Foundations of Information Systems 1st edition Raisinghani Test Bank

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Foundations of Information Systems

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Chapter 01: Fundamentals of Information Systems

Review Questions

Multiple Choice

1. Taylor is collecting and analyzing data to generate evidence that will support the organization's decision-making processes. What will Taylor use to assist with this effort?

A. data processing
B. information systems*
C. information technology
D. computer science

LO: 1.1.1 Define the key concepts in information systems
Blooms: Understand
Difficulty: Moderate

2. Which component of information systems enables users to perform specific tasks?

A. hardware
B. data
C. software*
D. procedures

LO: 1.1.1 Define the key concepts in information systems
Blooms: Remember
Difficulty: Easy

3. At your organization's quarterly business meeting, Amal presented statistics and other facts to help board members learn about the organization's progress and understand the quarterly reports. What are the statistics and facts that Amal presented called?

A. information*
B. procedures
C. data
D. transactions

LO: 1.1.1 Define the key concepts in information systems
Blooms: Remember

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Difficulty: Moderate

4. Which type of information system provides reports and summaries to help middle managers with decision-making?

A. decision support system
B. executive information system
C. management information system*
D. interorganizational information system

LO: 1.1.1 Define the key concepts in information systems
Blooms: Remember
Difficulty: Moderate

5. Which type of information system enables two or more companies to conduct business electronically?

A. decision support system
B. transaction processing system
C. management information system
D. interorganizational information system*

LO: 1.1.1 Define the key concepts in information systems
Blooms: Remember
Difficulty: Moderate

6. As your organization has grown, you need a system to handle functions such as human resource management, customer service monitoring, and project management. What type of system do you need?

A. point-of-sale system
B. transaction processing system
C. management information system
D. enterprise resource planning system*

LO: 1.1.1 Define the key concepts in information systems
Blooms: Understand
Difficulty: Moderate

7. What prevented early computers from being used as communication tools?

A. They were not part of information systems.
B. They did not have software.
C. They were not linked by data networks.*
D. They did not use transaction processing.

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LO: 1.1.2 Discuss the historical evolution of information systems
Blooms: Remember
Difficulty: Easy

8. What feature of the ARPANET enabled information sharing in separate locations by transferring data in small pieces as they are routed through a system?

A. packet-switching technology*
B. satellite links
C. list servers
D. FTP protocols

LO: 1.1.2 Discuss the historical evolution of information systems
Blooms: Understand
Difficulty: Easy

9. One of your customers is amazed they can interact with your organization's online advertisements. During the 1990s, this customer worked for an advertising agency and used Web 1.0, which only allowed customers to observe advertisements. Why did Web 1.0 not offer users the option of interacting with content?

A. With Web 1.0, websites relied on packet-switching technology.
B. With Web 1.0, websites were static.*
C. With Web 1.0, websites relied on list servers.
D. With Web 1.0, websites used routers.

LO: 1.1.2 Discuss the historical evolution of information systems
Blooms: Understand
Difficulty: Difficult

10. Which part of a computer manages disk storage?

A. list server
B. operating system (OS)*
C. transaction processing system
D. application software

LO: 1.1.3 Describe the components, elements, and operations of information systems
Blooms: Remember
Difficulty: Easy

11. You are looking at statistics and other numerical information about your organization's quarterly sales. What type of information is this?

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A. input data
B. qualitative data
C. output data
D. quantitative data*

LO: 1.1.3 Describe the components, elements, and operations of information systems
Blooms: Remember
Difficulty: Easy

12. A member of your IT staff identified an issue with your organization's firewall. Which element of your information system does this impact?
A. environment
B. application control*
C. processing
D. general control

LO: 1.1.3 Describe the components, elements, and operations of information systems
Blooms: Remember
Difficulty: Moderate

13. To prepare for a quarterly board meeting, you transform a ten-page report into a video to show the board and help them understand the organization's recent performance. Which operation of information systems did you use?
A. data processing
B. data retrieval
C. data dissemination*
D. data capture

