

SADCW-6ed Chapter 2: Investigating System Requirements

TRUE/FALSE

1. Systems analysis involves the creation of logical models.

ANS: T PTS: 1 REF: p44

2. The reason an analyst uses many different models is that each relates to a different aspect of the system.

ANS: T PTS: 1 REF: p44

3. Textual models are used to represent precise aspects of the system that can be best represented by using formulas.

ANS: F PTS: 1 REF: p45

4. Sometimes a narrative description is the best form to use for recording information.

ANS: T PTS: 1 REF: p45

5. A key reason that modeling is important in system development is the complexity of describing information systems.

ANS: T PTS: 1 REF: p45

6. Before gathering detailed information, an analyst identifies every type of stakeholder.

ANS: T PTS: 1 REF: p47

7. In the RMO CSMS project, customers are not considered stakeholders because it is not feasible to interview them or use them in the project activities.

ANS: F PTS: 1 REF: p48

8. Core Process 3 involves defining in great detail what the information system needs to accomplish in order to provide the organization with the desired benefits.

ANS: T PTS: 1 REF: p41

9. Beginning analysts often underestimate how much there is to learn about the work the users perform.

ANS: T PTS: 1 REF: p41

10. A fact finding user interview can usually be completed in one comprehensive session.

ANS: F PTS: 1 REF: p49

11. If the analysts understand the major business processes, it is not usually necessary to create a comprehensive list of all business processes.

ANS: F PTS: 1 REF: p50

12. The first and most important step in preparing for an interview is to determine who should be involved.

ANS: F PTS: 1 REF: p51

13. Asking about error conditions usually is done in later interviews after the analyst understands and documents the basic processing requirements.

ANS: F PTS: 1 REF: p52

14. A good way to remember the details of an interview is to use a tape recorder.

ANS: F PTS: 1 REF: p52

15. Reviewing existing documentation is a good idea for analysts because it is a dependable source of accurate policies and procedures.

ANS: F PTS: 1 REF: p56

16. When observing business processes, it is not necessary to observe all the processes at the same level of detail.

ANS: T PTS: 1 REF: p56

17. It is a good idea to observe user processes so that the analyst will know exactly how to build the functions into the new system.

ANS: F PTS: 1 REF: p56

18. The term “I’ll know it when I see it” applies to one valid way to get requirements definition.

ANS: T PTS: 1 REF: p57

19. A decision point within an activity diagram may be shown with an activity symbol.

ANS: T PTS: 1 REF: p58

20. A synchronization bar in an activity diagram allows multiple agents or actors to participate in a workflow in separate rows.

ANS: F PTS: 1 REF: p57-58

MULTIPLE CHOICE

1. The term technology architecture refers to
- | | |
|---|--|
| a. the software resources which make up the information systems | c. the combination of information systems and the hardware infrastructure |
| b. the hardware, network, and system software | d. the configuration of the old technology and new technology within an organization |

ANS: B PTS: 1 REF: p37

2. Application architecture is used to refer to
- a. the organization and configuration of all software solutions into information systems
 - b. the application of the information system to solve business problems
 - c. the architectural structure of the subsystems within a software application
 - d. the relationship between software applications and the areas of the organization that they support

ANS: A PTS: 1 REF: p37

3. Which of the following items is NOT a part of the application architecture?
- a. software
 - b. programming languages and development tools
 - c. user-interface technology
 - d. virtual private networks

ANS: D PTS: 1 REF: p37

4. Which of the following describes what the system is required to do?
- a. Functional requirements
 - b. General requirements
 - c. User requirements
 - d. Nonfunctional requirements

ANS: A PTS: 1 REF: p42

5. _____ requirements are based on the procedures and rules that the organization uses to run its business.
- a. Physical
 - b. Functional
 - c. Logical
 - d. System

ANS: B PTS: 1 REF: p42

6. _____ requirements are characteristics of the system other than the business procedures it must support.
- a. System
 - b. Physical
 - c. Nonfunctional
 - d. Implementation

ANS: C PTS: 1 REF: p43

7. The S in the FURPS acronym stands for _____.
- a. Screen and reporting requirements
 - b. Software requirements
 - c. System requirements
 - d. Security requirements

ANS: D PTS: 1 REF: p43

8. The P in the FURPS acronym stands for _____.
- a. Physical requirements
 - b. Performance requirements
 - c. People requirements
 - d. Processing requirements

