   Answer: Wal-Mart sells items that are pre-priced and bar coded with that price. Therefore the cash registers at Wal-Mart use bar code scanners. However, McDonalds sells fast foods that are not bar coded. The cash registers at McDonalds use touch screen systems that require a cashier to indicate the items purchased. The cash collection processes are not different. In both cases, the employee collects the cash or credit card, and returns any change.

108. Can you think of any procedures in place at McDonald’s that are intended to ensure the accuracy of your order?
   Answer: Student responses may vary, however, following are a few examples: Often, at either the drive-through or the inside cash register, the customer can see a screen that displays the items ordered. In addition, a fast food restaurant uses pre-designed slots to hold certain types of menu items. When a customer orders a particular sandwich, the person filling the order knows exactly which slot to pull the sandwich from. Each customer receives a printed receipt with the items listed and the customer can verify the accuracy.

109. How might the sales and cash collection processes at Boeing Co. (maker of commercial passenger jets) differ from the sales and cash collection processes at McDonald’s?
   Answer: Boeing does not sell to end-user consumers, but to companies such as airlines. Therefore Boeing does not have stores, nor inventory in stores, nor cash registers to process sales. Boeing is more likely to maintain a sales force that visits potential customers to solicit sales. Those sales may be entered by the salesperson into a laptop computer connected to Boeing’s network. McDonald’s, on the other hand, sells to consumers, uses order input touch screens at each location, and maintains supplies of perishable food products.

110. Are there business processes that do not in some way affect accounting records or financial statements?
   Answer: There may be processes that do not directly affect accounting records (such as recruiting and hiring a new employee), but all processes have a direct or indirect affect on accounting records. All processes use resources such as material or employee time. Therefore, all processes have expenses related to those processes that will affect the accounting records.
111. Briefly describe the five components of an accounting information system.
   Answer: 1. Work steps within a business process that capture accounting data as the business process occurs.
   2. Manual or computer-based records that record the accounting data from the business processes.
   3. Internal controls within the business process that safeguard assets and ensure accuracy and completeness of the data.
   4. Work steps that process, classify, summarize, and consolidate the raw accounting data.
   5. Work steps that generate both internal and external reports.

112. Describe how sales data is captured and recorded at a restaurant such as Applebee’s.
   Answer: A server at Applebee’s writes the order on a pad and carries that pad to a cash register. The server enters the order on a touch screen terminal. The order information is then displayed on a terminal in the kitchen. When the customer has finished the meal, the server prints a check and delivers the check to the table. The customer pays the server by using cash or a credit card. The server processes the payment on the touch screen register and returns the change or credit card slip to the customer.

113. What occurs in an accounting information system that classifies accounting transactions?
   Answer: For each business process that affects accounting records, the accounting information system must capture any resulting accounting data, record the data, process it through classification, summarization, and consolidation, and generate appropriate reports.

114. What are the differences between internal reports and external reports generated by the accounting information system?
   Answer: Internal reports are used by management to oversee and direct processes within the organization. External reports are the financial statements used by investors and creditors.

115. What types of businesses are in the supply chain of an automobile manufacturer?
   Answer: The types of businesses in an automaker’s supply chain are often manufacturers of parts used in cars. This would include manufacturers of tires, batteries, steel, plastic, vinyl and leather, as well as many other manufacturers making the thousands of parts in a car.

116. When a company evaluates a supplier of materials, what kinds of characteristics might be evaluated?
   Answer: The supplier’s characteristics that are likely to be evaluated include price and payment terms, quality, reliability of the materials, as well as whether the supplier can deliver materials when needed.

117. How do you think a company may be able to influence a supplier to meet its business processing requirements?
   Answer: A company may be able to influence a supplier by choosing only suppliers that meet expectations regarding the terms of price, quality, and delivery timing. Those suppliers that do not meet these expectations may not be used in the future. This exerts some influence over suppliers to meet requirements.
118. Describe any IT enablement that you have noticed at a large retail store such as Wal-Mart or Target.
Answer: The most noticeable IT enablement is the use of bar coded systems on the products and how they are read by the cash registers.

119. How do you think the World Wide Web (WWW) has led to business process reengineering at companies such as Lands End or J. Crew?
Answer: Prior to the World Wide Web, customers placed orders either on the phone or by mail. Both phone and mail orders require people to take the order and enter it into the computer system. Using online sales, the customer enters his own order and no company personnel are needed to key orders into the computer system. Therefore, there was a major change in the number of people employed to key orders.

120. What two kinds of efficiency improvement result from business process reengineering in conjunction with IT systems?
Answer: The use of IT systems usually leads to two kinds of efficiency improvements. First, the underlying processes are reengineered (through rethinking and redesign) so as to be conducted more efficiently. Second, the IT systems improve the processing efficiency of the underlying processes.