LO: 1.1.3 Describe the components, elements, and operations of information systems
Blooms: Understand
Difficulty: Difficult

14. How does an information system enhance the reliability of an organization's data?
A. by improving accuracy*
B. by improving efficiency
C. by improving automation
D. by improving productivity

LO: 1.1.3 Describe the components, elements, and operations of information systems
Blooms: Understand
Difficulty: Easy

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15. The staff implementing your organization's new information system is struggling. Team members are not communicating effectively, nor are they using critical thinking skills to develop a robust information system. What tool do you propose to help the team?
A. data dissemination
B. framework*
C. industry standard
D. feedback

LO: 1.2.1 Discuss the use of frameworks and industry standards in IS
Blooms: Understand
Difficulty: Difficult

16. Your organization conducts business with multiple other organizations. What tool should you use to ensure that your information system is compatible with the information systems used by these other organizations?
A. data dissemination
B. competency model
C. industry standard*
D. feedback

LO: 1.2.1 Discuss the use of frameworks and industry standards in IS
Blooms: Understand
Difficulty: Moderate

17. Your organization needs a framework that will improve its project management processes as it implements a new information system. Which framework do you recommend?
A. Zachman Framework
B. Agile methodology*
C. Skills Framework for the Information Age (SFIA)
D. McKinsey 7-S Framework

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Understand
Difficulty: Easy

18. Your organization needs to be more efficient and effective by improving its coordination across the organization. Areas that need improvement include developing better organizational goals and objectives with robust plans to achieve these, as well as implementing better workflow processes. The organization's tone at the top and shared values should also be revamped. Which framework do you recommend?

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A. McKinsey 7-S Framework*
B. Zachman Framework
C. Skills Framework for the Information Age (SFIA)
D. Control Objectives for Information and Related Technologies (COBIT)

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Understand
Difficulty: Difficult

19. A major issue at your organization is an incoherent mission to motivate operations. Which element of the McKinsey 7-S Framework does this relate to?
A. structure
B. systems
C. style
D. shared values*

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Remember
Difficulty: Moderate

20. While using the Skills Framework for the Information Age (SFIA), you delegate work based on each staff member's personal skills and knowledge. Which part of the SFIA framework are you using as you do this?
A. plan and organize
B. deploy*
C. analyze
D. develop

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Remember
Difficulty: Moderate

21. According to the Skills Framework for the Information Age (SFIA), which level of employees receive general supervision but have more autonomy, do work that is not necessarily routine, and may even supervise other employees?
A. Assist
B. Apply*
C. Ensure and Advise
D. Initiate and Influence

LO: 1.2.2 Identify the frameworks and standards in IS

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Blooms: Remember
Difficulty: Moderate

22. Under the Zachman Framework, which question seeks to gather details about an organization's units and hierarchy?
A. What?
B. Where?
C. Who?*
D. Why?

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Remember
Difficulty: Easy

23. You are a consultant helping colleges and universities develop IS programs that ensure students are prepared to handle jobs such as information systems administrator and database developer. What should you use to help with this effort?
A. ISO/IEC 27001
B. FISMA
C. IS2020*
D. TOGAF

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Understand
Difficulty: Moderate

24. Why is ethical mindset an important characteristic to enable information systems professionals to perform their jobs effectively?
A. It helps ensure that they fully understand the fundamentals of information systems.
B. It helps ensure that they can develop the competencies needed to stay abreast of changes in information systems.
C. It helps ensure that they understand the risks affecting cybersecurity and take actions to combat those risks.*
D. It helps ensure that they have the flexibility needed to adapt as the field of information systems evolves.

