

CHAPTER 1: SELF-ASSESSMENT TEST

The value of information is directly linked to how it helps decision makers achieve the organization's goals.

1. A(n) _____ is a set of interrelated components that collect, manipulate, and disseminate data and information and provide a feedback mechanism to meet an objective.
2. What consists of raw facts, such as an employee number?
 - a. bytes
 - b. data
 - c. information
 - d. knowledge

3. Knowledge workers are usually professionals in science, engineering, business, and other areas. True or False?

Computers and information systems help make it possible for organizations to improve the way they conduct business.

1

4. A(n) _____ is a set of elements or components that interact to accomplish a goal.

2

5. A measure of what is produced divided by what is consumed is known as _____.

3

- a. efficiency
- b. effectiveness
- c. performance
- d. productivity

6. A specific objective of a system is called a performance standard. True or False?

Knowing the potential impact of information systems and having the ability to put this knowledge to work can result in a successful personal career and organizations that reach their goals.

7. A(n) _____ consists of hardware, software, databases, telecommunications, people, and procedures.

8. Computer programs that govern the operation of a computer system are called _____.

- a. feedback
- b. feedforward
- c. software
- d. transaction processing systems

9. Payroll and order processing are examples of a computerized knowledge management system. True or False?

10. What is an organized collection of people, procedures, software, databases, and devices used to create, store, share, and use the organization's experience and knowledge?

- a. TPS (transaction processing system)
 - b. MIS (management information system)
 - c. DSS (decision support system)
 - d. KM (knowledge management)
11. _____ is a set of integrated programs that manage vital business operations.

System users, business managers, and information systems professionals must work together to build a successful information system.

12. What defines the problems and opportunities of an existing system?
- a. systems analysis
 - b. systems review
 - c. systems development
 - d. systems design

Information systems must be applied thoughtfully and carefully so that society, business, and industry around the globe can reap their enormous benefits.

13. _____ literacy is a knowledge of how data and information are used by individuals, groups, and organizations.

CHAPTER 1: SELF-ASSESSMENT TEST ANSWERS

- (1) information system
- (2) b
- (3) True
- (4) system
- (5) a
- (6) True
- (7) computer-based information system (CBIS)
- (8) c
- (9) False
- (10) d
- (11) Enterprise resource planning (ERP)
- (12) a
- (13) Information systems

REVIEW QUESTIONS

1. What is an information system? What are some of the ways information systems are changing our lives?
2. How is data different from information? Information from knowledge?
3. Describe the various types of data.
4. What is the difference between efficiency and effectiveness?
5. What are the components of any information system?
6. What is feedback? What are possible consequences of inadequate feedback?
7. How is system performance measured?
8. What is a knowledge management system? Give an example.
9. What is a computer-based information system? What are its components?
10. Describe the characteristics of a decision support system.
11. What is the difference between an intranet and an extranet?
12. What is m-commerce? Describe how it can be used.
13. What are the most common types of computer-based information systems used in business organizations today? Give an example of each.
14. Describe three applications of virtual reality.
15. What are computer literacy and information systems literacy? Why are they important?
16. What are some of the benefits organizations seek to achieve through using information systems?
17. Identify the steps in the systems development process and state the goal of each.

CHAPTER 2: SELF-ASSESSMENT TEST

The use of information systems to add value to the organization is strongly influenced by organizational structure, culture, and change.

1. Supply chain management can help a company determine what supplies and equipment are required for the value chain. True or False?
2. A(n) _____ is a formal collection of people and other resources established to accomplish a set of goals.
3. User satisfaction with a computer system and the information it generates often depends on the quality of the system and the resulting information. True or False?
4. A _____ employs individuals, groups, or complete business units in geographically dispersed areas that can last for a few weeks or years, often requiring telecommunications or the Internet.
 - a. learning structure
 - b. virtual structure
 - c. continuous improvement plan
 - d. reengineering project

Because information systems are so important, businesses need to be sure that improvements or completely new systems help lower costs, increase profits, improve service, or achieve a competitive advantage.

5. _____ involves contracting with outside professional services to meet specific business needs.

TEST

6. Today, quality means _____.
 - a. achieving production standards
 - b. meeting or exceeding customer expectations
 - c. maximizing total profits
 - d. meeting or achieving design specifications
7. Technology satisfaction is a measure of how widely technology is spread throughout an organization. True or False?
8. Reengineering is also called _____.
9. What is a measure of the output achieved divided by the input required?
 - a. efficiency
 - b. effectiveness
 - c. productivity
 - d. return on investment
10. _____ is a measure of the additional profits or benefits generated as a percentage of the investment in IS technology.