121. Explain the differences between a field, record, and file.
Answer: A field is one set of characters that make up a single data item. For example, last name would be a field in a customer database. A record is a collection of related fields for a single entity. For example, last name, first name, address, phone number, and credit card number fields might make up a single customer record. A file is a collection of similar records. For example, all customer records together would be a customer file.

122. Explain why random access files would be preferable to sequential access files when payroll personnel are changing a pay rate for a single employee.
Answer: When the desired action is to access a single record, random access is preferable. If sequential access storage is used, all records must be read in sequence until the desired record is reached. On the other hand, random access allows a single record to be accessed without the necessity of reading other records. This makes it more efficient to access a particular employee record to change the pay rate.

123. Why do real-time systems require direct access files?
Answer: If transactions are to be processed online and in real-time, it is necessary that the computer access a single record immediately. Thus, direct access files are required so the records can be accessed in real-time.

124. Why is data contained in the data warehouse called non-volatile?
Answer: Each time a new transaction is completed, parts of the operational data must be updated. Therefore, the operational database is volatile; with constantly changing information. However, the data warehouse does not change with each transaction. The data warehouse is only changed when periodic updates occur. The data is non-volatile because it does not change constantly.
125. How is an extranet different from the Internet?
Answer: The extranet allows access only to selected outsiders, while the Internet is open to an unlimited number of outsiders (essentially anyone having access to the Internet). On the other hand, extranets are typically used by companies to interact with specific suppliers and customers who have been granted access to a company’s network.

126. Prepare a list of the types of businesses that you have been in that were using Point of Sale systems.
Answer: Student responses may vary, but are likely to include grocery stores, department stores, restaurants, specialty stores, gas stations, and car washes.

127. What do you think would be the advantages of an e-payables system over a traditional system that uses paper purchase orders and invoices?
Answer: An e-payables system should be faster and more efficient than a paper-based system. In addition, an e-payables system is likely to have fewer errors in processing than a paper-based system.

128. Describe why enterprise risk management is important.
Answer: All organizations face risks and Enterprise Risk Management assists management in reducing and controlling risk. It also involves personnel across the entire business organization, as they implement strategies to achieve the organization’s objectives.

129. What is the difference between general controls and application controls?
Answer: General controls are those controls that apply overall to the IT accounting system. They are controls that are not restricted to any particular accounting application. An example of a general control is the use of passwords to allow only authorized users to log into an IT based accounting system. Application controls are those controls that are used specifically in accounting applications to control inputs, processing, and output. Application controls are intended to insure that inputs are accurate and complete, processing is accurate and complete, and that outputs are properly distributed, controlled, and disposed.

130. In what way is a code of ethics beneficial to an organization?
Answer: If top management institutes a code of ethics and emphasizes this code by modeling its principles and disciplining or discharging those who violate the code of ethics, it can help reduce unethical behavior in the organization.

131. What roles do accountants have in relation to the accounting information system?
Answer: Accountants are users of the AIS, they assist in the design of the AIS, and they are auditors of the AIS.
132. For each category of business processes (revenue, expenditure, conversion, administrative), give an example of a business process.
Answer: Student responses are likely to vary greatly, as they may refer to any of the sub-processes within each category. For example, the revenue processes include sales, sales returns, and cash collections; the expenditure processes include purchasing, purchase returns, cash disbursements, payroll and fixed asset processes; the conversion processes include planning, resource management, and logistics, and; administrative processes include capital processes, investments, and general ledger processes. Accordingly, any type of business process can be cited to answer this question, but the student must match the example with the appropriate process.

133. Think of a company that you have worked for or with which you have done business. Which departments within the company need reports generated by the accounting information systems?
Answer: Student responses are likely to vary greatly, as nearly every department within a business organization uses reports generated by the accounting information systems. For example, sales departments need customer account information to help in their efforts to sell products to customers. Purchasing departments need product information to help in their efforts to purchase products needed in the business. Each of these types of information is maintained in accounting information systems. There are numerous additional examples that could apply.

134. Explain a supply chain linkage and give an example.
Answer: A supply chain linkage is the connection of activities in the supply chain, which includes the entities, processes, and information flows, that involve the movement of materials, funds, and related information through the full logistics process, from the acquisition of raw materials to the delivery of finished products to the end user. It therefore includes the linked activities of vendors, service providers, customers, and intermediaries. In addition to the example of McDonald’s buns given in the text, another example would be a shirt sold by the Gap. The Gap’s supply chain linkage would likely include a supplier from whom the shirt was purchased, a manufacturer who assembled and sewed the shirt, a secondary supplier that likely provided the fabric from which the shirt was constructed, and a farmer who raised cotton used to make the fabric.

