Chapter 1: Introduction to Systems Analysis and Design

Multiple Choice

1. The outcome of the analysis phase is the:
a) Feasibility Analysis document
b) System proposal document
c) System specification document
d) System request document
e) Business Process document

Ans: b

2. In the SDLC (Systems Development Life Cycle), what comes after the analysis phase?
a) Approval phase
b) Design phase
c) Development phase
d) Implementation phase
e) Planning phase

Ans: b

3. The outcome of the planning phase is the:
a) Test plan
b) System proposal document
c) System specification document
d) System request document
e) Business Process document

Ans: d

4. The outcome of the design phase is the:
a) Feasibility Analysis document
b) System proposal document
c) System specification document
d) System request document
e) Business Process document

Ans: c

5. Another outcome of the planning phase is the:
a) Feasibility Analysis document
b) Project Plan
c) System specification document
d) System proposal document
e) Business Process document

Ans: b

6. The primary objective of the systems analyst is to:
a) Create value for the organization
b) Create a system proposal
c) Determine ROI (return on investment)
d) Assess risk for the project
e) Do root cause analysis

Ans: a

7. Which is NOT a reason to be a systems analyst?
a) It is an interesting job
b) It is an exciting job
c) It generally has little or no advancement options
d) It can gives you satisfaction of a system designed and implemented
e) It can be a challenging and rewarding job

Ans: c

8. Which is NOT true for systems analysts?
a) They create value for an organization
b) They enable the organization to perform work better
c) They do things and challenge the current way that an organization works
d) They play a key role in information systems development projects
e) They are the project sponsors for system proposals

Ans: e

9. Which is NOT a skill for a systems analyst (as given in the text)?
a) Technical
b) Mathematics
c) Business
d) Interpersonal
e) Ethics

Ans: b

10. Which is NOT an attribute of a systems analyst?
a) Understanding what to change
b) Knowing how to change it
c) Convincing others of the need to change
d) Serving as a change agent
e) Selecting which projects to approve

Ans: e

11. Which of the following project roles would focus on new business processes and value?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager

Ans: b

12. Which of the following project roles would identify how technology can improve business processes?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager

Ans: a

13. Which of the following project roles would look at designing new business processes?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager

Ans: a

14. Which of the following project roles would insure that the system conforms to information systems standards?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager
Ans: a

15. Which of the following project roles would ensure that the system meets infrastructure standards?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager
Ans: c

16. Which of the following project roles would develop a user training plan?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager
Ans: d

17. Which of the following project roles would assign resources to a project?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager
Ans: e

18. Which of the following project roles would serve as a primary point of contact for a project?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager
Ans: e

19. Which of the following project roles would manage the team of analysts, programmers, technical writers and others?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager
Ans: e

20. Which of the following project roles would analyze the key business aspects of the system?
a) Systems analyst
b) Business analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager
Ans: b

21. Ted is creating a project plan. Which phase of the SDLC is he working in?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Project plans are created in both the Analysis and Design phase
Ans: a

22. Shauna is doing interviewing. What would most likely be the SDLC phase for her?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Project plans are created in both the Analysis and Design phase
Ans: b

23. Simon is determining ROI and "Should we build it" for a system. Which phase of the SDLC is he working in?
a) Planning
b) Analysis
c) Design
d) Implementation
e) ROI comes after implementation when all the data is in and the actual return on investment can be properly calculated
Ans: a

24. Michaela is a systems analyst who is determining business requirements. What would most likely be the SDLC phase for her?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Business requirements are not developed by systems analysts, but by business analysts
Ans: b

25. Kumar is creating use cases. Which phase of the SDLC is he working in?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Use cases are created in both the Analysis and Design phase
Ans: a

26. Rosita is conducting alpha tests. What SDLC phase is she in?
a) Planning
b) Analysis
c) Design
d) Implementation
e) It is hard to say, as alpha tests can occur at any time in the SDLC
Ans: d

27. Chang is working on "How will this system work". What SDLC phase is he in?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Transition
Ans: c

28. Ting-You is focusing on delivery and support of the system. What SDLC phase is she in?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Feasibility
Ans: d

29. Rodger is working on 'why build the system'. He is in what SDLC phase?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Testing
Ans: a

30. Alice is calculating whether a system will lower costs or increase revenues. What SDLC phase is she in?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Evaluation
Ans: a

31. Which was NOT given as a method for determining business requirements?
a) Benchmarking
b) Interviewing
c) Observation
d) Document analysis
e) Questionnaires and surveys
Ans: a

32. Which would normally NOT be a part of the implementation phase?
a) System construction
b) Testing
c) Installation
d) Creating a support plan
e) Creating database and file specifications
Ans: e

33. Which would normally NOT be a reason for a project?
a) When a business need has been identified
b) A consultant has suggest a new customer relationship management system
c) An open source platform has just come on the market
d) An existing system just isn't working properly and the workaround is tedious
e) To support a new business initiative
Ans: c

34. Which phase is generally the longest and most expensive part of the development process?
a) Planning
b) Analysis
c) Design
d) Implementation
e) Feasibility
Ans: d

35. Because the cost can be immense, _____ is one of the most critical steps in implementation.
a) Documentation
b) Coding
c) Testing
d) Developing a conversion strategy
e) Training
Ans: c

36. Dan is looking at customer satisfaction with a new system. This is probably a:
a) Tangible cost
b) Tangible benefit
c) Intangible cost
d) Intangible benefit
e) Business requirement
Ans: b

37. PCM Incorporated will need to purchase new servers for a system. This would be a:
a) Development cost
b) Operating cost
c) Ongoing cost
d) Intangible cost
e) Intangible benefit
Ans: a

38. Which of the following will probably NOT be considered in technical feasibility?
a) Familiarity with application
b) A technology that has not been used before at this company
c) A gigantic project
d) The cost of database management system
e) The ability to interface this system with existing systems
Ans: d

39. Zoltan is worried about the company using the new system. This would be considered part of:
a) Technical feasibility
b) Economic feasibility
c) Risk feasibility
d) Hardware feasibility
e) Organizational feasibility
Ans: e

40. Linda is a clerk in the accounting department. She was interviewed by David and is excited about the proposed system that will utilize electronic funds transfer. This would be an example of _____.
a) Tangible benefit
b) Cash flow
c) Break even analysis
d) Intangible benefit
e) Return on investment
Ans: d