IS personnel is a key to unlocking the potential of any new or modified system.

11. Who is involved in helping users determine what outputs they need and constructing the plans required to produce these outputs?
 - a. CIO
 - b. applications programmer

CHAPTER 2: SELF-ASSESSMENT TEST ANSWERS

- c. systems programmer
 - d. systems analyst
12. An information center provides users with assistance, training, and application development. True or False?
- (1) True (2) organization (3) True (4) b (5) Outsourcing (6) b
(7) False (8) process redesign (9) c (10) Return on investment
(11) d (12) True (13) chief information officer (CIO)
13. The _____ is typically in charge of the IS department or area in a company.

REVIEW QUESTIONS

1. What is the difference between a value chain and a supply chain?
2. What is customer relationship management?
3. What role does an information system play in today's organizations?
4. What is reengineering? What are the potential benefits of performing a process redesign?
5. What is user satisfaction?
6. What is the difference between reengineering and continuous improvement?
7. What is the difference between technology infusion and technology diffusion?
8. What is quality? What is total quality management (TQM)? What is Six Sigma?
9. What are organizational change and organizational learning?
10. List and define the basic organizational structures.
11. Sketch and briefly describe the three-stage organizational change model.
12. What is downsizing? How is it different from outsourcing?
13. What are some general strategies employed by organizations to achieve competitive advantage?
14. List and describe popular job-finding strategies.
15. Define the term "productivity." How can a company best use productivity measurements?
16. What is on-demand computing? What two advantages does it offer to a company?
17. What is the total cost of ownership?
18. Describe the role of the CIO.

CHAPTER 9: MULTI-ADDRESSMENT TEST

Electronic and mobile commerce are evolving, providing new ways of conducting business that present both potential benefits and problems.

1. An organization will use both _____ e-commerce to purchase goods and services from its suppliers and _____ e-commerce to sell products to its customers.
 2. Which form of e-commerce is the largest?
 3. What is the elimination of intermediate organizations between the producer and the consumer called?
 4. The sole objective of e-Government is to improve communications between citizens and the federal government. True or False?
5. The market for m-commerce in North America is far advanced relative to Western Europe and Japan. True or False?
- E-commerce and m-commerce can be used in many innovative ways to improve the operations of an organization.
6. A(n) _____ is a single Web site that offers many products and services at one Internet location.
 - a. e-tailer
 - b. Web service
 - c. cybermall
 - d. none of the above

7. The practice of _____ divides the pool of potential customers into subgroups, which are usually defined in terms of demographic characteristics.
8. An advancement in online bill payment that uses e-mail for the biller to post an image of your statement on the Internet so you can direct your bank to pay it is called _____.

Although e-commerce and m-commerce offer many advantages, users must be aware of and protect themselves from many threats associated with this technology.

9. Which of the following is a frequent advantage of converting to an e-commerce supply chain?
 - a. an increase transportation costs
 - b. an increase in available product inventory
 - c. acquisition of expensive information systems technology
 - d. an improved level of customer service
10. The use of any of several technologies to enforce policies for controlling access to digital media is called _____.

Organizations must define and execute a strategy to be successful in e-commerce and m-commerce.

11. After your Web site is established and successful, you do not need to redefine your site's basic business model. True or False?

12. Web site operators can take several actions to improve their rankings by search engines. True or False?

E-commerce and m-commerce require the careful planning and integration of a number of technology infrastructure components.

13. Poor Web site performance can drive consumers to abandon your Web site in favor of those with better, more reliable performance. True or False?

14. _____ contain variable information and are built to respond to a specific Web site visitor's request for information.

CHAPTER 8: SELF-ASSESSMENT TEST ANSWERS

- (1) buy-side and sell-side (2) B2B (3) disintermediation (4) false
- (5) false (6) c (7) market segmentation (8) electronic bill presentation (9) d (10) digital rights management (11) false (12) true (13) true (14) Dynamic Web pages

CHAPTER 9: SELF-ASSESSMENT TEST

An organization must have information systems that support routine, day-to-day activities and that help a company add value to its products and services.