ANS: B PTS: 1 REF: p43

9. _____ requirements are most often documented in graphical and textual models.
- a. Security
 - b. Nonfunctional
 - c. Technical
 - d. Functional

ANS: D PTS: 1 REF: p45

19. Clients play what role in the development of the new system?
- a. Develop the project plan
 - b. Fund the project
 - c. Define business processes
 - d. Lead the project team
- ANS: B PTS: 1 REF: p47
20. Questionnaires can be useful in information gathering when users ____.
- a. are widely distributed geographically
 - b. need prompting to respond to questions
 - c. are not well-informed
 - d. do not have time for interviews
- ANS: A PTS: 1 REF: p54
21. Questions that have a simple, definitive answer are called _____ questions.
- a. true/false
 - b. close-ended
 - c. open-ended
 - d. multiple choice
- ANS: B PTS: 1 REF: p51
22. Which of the following is normally the most time-consuming and resource-expensive operation?
- a. Building prototypes
 - b. Observing business processes
 - c. Researching vendor solutions
 - d. Interview stakeholders
- ANS: D PTS: 1 REF: p49
23. Questionnaires can be used to ask questions that _____.
- a. determine user opinions
 - b. determine the stakeholders
 - c. define system functions
 - d. detail user procedures
- ANS: A PTS: 1 REF: p54
24. During a fact-finding interview, an important guideline is ____.
- a. to include as many users as possible
 - b. not to waste project time by including too many analysts
 - c. to probe to get sufficient details
 - d. to include the client in important decisions
- ANS: C PTS: 1 REF: p51
25. The strength of closed-ended questions is that they ____.
- a. invite discussion and elaboration
 - b. limit answers to a set of choices
 - c. speed up the interview process
 - d. are easier for the users to answer
- ANS: B PTS: 1 REF: p50
26. Which of the following statements is correct about questionnaires?
- a. Questionnaires are well suited to help you learn about processes, workflows, or techniques.
 - b. Stakeholders always return questionnaires that contain many open-ended questions.
 - c. Questionnaires have a limited and specific use in information gathering.
 - d. Questionnaires are the most frequently used method to gather user information.
- ANS: C PTS: 1 REF: p54-55
27. The most important step in preparing for an interview is to _____.
- a. determine the correct users
 - b. build a list of questions
 - c. establish an objective
 - d. determine the project team members

ANS: C PTS: 1 REF: p51

28. Asking many detailed, probing questions during an initial interview usually _____.
a. makes the users uncomfortable c. can wait until follow-up interviews
b. is necessary to understand the business process d. indicates that the analyst does not understand the business

ANS: B PTS: 1 REF: p52

29. ____ is an important part of each interview.
a. Follow-up c. An agenda
b. Review of the requirements models d. Finalize processing decisions

ANS: A PTS: 1 REF: p51-52

30. _____ is an important part of the follow-up after an interview.
a. Establishing documentation guidelines c. Making copies of everyone's notes
b. Building models d. Setting the time for the next meeting

ANS: B PTS: 1 REF: p51-52

31. Every successful interview requires _____.
a. open-ended questions c. an activity diagram
b. preparation d. finding the exception conditions

ANS: B PTS: 1 REF: p51

32. As part of the interview process, any unresolved issues should be _____.
a. noted in the analyst's meeting notes c. brought to the attention of the appropriate manager
b. given a tentative resolution d. put on an open-items list

ANS: D PTS: 1 REF: p53

33. One of the dangers in researching vendor solutions is that users and analysts _____.
a. may discover and desire too many unimportant "bells and whistles" c. may discover different methods to perform business processes
b. may not understand the vendor solution d. may want to buy one of these solutions prematurely

ANS: D PTS: 1 REF: p57

34. The term "I'll know it when I see it" refers to what method of requirements definition.
a. Questionnaires c. Observing business procedures
b. User interviews d. Collecting active user comments

ANS: D PTS: 1 REF: p57

35. One way to show multiple, independent alternative paths within an activity diagram is with a _____.
a. synchronization bar c. decision diamond
b. swimlane d. activity oval

ANS: C PTS: 1 REF: p58

36. Workflows can be documented using _____.
a. swimlanes c. class diagrams

5. Which two of the following are activities of Core Process 3? (choose two)
- a. Gather detailed information
 - b. Plan the project iterations
 - c. Build an iteration schedule
 - d. Define test data
 - e. Develop user-interface dialogs
 - f. Develop architectural structure

ANS: A, E PTS: 2 REF: p40

COMPLETION

1. Core Process 3 is called “Discover and understand details.” Another term that is used to describe these activities is _____ activities.

