

Chapter 1 - An Introduction to Information Systems in Organizations

True / False

1. Information is simply a collection of raw facts such as an employee number or the total hours worked in a week.
 - a. True
 - b. False

ANSWER: False

2. Data represents real-world things including raw facts such as image and audio data.
 - a. True
 - b. False

ANSWER: True

3. A set of random or unrelated tasks performed to achieve a definite outcome is called a process.
 - a. True
 - b. False

ANSWER: False

4. The term *data* is used to label raw facts such as height and weight of a patient.
 - a. True
 - b. False

ANSWER: True

5. Reengineering and continuous improvement have the same definition.
 - a. True
 - b. False

ANSWER: False

6. A sustaining innovation is one that initially provides a lower level of performance than the marketplace has grown to accept.
 - a. True
 - b. False

ANSWER: False

7. The concept of a value chain is not significant to organizations unless they manufacture products.
 - a. True
 - b. False

ANSWER: False

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8. Over time, disruptive innovation tends to become less attractive to users in a new market.

- a. True
- b. False

ANSWER: False

9. Perceived usefulness and ease of use of a system influence an individual's attitude toward the system.

- a. True
- b. False

ANSWER: True

10. The diffusion of innovation theory states that adoption of any innovation happens all at once for all members of the targeted population.

- a. True
- b. False

ANSWER: False

11. The diffusion of innovation theory can be useful in planning the rollout of a new information system.

- a. True
- b. False

ANSWER: True

12. The activities that lead to getting the right product into the right consumer's hands in the right quantity at the right time at the right cost are known as value chain management.

- a. True
- b. False

ANSWER: False

13. Opportunities in information systems are available to people from different parts of the world.

- a. True
- b. False

ANSWER: True

14. The role of a systems analyst is narrowly defined and seldom involves communications with others.

- a. True
- b. False

ANSWER: False

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15. The information systems operations group is responsible for the day-to-day running of IS hardware to process the organization's information systems workload.

- a. True
- b. False

ANSWER: True

16. The successful implementation for change only happens when people accept the need for change and believe that it will improve factors such as productivity and/or customer satisfaction.

- a. True
- b. False

ANSWER: True

17. "Adapting" is the second stage in Lewin's Change Model, which involves learning new work methods, behaviors, and systems.

- a. True
- b. False

ANSWER: False

18. According to Lewin's Change Model, an organization must deliberately change old habits, learn new work methods, and accept the new work methods as parts of the job.

- a. True
- b. False

ANSWER: True

19. Today, many organizations can function and compete effectively without computer-based information systems.

- a. True
- b. False

ANSWER: False

20. For someone to be a good CIO, technical ability is the most important characteristic.

- a. True
- b. False

ANSWER: False

21. One of the primary roles of a senior IS manager is to communicate with other areas of the organization to determine changing business needs.

- a. True
- b. False

ANSWER: True

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22. A feedback mechanism is an optional component of an information system.

- a. True
- b. False

ANSWER: False

23. An organization's technology infrastructure includes all of the hardware, software, databases, networks, people, and procedures that are configured to collect, manipulate, store, and process data into information.

- a. True
- b. False

ANSWER: True

24. Cole has just landed a job as a sales representative in a department store. Nina is teaching him the set of steps he should follow to ring up, take payment for, and bag a purchase for a customer. Cole is learning a procedure.

- a. True
- b. False

ANSWER: True

Multiple Choice

25. The process of defining relationships among data to create useful information requires _____.

- a. an information system
- b. a formal education
- c. knowledge
- d. intuition

ANSWER: c

26. A clothing store chain tracks the sale of each product at each location. Managers use this information to calculate the organization's profits, to track inventory needs, and to determine which styles and fabrics are the most popular among its customers. This is an example of quality information that is _____.

- a. flexible
- b. economical
- c. relevant
- d. verifiable

ANSWER: a

27. The value of information is directly linked to how it helps decision makers achieve their organization's _____.

- a. cost/profit target
- b. goals
- c. cost reduction initiatives
- d. customer satisfaction levels

ANSWER: b

28. In terms of information systems, Wikipedia would be an example of _____.

- a. a personal IS
- b. a group IS
- c. an enterprise IS
- d. an organizational complement

ANSWER: b

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29. Which of the following is NOT an organizational complement?