1. A key characteristic of an enterprise system is that it uses a database of key operational and planning data that can be _____.
2. The result of processing business transactions is that the organization's records are updated to reflect the status of the operation at the time of the _____.
3. Which of the following is *not* one of the basic components of a TPS?
 - a. databases
 - b. networks
 - c. procedures
 - d. analytical models
4. A form of TPS whereby business transactions are immediately processed is called _____.
5. Capturing data at its source and recording it accurately in a timely fashion, with minimal manual effort, and in an electronic or digital form that can be directly entered into the computer are the principles behind _____.
6. Which of the following is a set of transaction processing systems sometimes referred to as the lifeblood of the organization?
 - a. purchasing systems
 - b. accounting systems
 - c. order processing systems
 - d. none of the above
7. Business data goes through a(n) _____ that includes data collection, data editing, data correction, data manipulation, data storage, and documentation production.
8. Inventory control, purchase order processing, receiving, and accounts payable systems make up a set of systems that support the _____ business function.

100% correct

9. The _____ transaction processing system manages the cash flow of the company by keeping track of the money owed the company.

A company that implements an enterprise resource planning system is creating a highly integrated set of systems, which can lead to many business benefits.

10. Many multinational companies roll out standard IS applications for all to use. However, standard applications often don't account for all the differences among business partners and employees operating in other parts of the world. Which of the following is a frequent modification that is needed for standard software?
- Software might need to be designed with local language interfaces to ensure the successful implementation of a new IS.
 - Customization might be needed to handle date fields correctly.
 - Users might also have to implement manual processes and overrides to enable systems to function correctly.
 - all of the above
11. Which of the following is a primary benefit of implementing an ERP system?
- elimination of inefficient systems
 - easing adoption of improved work processes
 - improving access to data for operational decision making
 - all of the above
12. The individual application modules included in an ERP system are designed to support _____, the most efficient and effective ways to complete a business process.

CHAPTER 10: SELF-ASSESSMENT TEST

Good decision-making and problem-solving skills are the key to developing effective information and decision support systems.

1. Developing decision alternatives is done during what decision-making stage?
 - a. initiation stage
 - b. intelligence stage
 - c. design stage
 - d. choice stage
2. Problem solving is one of the stages of decision making.
True or False?
3. A "rule of thumb" or commonly accepted guideline is called a(n) _____.
4. A decision that inventory should be ordered when inventory levels drop to 500 units is an example of a(n) _____.
 - a. synchronous decision
 - b. asynchronous decision
 - c. nonprogrammed decision
 - d. programmed decision
5. A(n) _____ model will find the best solution to help the organization meet its goals.
6. A satisficing model is one that will find a good problem solution, but not necessarily the best problem solution.
True or False?

The management information system (MIS) must provide the right information to the right person in the right format at the right time.

7. What summarizes the previous day's critical activities and is typically available at the beginning of each workday?
 - a. key-indicator report
 - b. demand report
 - c. exception report
 - d. database report
8. MRP and JIT are subsystems of the _____.
 - a. marketing MIS
 - b. financial MIS
 - c. manufacturing MIS
 - d. auditing MIS

- y
- 9. Another name for the _____ MIS is the personnel MIS because it is concerned with activities related to employees and potential employees of the organization.

Decision support systems (DSSs) are used when the problems are unstructured.

10. The focus of a decision support system is on decision-making effectiveness when faced with unstructured or semistructured business problems. True or False?
11. The _____ in a decision support system allows a decision maker to perform quantitative analysis.
12. What component of a decision support system allows decision makers to easily access and manipulate the DSS and to use common business terms and phrases?
- the knowledge base
 - the model base
 - the user interface or dialogue manager
 - the expert system

Specialized support systems, such as group support systems (GSSs) and executive support systems (ESSs), use the overall approach of a DSS in situations such as group and executive decision making.

13. What decision-making technique allows voting group members to arrive at a final group decision?
- groupthink
 - anonymous input
 - nominal group technique
 - delphi
14. A type of software that helps with joint work group scheduling, communication, and management is called _____.
15. The local area decision network is the ideal GSS alternative for situations in which decision makers are located in the same building or geographic area and the decision makers are occasional users of the GSS approach. True or False?
16. A(n) _____ supports the actions of members of the board of directors, who are responsible to stockholders.