135. Explain how business process reengineering occurs. Also, explain how it differs from the typical changes in company policies.
Answer: With business process reengineering, the underlying business processes are reengineered so as to be conducted more efficiently. In other words, a comprehensive rethinking and redesign takes place in order to enhance performance of the process. A key component of BPR is the leveraging of the capabilities of IT to improve the efficiency of the process. BPR differs from typically organizational change in that it involves “thinking outside the box” in order to offer completely new and improved methods for business processes.
136. For an accounts receivable system, what kind of data would be found in the master files and transaction files respectively?
Answer: An accounts receivable master file would include relatively permanent data necessary to process customer transactions. This would include a record for each customer. The data in the master file would probably include customer name, address, phone numbers, credit limit, and current balance. A transaction file for accounts receivable would contain the relatively temporary data that must be processed to update the master file, such as details from individual sales and cash collections from customers.

137. Describe the differences in the three types of processing.
Answer:
a. Batch processing involves the grouping of similar transactions to be processed together;
b. Online processing involves processing individual transactions, one-at-a-time; and
c. Real-time processing is an online processing method that involves the immediate processing of individual transactions.

138. The networks discussed in this chapter were LANs, Internet, intranet, and extranet. Explain each.
Answer: A LAN is a computer network that spans a relatively small area such as a building or group of buildings within a business organization. The Internet is the global computer network made up of millions upon millions of computers and sub-networks throughout the world. An intranet is an organization’s private computer network, accessible only by employees of that organization to share data and manage projects. An extranet is an expansion of an intranet that allows limited access to designated outsiders such as customers and suppliers of the organization.

139. Give a brief summary of enterprise risk management, corporate governance, and IT governance.
Answer:
d. Enterprise risk management is an ongoing strategy-setting and risk assessment process that is effected by top management but involves personnel across the entire entity.
e. Corporate governance is an elaborate system of checks and balances whereby a company’s leadership is held accountable for building shareholder value and creating confidence in the financial reporting process.
f. IT governance is the corporate governance process that applies specifically to the proper management, control, and use of IT systems.

140. Describe why accountants should be concerned about ethics.
Answer: Accountants should be concerned about ethics because accounting information systems are often the tools used to commit or cover up unethical behavior. Accountants need to be aware of the possibility of fraud within the AIS so that they can assist in developing and implementing effective internal controls to reduce the risk of such unethical acts. In addition, accountants need to be prepared to resist the temptation to commit unethical acts and to avoid being coerced into assisting with a fraudulent cover-up.
141. Adrienne Camm is currently pursuing her accounting degree at Ridge University. She has excelled in each of her major courses to date; however, she has always struggled with her computer classes and with assignments requiring use of computer technology. Nevertheless, Adrienne confidently claims that she will become an excellent accountant. Comment on the practical and ethical implications of her position.

Answer: Adrienne is mistaken in her position for the following reasons:

- Practically speaking, accountants need to be well-informed about the operation of accounting information systems, which nearly always involve computer technology. The AIS is the foundation of most accounting functions, so to resist computer technology would be unreasonable, if not impossible. Also, in order to assist in developing internal controls, accountants must understand the processes within the AIS, including the use of technology, so that effective controls can be developed and implemented to reduce risks.
- Ethically speaking, accountants need to be well-informed about the operation of the AIS so that they are poised to recognize fraud and errors that may occur. Without an understanding of the underlying technology, accountants would be unable to effectively capture and monitor business processes. Rather than fulfilling her responsibility as an accountant to develop and implement internal controls, Adrienne’s ignorance of the AIS could actually allow for fraud to be perpetrated without being prevented or detected.

For these reasons, Adrienne’s viewpoint is quite dangerous.

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142. If an accounting information system was entirely a manual system (no computers used), explain how data would be captured, recorded, classified, summarized, and reported. Discuss how the sophistication of the company’s computer system impacts the accounting output and, alternatively, how the requirements for accounting outputs impact the design of the accounting information system.

Answer: In a manual accounting information system, data would be captured on source documents and recorded by hand in subsidiary ledgers or special journals. Account classifications would be determined by the accountants responsible for recording the transaction. The accountants would perform mathematical computations to summarize the records and post them to a general ledger. The general ledger would be manually summarized at the end of the period so that financial statements could be prepared. The financial reports would be manually compiled based on the ending general ledger balances. Since a great deal of paper and human processing are required for a manual system, a manual system is prone to error. More sophisticated, computer-based systems tend to produce more output that is more accurate because they are programmed to process data consistently. They also use programming to perform mathematical computations, which promotes accuracy and time savings. Therefore, IT usage to support business processes results in increased accuracy, increased efficiency, and reduced costs.