- a. well-trained workers b. system support
- c. new decision rights d. familiar processes

ANSWER: d

30. To keep information beyond reach of unauthorized users is to keep the information _____.

- a. secure b. economical
- c. simple d. verifiable

ANSWER: a

31. Harrison works at a nationally known grocery store chain. He is analyzing sales data from the past five years to determine which low-selling products should be discontinued. Harrison is most likely a(n) _____.

- a. data scientist b. end user
- c. knowledge worker d. top executive

ANSWER: a

32. Providing value to a _____ is the primary goal of any organization.

- a. stakeholder b. product
- c. competitor d. service

ANSWER: a

33. In a manufacturing organization, the supply chain is a key value chain whose primary activities include all of the following EXCEPT:

- a. inbound logistics b. finance and accounting
- c. marketing and sales d. customer service

ANSWER: b

34. The idea of _____ is a form of innovation that constantly seeks ways to improve business processes and add value to products and services.

- a. reengineering b. process redesign
- c. disruptive change d. continuous improvement

ANSWER: d

35. The performance levels of radically new 'high-tech' products usually improve with newer versions. Such types of products are known as

- a. sustaining innovations b. continuous improvement
- c. disruptive innovations d. business reengineering

ANSWER: c

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36. Which of the following theories explains how a new idea or product gains acceptance and spreads through a specific population or subset of an organization?
- a. diffusion of innovation theory b. contingency theory
 - c. public choice theory d. two-factor theory

ANSWER: a

37. In a supply chain, _____ involve the transformation, movement, and storage of supplies and raw materials.
- a. virtual flows b. matrix flows
 - c. information flows d. physical flows

ANSWER: d

38. _____ is a visa program that allows skilled employees from foreign lands into the United States.
- a. L-1B b. H-1B
 - c. 4F d. G-5

ANSWER: b

39. _____ are responsible for running and maintaining information system equipment and also for scheduling, hardware maintenance, and preparing input and output.
- a. Data-entry operators b. System operators
 - c. Web operators d. Local area network operators

ANSWER: b

40. _____ encompasses all the activities required to get the right product into the right consumer's hands in the right quantity at the right time and at the right cost, from acquisition of raw materials through customer delivery.
- a. Supply chain management b. Value chain management
 - c. Inventory management d. Customer management

ANSWER: a

41. Suppose you are assigned to manage a virtual team. Which of the following will you NOT do?
- a. define goals, and set expectations
 - b. be aware of team members cultural sensitivity
 - c. ensure the team members are familiar with each other at a personal level
 - d. hold team meetings regularly - whether the team members like it or not

ANSWER: d

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42. Suppose, you need to advise someone about getting a certification. Which of the following will be appropriate advice?
- a. Getting certification is a sure way of improving your income
 - b. Certifications are vendor-specific
 - c. Certifications are the same as courses offered at universities
 - d. You need a college degree before you can take a certification exam

ANSWER: b

43. All of the following are positive driving forces that influence change according to Lewin's Theory of Force Field Analysis, EXCEPT:
- a. beliefs
 - b. past performance
 - c. expectations
 - d. cultural norms

ANSWER: b

44. According to the diffusion innovation theory, _____ are the risk takers, always the first to try new products and ideas.
- a. early majority
 - b. late majority
 - c. early adopters
 - d. innovators

ANSWER: d

45. Which of the following is NOT one of the four main components in Leavitt's Diamond?
- a. people
 - b. systems
 - c. tasks
 - d. technology

ANSWER: b

46. Positive outcomes of continuous improvement include _____.
- a. increased customer loyalty
 - b. increased customer satisfaction
 - c. protection against competitors
 - d. all of these

ANSWER: d

47. According to Lewin and Schein's 3-stage model of organizational change, which of the following tasks would be found in the 'unfreezing' stage?
- a. Monitor progress against success criteria
 - b. Establish controls to ensure change is occurring
 - c. Establish processes and systems to institutionalize change
 - d. Assign leaders and implementation team

