

Chapter 1—The Information System: An Accountant's Perspective

TRUE/FALSE

1. Information is a business resource.

ANS: T

2. An information system is an example of a natural system.

ANS: F

3. Transaction processing systems convert non-financial transactions into financial transactions.

ANS: F

4. Information lacking reliability may still have value.

ANS: F

5. A balance sheet prepared in conformity with GAAP is an example of discretionary reporting.

ANS: F

6. The Management Reporting System provides the internal financial information needed to manage a business.

ANS: T

7. Most of the inputs to the General Ledger System come from the Financial Reporting System.

ANS: F

8. When preparing discretionary reports, organizations can choose what information to report and how to present it.

ANS: T

9. Retrieval is the task of permanently removing obsolete or redundant records from the database.

ANS: F

10. Systems development represents 80 to 90 percent of the total cost of a computer system.

ANS: F

11. The database administrator is responsible for the security and integrity of the database.

ANS: T

12. A backbone system is completely finished, tested, and ready for implementation.

ANS: F

13. The internal auditor represents the interests of third-party outsiders.

ANS: F

14. Information Technology (IT) audits can be performed by both internal and external auditors.

ANS: T

15. The single largest user of computer services is the personnel function.

ANS: F

16. Increased control is one of the key advantages of distributed data processing.

ANS: F

17. The flat-file approach is most often associated with so-called legacy systems.

ANS: T

18. In a flat-file system, files are easily shared by users.

ANS: F

19. Legacy systems were eliminated in the effort to make systems Y2K compliant.

ANS: F

20. One of the greatest disadvantages of database systems is that all data is always available to all users.

ANS: F

21. Under SOX legislation auditors are no longer allowed to provide consulting services to audit clients.

ANS: T

22. Under SOX legislation auditors are no longer allowed to provide consulting services to their clients.

ANS: F

They cannot provide such services to audit clients but may still provide them to non-audit clients

MULTIPLE CHOICE

1. Which of the following is not a business resource?
- raw material
 - labor
 - information
 - all are business resources

ANS: D

2. Which level of management is responsible for short-term planning and coordination of activities necessary to accomplish organizational objectives?
- a. operations management
 - b. middle management
 - c. top management
 - d. line management

ANS: B

3. Which level of management is responsible for controlling day-to-day operations?
- a. top management
 - b. middle management
 - c. operations management
 - d. executive management

ANS: C

4. The ability to achieve the goals of a system depends upon the effective functioning and harmonious interaction between its subsystems. This is called
- a. system decomposition
 - b. system redundancy
 - c. backup system
 - d. subsystem interdependency

ANS: D

5. The value of information for users is determined by all of the following but
- a. reliability
 - b. relevance
 - c. convenience
 - d. completeness

ANS: C

6. An example of a nonfinancial transaction is
- a. sale of products
 - b. cash disbursement
 - c. log of customer calls
 - d. purchase of inventory

ANS: C

7. An example of a financial transaction is
- a. the purchase of computer
 - b. a supplier's price list
 - c. a delivery schedule
 - d. an employee benefit brochure

ANS: A

8. Which subsystem is not part of the Accounting Information System?
- a. Transaction Processing System
 - b. Expert System
 - c. General Ledger/Financial Reporting System
 - d. Management Reporting System

ANS: B

9. The major difference between the Financial Reporting System (FRS) and the Management Reporting System (MRS) is the
- FRS provides information to internal and external users; the MRS provides information to internal users
 - FRS provides discretionary information; the MRS provides nondiscretionary information
 - FRS reports are prepared using information provided by the General Ledger System; the MRS provides information to the General Ledger System
 - FRS reports are prepared in flexible, nonstandardized formats; the MRS reports are prepared in standardized, formal formats

ANS: A

10. The purpose of the Transaction Processing System includes all of the following except
- converting economic events into financial transactions
 - recording financial transactions in the accounting records
 - distributing essential information to operations personnel to support their daily operations
 - measuring and reporting the status of financial resources and the changes in those resources

ANS: D

11. The Transaction Processing System includes all of the following cycles except
- the revenue cycle
 - the administrative cycle
 - the expenditure cycle
 - the conversion cycle

ANS: B

12. The primary input to the Transaction Processing System is
- a financial transaction
 - an accounting record
 - an accounting report
 - a nonfinancial transaction

ANS: A

13. When designing the data collection activity, which type of data should be avoided?
- data that is relevant
 - data that is efficient
 - data that is redundant
 - data that is accurate