The requirements for accounting outputs impact the design of the AIS. Work steps within a business process can be designed to capture data in a manner that is consistent with the desired content and format of the related output. This promotes efficiency and effectiveness of the overall process. When business process reengineering is used to design business processes, IT systems can be introduced to take advantage of the speed and efficiency of computers to enhance the AIS.
143. Classify each of the following processes as either a revenue process, expenditure process, conversion process, or administrative process:
   a. Selling common stock to raise capital
   b. Purchasing electronic components to manufacture DVD players
   c. Moving electronic components from the stockroom to the production floor to begin making DVD players
   d. Paying employees at the end of a payroll period
   e. Preparing financial statements
   f. Receiving cash payments from customers
   g. Buying fixed assets
   h. Moving manufactured DVD players from the production floor to the warehouse

Answer:
   a. ADMINISTRATIVE
   b. EXPENDITURE
   c. CONVERSION
   d. EXPENDITURE
   e. ADMINISTRATIVE
   f. REVENUE
   g. EXPENDITURE
   h. CONVERSION
144. Business processes are composed of three common stages: an initial event, a beginning, and an end. For each of the processes a through h in Problem 47, identify the applicable initial event, beginning, and end of the process. Student responses may vary as their experiences are likely to be different.

Answer: Different businesses may have different events that trigger these processes; however, the following are common examples:

a. Selling common stock to raise capital: Initial Event – Contacting and communicating with investors; Beginning – Receiving consideration from investor; End – Recording transactions in the accounting records.

b. Purchasing electronic components to manufacture DVD players: Initial Event – Receiving a purchase request from operations personnel; Beginning – Placing an order with a supplier; End – Recording the payment for the component parts.

c. Moving electronic components from the stockroom to the production floor to begin making DVD players: Initial Event – Receiving a request from the Production department for the movement of materials; Beginning – Removing inventory from the stockroom; End – Recording the receipt of goods in the production area.

d. Paying employees at the end of a payroll period: Initial Event – Receiving a time sheet or other indication of time worked; Beginning – Recording hours in the payroll records; End – Distributing paychecks or depositing paychecks in employee accounts.

e. Preparing financial statements: Initial Event – Preparing end-of-period adjusting entries; Beginning – Summarizing adjusted account balances; End – Compiling data in financial statement format and writing related disclosure notes.

f. Receiving cash payments from customers: Initial Event – Communicating with customer about a sale; Beginning – Notifying customer of amounts owed related to the sale; End – Recording the receipt of cash and deposit in a bank account.

g. Buying fixed assets: Initial Event – Planning for an expenditure as part of a capital budgeting process; Beginning – Placing an order for the fixed asset; End – Receiving the asset and recording it in a subsidiary ledger.

h. Moving manufactured DVD players from the production floor to the warehouse: Initial Event – Receiving notification from the Production department regarding completion of products; Beginning – Removing finished goods from the production floor; End – Recording the receipt of finished goods in the warehouse.
145. Each of the points listed next represents an internal control that may be implemented within a company’s accounting information system to reduce various risks. For each point, identify the appropriate business process (revenue, expenditure, conversion, administrative). In addition, refer to the description of business processes under Study Objective 1 in the chapter, and identify the appropriate sub-process. (Some sub-processes may be used more than once, and others may not be used at all.)

Answer:

a. Customer credit must be authorized before a business transaction takes place. Revenue processes, sales sub-processes
b. An authorized price list of goods for sale is provided. Revenue processes, sales sub-processes
c. A shipping report is prepared for all shipments of goods so that customers may be billed in a timely manner. Revenue processes, sales sub-processes
d. Access to personnel files and paycheck records is available only in accordance with management specifications. Expenditure processes, payroll sub-processes
e. New vendors are required to be authorized before a business transaction takes place. Expenditure processes, purchasing sub-processes
f. Access to cash is restricted to those employees authorized by management. Revenue or Expenditure processes, Cash collection or cash disbursement sub-processes, respectively
g. Costs of goods manufactured is properly summarized, classified, recorded, and reported.
h. Conversion processes, resource management sub-processes
i. Amounts due to vendors are reconciled by comparing company records with statements received from the vendors. Expenditure processes, cash disbursements sub-processes
j. Employee wage rates and paycheck deductions must be authorized by management. Expenditure processes, payroll sub-processes
k. Specific procedures such as the performance of a background check are carried out for all new employee hires. Expenditure processes, payroll sub-processes
l. The purchasing manager is notified when stock levels are low so that items may be restocked to prevent backorders. Conversion processes, resource management sub-processes
m. Two signatures are required on checks for payments in excess of $5000. Expenditure processes, cash disbursement sub-processes
n. When excess cash is on hand, the funds are invested in short-term securities. Administrative processes, investment sub-processes
o. Goods received are inspected and damaged, or unmatched, items are promptly communicated to the vendor. Revenue processes, sales sub-processes
p. The monthly bank statement is reconciled to the company's cash records by an outside accountant. Revenue or Expenditure processes, Cash collection or cash disbursement sub-processes, respectively