ANSWER: d

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48. Suppose you work at a business unit that has group of people who would rather wait to try a new technique. They listen to and follow the opinion leaders. They would be classified as the _____.
- a. innovators
 - b. early adopters
 - c. early majority
 - d. late majority

ANSWER: c

49. You might be an information systems worker if you _____.
- a. prefer a slow-paced environment, where technology rarely changes
 - b. prefer to work only on the computer and are not interested in the business
 - c. enjoy learning new techniques and enjoy working with people
 - d. are good in book-keeping, like an accountant

ANSWER: c

50. In most large organizations, the IS department is divided into the following functions _____.
- a. operations and development
 - b. operations, development, and support
 - c. operations and support
 - d. systems, operations, and development

ANSWER: b

51. Important functions of the chief information officer include
- a. employing an IS department's equipment and staff to help the organization reach its goals
 - b. monitoring the financial considerations of the IS department, such as return on investment
 - c. ensuring the organization complies with laws and regulations
 - d. all of these

ANSWER: d

52. In a large IS organization, the professional who is responsible for maintaining the security and integrity of the organization's systems and data is _____.
- a. the data center manager
 - b. the data security manager
 - c. the system security operator
 - d. the information systems security analyst

ANSWER: d

53. Which of the following is NOT a task typically associated with the systems analyst role?
- a. conveying system requirements to software developers and network architects
 - b. troubleshooting problems after implementation
 - c. collaborating with others to build a software product from scratch
 - d. choosing and configuring hardware and software

ANSWER: c

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54. One method an IS professional might use to find a new job would be _____.
a. seeking referrals from colleagues, friends, and family members
b. searching and applying for open positions on Internet job sites
c. networking through an IS professionals' organization
d. all of these

ANSWER: d

55. Which of the following is NOT one of the functions of a computer-based information system?
a. collect data b. store data
c. apply data d. process data

ANSWER: c

56. Calligraph Publishing Inc.'s information system allows its customers to access the system to retrieve information on new releases, inventory levels, and more. This must be a _____.
a. personal IS
b. group IS
c. enterprise IS
d. none of these answers

ANSWER: c

Completion

57. _____ is the awareness and understanding of a set of information and the ways that information can be made useful to support a specific task or reach a decision.

ANSWER: Knowledge

58. For each type of IS (personal, group, enterprise), there are _____ that must be in place to ensure successful implementation and use of the system.

ANSWER: organizational complements

59. An information system that improves the productivity of individual users in performing stand-alone tasks is called a(n) _____.

ANSWER: personal IS

60. A manufacturing facility has a series of activities that converts the raw materials into valuable products. Such a series of activities make up the organization's _____ chain.

ANSWER: value

61. A(n) _____ is a group of individuals whose members are distributed geographically, but who collaborate and complete work through the use of information systems technology.

ANSWER: virtual team

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62. In any organization, _____ such as raw materials, labor, facilities, equipment, and knowledge, are needed to transform them to outputs in a way that increases the input's value.

ANSWER: inputs

63. The radical redesign of business processes, organizational structures, information systems, and values of an organization to achieve a breakthrough in business results is known as _____.

ANSWER: reengineering

64. _____ is a theory that proposes that every organizational system is made up of four main components—people, tasks, structure, and technology—with an interaction among the four components so that any change in one of these elements will necessitate a change in the other three elements.

ANSWER: Leavitt's diamond

65. The attitude towards using an information system depends on its perceived ease-of-use and perceived _____.

ANSWER: usefulness

66. In the technology acceptance model (TAM), _____ is defined as the degree to which individuals believe that use of the system will improve their performance.

ANSWER: perceived usefulness

67. Sarah, as the head of a business division, wants to set up a network access account for a new employee. She should call the _____ to get this done.

ANSWER: LAN administrator or
Network administrator

68. A(n) _____ is a professional in a developmental group of an information systems department who assists in choosing and configuring hardware and software, matching technology to users' needs, monitoring and testing the system in operation, and troubleshooting problems after implementation.

ANSWER: systems analyst

69. _____ design and set up databases to meet an organization's needs.

ANSWER: Database administrators
DBAs
database administrators

70. The _____ group of a typical information systems organization is responsible for the day-to-day running of IS hardware to process the organization's information systems workload.