41. Ramya is preparing an economic feasibility study. She has a calculation where she takes total benefits minus total costs and divides that answer by the total costs. She is calculating:
a) Cash flow
b) Return on investment
c) Break-even point
d) Net present value
e) Internal rate of return
Ans: b

42. Ramona is preparing an economic feasibility study. She is calculating the payback period. She is calculating:
a) Cash flow
b) Return on investment
c) Break-even point
d) Net present value
e) Internal rate of return
Ans: c

43. Rosa has a spreadsheet with benefits and costs spread out over several years. She is calculating:
a) Cash flow
b) Return on investment
c) Break-even point
d) Net present value
e) Internal rate of return
Ans: a

44. Robert is doing an economic analysis using today's dollar values. He is doing:
a) Cash flow analysis
b) Return on investment analysis
c) Break-even point analysis
d) Net present value analysis
e) Internal rate of return analysis
Ans: d

45. Which would most likely NOT be involved in stakeholder analysis for a supply chain control system?
a) A champion from the inventory department
b) A champion from the human resources department
c) A manager in the ordering department
d) A shipping clerk
e) A warehouse manager
Ans: b

46. TJ has prepared a spreadsheet where the total benefits are $182,000; the total cumulative costs are $120,000. The ROI would be::
a) $62,000
b) About 34%
c) About 51.7%
d) About 65.3%
e) Less than 20%
Ans: c

47. Ross has the following calculations on a spreadsheet: Year 1 accumulated costs of 5000; year 2 accumulated costs of 7500; year 3 accumulated costs of 9500; year 4 accumulated costs of 10500 and year 5 accumulated costs of 13000. And year 1 accumulated benefits of 300; year 2 accumulated benefits of 2300; year 3 accumulated benefits of 6500; year 4 accumulated benefits of 10475; and year 5 accumulated benefits of 15,425. The break-even point would occur in which year?
a) Year 1
b) Year 2
c) Year 3
d) Year 4
e) Year 5
Ans: d

48. Frances has a spreadsheet where the total benefits are $497,000 and the total cumulative costs are $450,385. The ROI would be:
a) Less than 10%
b) Between 10 and 15%
c) Between 15 and 20%
d) Between 20 and 25%
e) Over 25%
Ans: b

49. Which of the following project roles would probably make a presentation about the objectives of a proposed project and its benefits to executives who will benefit directly from the project?
a) Business Analyst
b) Systems Analyst
c) Project Manager
d) Champion
e) Chief Information Officer (CIO)
Ans: d

50. Which is an activity the users probably will NOT do on a project?
a) Make decisions that influence the project
b) Budget funds for the project
c) Perform hands-on activities for the project
d) Be assigned specific tasks to perform (with clear deadlines)
e) Have some official roles on the project team
Ans: b

51. The type of skill that is common to systems analysts to deal fairly and honestly with other project team members is:
a) Technical
b) Business
c) Analytical
d) Interpersonal
e) Ethical
Ans: e

52. The type of skill that is common to systems analysts to understand how IT can be applied to business situations and to ensure that the IT delivers real business value is:
a) Technical
b) Business
c) Analytical
d) Interpersonal
e) Ethical
Ans: b

53. Rocky is dealing one-on-one with users and business managers (including some that have little experience with technology). He is demonstrating what system analyst skill?
a) Technical
b) Business
c) Analytical
d) Interpersonal
e) Ethical
Ans: d

54. Becky is a systems analyst for Laswell Consulting. She is attending a three day intensive workshop on developing applications in php. What systems analyst skill is she working on?
a) Technical
b) Business
c) Analytical
d) Interpersonal
e) Ethical
Ans: a

55. Jack is going over financial numbers for a proposed project. Which of the following system analyst skills is he exhibiting currently?
a) Technical
b) Business
c) Analytical
d) Interpersonal
e) Management
Ans: c

56. The new system will be built on an open source platform using MySQL and php. Jing has a strong background in these areas. He will be serving as the _____ on this project.

a) Business analyst
b) Systems analyst
c) Infrastructure analyst
d) Change management analyst
e) Project manager

Ans: c

57. Anny is planning on talking with a clerk and a manager in the accounts payable area, a manager in the procurement department, and two vendors. She is probably doing:

a) Observation
b) Interviews
c) JAD
d) Documentation analysis
e) Organizational Feasibility

Ans: b

58. Babu is looking at issues regarding the system installation – such as adequate documentation and training. He is probably functioning as the _____.

a) Project manager
b) Systems analyst
c) Champion
d) Sponsor
e) Change management analyst

Ans: e

59. Kallie is creating use cases, data flow diagrams and entity relationship diagrams. In what phase of the SDLC would she do this?

a) Planning
b) Analysis
c) Design
d) Construction
e) Implementation

Ans: b

60. Andrew is pondering, "can we build it". This is probably:

a) Technical feasibility
b) Economic feasibility
c) Interviewing
d) Observation
e) Fact finding

