Systems Analysis and Design Methods Chapter 3: Information Systems Development

Multiple Choice Questions

- 1. The act of drawing one or more graphical representations of a system is called
 - A. modelingB. prototypingC. documentationD. All of the above

The correct answer is A.

2. The act of building a small-scale, representation or working model of the users' requirements to discover or verify those requirements is called

A. modelingB. prototypingC. documentationD. All of the above

The correct answer is B.

- 3. The activity of recording facts and specifications for a system is called
 - A. modelingB. prototypingC. documentationD. All of the above

The correct answer is C.

- 4. asks the questions: Will the solution fulfill the users' requirements? To what degree? How will the solution change the users' work environment? How do users feel about such a solution.
 - A. Operational Feasibility
 - B. Risk Feasibility
 - C. Economic feasibility
 - D. Technical feasibility

- 5. _____asks the question: What is the probability of a successful implementation using the technology and approach?
 - A. Operational Feasibility
 - B. Risk Feasibility
 - C. Economic feasibility
 - D. Technical feasibility

The correct answer is B

- 6. ______ is a process-centered technique that transforms the structured analysis models into good software design models. It introduced a modeling tool called structure charts, used to illustrate software structure to fulfill business requirements.
 - A. Structured DesignB. Object-OrientedC. Information Engineering (IE)D. All of the above

The correct answer is A

- 7. <u>is a data-centered, but process-</u> sensitive technique used to model business requirements and design systems that fulfill those requirements. It emphasizes a modeling tool called entity relationship diagrams.
 - A. Structured DesignB. Object-OrientedC. Information Engineering (IE)D. All of the above

The correct answer is C.

True or False Questions

8. An information system is a set of activities, methods, best practices, deliverables, and automated tools that stakeholders use to develop and maintain business processes.

A. True B. False

The correct answer is B.

(A systems development process is a set of activities, methods, best practices, deliverables, and automated tools that stakeholders use to develop and maintain information systems and software.)

9. The Capability Maturity Model (CMM) is a framework to assess the maturity level of an organization's information systems development and management processes and products.

A. True B. False

The correct answer is A.

10. A systems development life cycle is a very formal and precise system development process that defines a set of activities, methods, best practices, deliverables and automated tools for system developers and project managers to use to develop and maintain most of all information systems and software.

A. True B. False

The correct answer is B.

(A systems development methodology is a very formal and precise system development process that defines a set of activities, methods, best practices, deliverables and automated tools for system developers and project managers to use to develop and maintain most or all information systems and software.)

11. A systems development methodology divides the life cycle of an information system into two stages: (1) systems development; and (2) systems operation and support.

A. True B. False

The correct answer is B.

(A system life cycle divides the life of an information system into two major stages: (1) systems development; and (2) systems operation and support.)

12. All life cycle methodologies prescribe the exact same set of phases and activities.

A. True B. False

The correct answer is B.

All life cycle methodologies prescribe phases and activities. The number and scope of phases and activities varies from author to author, expert to expert, and company to company.

13. Your textbook identifies seven phases in the systems development methodology: preliminary investigation; problem analysis; requirements analysis; decision analysis; design; construction; and implementation.

A. True B. False

14. Documentation standards insure that the deliverables of any phase or activity meet business and technology expectations.

A. True B. False

The correct answer is B.

(Documentation standards should be a working by-product of the entire systems development effort, and reveals strengths and weaknesses of the system to multiple stakeholders before a system is built. Quality standards insure that the deliverables of any phase or activity meet business and technology expectations.)

15. The systems analyst should identify alternative solutions, and then evaluate each of them for possible feasibility, especially for cost-effectiveness and risk management.

A. True B. False

The correct answer is A.

16. Cost-effectiveness is defined by looking at the costs of developing and operating the information system.

A. True B. False

The correct answer is B.

(Cost-effectiveness is defined as the result obtained by striking a balance between the cost of developing and operating information systems and the benefits derived from that system.)

17. Risk management is the process of striking a balance between the cost of the system and the potential for the system to have something go wrong during implementation.

A. True B. False

The correct answer is B.

(Risk management is the process of identifying, evaluating and controlling what might go wrong in a project before it becomes a threat to the successful completion of the project or implementation of the information system.)