ANSWER: operations

71. _____ convert a program design developed by a systems analyst or software developer using one of many computer languages.

ANSWER: Programmers
programmers

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72. _____ is a process for testing skills and knowledge, which results in a statement by the certifying authority that confirms an individual is capable of performing particular tasks.

ANSWER: Certification
certification

73. Process redesign, which is also known as _____, involves the radical redesign of business processes, organizational structures, information systems, and values.

ANSWER: business process reengineering

74. "Kaizen" is the Japanese word for _____.

ANSWER: continuous improvement

75. The _____ theory was developed by E.M. Rogers to explain how a new idea or product gains acceptance and diffuses (or spreads) through a specific population or subset of an organization.

ANSWER: diffusion of innovation

76. The first stage of Lewin's change model, _____, means ceasing old habits and creating a climate that is receptive to change.

ANSWER: unfreezing

77. According to Leavitt's theory, _____ in one aspect of the information system element will necessitate changes in other elements also.

ANSWER: change

78. Laptops are a good example of _____ because they are gradually displacing desktop computers due to new and better performance characteristics.

ANSWER: disruptive innovation

79. Of the five categories of innovation adopters, _____ are always the first to try new products and ideas.

ANSWER: innovators

80. _____ is the term used to describe the information systems and solutions built and deployed by departments other than the information systems department.

ANSWER: Shadow IT
shadow IT
Shadow Information Technology
shadow information technology

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Essay

81. Briefly distinguish among data, information, and knowledge.

ANSWER: Data consists of raw facts, such as employee number or total hours worked in a week, an inventory part number, or the number of units produced on a production line.
Information is a collection of facts organized and processed so that they have additional value beyond the value of individual facts. For example, a sales manager may want individual sales data summarized to see the total sales for the month. Providing information to customers can also help companies increase revenues and profits.
Knowledge is the awareness and understanding of a set of information and the ways that information can be made useful to support a specific task or reach a decision. Having knowledge means understanding relationships in information.

82. Define the term value chain and briefly discuss the purpose of the supply chain component in a manufacturing organization.

ANSWER: The value chain is a series (chain) of activities that an organization performs to transform inputs into outputs in such a way that the value of the input is increased. In a manufacturing organization, the supply chain is a key value chain whose primary activities include inbound logistics, operations, outbound logistics, marketing and sales, and service. These primary activities are directly concerned with the creation and/or delivery of the product or service. There are also four main areas of support activities, including technology infrastructure, human resource management, accounting and finance, and procurement.

83. Explain the difference between sustaining and disruptive innovation.

ANSWER: Sustaining innovation results in enhancements to existing products, services, and ways of operating. Such innovations are important as they enable an organization to continually increase profits, lower costs, and gain market share. A disruptive innovation is one that initially provides a lower level of performance than the marketplace has grown to accept. Over time, however, the disruptive innovation is improved to provide some new performance characteristics and becomes more attractive to users in a new market. As it continues to improve and begins to provide a higher level of performance, it eventually displaces the former product or way of doing things.

84. Discuss the roles, functions, and careers in information systems (IS).

ANSWER: Information systems (IS) offer many exciting and rewarding careers. Professionals with careers in information systems can work in an IS department or outside a traditional IS department as Web developers, computer programmers, systems analysts, computer operators, and many other positions. There are also opportunities for IS professionals in the public sector. In addition to technical skills, IS professionals need skills in written and verbal communication, an understanding of organizations and the way they operate, and the ability to work with people and in groups. Most medium to large organizations manage information resources through an IS department. In smaller businesses, one or more people might manage information resources, with support from outsourced services.

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85. Describe both of Lewin's theories—change model and force field analysis—and explain how they are related.

ANSWER: Lewin's change model proposes that organizational change goes through three stages: Unfreezing, which means ceasing old habits and creating a climate that is receptive to change; moving, which involves learning new work methods, behaviors, and systems; and refreezing, which involves reinforcing changes to make the new process accepted. Lewin went on to identify two types of forces that can influence these stages, which are explained in his theory of force field analysis. Driving (positive) forces are beliefs, expectations, and cultural norms that encourage change, while restraining (negative) forces make change difficult to accept or implement.