LO: 1.2.3 Correlate the frameworks and standards to knowledge as an IS professional
Blooms: Remember
Difficulty: Moderate

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25. What concept refers to an individual's ability to apply specific skills, experience, and personal characteristics in a way that enables them to perform a job in an effective and efficient manner?
A. competency*
B. motivation
C. semantic modeling
D. technical expertise

LO: 1.3.1 Explain competencies in IS and IT
Blooms: Remember
Difficulty: Easy

26. You provide a recommendation for your organization's intern. You describe this person as dependable, reliable, professional, and willing to learn. You also state that you were impressed by the intern's integrity. Based on this assessment, what competency impressed you most about the intern?
A. workplace capabilities
B. occupational skills
C. personal effectiveness*
D. academic accomplishments

LO: 1.3.1 Explain competencies in IS and IT
Blooms: Understand
Difficulty: Moderate

27. Your new employee prefers to work alone and contributes little when involved in groups. This employee also daydreams during meetings and simply follows instructions without making any effort to think about the work and why it is important. In which competency area is this employee lacking?
A. personal effectiveness
B. workplace*
C. technical
D. academic

LO: 1.3.1 Explain competencies in IS and IT
Blooms: Understand
Difficulty: Moderate

28. What type of software package enables organizations to automate and coordinate operations, solve problems, and monitor organizational performance?
A. business analysis

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B. enterprise system*
C. information technology
D. networking

LO: 1.3.2 Describe the connections between IS and IT
Blooms: Remember
Difficulty: Easy

29. What process enables organizations to collaborate across international borders to design and develop new goods and services for the global marketplace?
A. global innovation*
B. artificial intelligence
C. globalization
D. enterprise management

LO: 1.4.2 Discuss global innovation and its importance
Blooms: Remember
Difficulty: Easy

30. Which technological advancement allows data storage closer to the source of data, rather than a centralized cloud or server?
A. artificial intelligence
B. edge computing*
C. blockchain
D. Internet of Things

LO: 1.4.3 Describe global initiatives in IS
Blooms: Remember
Difficulty: Easy

Fill in the Blank

31. An information system usually consists of five key components, including _____, which are the instructions and rules that guide the appropriate ways to use the system's hardware, software, and data.
Answer: procedures

LO: 1.1.1 Define the key concepts in information systems
Blooms: Remember
Difficulty: Moderate

32. A(n) _____ handles day-to-day procedures, such as order processing and payroll.

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Answer: transaction processing system (TPS)

LO: 1.1.1 Define the key concepts in information systems
Blooms: Remember
Difficulty: Easy

33. You are using the organization's _____ to gather tactical information to help make wise short-term decisions within your department. Doing this will help the organization carry out its strategic plan and achieve long-term goals and objectives. In addition, you are using the organization's _____ to generate budgeting documents and other reports to ensure your understanding of what the department is accomplishing.

Answer: decision support system (DSS); management information system (MIS)

LO: 1.1.1 Define the key concepts in information systems
Blooms: Remember
Difficulty: Moderate

34. Your organization is exploring options to promote its products and decides to develop content, including videos and banner advertisements, suitable to distribute via mobile devices. This content will be distributed on _____, an electronic communication tool that supports online communities where your organization's target market is readily accessible.

Answer: social media

LO: 1.1.1 Define the key concepts in information systems
Blooms: Understand
Difficulty: Moderate

35. _____ is an important part of information systems operations to ensure that an organization's information is protected from cyberthreats, as well as environmental threats like wildfires and tornadoes. At the same time, information must be readily accessible to users for _____, which is the process of sharing information maintained in the information system.

Answer: Data storage; data dissemination

LO: 1.1.1 Define the key concepts in information systems
Blooms: Remember
Difficulty: Moderate

36. You and a colleague disagree over the best framework to use as your organization upgrades its information system. You recommend _____, which focuses on five processes,

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including Evaluate, Direct, and Monitor (EDM) and Deliver, Service, and Support (DSS). Your colleague prefers _____, which focuses on skills such as plan and organize, deploy, and reward.

Answer: Control Objectives for Information and Related Technologies (COBIT); Skills Framework for the Information Age (SFIA)

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Remember
Difficulty: Easy

37. If a team needs a structured, linear process that includes logical design and brainstorming, they may prefer to use _____ as their framework.