Ans: a

True / False

61. The SDLC is an acronym for the Systems Development Life Cycle. ***True***
62. The key person in the SDLC is the Project Manager. ***False***
63. The primary goal of a system is to create value for the organization. ***True***
64. Systems Analysis and Design projects are highly effective, with less than 3% of all projects cancelled or abandoned. ***False***
65. Systems that are not cancelled or abandoned are frequently delivered to the users significantly late or costing more than expected. ***True***
66. Being a systems analyst is one of the most interesting, exciting and challenging jobs available. ***True***
67. The goal of a new (or reworked) system is to build a wonderful, functioning system. ***False***
68. The key person in the SDLC is the systems analyst who analyzed the business situation, identifies opportunities for improvements and design an information system to implement the improvements. ***True***
69. Systems analysts need to be able to communicate effectively. ***True***
70. Systems analysts are generally experts in business, finance and application development. ***False***
71. When compared to a business analyst, the systems analyst will identify how the system will provide business value. ***False***
72. When compared to a change management analyst, the systems analyst will create, manage and execute user training. ***False***
73. The infrastructure analyst will assign resources and manage the project plan. ***False***
74. When compared to a systems analyst, the business analyst will probably have more responsibility for determining business value. ***True***
75. When compared to a business analyst, the project manager will probably have more interaction with business users. ***False***
76. Mike is a systems analyst. He will be focusing on the IS issues surrounding the system. ***True***
77. Because of the need to be focused on providing information about the business value of a system, a systems analyst will probably have much training or experience in programming or application development. ***True***
78. Generally after a person has gained experience as a project manager, he or she can be promoted to being a systems analyst. ***False***
79. The SDLC stands for the Systems Design Labor Committee, and oversees the selection of team members from both the IS and business side to a project. ***False***
80. The SDLC generally can be broken into four phases: planning, analysis, design and implementation. ***True***
81. The SDLC consists of four discrete phases – planning, analysis, design and implementation – where each step must be completed before the next phase can commence. ***False***
82. Technical feasibility is generally done in the planning phase of the SDLC. ***True***
83. Determining business requirements is generally done in the planning phase of the SDLC. ***False***
84. The project staffing plan is generally done in the analysis phase of the SDLC. ***False***
85. The primary output of the planning phase is the System Request. ***True***
86. The primary output of the analysis phase is the System Specifications. ***False***
87. The primary output of the analysis phase is the System Proposal. ***True***
88. The normal sequence of SDLC phase outputs (from beginning to end) would be: System Request; System Proposal; System Specifications; and Installed system. ***True***
89. Test plans are generally created in the Design phase of the SDLC. ***False***
90. The question 'Can we build it' is asked in the design phase. ***False***
91. Interviewing is generally done in the analysis phase of the SDLC. ***True***
92. Economic feasibility is generally done in the design phase of the SDLC. ***False***
93. Juan is creating use cases. He is working in the design phase of the SDLC. ***False***
94. Mya is overseeing programming efforts. This is done in the implementation phase of the SDLC. ***True***

95. The SDLC is a process of 'gradual refinement'. ***True***
96. The planning phase of the SDLC will have two steps: project initiation and requirements determination. ***False***
97. The three feasibility analyses in the text were: organizational feasibility, technical feasibility, and economic feasibility. ***True***
98. The database and file specifications are developed in the analysis phase of the SDLC. ***False***
99. Nomar is doing requirements gathering. He would be in the analysis phase of the SDLC. ***True***
100. Karolyn is writing the system proposal. She would do this in the Design phase of the SDLC. ***False***
101. Developing navigation methods, database and file specifications and what architecture to use would occur in the design phase of the SDLC. ***True***
102. A support plan for the system is established in the implementation phase of the SDLC. ***True***
103. Projects generally originate when someone in the organization identifies a business need. ***True***
104. Emerging technologies rarely or never are considered when initiating a project. ***False***
105. The term "systems analyst" and "Project sponsor" can be used interchangeably . ***False***
106. The project sponsor should have an idea of the business value to be gained from the system. ***True***
107. Tangible values are those benefits that will be realized within the first year of a new system. ***False***
108. The document that describes the business reasons for building a system and the value that the system is expected to provide is called the "System Proposal". ***False***
109. Completed system request forms are generally submitted to the Chief Financial Officer (CFO) for consideration. ***False***
110. A system request will generally have these items: project sponsor; business need; business requirements; business value; special issues or constraints. ***True***
111. In determining whether to consider a system request, the approval committee may do a feasibility analysis. ***True***
112. The three factors in the text for a Feasibility analysis are: Technical Feasibility; Organizational Feasibility and Economic Feasibility. ***True***
113. The 'motto' that goes with Organizational Feasibility is "Can We Build It". ***False***
114. The 'motto' that goes with Economic Feasibility is "Should we build it". ***True***
115. If the development team of an organization is not familiar with the technologies that may be used, the project should be cancelled. ***False***
116. Projects with a larger size and with technologies that are unfamiliar can increase the risk of a project being completed. ***True***
117. User frustration with a proposed system would fall under intangible costs. ***True***
118. "ROI" is rate of income, and is one of the factors considered for Economic Feasibility. ***False***
119. A project must have a positive ROI to be considered. ***False***
120. Using 'net present value' in calculating economic feasibility will allow for variations in the time value of money. ***True***
121. To be compatible, all costs and benefits should use the current value of money since variations over time will (a) not affect the return on investment and (b) it is difficult (or impossible) to estimate future value of money. ***False***
122. Important stakeholders for Organizational Feasibility include: Champion, Organizational Management, and Systems Users. ***True***
123. The "champion" is always a different high-level executive from the "project sponsor". ***False***
124. The Champion supports the project with resources and political clout. ***True***
125. Brad is an analyst doing a Technical Feasibility study. He notices that the proposed system utilizes open source software, but the users are only familiar with Microsoft Office products and tools. He should contact the project sponsor to change the request to a Microsoft solution. ***False***

Chapter 2: Project InitiationManagement

Multiple Choice

1. A critical success factor in project management is to:
a) Say "no" to all requests as they add to 'scope creep'
b) Use throwaway prototyping
c) Use a CASE tool to delineate requirements from work tasks
d) Start with a realistic assessment of the work that needs to be done
e) Hire an outside project management consulting group
Ans: d

2. Which is a true statement about IT projects?
a) Most IS departments face a demand for IT projects that far exceed the ability to do them.
b) Project Managers must be certified as PMP (Project Management Professionals)
c) Project estimates tend to have a built-in buffer of time
d) Project teams of 12 to 15 are generally considered optimum
e) The majority of projects taken on by IT departments are not strategic to the business
Ans: a

3. Which is NOT suggested for IT development projects?
a) Projects need to be prioritized
b) Projects need to be carefully selected
c) Projects need to be carefully managed
d) Projects need to give a positive return on investment within four years
e) Projects need to give value to the business
Ans: d

4. Which would generally NOT be taken into consideration for project portfolio management in an organization?
a) The number of large projects
b) The number of tactical projects
c) The number of high risk projects
d) The number of strategic projects
e) The number of financially feasible projects
Ans: e

5. Which of the following is probably NOT a method to classify projects?
a) Open source
b) Size
c) Risk
d) Scope
e) Economic value
Ans: a

6. When comparing the Waterfall methodology to the parallel methodology:
a) The waterfall methodology will generally result in faster implementation
b) The parallel methodology will generally involve more agile development
c) The parallel methodology will generally break the project into subprojects
d) The waterfall methodology can only work with clear requirements
e) The waterfall methodology will never require requirements gathering
Ans: c

7. The V-model pays more explicit attention to _____:
a) Iteration
b) Return on investment (ROI)
c) Business Value (the "V")
d) Testing
e) Prototyping
Ans: d