ANS:
analysis
Analysis
systems analysis
Systems Analysis

PTS: 2 REF: p40

2. The U in the FURPS acronym stands for _____.

ANS:
usability
Usability
usability requirements
Usability requirements

PTS: 2 REF: p43

3. The R in the FURPS acronym stands for _____.

ANS:
reliability requirements
Reliability requirements
reliability
Reliability

PTS: 2 REF: p43

4. The P in the FURPS acronym stands for _____.

ANS:
performance requirements
performance
Performance
Performance requirements

PTS: 2 REF: p43

5. _____ requirements describe operational characteristics related to users such as work procedures and online help.

ANS:
Usability
usability

PTS: 2 REF: p43

6. _____ requirements describe the dependability of a system such as service outages and incorrect processing.

ANS:
Reliability
reliability

PTS: 2 REF: p43

7. _____ requirements describe operational characteristics related to measures of workload such as throughput and response time.

ANS:
Performance
performance

PTS: 2 REF: p43

8. _____ requirements describe how access to the software application will be controlled and data will be protected.

ANS:
Security
security

PTS: 2 REF: p43

9. _____ requirements describe constraints such as programming languages, tools, and communication protocols for distributed portions of the system.

ANS:
Implementation
implementation

PTS: 2 REF: p44

10. _____ requirements describe interactions between systems, e.g. the method of communication between one system and another system.

ANS:
Interface
interface

PTS: 2 REF: p44

11. _____ requirements describe how a system is configured, monitored, maintained, and updated.

ANS:

Supportability
supportability

PTS: 2 REF: p44

12. Use case diagrams, class diagrams, sequence diagrams are all examples of standard modeling method?

ANS:
UML
Unified Modeling Language
Unified modeling language

PTS: 2 REF: p46

13. Persons who have an interest in the successful implementation of the new system are called _____.

ANS: stakeholders

PTS: 2 REF: p46

14. Persons within an organization who have a significant interest in its operation are _____ stakeholders.

ANS: internal

PTS: 2 REF: p46

15. Persons outside an organization's control who interact with the system or who have an interest in its operation are called _____ stakeholders.

ANS: external

PTS: 2 REF: p46

16. Questions that have a simple, definitive answer are called _____ questions.

ANS: closed-ended

PTS: 2 REF: p50

17. Questions that encourage discussion are called _____ questions.

ANS: open-ended

PTS: 2 REF: p50

18. The most important and first step in preparing for an interview with a user is to establish the _____ of the interview.

ANS: objective

PTS: 2 REF: p51

19. A _____ is the sequence of processing steps that completely handles one business transaction.

ANS: workflow

PTS: 2 REF: p57

20. An _____ describes the sequential flow of user activities.

ANS:
activity diagram
workflow diagram

PTS: 2 REF: p57

21. One way to show concurrent paths within an activity diagram is with a _____.

ANS: synchronization bar

PTS: 2 REF: p57

22. In order to show all the activities of a single agent or organizational unit together, a activity diagram contains what construct?

ANS:
swimlane
swimlane heading
Swimlane
Swimlane heading

PTS: 2 REF: p57

ESSAY

1. List the activities of Core Process 3: Discover and Understand Details

ANS:
1. Gather detailed information
2. Define requirements
3. Prioritize requirements
4. Develop user-interface dialogs
5. Evaluate requirements with users

PTS: 5 REF: p40

2. List the elements that are referred to by the FURPS+ acronym.

ANS:
F = Functional requirements
U = Usability requirements
R = Reliability requirements
P = Performance requirements
S = Security requirements
+ = Other constraints including Design constraints, Implementation requirements, interface requirements, physical requirements, supportability requirements.

PTS: 5 REF: p43-44

3. List the six techniques used to gather detailed requirements information.

ANS:

1. Interview users
2. Distribute questionnaires
3. Review documents
4. Observe users
5. Research vendor solutions
6. Collect active user comments

PTS: 5 REF: p48

4. List five steps in the activity to interview users and other stakeholders.

ANS:

1. Prepare detailed questions
2. Meet with users
3. Discuss answers and procedures
4. Document answers
5. Follow-up on open issues

PTS: 5 REF: p49

5. List the three major question themes that guide analysts in fact finding activities.

ANS:

1. What are the business processes?
2. How are the business processes performed?
3. What information is required?

PTS: 5 REF: p50