Answer: Waterfall

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Remember
Difficulty: Moderate

38. If an organization has government contracts, it should be familiar with the _____, which establishes security guidelines and standards that government contractors must meet to reduce the possibility of misusing or losing data to human error or hacking.

Answer: Federal Information Security Modernization Act (FISMA)

LO: 1.2.2 Identify the frameworks and standards in IS
Blooms: Remember
Difficulty: Easy

39. To fill your organization's open positions, the human resources department is reviewing the company's needs in areas including personal effectiveness, academic knowledge, creative thinking, problem-solving, leadership, and conflict resolution, as well as more specific items such as database management and cybersecurity. To assist with this effort, human resources staff could rely on a(n) _____, which identifies an organization's requirements for employees to effectively perform their jobs.

Answer: competency model

LO: 1.3.1 Explain competencies in IS and IT
Blooms: Remember
Difficulty: Moderate

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40. Information systems has been a critical component of _____, which includes the international sales of goods and services and exchange of ideas across international borders.
Answer: globalization

LO: 1.4.1 Describe why information systems should be global
Blooms: Remember
Difficulty: Easy

Short Answer Questions

41. What is the relationship between computer science, information technology, and information systems?
Sample Answer: Computer science provides the foundations for the theories and technology that enable and support computing systems. Information technology implements and maintains those computer systems, making them operational. Information systems uses those systems to process and manage information.

LO: 1.1.1 Define the key concepts in information systems
Blooms: Analyze
Difficulty: Easy

42. To prepare for a meeting about your organization's strategic plans, your assistant provides a document that lists raw facts and figures about your organization's products with no additional information. You are displeased with this document and ask your assistant to redo it. Why?
Sample Answer: To be useful, raw facts and figures (also known as data), must be processed and converted into meaningful information. This is achieved by manipulating raw facts and figures to provide context and meaning, such as statistics about which products are an organization's best sellers and the profits generated from these sales. The document the assistant provided wasn't useful because the data included hadn't been processed and changed into information.

LO: 1.1.1 Define the key concepts in information systems
Blooms: Understand
Difficulty: Difficult

43. You have two employees who operate your organization's information systems. They use different processes in their work, and this has yielded inconsistent and unreliable information. How should you address this issue?
Sample Answer: You should implement standard operating procedures, which are a set of instructions and rules to govern the use of an information system's hardware, software, and

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data. By requiring both employees to follow the standard operating procedures, their work and the information they produce will be consistent and reliable.

LO: 1.1.1 Define the key concepts in information systems
Blooms: Apply
Difficulty: Moderate

44. How does an executive information system (EIS) differ from a management information system (MIS)?

Sample Answer: An EIS supports the strategic information needs of top executives, providing the information needed to handle executive functions, such as developing an organization's strategic goals and objectives and plans for achieving them. An MIS provides middle managers with reports and summaries to support decision-making and managerial functions.

LO: 1.1.1 Define the key concepts in information systems
Blooms: Analyze
Difficulty: Easy

45. What was the Jacquard loom, and why was it important in the development of computers?

Sample Answer: The 1801 invention helped artists weave patterned cloth. Using punched pasteboard cards, Jacquard applied binary code to the weaving process. The loom itself functioned as the machine's hardware. The loom's rods were controlled by pasteboard cards that were stiff and included holes to instruct the rods in the steps needed to weave a specific pattern of cloth. This design helped early computer designers understand the concepts and importance of computer hardware and software by applying binary code. While the cards' pasteboard was hardware, the patterns of holes in the cards were software because they provided instructions and determined which patterns would appear in each piece of cloth the loom produced. This process demonstrated how hardware and software could be coordinated to achieve specific tasks, providing an important framework as computers were developed.

LO: 1.1.2 Discuss the historical evolution of information systems
Blooms: Remember
Difficulty: Moderate

46. Your organization's IT staff is implementing a new information system, and all the components are in place. Briefly explain each of the elements that you must now implement to enable the information system to function.

Sample Answer: The elements are environment, input, processing, output, control, and feedback.