8. RAD is an acronym for:
a) Real Application Development
b) Rapid Application Design
c) Rapid Authentic Development
d) Real Autonomous Development
e) Rapid Application Development
Ans: e

9. Which of the following is NOT a Rapid Application Development methodology?
a) Extreme Programming (XP)
b) Parallel Development
c) Throwaway Prototyping
d) Iterative development
e) System Prototyping
Ans: b

10. Which of the following might result in version 1; version 2 (etc.) of a system?
a) System Prototyping
b) Waterfall Development
c) Iterative Development
d) System Prototyping
e) Parallel Development
Ans: c

11. System prototyping is BEST characterized as:
a) A 'Quick and Dirty' system
b) A series of versions
c) A method for exploring design alternatives
d) A method for stressing customer satisfaction
e) More explicit testing
Ans: a

12. Throwaway prototyping is BEST characterized as:
a) A 'Quick and Dirty' system
b) A series of versions
c) A method for exploring design alternatives
d) A method for stressing customer satisfaction
e) More explicit testing
Ans: c

13. Parallel methodology is BEST characterized as:
a) A 'Quick and Dirty' system
b) A series of versions
c) A method for exploring design alternatives
d) A method for stressing customer satisfaction
e) More explicit testing
Ans: b

14. Extreme Programming (XP) is BEST characterized as:
a) A 'Quick and Dirty' system
b) A series of versions
c) A method for exploring design alternatives
d) A method for stressing customer satisfaction
e) More explicit testing

Ans: d

15. The "V-model" of the waterfall method is BEST characterized as:
a) A 'Quick and Dirty' system
b) A series of versions
c) A method for exploring design alternatives
d) A method for stressing customer satisfaction
e) More explicit testing

Ans: e

16. What the MAIN difference between systems prototyping and throwaway prototyping?
a) Systems prototyping involves users while throwaway prototyping does not
b) Throwaway prototyping involves users while systems prototyping does not
c) Systems prototyping is a rapid application development methodology; while throwaway prototyping is not
d) Systems prototyping works with users to quickly develop a simplified working version of the proposed system; while throwaway prototyping focuses more on exploring design alternatives
e) Throwaway prototyping develops systems that will be use as 'stop-gap' systems – and generally for less than six months; while systems prototyping results in systems that will be used extensively for several years.

Ans: d

17. Which of the following methodologies ***might*** be most appropriate if you have a system project with: clear requirements; very familiar technologies; not all that complex; reasonably reliable; a very long time schedule and the schedule visibility is not important?
a) Waterfall
b) Parallel
c) Iterative
d) System prototyping
e) Throwaway prototyping

Ans: a

18. Which of the following methodologies ***might*** be most appropriate if you have a system project with: unclear user requirements; unfamiliar technologies; somewhat complex; needs to be reliable; time is not an issue and the schedule visibility is somewhat important?
a) Waterfall
b) Parallel
c) Iterative
d) System prototyping
e) Throwaway prototyping

Ans: e

19. Which of the following methodologies ***might*** be most appropriate if you have a system project with: clear requirements; very familiar technologies; not all that complex; reasonably reliable; a short time schedule and the schedule visibility is not important?
a) Waterfall
b) Parallel
c) Iterative
d) System prototyping
e) Throwaway prototyping

Ans: b

20. Which of the following methodologies ***might*** be most appropriate if you have a system project with: clear requirements; very familiar technologies; not all that complex; must be reliable; a somewhat longer schedule and the schedule visibility is not important?

a) Waterfall
b) Parallel
c) Iterative
d) System prototyping
e) V-model

Ans: e

21. Which of the following methodologies ***might*** be most appropriate if you have a system project with: somewhat unclear requirements; somewhat unfamiliar technologies; that is complex; reasonably reliable; a short time schedule and high schedule visibility?

a) Waterfall
b) Parallel
c) Iterative
d) System prototyping
e) Throwaway prototyping

Ans: c

22. Which of the following methodologies ***might*** be most appropriate if you have a system project with: unclear requirements; very familiar technologies; not all that complex; reasonably reliable; a short time schedule and the schedule visibility is somewhat important?

a) Waterfall
b) Parallel
c) Iterative
d) System prototyping
e) Extreme Programming

Ans: e

23. Which of the following methodologies ***might*** be most appropriate if you have a system project with: unclear user requirements; unfamiliar technologies; very complex; must be reliable; a short to medium time schedule and the schedule visibility is somewhat important?

a) Waterfall
b) Parallel
c) Iterative
d) System prototyping
e) Throwaway prototyping

Ans: e

24. Which of the following methodologies is the historic standard, but is used less today because it takes the longest to complete all the SDLC steps?

a) Waterfall
b) Parallel
c) Iterative
d) System prototyping
e) Throwaway prototyping

Ans: a

25. The main difference between the Parallel Development Methodology and the Iterative Development Methodology is that:

a) The Parallel Development Methodology will have various releases (like version 1.0; 2.0, etc.) and the Iterative will not
b) The Iterative Methodology will break the system project into sub-projects for analysis, design and implementation and then merge them into a final system and the Parallel will not
c) The Parallel Methodology will have sub-projects and the Iterative Methodology will have various releases
d) The Parallel Methodology will create various models or prototypes with user involvement before setting on design concepts and the Iterative will not
e) The Iterative Methodology will create various models or prototypes with user involvement before setting on design concepts and the Parallel Methodology will not

Ans: c

26. Which of the following would BEST describe “clarity of user requirements”?
a) The aspect of using technologies that analysts and developers are familiar with
b) The aspect of what the business side really wants the system to do
c) The aspect of how quickly the system can be developed and implemented
d) The aspect of how complex the system must be
e) The aspect of how accurate the system must be (such as medical equipment or for games)
Ans: b

27. Which of the following would BEST describe “familiarity with technology”?
a) The aspect of using technologies that analysts and developers are familiar with
b) The aspect of what the business side really wants the system to do
c) The aspect of how quickly the system can be developed and implemented
d) The aspect of how complex the system must be
e) The aspect of how accurate the system must be (such as medical equipment or for games)
Ans: a

28. Which of the following would BEST describe “system complexity”?
a) The aspect of using technologies that analysts and developers are familiar with
b) The aspect of what the business side really wants the system to do
c) The aspect of how quickly the system can be developed and implemented
d) The aspect of how intricate and difficult the system must be
e) The aspect of how accurate the system must be (such as medical equipment or for games)
Ans: d