CHAPTER 10: SELF-ASSESSMENT TEST ANSWERS

- (1) c (2) False (3) heuristic (4) d (5) optimization (6) True
(7) a (8) c (9) human resource (10) True (11) model base
(12) c (13) c (14) groupware or workgroup software (15) False
(16) executive information system (EIS)

REVIEW QUESTIONS

1. What is a satisficing model? Describe a situation when it should be used.
2. What is the difference between intelligence and design in decision making?
3. What is the difference between a programmed decision and a nonprogrammed decision? Give several examples of each.
4. What are the basic kinds of reports produced by an MIS?
5. How can a social networking site be used in a DSS?
6. What are the functions performed by a financial MIS?
7. Describe the functions of a manufacturing MIS.
8. List and describe some other types of MISs.
9. What are the stages of problem solving?
10. What is the difference between decision making and problem solving?
11. How can location analysis be used in a marketing research MIS?
12. Describe the difference between a structured and an unstructured problem and give an example of each.
13. Define *decision support system*. What are its characteristics?
14. Describe the difference between a data-driven and a model-driven DSS.
15. What is the difference between what-if analysis and goal-seeking analysis?
16. What are the components of a decision support system?
17. State the objective of a group support system (GSS) and identify three characteristics that distinguish it from a DSS.
18. How can social networking sites be used in a GSS?
19. How does an executive support system differ from a decision support system?
20. Identify three fundamental uses for an executive support system.

Knowledge management allows organizations to share knowledge and experience among managers and employees.

1. _____ knowledge is objective and can be measured and documented in reports, papers, and rules.
2. What type of person creates, uses, and disseminates knowledge?
 - a. knowledge worker
 - b. information worker
 - c. domain expert
 - d. knowledge engineer
3. A community of practice (COP) is a group of people or community dedicated to a common discipline or practice, such as open-source software, auditing, medicine, engineering, and other areas. True or False?

Artificial intelligence systems form a broad and diverse set of systems that can replicate human decision making for certain types of well-defined problems.

4. The Turing Test attempts to determine whether the responses from a computer with intelligent behavior are indistinguishable from responses from a human. True or False?
5. _____ are rules of thumb arising from experience or even guesses.
6. What is not an important attribute for artificial intelligence?
 - a. the ability to use sensors
 - b. the ability to learn from experience
 - c. the ability to be creative
 - d. the ability to make complex calculations
7. _____ involves mechanical or computer devices that can paint cars, make precision welds, and perform other tasks that require a high degree of precision or are tedious or hazardous for human beings.
8. What branch of artificial intelligence involves a computer understanding and reacting to statements in English or another language?
 - a. expert systems
 - b. neural networks
 - c. natural language processing
 - d. vision systems
9. A(n) _____ is a combination of software and hardware that allows the computer to change how it functions or reacts to situations based on feedback it receives.

Expert systems can enable a novice to perform at the level of an expert but must be developed and maintained very carefully.

10. What is a disadvantage of an expert system?
 - a. the inability to solve complex problems
 - b. the inability to deal with uncertainty
 - c. limitations to relatively narrow problems
 - d. the inability to draw conclusions from complex relationships
11. A(n) _____ is a collection of software packages and tools used to develop expert systems that can be implemented on most popular PC platforms to reduce development time and costs.
12. A heuristic consists of a collection of software and tools used to develop an expert system to reduce development time and costs. True or False?
13. What stores all relevant information, data, rules, cases, and relationships used by the expert system?
 - a. the knowledge base
 - b. the data interface
 - c. the database
 - d. the acquisition facility
14. A disadvantage of an expert system is the inability to provide expertise needed at a number of locations at the same time or in a hostile environment that is dangerous to human health. True or False?
15. What allows a user or decision maker to understand how the expert system arrived at a certain conclusion or result?
 - a. the domain expert
 - b. the inference engine
 - c. the knowledge base
 - d. the explanation facility
16. An important part of an expert system is the _____, which allows a user or decision maker to understand how the expert system arrived at certain conclusions or results.
17. In an expert system, the domain expert is the individual or group who has the expertise or knowledge one is trying to capture in the expert system. True or False?

Multimedia and virtual reality systems can reshape the interface between people and information technology by offering new ways to communicate information, visualize processes, and express ideas creatively.

18. _____ can be used to create stunning brochures, presentations, reports, and documents.

19. What type of virtual reality is used to make human beings feel as though they are in a three-dimensional setting, such as a building, an archaeological excavation site, the human anatomy, a sculpture, or a crime scene reconstruction?

- a. cloud
- b. relative
- c. immersive
- d. visual

Specialized systems can help organizations and individuals achieve their goals.

20. _____ involves the use of information systems to develop competitive strategies for people, organizations, or even countries.

