

## **Chapter 02: Investigating System Requirements**

1. Systems analysis involves the creation of logical models.

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p43  
p58

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

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p43  
p59

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

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p 59

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

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p58

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

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p47

6. 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.

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p48

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7. 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.

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p42  
p43

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

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p43

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

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p50  
p52

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

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p50

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

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p51

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

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p52

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

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p53

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

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p56

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

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p57

16. 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.

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p57

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

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p58

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

- a. True
- b. False

*ANSWER:* True

*POINTS:* 1

*REFERENCES:* p60

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

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p60-61

20. FURPS and FURPS+ are synonymous.

- a. True
- b. False

*ANSWER:* False

*POINTS:* 1

*REFERENCES:* p46

21. The term technology architecture refers to

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

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p39

22. 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

*ANSWER:* a

*POINTS:* 1

*REFERENCES:* p40

23. 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

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p40

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24. Which of the following describes what the system is required to do?
- Functional requirements
  - General requirements
  - User requirements
  - Nonfunctional requirements

*ANSWER:* a

*POINTS:* 1

*REFERENCES:* p45

25. \_\_\_\_\_ requirements are based on the procedures and rules that the organization uses to run its business.
- Physical
  - Functional
  - Logical
  - System

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p45

26. \_\_\_\_\_ requirements are characteristics of the system other than the business procedures it must support.
- System
  - Physical
  - Nonfunctional
  - Implementation

*ANSWER:* c

*POINTS:* 1

*REFERENCES:* p45

27. The S in the FURPS acronym stands for \_\_\_\_\_.
- Screen and reporting requirements
  - Software requirements
  - System requirements
  - Security requirements

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p45-46

28. The P in the FURPS acronym stands for \_\_\_\_\_.
- Physical requirements
  - Performance requirements
  - People requirements
  - Processing requirements

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p45-46

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29. \_\_\_\_\_ requirements are most often documented in graphical and textual models.
- Security
  - Nonfunctional
  - Technical
  - Functional

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p59

30. Diagrams and schematic representations of some aspect of a system are examples of a \_\_\_\_\_ model.
- logical
  - graphical
  - mathematical
  - textual

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p59

31. A representation of some aspect of the system being built is a \_\_\_\_\_.
- requirement
  - technique
  - model
  - user interface

*ANSWER:* c

*POINTS:* 1

*REFERENCES:* p58

32. A series of formulas that describe technical aspects of a system is a(n) model.
- textual
  - descriptive
  - graphical
  - mathematical

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p59

33. What does the Acronym UML stand for?
- User Modification Language
  - Unified Modeling Language
  - User Mode Listings
  - Unix Modeling Language

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p59

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34. The term \_\_\_\_\_ refers to all the people who have an interest in the successful implementation of the system.
- a. users
  - b. clients
  - c. managers
  - d. stakeholders

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p47

35. Persons who regularly interact with the system as part of their jobs are called \_\_\_\_\_.
- a. user stakeholders
  - b. client stakeholders
  - c. operational stakeholders
  - d. executive stakeholders

*ANSWER:* c

*POINTS:* 1

*REFERENCES:* p47

36. What type of stakeholders are those that do not use the system on day to day tasks, but use information, such as reports, from the system.
- a. Business stakeholders
  - b. Client stakeholders
  - c. External stakeholders
  - d. Executive stakeholders

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p48

37. What do we call the person or group who provides funding for the development of the new system?
- a. Oversight committee
  - b. Client
  - c. Board of directors
  - d. Department head

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p48

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38. The group that provides direction for the configuration of the new system in the existing computing environment are called \_\_\_\_\_.