29. Which of the following would BEST describe “system reliability”?
a) The aspect of using technologies that analysts and developers are familiar with
b) The aspect of what the business side really wants the system to do
c) The aspect of how quickly the system can be developed and implemented
d) The aspect of how complex the system must be
e) The aspect of how accurate the system must be (such as medical equipment or for games)
Ans: e

30. Which of the following would BEST describe “short time schedules”?
a) The aspect of using technologies that analysts and developers are familiar with
b) The aspect of what the business side really wants the system to do
c) The aspect of how quickly the system can be developed and implemented
d) The aspect of how complex the system must be
e) The aspect of how accurate the system must be (such as medical equipment or for games)
Ans: c

31. Bob is selecting a systems analysis and design methodology. What might be the first step?
a) Selecting the shortest methodology
b) Researching the organizations standards and policies for ‘approved’ methodologies
c) Interviewing senior management as to their suggestions on methodologies
d) Do a quick ‘cost/benefit’ analysis on which methodology will provide the most benefits at the lowest cost
e) Do an analysis on which methodology might lessen or eliminate scope creep
Ans: b

32. A team of developers and customers are in close communication, with frequent communications, simplicity, feedback and courage. This would best describe:
a) The parallel development methodology
b) The waterfall development methodology
c) The iterative development methodology
d) The Extreme Programming methodology
e) The throwaway prototyping methodology
Ans: d

33. Amie and Rani are analysts; Stephen, David and Chang are users. They are approaching a new system project and trying to streamline the SDLC by using a lot of face-to-face communication, with eliminating modeling and documentation overhead. They are probably doing:

a) Parallel development methodology
b) Waterfall methodology
c) Agile methodology
d) Iterative methodology
e) Full Procedure Methodology (FPM)

Ans: c

34. In a "typical" business application development using the SDLC, you would probably spend ____ in the planning phase.

a) 10%
b) 15%
c) 20%
d) 25%
e) 30%

Ans: b

35. In a "typical" business application development using the SDLC, you would probably spend ____ in the analysis phase.

a) 10%
b) 15%
c) 20%
d) 25%
e) 30%

Ans: c

36. In a "typical" business application development using the SDLC, you would probably spend ____ in the design phase.

a) 20%
b) 25%
c) 30%
d) 35%
e) 40%

Ans: d

37. In a "typical" business application development using the SDLC, you would probably spend ____ in the implementation phase.

a) 20%
b) 25%
c) 30%
d) 35%
e) 40%

Ans: c

38. Kumar is the project manager for a revised TTP system. Which of the following most likely would NOT be considered in developing a work plan?

a) Identifying tasks that need to be completed
b) Estimating the time that will be needed on tasks
c) Creating a dependency chart
d) The organizational readiness for the project
e) Key milestones that need to be met

Ans: d

39. Tatiana is developing a staffing plan for a project. Which of the following would she NOT consider in developing such a staffing plan?

a) Matching people's skills with the needs of the project
b) Determining the number of people that might be needed
c) Creating a team with balanced diversity
d) Determining the technical skills needed on the project
e) Selecting people with good interpersonal skills to help with political considerations

Ans: c

40. Suggestions for motivation might include all of these EXCEPT:
a) Setting realistic deadlines
b) Giving all team members the same bonus on a project
c) Recognize and reward good efforts
d) Reward those with outstanding quality and effort
e) Having a good working environment
Ans: b

41. This factor is the number one influence on people's performance:
a) Motivation
b) Financial reward
c) Group-think
d) Scope creep
e) New technology
Ans: a

42. TJ is coordinating a project. Which would he probably NOT use to avoid conflicts?
a) Encourage a competitive edge between team members
b) Clearly defining plans for the project
c) Develop a project charter
d) Look at other projects and priorities and see how that might impact the project
e) Communicate the business value to the team
Ans: a

43. _____ are created to ensure that team members are performing tasks in the same way and following the same procedures.
a) Project charters
b) Standards
c) CASE tools
d) Waterfall methodologies
e) Agile technologies
Ans: b

44. Which is probably NOT a standard that Babu would use on a project?
a) User interface design standards
b) Procedural standards
c) Coding standards
d) Specification requirement standards
e) Reimbursement standards
Ans: e

45. The most common reason for schedule and cost overruns is _____
a) Team conflict
b) Lack of communication from project manager to project team
c) Lack of support by sponsor and champion
d) Scope creep
e) Adding people to a late project
Ans: d

46. Estimating can be tough. In terms of costs when doing the **analysis** phase, the typical margin of error for well-done estimates could be as much as _____ % off.
a) 10%
b) 25%
c) 35%
d) 50%
e) 60%
Ans: d

47. Micah is a fairly new project manager. He estimated for a project plan (on the planning phase) that the project would cost $50,000 and take 20 weeks. According to the margin of error guidelines for well-done estimates, that could range from:
a) $0 and $100,000 – and between 15 and 25 weeks
b) $10,000 and $60,000 – and between 12 and 28 weeks
c) $0 and $100,000 – and between 0 and 40 weeks
d) $5,000 and $100,000 – and between 10 and 30 weeks
e) $25,000 and $75,000 – and between 10 and 30 weeks
Ans: a

48. The science (or art) of project management is in making _____ of size, time and cost.
a) Benchmark comparisons
b) Analytical and educated estimates
c) Trade-offs
d) Maximum calculations
e) Minimum calculations
Ans: c

49. Mya is managing a project. Unfortunately, the entire project team lost four days due to a hurricane in the area and a couple of the project team lost even more time when dealing with insurance claims and rebuilding. At the six-week mark of a nine-week project, she figures the team is one week behind. What might be the BEST solution?
a) Add several people to the project to get it back to schedule
b) Do not change the schedule, but expect the project and development teams to work longer days and every-other weekend.
c) Since the project is about 16% behind, increase the project to about 10-and-one-half weeks
d) Since the project is about 20% behind, increase the project to about 12 week.
e) Add three people to the project – AND – increase the overall project by one week (to a total of ten weeks)
Ans: c

50. Garrett has been told by management that his project MUST be completed on time. His best estimates are more than two weeks after the absolute deadline. Which technique could he use to get a functional system on time?
a) Risk management
b) System prototyping
c) Benchmarking
d) Timeboxing
e) Activity elimination
Ans: d

