|  | Faculty of Information Technology  **SYSTEM ANALYSIS AND DESIGN**  **Fall 2021** |
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**Chapter 1 Fundamental of Systems Development**

**Part I. Multiple choice questions**

1) \_\_\_\_\_\_\_\_ would be classified as software designed to support the payroll function.

A) System software

B) Design software

C) Analysis software

**D) Application software**

2) \_\_\_\_\_\_\_\_ is designed to support organizational functions or processes.

**A) Application software**

B) Design software

C) Analysis software

D) Testing software

3) What are computer programs that make it easy to use and benefit from techniques and to faithfully follow the guidelines of the overall development methodology?

**A) Tools**

B) Techniques

C) Data flow

D) Methodologies

Answer: A

4) Who has the primary responsibility for the design and analysis of information systems?

**A) Systems analyst**

B) Software engineer

C) Employees

D) Applications developer

Answer: A

5) \_\_\_\_\_\_\_\_ is/are the process(es) that an analyst will follow to help ensure that his work is complete, well-done, and understood by project team members.

A) Tools

**B) Techniques**

C) Data flow

D) Methodologies

Answer: B

6) The first procedural, or third-generation, computer programming languages did not become available until the beginning of the \_\_\_\_\_\_\_\_.

A) 1950s

**B) 1960s**

C) 1970s

D) 1980s

Answer: B

7) Because computers were so expensive, computer memory was also at a premium, so system developers conserved as much memory as possible for \_\_\_\_\_\_\_\_.

A) System design

B) System analysis

C) Data analysis

**D) Data storage**

Answer: D

8) \_\_\_\_\_\_\_\_ are large, complex systems that consist of a series of independent system modules.

A) Supply chain management systems

**B) Enterprise-wide systems**

C) Customer relationship management systems

D) Transaction processing systems

Answer: B

9) \_\_\_\_\_\_\_\_ were developed to make systems developers' work easier and more consistent.

A) Data analysis tools

**B) Computer-aided software engineering (CASE) tools**

C) Software designing tools

D) Modeling tools

Answer: B

10) Most organizations find it beneficial to use a standard set of steps, called \_\_\_\_\_\_\_\_, to develop and support their information systems.

**A) Systems development methodology**

B) Supply chain management systems

C) Analytical processing systems

D) Customer relationship management systems

Answer: A

11) Which of the below is a traditional methodology used to develop, maintain, and replace information systems?

A) Prototyping

B) OOAD

C) RAD

**D) SDLC**

Answer: D

12) Information systems analysis and design is a process to develop and maintain computer-based information systems.

Answer: TRUE

13) Ninety-four percent of companies report that they practice agile in their systems development efforts.

Answer: TRUE

14) To be effective, techniques and tools must both be consistent with an organization's systems development methodology.

Answer: TRUE

15) Techniques and tools must make it difficult for system developers to conduct the steps called for in the methodology.

Answer: FALSE

16) An organizational approach to systems analysis and design is not driven by methodologies.

Answer: FALSE

17) The analysis and design of computer-based information systems began in the 1950s.

Answer: TRUE

18) Most organizations never developed their applications from scratch using their in-house development staff.

Answer: FALSE

19) Which of the following is correct with respect to the logical design?

**A) All functional features of the system chosen for development in analysis are** described independently of any computer platform.

B) Logical design does not concentrate on the business aspects of the system.

C) Logical design is tied to a specific hardware and software platform.

D) Technical specifications are developed.

Answer: A

20) In which phase of the SDLC is an information system systematically repaired and improved?

A) Implementation

B) Analysis

C) Design

**D) Maintenance**

21) Which of the following are delivered after the completion of analysis phase?

A) Functional, detailed specifications of all system elements

B) Priorities for systems and projects; an architecture for data, networks, and selection hardware, and IS management are the result of associated systems

C) Code, documentation, training procedures, and support capabilities

**D) Description of current system and where problems and opportunities are with a general recommendation on how to fix, enhance, or replace current system**

Answer: D

22) Systems development methodologies and techniques which are based on objects rather than data or processes are known as \_\_\_\_\_\_\_\_.

A) Inheritance

B) Objects

C) Participatory design

D) **Object-oriented analysis and design**

Answer: D

**Part 2. Short answer**

1) Who is a systems analyst and what are the duties of a systems analyst?

Answer: Many people in organizations are responsible for systems analysis and design; in most organizations the systems analyst has the primary responsibility. When you begin your career in systems development, you will most likely begin as a systems analyst or as a programmer with some systems analysis responsibilities. The primary role of a systems analyst is to study the problems and needs of an organization in order to determine how people, methods, and information technology can best be combined to bring about improvements in the organization. A systems analyst helps system users and other business managers define their requirements for new or enhanced information services. As such, a systems analyst is an agent of change and innovation.

Difficulty: Moderate

AACSB: Information Technology

L.O.: 1.1 Define information systems analysis and design

Classification: Synthesis

2) What is an application software and its importance?

Answer: An important (but not the only) result of systems analysis and design is application software, software designed to support a specific organizational function or process, such as inventory management, payroll, or market analysis. In addition to application software, the total information system includes the hardware and systems software on which the application software runs, documentation and training materials, the specific job roles associated with the overall system, controls, and the people who use the software along with their work methods.

Difficulty: Easy

AACSB: Information Technology

L.O.: 1.1 Define information systems analysis and design

Classification: Synthesis

3) What is meant by system methodologies, techniques, and tools?

Answer: Methodologies are comprehensive, multiple-step approaches to systems development. Techniques are particular processes that you follow to help ensure that your work is complete, well done, and understood by others. Tools are typically computer programs that make it easier to use and benefit from techniques and to follow faithfully the guidelines of the overall development methodology. The techniques and tools should support the chosen methodology. Methodologies, techniques, and tools work together to form an organizational approach to systems analysis and design.

Difficulty: Easy

AACSB: Information Technology

L.O.: 1.1 Define information systems analysis and design

Classification: Synthesis

4) What is a system development methodology?

Answer: Most organizations find it beneficial to use a standard set of steps, called a systems development methodology, to develop and support their information systems. Like many processes, the development of information systems often follows a life cycle. For example, a commercial product follows a life cycle in that it is created, tested, and introduced to the market. Its sales increase, peak, and decline. Finally, the product is removed from the market and replaced by something else.

Difficulty: Easy

AACSB: Information Technology

L.O.: 1.1 Define information systems analysis and design

Classification: Synthesis

5) What are the five major phases of the SDLC?

Answer: The major SDLC phases include planning, analysis, design, implementation, and maintenance. Planning is the first phase of the SDLC in which an organization's total information system needs are identified, analyzed, prioritized, and arranged. Analysis is the second phase of the SDLC in which system requirements are studied and structured. During the third phase, the design phase, a description of the recommended solution is converted into logical and then physical system specifications. Implementation is the fourth phase of the SDLC in which the information system is coded, tested, installed, and supported in the organization. Maintenance is the fifth and final phase of the SDLC in which an information system is systematically repaired and improved.

Difficulty: Moderate

AACSB: Information Technology

L.O.: 1.1 Define information systems analysis and design

Classification: Synthesis

6) Which of the below is a true statement regarding the systems development life cycle?

A) The SDLC is not iterative.

B) It is not possible to complete some activities in one phase in parallel with those of another phase.

C) **The life cycle can be thought of as a circular process in which the end of the useful life of one system leads to the beginning of another project to develop a new version of or replace an existing system.**

D) The life cycle can be thought of as a linear process in which the end of the useful life of one system leads to the beginning of another project to develop a new version of or replace an existing system.

Answer: C