ANS: C

14. The most basic element of useful data in the database is
- the record
 - the key
 - the file
 - the attribute

ANS: D

15. In a database, a complete set of attributes for a single occurrence of an entity class is called

- a. a key
- b. a file
- c. a record
- d. a character

ANS: C

16. Effective information has all of the following characteristics except
- a. relevance
 - b. completeness
 - c. summarization
 - d. structure

ANS: D

17. Database management tasks do not include
- a. summarization
 - b. storage
 - c. retrieval
 - d. deletion

ANS: A

18. The author distinguishes between the Accounting Information System and the management Information System based on
- a. whether the transactions are financial or nonfinancial
 - b. whether discretionary or nondiscretionary reports are prepared
 - c. the end users of the reports
 - d. the organizational structure of the business

ANS: A

19. Which activity is not part of the finance function?
- a. cash receipts
 - b. portfolio management
 - c. credit
 - d. general ledger

ANS: D

20. Market research and advertising are part of which business function?
- a. materials management
 - b. finance
 - c. marketing
 - d. production

ANS: C

21. Which function manages the financial resources of the firm through portfolio management, banking, credit evaluation, and cash receipts and disbursements?
- a. accounting
 - b. finance
 - c. materials management
 - d. distribution

ANS: B

22. Which of the following is not part of the accounting function?
- a. managing the financial information resource of the firm
 - b. capturing and recording transactions in the database
 - c. distributing transaction information to operations personnel
 - d. managing the physical information system of the firm

ANS: D

23. The term “accounting independence” refers to
- a. data integrity
 - b. separation of duties, such as record keeping and custody of physical resources
 - c. generation of accurate and timely information
 - d. business segmentation by function

ANS: B

24. In the distributed data processing approach
- a. computer services are consolidated and managed as a shared organization resource
 - b. the computer service function is a cost center
 - c. the end users are billed using a charge-back system
 - d. computer services are organized into small information processing units under the control of end users

ANS: D

25. The data control group is responsible for
- a. performing the day-to-day processing of transactions
 - b. security and integrity of the database
 - c. liaison between the end user and data processing
 - d. providing safe storage for off-line data files

ANS: C

26. Data processing does **not** involve
- a. data control
 - b. computer operations
 - c. system maintenance
 - d. data conversion

ANS: C

27. Independent auditing is performed by
- a. external auditors
 - b. internal accountants
 - c. licensed auditors
 - d. third-party accountants

ANS: A

28. Which individual is least involved in new systems development?
- a. systems analyst
 - b. external auditor
 - c. end user
 - d. data librarian

ANS: D

29. The objectives of all information systems include all of the following except
- support for the stewardship function of management
 - evaluating transaction data
 - support for the day-to-day operations of the firm
 - support for management decision making

ANS: B

30. Which individuals may be involved in the Systems Development Life Cycle?
- accountants
 - systems professionals
 - end users
 - all of the above

ANS: D

31. An appraisal function housed within the organization that performs a wide range of services for management is
- internal auditing
 - data control group
 - external auditing
 - database administration

ANS: A

32. Advantages of a database system include all of the following except
- elimination of data redundancy
 - open access to all data by all users
 - single update for changes in data
 - confidence that all data is current

ANS: B

33. Disadvantages of distributed data processing include all of the following except
- mismanagement of organizationwide resources
 - hardware and software incompatibility
 - cost reductions
 - difficulty in hiring qualified IT professionals

ANS: C

34. Advantages of distributed data processing include each of the following except
- cost reductions
 - better management of organization resources
 - improved operational efficiency
 - increased user satisfaction

ANS: B

35. Disadvantages of the distributed data processing approach include all of the following except
- possible mismanagement of organization resources
 - redundancy of tasks
 - software incompatibility
 - system is not responsive to the user's situation

ANS: D

36. ERP packages include all of the following modules except
- human resources
 - general ledger
 - inventory management
 - they include all of the above

ANS: D

37. All of the following are external end users except
- cost accountants
 - creditors
 - stockholders
 - tax authorities

ANS: A

38. Useful information must possess all of the following characteristics except
- relevance
 - timelessness
 - accuracy
 - completeness

ANS: B

39. The objectives of an information system include each of the following except
- support for the stewardship responsibilities of management
 - furthering the financial interests of shareholders
 - support for management decision making
 - support for the firm's day-to-day operations

ANS: B

40. Accountants play many roles relating to the accounting information system, including all of the following except
- system users
 - system designers
 - system auditors
 - system converters

ANS: D

SHORT ANSWER

1. Entities outside the organization with a direct or indirect interest in the firm, such as stockholders, financial institutions, and government agencies, are called _____.