51. Which of the following probably is NOT a timeboxing step?
a) Set the date for system delivery
b) Prioritize the functionality that needs to be included in the system
c) Build the core of the systems (with the basic functions included)
d) Add sufficient staff to reach basic functionality
e) Postpone functionality that cannot be provided with in the time frame
Ans: d

52. Which of the following is NOT a classic planning mistake?
a) Overly optimistic schedule
b) Failing to monitor the schedule
c) Failing to update the schedule
d) Adding people to a late project
e) Omitting key requirements
Ans: e

53. CASE stands for:
a) Computer analysis and software engineering
b) Computer-aided software engineering
c) Computer Arbitrated System Engineering
d) Control and System Environment
e) Control and System Engineering

Ans: b

54. A two-person team has single line of communication; a three-person team will have three lines of communication; a four-person team will have six lines of communication. A team with n members will have:
a) n! (n factorial) lines of communication
b) n^2 (n squared) lines of communication
c) ((n * (n-1)) / n) lines of communication
d) ((n * (n-1)) / 2) lines of communication
e) (n^2 / n!) (n squared divided by n factorial) lines of communication

Ans: d

55. If the skills required by a project cannot be met by the available project team, which would probably NOT be a reasonable solution?
a) Use a consultant
b) Use a contract employee
c) Modify the project to use skills inherent on the project team
d) Train the project team (or some of the team) on the skills needed
e) Mentor a team member (like sending a person to work on a similar project to acquire the necessary skills)

Ans: c

56. Interpersonal skills for a project manager might be important when:
a) Making assignments for a project
b) Creating a cost/benefit spreadsheet
c) Creating the system proposal
d) Working with a highly controversial project that may have political implications
e) Using the V-model variation of the Waterfall Methodology.

Ans: d

57. Rich is a manager in the accounting department. After the system proposal is approved, he realizes that he did not mention that they want the new system to run on laptops, mobile PDA's and other mobile devices with a secure login and all data should be encrypted to meet the latest security guidelines. He wants to make sure this is included in the project. This probably is:
a) Scope creep
b) Technical feasibility
c) Infrastructure requirement
d) Already included in the system proposal
e) Unrelated to the project

Ans: a

True / False

58. PMP is Project Management Professional. ***True***
59. PMP is People – Management – Project – the three components of successful project management. ***False***
60. CIO is an acronym for "computing information organization". ***False***
61. CIO is an acronym for "Chief Information Officer". ***True***
62. A critical success factor for project management is to start with a realistic assessment of the work that needs to be accomplished. ***True***
63. A critical success factor for project management is to have a positive return on investment within six years. ***False***
64. Investments in information systems projects today are evaluated in the context of an entire portfolio of projects. ***True***
65. In today's organizations, an approval committee must review and monitor project progress to ensure project continuance. ***True***
66. In most IT departments, the demand for IT projects is generally about the same as the department's ability to supply them. ***False***
67. The corporate IT department carefully needs to prioritize, select and manage a portfolio of projects. ***True***
68. Projects can be classified by: size, cost, purpose, length, programming language and hardware platform. ***False***
69. The project methodology that takes the longest to complete is the Waterfall Development Methodology. ***True***
70. The project methodology that takes the longest to complete is Throwaway Prototyping Methodology. ***False***
71. The project methodology that takes the longest to complete is Extreme Programming Methodology. ***False***
72. The Waterfall Methodology generally follows the SDLC from phase to phase. ***True***
73. The Waterfall Methodology breaks the overall project into a series of release versions. ***False***
74. The Parallel Methodology breaks the overall project into a series of release versions. ***False***
75. The Iterative approach of the RAD methodology breaks the overall project into a series of release versions. ***True***
76. The V-model is a variation of the Waterfall Methodology that stresses testing. ***True***
77. The V-model is a rapid application development (RAD) methodology that stresses user involvement and organizational adoption. ***False***
78. The Throwaway Prototyping methodology is especially good for exploring design alternatives. ***True***
79. The Throwaway Prototyping methodology is good at creating release version 1.0 for users; and then the methodology shifts to system prototyping to finish the system. ***False***
80. Throwaway Prototyping balances the benefits of well-thought-out analysis and design phases with the advantages of using prototypes to refine key issues before a system is built. ***True***
81. Agile Development stresses analysis, modeling and documentation over programming. ***False***
82. Extreme Programming (XP) stresses customer satisfaction and teamwork. ***True***

83. If you had a project with very clear requirements; familiar technologies; not super complex; reliable; a very long time schedule and where the need for schedule visibility is low – the best methodology might be Extreme programming. ***False***
84. Scope creep is when somebody pours 'scope mouthwash' on you. ***False***
85. Scope creep is when new requirements are added to the project after the original project scope was defined and 'frozen'.***True***
86. The margin of error in cost and time estimates can be as much as 20% in the planning phase for the system proposal deliverable. ***False***
87. The science (or art) of project management is setting a schedule and sticking to it no matter what – even if that includes working weekends and adding staff to reach the deadline on time. ***False***
88. Wendy has been informed by the CIO that the project she is managing MUST be done by December 20th and must be fully tested and implemented by December 31st. She realizes that will mean she will have to prioritize the functionality and build the system to meet the core functions, even if that means something gets delayed until the next release of that system. She is practicing the 'benchmarking' approach to scope management. ***False***
89. Wendy has been informed by the CIO that the project she is managing MUST be done by December 20th and must be fully tested and implemented by December 31st. She realizes that will mean she will have to prioritize the functionality and build the system to meet the core functions, even if that means something gets delayed until the next release of that system. She is practicing the 'timeboxing' approach to scope management. ***True***
90. A classic planning mistake mentioned in the textbook is having an 'overly optimistic schedule'. ***True***
91. A classic planning mistake mentioned in the textbook is motivating employees with financial rewards instead of recognition and genuine thanks. ***False***
92. Nate is managing a project that is behind by one month with five months to go. He should add four to six staff persons to the project to get it back up to speed. ***False***
93. Using industry standards, the general estimated project time for the Implementation phase is 15%. ***False***
94. Using industry standards, the general estimated project time for the Implementation phase is 30%. ***True***
95. Using industry standards, the general estimated project time for the Planning phase is 15%. ***True***
96. Using industry standards, the general estimated project time for the Analysis phase is 20% ***True***
97. Using industry standards, the general estimated project time for the Design phase is 50% ***False***
98. Scrum, XP and Dynamic systems development method (DSDM) are all classified as 'agile development' concepts. ***True***
99. The traditional methodology that emphasizes all of the steps of the SDLC in order, but with a stronger emphasis on testing is the "T-Model". ***False***
100. Either systems prototyping or throwaway prototyping are generally a good methodology choice when the project has unclear user requirements. ***True***