CHAPTER 11: SELF-ASSESSMENT TEST ANSWERS

- (1) Explicit (2) a (3) True (4) True (5) Heuristics (6) d (7) Robotics (8) c (9) learning system (10) c (11) expert system shell (12) False (13) a (14) False (15) d (16) explanation facility (17) True (18) multimedia (19) c (20) Game theory

REVIEW QUESTIONS

1. What is a *knowledge management system*?
2. What is a *community of practice*?
3. What is a *chief knowledge officer*? What are his or her duties?
4. What is a vision system? Discuss two applications of such a system.
5. What is natural language processing? What are the three levels of voice recognition?
6. Describe three examples of the use of robotics. How can a microrobot be used?
7. What is a learning system? Give a practical example of such a system.
8. What is a neural network? Describe two applications of neural networks.
9. Under what conditions is the development of an expert system likely to be worth the effort?
10. Identify the basic components of an expert system and describe the role of each.
11. Describe several business uses of multimedia.
12. What is virtual reality? Give three examples of its use.
13. Expert systems can be built based on rules or cases. What is the difference between the two?
14. Describe the roles of the domain expert, the knowledge engineer, and the knowledge user in expert systems.
15. What is informatics? Give three examples.
16. Describe game theory and its use.
17. Identify three special interface devices developed for use with virtual reality systems.
18. Identify and briefly describe three specific virtual reality applications.
19. What is informatics? How is it used?
20. Give three examples of other specialized systems.

CHAPTER 12: SELF-ASSESSMENT TEST

Effective systems development requires a team effort from stakeholders, users, managers, systems development specialists, and various support personnel, and it starts with careful planning.

1. _____ is the activity of creating or modifying existing business systems. It refers to all aspects of the process—from identifying problems to be solved or opportunities to be exploited to the implementation and refinement of the chosen solution.
2. Which of the following people ultimately benefit from a systems development project?
 - a. computer programmers
 - b. systems analysts
 - c. stakeholders
 - d. senior-level manager
3. _____ involves questioning statements and assumptions.
4. Like a contractor constructing a new building or renovating an existing one, the chief information officer (CIO) takes the plans from the systems analyst and builds or modifies the necessary software. True or False?
5. The term _____ refers to the translation of strategic and organizational goals into systems development initiatives.
6. What involves investigating new approaches to existing problems?
 - a. critical success factors
 - b. systems analysis factors
 - c. creative analysis
 - d. critical analysis

Systems development often uses tools to select, implement, and monitor projects, including prototyping, rapid application development, CASE tools, and object-oriented development.

7. What kind of development uses tools, techniques, and methodologies designed to speed application development?
 - a. rapid application development
 - b. joint optimization
 - c. prototyping

- d. extended application development
8. Agile development allows systems to change as they are being developed. True or False?
9. _____ takes an iterative approach to the systems development process. During each iteration, the team identifies and analyzes requirements and alternative solutions to the problem, designs new solutions, and implements a portion of the system.
10. Rapid application development (RAD) employs tools, techniques, and methodologies designed to speed application development. True or False?
11. What consists of all activities that, if delayed, would delay the entire project?
- deadline activities
 - slack activities
 - RAD tasks
 - the critical path

Systems development starts with investigation and analysis of existing systems.

12. The systems request form is a document that is filled out during systems analysis. True or False?
13. Feasibility analysis is typically done during which systems development stage?
- investigation
 - analysis
 - design
 - implementation
14. Data modeling is most often accomplished through the use of _____, whereas activity modeling is often accomplished through the use of _____.
15. The overall purpose of requirements analysis is to determine user, stakeholder, and organizational needs. True or False?

CHAPTER 12: SELF-ASSESSMENT TEST ANSWERS

- (1) Systems development
- (2) c
- (3) Critical analysis
- (4) False
- (5) information systems planning
- (6) c
- (7) a
- (8) True
- (9) Prototyping
- (10) True
- (11) d
- (12) False
- (13) a
- (14) entity-relationship (ER) diagrams, data-flow diagrams
- (15) True

REVIEW QUESTIONS

1. What is an IS stakeholder?
2. What is the goal of IS planning? What steps are involved in IS planning?
3. What are the typical reasons to initiate systems development?
4. What is the difference between creative analysis and critical analysis?
5. What is the difference between a programmer and a systems analyst?
6. What is the difference between a Gantt chart and PERT?
7. What is the difference between systems investigation and systems analysis? Why is it important to identify and remove errors early in the systems development life cycle?

8. What is end-user systems development? What are the advantages and disadvantages of end-user systems development?
9. List factors that have a strong influence on project success.
10. What is the purpose of systems analysis?
11. What are the steps of object-oriented systems development?

12. Define the different types of feasibility that systems development must consider.
13. What are the objectives of agile development?
14. What is the result or outcome of systems analysis? What happens next?