- Environment refers to factors such as physical location and network capabilities that affect a system and help determine how it operates. Environment also involves the

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purpose and context of a system, including whether the majority of users are tech savvy or have limited skills in technology. To ensure the system's security, the physical location of the system must be in a secure building, and the system itself must include cybersecurity features that guard against hacking and other unauthorized use.

- Input refers to the data collected and entered into the system by users or entered automatically when transactions occur. To handle this data, an information system must include the appropriate software.
- Processing refers to the tasks performed, such as computations, that make data useful.
- Output is the data and information generated by a system for users. Examples of outputs include information about an organization's costs, sales, and profits.
- Control refers to the policies and procedures that ensure a system functions effectively, efficiently, and securely. Controls typically fall into two categories—application and general.
- Feedback is information from users about an information system's functionality, including any problems that they experience when using the system.

LO: 1.1.3 Describe the components, elements, and operations of information systems
Blooms: Understand
Difficulty: Difficult

47. Your organization is implementing a new information system. What is the difference between a framework and an industry standard, and how can they help an organization implement a robust information system?

Sample Answer: A framework refers to a tangible, structured set of guidelines and best practices used to guide the process of developing, implementing, managing, or maintaining a business process, policy, system, or procedure, including an information system. An industry standard is a policy, procedure, or requirement widely used and supported in an industry to promote efficiency and quality in goods and services. Frameworks and industry standards provide guidelines to promote best practices and help organizations achieve goals and objectives pertaining to their information systems.

LO: 1.2.1 Discuss the use of frameworks and industry standards in IS
Blooms: Analyze
Difficulty: Moderate

48. Your organization is growing and needs a more robust information system. The organization is struggling to design this system, partly because not everyone agrees on who the stakeholders in the system are or what those stakeholders need. What framework do you recommend to address this, and why? As part of your answer, briefly describe this framework.

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Sample Answer: The organization should use the Zachman Framework, which explores stakeholders' perspectives and can be a valuable tool to understand what an organization's information systems should entail and to develop the appropriate enterprise architecture to support that system. The Zachman Framework focuses on six questions to identify the needs and perspectives of stakeholders. The questions include:

- What? seeks to understand the data needed for the system by learning about the organization's data, objects, and information.
- How? seeks to understand the organization's processes and functions.
- Where? seeks to learn where the organization operates.
- Who? seeks to learn who the organizational members are, as well as gather details about the organization's units and hierarchy.
- When? seeks to learn the organization's schedule of operations, including when processes are performed.
- Why? seeks to learn why the organization has selected certain systems and solutions for its enterprise risk management and information systems. This question also seeks to determine what motivates the organization to perform certain functions.

LO: 1.2.3 Correlate the frameworks and standards to knowledge as an IS professional
Blooms: Understand
Difficulty: Difficult

49. To ensure that your organization's information system remains robust, you recommend upgrading the software. Who should you ask to handle this, and why?

Sample Answer: You should ask an information technology (IT) professional to upgrade the software. IT is concerned with technological operations, and IT professionals design and build an organization's technological infrastructure, including the computer hardware, software, and networks required to support the information system. IT professionals also provide user support to maintain technology and ensure that it functions appropriately. By contract, information systems (IS) focuses on an organization's goals and developing an information system to meet organizational needs. IT professionals typically use IS requirements to guide their work as they design and develop an organization's technological infrastructure.

LO: 1.3.1 Explain competencies in IS and IT
Blooms: Analyze
Difficulty: Moderate

50. Why is it important for information systems to be global?

Sample Answer: IS is important for globalization because it provides the resources that organizations need to achieve success in the global marketplace. This includes enabling global communication and information sharing, as well as supporting the processes to manage data compiled from sources throughout the world. IS also gives organizations the tools to function at

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any time of day, eliminating the need for different time zones to be an obstacle in global operations. In addition, IS helps organizations develop the frameworks they need for strategic planning and decision-making on a global scale.

LO: 1.4.1 Describe why information systems should be global
Blooms: Understand
Difficulty: Easy

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