Chapter 3: Requirements Determination

Multiple Choice

1. The outcome of the analysis phase is the:
a) Feasibility Analysis document
b) System proposal document
c) System specification document
d) System request document
e) Business Process document

Ans: b

2. In the SDLC (Systems Development Life Cycle), what comes after the analysis phase?
a) Approval phase
b) Design phase
c) Development phase
d) Implementation phase
e) Planning phase

Ans: b

3. The systems proposal is generally approved by.
a) The Chief Information Officer
b) The top manager in the user's area (like the Vice President of Marketing)
c) The Vice President of Finance
d) The approval committee
e) The CEO (chief executive officer)

Ans: d

4. Which of the following will probably NOT be at a system walkthrough?
a) User representatives
b) Management representatives
c) Computer Center director
d) Key decision makers
e) Analyst who prepared the system proposal

Ans: c

5. The line between analysis and design is sometimes very blurry. One reason is that _____:
a) Object-oriented methods are generally fuzzier as compared to waterfall methods
b) there is inadequate funding for the analysis phase to do a complete analysis
c) analysts are generally rushed to complete the system proposal
d) scope creep has occurred
e) the deliverables are really the first step in the design of the new system

Ans: e

6. Which is NOT a purpose of the requirements definition?
a) To give a very high-level explanation of the business requirements
b) A more precise list of requirements that can be used as inputs to the rest of analysis
c) Create functional requirements
d) Create cost/benefit analysis
e) Create non-functional requirements

Ans: d

7. When determining requirements it is good to have all BUT ____ involved.
a) Managers in the business area
b) Analysts
c) Project Sponsors
d) Staff in the business area
e) Information technology staff
Ans: e

8. An example of a functional requirement is _____
a) Access to the customer order system
b) System should be available in English and Spanish
c) System can be accessed through a Blackberry device
d) Output can be displayed in Internet Explorer, in Firefox, or in Google Chrome browsers
e) System is automatically updated every 5 seconds
Ans: a

9. An example of a nonfunctional requirement is _____
a) Supplier table is available
b) The system must contain customer order history for three years
c) System can be used in any of 100 offices worldwide
d) SQL queries from customer table and order table are available
e) Customer zipcode is formatted as character data
Ans: c

10. Which is generally NOT true of non-functional requirements?
a) Cultural differences can be considered
b) Color interpretations on screens and forms may be different in different geographical places
c) Multi-lingual interfaces many be needed
d) Systems may need to adapt from global solutions to local realities
e) Systems may need to have actual expenses from global operations
Ans: e

11. Which is NOT an expectation of the Requirements Definition?
a) Listing of functional requirements
b) Listing of project costs and benefits in both dollars and Euros
c) Listing of non-functional requirements
d) Defining scope of project
e) To be the document that is used for clarification when problems arise.
Ans: b

12. One of the problems when doing requirements determination is:
a) Exclusion of business users and failure to address the true business needs of the users
b) Inclusion of data tables
c) Inclusion of business logic
d) Inclusion of a list of processes the system needed to perform
e) Over-reliance on object oriented systems analysis and design
Ans: a

13. Which is NOT a requirements analysis strategy?
a) Understanding of the as-is system
b) Identifying improvements
c) Developing requirements for the to-be system
d) Root cause analysis
e) Understanding of screen design, layout and navigation
Ans: e

14. According to the authors, in moving "from here to there", an analyst needs:
a) An understanding of corporate politics
b) Knowledge on how to stop scope creep
c) Joint Application Development facilitating skills
d) Microsoft Project Management software skills
e) Strong critical thinking skills

Ans: e

15. Jona's project is to take a fairly straight-forward manual process and make it an electronic process. This will make the processing more efficient. Which of the following requirements analysis strategies is she using?
a) Business Process Automation
b) Business Process Improvement
c) Business Process Internalization
d) Business Process Reengineering
e) Business Process Renovation

Ans: a

16. Two BPA techniques commonly used to identify possible problems in the current system are _____.
a) Problem Analysis and benchmarking
b) Problem Analysis and activity based costing
c) Duration analysis and informal benchmarking
d) Root Cause Analysis and outcome analysis
e) Problem analysis and root cause analysis

Ans: e

17. Root Cause Analysis tries to find _____.
a) How long each process takes in the as-in system with an eye at shortening the time
b) How much each process costs (rather than the time) with an eye at cutting costs
c) The true problem and not just symptoms of problems and solve that
d) Technologies that could work
e) Other companies that have similar processes and attempt to learn from them

Ans: c

18. Omar is making moderate changes to a system in order to take advantage of new opportunities offered by technology or to emulate what other companies are doing. This would be called:
a) Business Process Automation
b) Business Process Improvement
c) Business Process Internalization
d) Business Process Reengineering
e) Business Process Renovation

Ans: b

19. Sanjay has business colleagues on the Slashdot.org technology forum. He is interested in how they may have implemented supply chain management systems using radio frequency identification. Sanjay is identifying improvement opportunities through _____.
a) Duration analysis
b) Outcome analysis
c) Activity-Based Costing
d) Informal Benchmarking
e) Root Cause analysis

Ans: d

20. Wayne is a senior director of finance. His company only recently came under Sarbanes-Oxley regulations and is the project sponsor to become compliant. He realizes that examining the as-is system may not be much help as the regulations are so radical that a major analysis and design project must be completed to make the company compliant. He is leaning towards: _____

a) Business Process Automation
b) Business Process Improvement
c) Business Process Internalization
d) Business Process Reengineering
e) Business Process Renovation

Ans: d

21. There are times where what one 'assumes' might be incorrect. The analyst may assume that a system needs to have bilingual language support in California, while the system is only used by a small department where only English is spoken. Likewise, an analyst may *assume* that financial data is coming from internal sources, but is largely coming from external bank regulators and the Federal Reserve Bank. Analyzing the assumptions underlying a process to really understand what users, customers and others want is:

a) Duration analysis
b) Feasibility analysis
c) Outcome analysis
d) Problem analysis
e) Root cause analysis