- a. Technical stakeholders
- b. Support staff
- c. System programmers
- d. Operational stakeholders

*ANSWER:* a

*POINTS:* 1

*REFERENCES:* p48

39. 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

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p48

40. 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

*ANSWER:* a

*POINTS:* 1

*REFERENCES:* p54

41. Questions that have a simple, definitive answer are called \_\_\_\_\_ questions.

- a. true/false
- b. close-ended
- c. open-ended
- d. multiple choice

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p51

42. 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

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p50



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43. Questionnaires can be used to ask questions that \_\_\_\_\_.
- a. determine user opinions
  - b. determine the stakeholders
  - c. define system functions
  - d. detail user procedures

*ANSWER:* a

*POINTS:* 1

*REFERENCES:* p54

44. 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

*ANSWER:* c

*POINTS:* 1

*REFERENCES:* p52

45. 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

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p51

46. 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.

*ANSWER:* c

*POINTS:* 1

*REFERENCES:* p54-55

47. 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

*ANSWER:* c

*POINTS:* 1

*REFERENCES:* p51

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

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p52

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

*ANSWER:* a

*POINTS:* 1

*REFERENCES:* p54

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

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p54

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

*ANSWER:* b

*POINTS:* 1

*REFERENCES:* p51

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

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p54

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

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p57

54. The term “I’ll know it when I see it” refers to what method of requirements definition.
- a. Questionnaires
  - b. User interviews
  - c. Observing business procedures
  - d. Collecting active user comments

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p58

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

*ANSWER:* c

*POINTS:* 1

*REFERENCES:* p60

56. Workflows can be documented using \_\_\_\_\_.
- a. swimlanes
  - b. use case diagrams
  - c. class diagrams
  - d. activity diagrams

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p560

57. Looping in an activity diagram is best represented using what?
- a. synchronization bars
  - b. decision points
  - c. activity ovals
  - d. lines with arrowheads

*ANSWER:* a

*POINTS:* 1

*REFERENCES:* p560

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58. One important reason for prioritizing requirements is to \_\_\_\_\_.
- a. assign work within an iteration
  - b. speed up the project
  - c. avoid confusing the users
  - d. avoid scope creep

*ANSWER:* d

*POINTS:* 1

*REFERENCES:* p44

59. The “+” in FURPS+ includes which of the following types of requirements? (choose two)
- a. Supportability requirements
  - b. Performance constraints
  - c. Reliability constraints
  - d. Nonfunctional requirements
  - e. Design constraints
  - f. User interface requirements

*ANSWER:* a, e

*POINTS:* 2

*REFERENCES:* p46

60. Which are the major business themes that guide analysts in fact finding activities? (chosed 3)
- a. What are the business processes?
  - b. Who performs the business processes?
  - c. How are the business processes performed?
  - d. What are the objectives of a business process? (What should it accomplish?)
  - e. What is produced by the business process?
  - f. What information is needed?

*ANSWER:* a, c, f

*POINTS:* 2

*REFERENCES:* p50-51

61. What are the two primary benefits of reviewing the documentation of existing inputs, outputs, and procedures. (choose 2)
- a. Have a repository of existing documentation
  - b. Obtain a preliminary understanding
  - c. Encourages the users to prepare for interviews
  - d. Help build models of existing procedures
  - e. Ensure complete documentation of procedures
  - f. Serve as visual aids in interview discussions

*ANSWER:* b, f

*POINTS:* 2

*REFERENCES:* p55-56

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62. Two benefits of researching vendor solutions include \_\_\_\_\_ and \_\_\_\_\_. (Choose two)
- a. encouraging the users to buy a vendor solution immediately
  - b. helping analysts discover state of the art solutions
  - c. helping users generate new ideas for business functions
  - d. speeding up the development project
  - e. informing senior management about competitors
  - f. reducing the risk of implementing a new system

*ANSWER:* b, c

*POINTS:* 1

*REFERENCES:* p57

63. 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

*ANSWER:* a, e

*POINTS:* 2

*REFERENCES:* p42

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

*ANSWER:* analysis  
Analysis  
systems analysis  
Systems Analysis

*POINTS:* 2

*REFERENCES:* p42

65. The U in the FURPS acronym stands for \_\_\_\_\_.

*ANSWER:* usability  
Usability  
usability requirements  
Usability requirements

*POINTS:* 2

*REFERENCES:* p45

66. The R in the FURPS acronym stands for \_\_\_\_\_.

*ANSWER:* reliability requirements  
Reliability requirements  
reliability  
Reliability

*POINTS:* 2

*REFERENCES:* p45

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67. The P in the FURPS acronym stands for \_\_\_\_\_.