ANS:
stakeholders

2. The process of breaking a system into smaller subsystem parts is called _____.

ANS:
system decomposition

3. Transactions with trading partners include _____ and _____.

ANS:
sales, purchases

4. A system is a group of two or more interrelated components that _____.

ANS:
serve a common purpose

5. The task of locating and transferring an existing record from the database for processing is called data _____.

ANS:
retrieval

6. Three ways that a business can be divided into segments are by _____, _____ and by _____.

ANS:
geographic location, product lines, function

7. Three activities that are part of the finance function are _____, _____, and _____.

ANS:
portfolio management, treasury, credit, cash disbursements, cash receipts

8. Two distinct ways to structure the Data Processing Department are _____ and _____.

ANS:
centralized, distributed

9. Two methods to acquire information systems are to _____ and to _____.

ANS:
develop customized systems, purchase commercial systems

10. Audits are conducted by _____, _____, and _____ auditors.

ANS:
internal, external, IT

11. Sales of products to customers, purchases of inventory from vendors, and cash disbursements are all example of _____.

ANS:

financial transactions

12. The three major subsystems of the AIS are _____, _____, and _____.

ANS:

the transaction processing system, the general ledger/financial reporting system, the management reporting system

13. The _____ and _____ standards that characterize the AIS clearly distinguish it from the MIS.

ANS:

legal, professional

14. The transaction processing system is comprised of three cycles: _____, _____, and _____.

ANS:

revenue, expenditure, conversion

15. The REA model identifies an organization's _____, _____, and _____.

ANS:

resources, events, agents.

16. Sarbanes-Oxley legislation requires that management designs and implements controls over the entire financial reporting process. What systems does this include?

ANS:

This includes the financial reporting system, the general ledger system, and the transaction processing systems that supply the data for financial reporting.

17. Why is it necessary to distinguish between AIS and MIS?

ANS:

Because of the highly integrative nature of modern information systems, management and auditors need a conceptual view of the information system that distinguishes key processes and areas of risk and legal responsibility from the other (non-legally binding) aspects of the system. Without such a model, critical management and audit responsibilities under SOX may not be met.

18. How has SOX legislation impacted the consulting practices of public accounting firms?

ANS:

Prior to SOX, a gray area of overlap existed between assurance and consulting services. Auditors were once allowed to provide consulting services to their audit clients. This is now prohibited from doing so under SOX legislation.

19. What is discretionary reporting?

ANS:

Reports used by management that the company is not obligated by law, regulation, or contract to provide. These are often used for internal problem-solving issues rather than by external constituents.

20. Name the five characteristics of information?

ANS:

Relevance, accuracy, completeness, summarization, and timeliness.

ESSAY

1. Contrast the responsibilities of operations management, middle management, and top management. Explain the different information needs for each level of management.

ANS:

Operations management is directly responsible for controlling day-to-day operations. Operations managers require detailed information on individual transactions such as sales, shipment of goods, usage of labor and materials in the production process, and internal transfers of resources from one department to another. Budgeting information and instructions flow downward from top and middle management to operations management.

Middle managers perform short-term planning and coordination of activities necessary to accomplish organizational objectives. Middle management requires information that is more summarized and oriented toward reporting on overall performance and problems, rather than routine operations.

Top management is responsible for longer-term planning and setting organizational objectives. Information provided to top management is highly summarized.

2. Explain the difference between data and information.

ANS:

Data are facts which may or may not be processed; data have no particular impact on the user. Information is processed data that causes the user to take action.

3. Why do accountants need to understand the organizational structure of the business?

ANS:

The structure of an organization reflects the distribution of responsibility, authority, and accountability throughout the organization. Accountants need to understand this distribution pattern in order to assess the information needs of users, and to design the Accounting Information System to meet those needs.

4. Several disadvantages of distributed data processing have been discussed. Discuss at least three.

ANS:

Distributing the control of information resources can lead to *mismanagement of organizational resources*.

Hardware and software incompatibility can result.

Distribution of responsibility can result in many users performing *redundant tasks*.

Individual user control can lead to internal control concerns when *users perform incompatible duties*.

Small organizational units may have difficulty *hiring qualified IT professionals*.

Distribution of decision making can result in a *lack of standards*.

5. Name and explain the purpose of the three major subsystems of the AIS:

ANS:

TPS records the financial transactions of the firm
GL/FRS produces the financial statements etc. required by law
MRS provides information to internal management for decision making

6. What are the three primary functions performed by the transaction processing system?

ANS:

converting economic events into financial transaction, recording financial transaction in the accounting records (journals and ledgers), and distributing essential financial information to operations personnel to support daily operations.