18. The divide and conquer approach of dividing a system into subsystems allows better communication and project management by delegating different pieces of the system to different stakeholders.

A. True B. False

19. Information systems projects can be planned or unplanned.

A. True B. False

The correct answer is A.

20. The decision analysis phase must consider the question, "Is this project worth looking at?"

A. True B. False

The correct answer is B. (The preliminary investigation phase must consider the question, "Is this project worth looking at?")

21. It is too early to determine the scope of the project during the preliminary analysis phase since only a limited number of requirements have been identified.

A. True B. False

The correct answer is B. (Scope definition is an important outcome of the preliminary analysis of the project. Scope defines how big the project is or will be.)

22. The problem analysis phase provides for a study and analysis of the existing system.

A. True B. False

The correct answer is A.

23. As soon as management has given approval for the project after the problem analysis phase, you can start designing the new system.

A. True B. False

The correct answer is B.

(Before you can design the system, you need to understand what capabilities it should provide to its users; what data needs to be captured and stored; what performance level is expected.)

24. The purpose of the decision analysis phase is to identify candidate solutions, analyze those candidate solutions for feasibility and recommend a candidate solution as the target solution to be designed.

A. True B. False

25. Operational feasibility is used to determine if a solution is operationally feasible and if the staff has the technical expertise to design and build the solution.

A. True B. False

The correct answer is A.

(Technical feasibility is used to determine if a solution is technically feasible and if the staff has the technical expertise to design and build the solution. Operational feasibility is used to determine if the solution will fulfill the users' requirements and how it will impact the users' work environment.)

26. Economic feasibility is used to determine if an economical schedule can be designed and implemented.

A. True B. False

The correct answer is B.

(Economic feasibility is used to determine if a solution is cost-effective, which means that there is a favorable balance between the cost of developing the solution and the benefits derived from that solution.)

27. Schedule feasibility is used to determine if the solution can be designed and implemented within an acceptable time period.

A. True B. False

The correct answer is A.

28. Risk feasibility is used to determine if the cost of the system, in the context of its schedule, will meet all the risks identified by management.

A. True B. False

The correct answer is B. (Risk feasibility is the probability of a successful implementation using the chosen technology and approach.)

29. Fact-finding is the formal process of dealing with contractual issues related to the information systems.

A. True B. False

The correct answer is B.

(Fact-finding is the formal process of using research, interviews, meetings, questionnaires, sampling and other techniques to collect information about systems, requirements, and preferences.)

30. Presentation is the activity of communicating findings, recommendations, and documentation for review by interested users and managers. It may only be prepared in a written form.

A. True B. False

The correct answer is B.

(Presentation is the activity of communicating findings, recommendations, and documentation for review by interested users and managers. It may be written or verbal.)

31. Process management is the activity of defining, planning, directing, monitoring and controlling a project to develop an acceptable system within the allotted time and budget.

A. True B. False

The correct answer is B.

(Project management is the activity of defining, planning, directing, monitoring and controlling a project to develop an acceptable system within the allotted time and budget.)

32. Model driven development techniques emphasize the drawing of models to help visualize and analyze problems, define business requirements, and design information systems.

A. True B. False

The correct answer is A.

33. Structured analysis is a process-centered technique used to transform structured designs into good software models, using a tool called a structure chart.

A. True B. False

The correct answer is B. (Structured analysis is a process-centered technique that is used to model business requirements for a system using a modeling tool called the data flow diagram.)

34. A prototype is a large-scale, working model of the system owner's requirements for information systems.

A. True B. False

The correct answer is B.

(A prototype is a smaller-scale, representative or working model of the users' requirements or a proposed design for an information system.)

35. Commercial off-the-shelf software is a software package that is modified to conform to the business functions and information systems.

A. True B. False

The correct answer is B. (Commercial off-the-shelf software is a software package or solution that is purchased to support one or more business functions and information systems.)

36. Computer aided systems engineering (CASE) tools provide a fully integrated collection of information systems that span most basic business functions required by a major corporation.

A. True B. False

The correct answer is B.

(Computer aided systems engineering (CASE) tools are software programs that automate or support the drawing and analysis of system models and provide for the translation of system models into application programs.)

37. Reverse engineering allow a CASE tool to read existing program code and transform that code into a representative system model that can be edited and refined by the systems analyst.

A. True B. False