*ANSWER:* performance requirements  
performance  
Performance  
Performance requirements

*POINTS:* 2

*REFERENCES:* p46

68. \_\_\_\_\_ requirements describe operational characteristics related to users such as work procedures and online help.

*ANSWER:* Usability  
usability

*POINTS:* 2

*REFERENCES:* p45

69. \_\_\_\_\_ requirements describe the dependability of a system such as service outages and incorrect processing.

*ANSWER:* Reliability  
reliability

*POINTS:* 2

*REFERENCES:* p45

70. \_\_\_\_\_ requirements describe operational characteristics related to measures of workload such as throughput and response time.

*ANSWER:* Performance  
performance

*POINTS:* 2

*REFERENCES:* p46

71. \_\_\_\_\_ requirements describe how access to the software application will be controlled and data will be protected.

*ANSWER:* Security  
security

*POINTS:* 2

*REFERENCES:* p46

72. \_\_\_\_\_ requirements describe constraints such as programming languages, tools, and communication protocols for distributed portions of the system.

*ANSWER:* Implementation  
implementation

*POINTS:* 2

*REFERENCES:* p46

73. \_\_\_\_\_ requirements describe interactions between systems, e.g. the method of communication between one system and another system.

*ANSWER:* Interface  
interface

*POINTS:* 2

*REFERENCES:* p46

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74. \_\_\_\_\_ requirements describe how a system is configured, monitored, maintained, and updated.

*ANSWER:* Supportability  
supportability

*POINTS:* 2

*REFERENCES:* p46

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

*ANSWER:* UML  
Unified Modeling Language  
Unified modeling language

*POINTS:* 2

*REFERENCES:* p59

76. Persons who have an interest in the successful implementation of the new system are called \_\_\_\_\_.

*ANSWER:* stakeholders

*POINTS:* 2

*REFERENCES:* p47

77. Persons within an organization who have a significant interest in its operation are \_\_\_\_\_ stakeholders.

*ANSWER:* internal

*POINTS:* 2

*REFERENCES:* p47

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

*ANSWER:* external

*POINTS:* 2

*REFERENCES:* p47

79. Questions that have a simple, definitive answer are called \_\_\_\_\_ questions.

*ANSWER:* closed-ended

*POINTS:* 2

*REFERENCES:* p51

80. Questions that encourage discussion are called \_\_\_\_\_ questions.

*ANSWER:* open-ended

*POINTS:* 2

*REFERENCES:* p51

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

*ANSWER:* objective

*POINTS:* 2

*REFERENCES:* p51

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82. A \_\_\_\_\_ is the sequence of processing steps that completely handles one business transaction.

*ANSWER:* workflow

*POINTS:* 2

*REFERENCES:* p57

83. An \_\_\_\_\_ describes the sequential flow of user activities.

*ANSWER:* activity diagram  
workflow diagram

*POINTS:* 2

*REFERENCES:* p60

84. One way to show concurrent paths within an activity diagram is with a \_\_\_\_\_.

*ANSWER:* synchronization bar

*POINTS:* 2

*REFERENCES:* p60

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

*ANSWER:* swimlane  
swimlane heading  
Swimlane  
Swimlane heading

*POINTS:* 2

*REFERENCES:* p60

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

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

*POINTS:* 5

*REFERENCES:* p42

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

*ANSWER:* 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.

*POINTS:* 5

*REFEREN* p45-46

*CES:*



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

*ANSWER:*

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

*POINTS:* 5

*REFERENCES:* p50

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

*ANSWER:*

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

*POINTS:* 5

*REFERENCES:* p50

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

*ANSWER:*

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

*POINTS:* 5

*REFERENCES:* p50