7. The most commonly stated benefits of DDP are cost savings, increased user satisfaction, and improved operational efficiency. Explain.

ANS:

The costs of both processing and data storage have declined significantly in the time since early automation. In addition, data entry can be distributed and application complexity reduced. Users are typically more satisfied when they can control the resources that affect their profitability. Also users want systems people who will respond to their needs and involve them in development and implementation of their own systems. Delegation of cost control to individual units leads to more efficient use of unit resources.

8. Data redundancy is described as a problem in flat-file systems due to data storage, updating, and currency issues. Explain.

ANS:

Data that is stored 10 different times takes up 10 times the storage space of data stored once. If data is stored in multiple files, each file must be updated when a change occurs. If the issue of updates is mismanaged in a flat-file environment, some data may be unchanged, therefore be non-current and lead to incorrect decisions.

9. Explain the elements of the REA model and give an example of each.

ANS:

Economic *resources* are the assets of the organization. They are objects that are scarce and under the control of the organization. They do not include accounts receivable. An example is inventory. Economic *events* are actions that affect changes in resources. An example is a sale to a customer. Economic *agents* are individuals and business units that participate in economic events. An example is a sales clerk.

10. Distinguish between the accounting information system and the management information system.

ANS:

The AIS processes financial (e.g., cash receipts) and nonfinancial (e.g., addition to the approved vendor list) transactions that directly affect the processing of the financial transaction. These are handled by the three major subsystems: transaction processing, general ledger/financial reporting, and management reporting.

The MIS processes additional nonfinancial transactions that contribute to the decision making of managers.

11. Why have re-engineering efforts been made to integrate AIS and MIS?

ANS:

Managers of all areas typically need data from both the AIS and the MIS. If the data needed by managers for decision-making processes are located in two or more data sets, the preparation of reports is both inefficient and expensive. Further, a lack of coordination between the two data sets can result in data that is not consistent and is unreliable.

12. Why is it important to organizationally separate the accounting function from other functions of the organization?

ANS:

The accounting function provides record-keeping services for all of the operations and day-to-day activities of other departments, which affect the financial position of the organization. Record keeping tasks must be kept separate from any area that has custody over assets. Thus, the accounting function must remain independent so that the protection of the firm's assets is carried out in an environment with minimum possibilities for theft.

13. The REA model is based on the premise that "business data must not be preformatted or artificially constrained and must reflect all relevant aspects of the underlying economic events." What does this mean and how is it applied

ANS:

The REA model requires that accounting phenomena be characterized in a manner consistent with the development of multiple user views not simply those of the accounting function. As such, REA procedures and databases are structured around events rather than accounting artifacts such as journals, ledgers, charts-of-accounts, and double entry accounting. Under the REA model, business organizations prepare financial statements directly from the event database.

14. ERP systems are comprised of a highly integrated set of standardized modules. Discuss the advantages and potential disadvantages of this approach.

ANS:

Advantages of ERP

Enterprise Resource Planning (ERP) systems enable organizations to automate and integrate key business processes.

ERPs break down traditional functional barriers by facilitating data sharing

ERP software embodies and supports the best business practices of a given industry thus encouraging positive changes in the way firms do business

Organizations experience internal efficiencies by employing standard business practices among all organizational units.

Disadvantages of ERP

The implementation of an ERP system can be a massive undertaking that can span several years.

Because of their complexity and size, few organizations are willing or able to commit the necessary financial resources and incur the risk of developing an ERP system in-house. Hence, virtually all ERPs are commercial products designed to solve standardized business problems. Many organizations have unique needs that require customized systems.

Organizations that implement an ERP often need to modify their business processes to suit unique business functions, particularly industry-specific tasks. These applications, often called bolt-ons, are not always designed to communicate with ERP packages.

ERP packages are enormously expensive. Organization management should exercise great care in deciding which, if any, ERP is best for them.

15. Distinguish between the centralized and distributed approaches to organizing the computer services function.

ANS:

In a centralized data processing approach, the computer services function is centrally located. The databases are housed in one place where all of the data processing occurs by one or more main computers. All systems development and maintenance work for the entire organization is performed by systems professionals. End users wishing to have new systems or features must submit a formal request to this group and are usually prioritized and placed in a queue.

In a distributed data processing approach, the CPUs are spread out and control over data and processing is at the information processing unit (IPU) level. Thus, end users have more influence over the systems development projects, which are typically handled by systems professionals at the IPU level.