Ans: c

22. Moderate changes to existing processes falls under the _____ analysis.

a) Business Process Automation (BPA)
b) Business Process Improvement (BPI)
c) Business Process Reengineering (BPR)
d) Business Process Blue-skying (BPB)
e) Business Process Efficiency (BPE)

Ans: b

23. Myles is studying a system to lessen the number of complaints about the Help Desk. He has formally studied the service counter at Wal-Mart, Target and Kohl's department stores; as well as listened in to complaint phone calls to a hotel booking site. He is trying to see how other organizations work at lessening complaints and also how they handle complaints. This would be what type of analysis?

a) Complaint processing
b) Design analysis
c) Problem analysis
d) Outcome analysis
e) Informal benchmarking

Ans: e

24. Mya is an analyst for National Homeowners Insurance of Hartford Connecticut. After hurricane Katrina, National Homeowners took an average of 78 days to assess damage and settle claims in the affected area. While Katrina was an unusual situation, Mya's analysis shows that the average claim processing should be less than 10 days for more 'normal' insurance processing. What analysis technique is she using?

a) Duration analysis
b) Formal benchmarking
c) Hurricane model analysis
d) Simulation
e) ANOVA forecasting

Ans: a

25. Mya, an analyst for National Homeowners Insurance of Hartford Connecticut, has been assigned to look at radical changes to property damage claims. Currently, she is taking each step in the existing process and deleting it to see if that step really was needed (or was duplicated in other ways). Which analysis technique is she using?

a) Activity based costing
b) Activity elimination
c) Forecasting analysis
d) Problem analysis
e) Root-cause analysis

Ans: b

26. Which of the following requirements analysis techniques would most likely have: moderate project costs; multiple business functions; moderate risk; and generally offers moderate potential benefits?

a) Business Process Automation (BPA)
b) Business Process Improvement (BPI)
c) Business Process Reengineering (BPR)
d) Business Process Blue-skying (BPB)
e) Business Process Efficiency (BPE)

Ans: b

27. The authors suggest that an analyst is 'very much like a _____' and business users are like elusive suspects.

a) Police professional
b) Politician
c) Forensic scientist
d) Air traffic controller
e) Detective

Ans: e

28. When gathering requirements from processing clerks and lower level managers about 'how' a system works, the best approach might be: _____.

a) JAD session
b) Document analysis
c) Closed ended interview questions
d) Probing interview questions
e) Root cause analysis

Ans: c

29. Amanda sent a list with GPS, RFID, ERP, SOA, SaaS, VoIP and ten additional 'hot' technologies to managers at her company. She wanted them to think how each technology could be applied to current business process. Amanda is identifying improvement opportunities through _____.

a) Benchmarking
b) Technical feasibility
c) Problem analysis
d) Root cause analysis
e) Technology analysis

Ans: e

30. An analysis team consisting of users, managers, and analysts, are doing activity elimination analysis. They are probably in the midst of:

a) Business Process Automation (BPA)
b) Business Process Improvement (BPI)
c) Business Process Reengineering (BPR)
d) Business Process Blue-skying (BPB)
e) Business Process Efficiency (BPE)

Ans: c

31. Business Process Automation (BPA) is noted for all of the following EXCEPT which one?
a) Narrow business segment
b) Lower costs
c) Generally lower risks
d) More efficient processing
e) Potentially higher returns
Ans: e

32. Which is NOT part of the requirements gathering process?
a) Is used for building political support for the project
b) Is used for establishing trust and rapport between the project team and users
c) Determining 'if we build it, they will come'
d) Key stakeholders need to be included
e) Involving people who may feel slighted if their input is not considered
Ans: c

33. When gathering requirements, the most commonly used technique is: _____
a) Document Analysis
b) Interviews
c) Joint Application Development (JAD) sessions
d) Questionnaires / surveys
e) Observation
Ans: b

34. A technique where the project team, users, and management work together for several hours or several days or several weeks until the needed information is collected is: _____.
a) Document Analysis
b) Interviews
c) Joint Application Development (JAD) sessions
d) Questionnaires / surveys
e) Observation
Ans: c

35. A technique where a set of written (or online) questions are distributed to people (frequently to a large number of people) is: _____.
a) Document Analysis
b) Interviews
c) Joint Application Development (JAD) sessions
d) Questionnaires / surveys
e) Observation
Ans: d

36. A technique where an analyst goes through binders of information about a system, such as processes, procedures, etc. is _____
a) Document Analysis
b) Interviews
c) Joint Application Development (JAD) sessions
d) Questionnaires / surveys
e) Observation
Ans: a

37. A technique where the analyst watches how people perform their activities is _____
a) Document Analysis
b) Interviews
c) Joint Application Development (JAD) sessions
d) Questionnaires / surveys
e) Observation

Ans: e

38. Which of the following is NOT a common problem in JAD sessions?
a) Where one or two people dominate the discussion
b) Where two or more people seem to be in great disagreements – but actually are very close together (violent agreement)
c) Where two or more people just cannot agree – and have made sure that the others know this (unresolved conflict)
d) That the facilitator helps by inserting his or her opinion
e) Where some people seem to be whispering and side discussions among themselves

Ans: d

39. Which is NOT a good practice in conducting interviews?
a) Be happy – happy people radiate confidence
b) Explain thoroughly – it is estimated that in a strong interview session, the interviewer (you) should talk and explain about 60% of the time; and the interviewee should answer about 40% of the time
c) Watch interviewees' facial expressions, how they sit and their body language; do they cross their arms; do they lean forward?
d) Pay attention to what the interviewee is saying
e) If the interviewee ask you a question, answer it truthfully – and if you don't know an answer, say so

Ans: b

40. In the interview report, what will probably NOT be included?
a) Summary of what the interviewee said
b) Interview's name; interviewee's name
c) Details from crucial areas of the interview relating to the project at hand
d) The actual questions that were asked as a permanent record
e) Any materials, documents, etc. that the interviewee gave you relevant to the project at hand

Ans: d

41. After creating the interview report you should:
a) Send a copy to the interviewee with a request to read it and correct or clarify
b) Change the document into a unchangeable format (like a pdf file) so that it cannot be changed or edited
c) Distribute the interview report to all others that are on the interview schedule so they will not have to go over the same materials
d) Edit the report into a bulleted format for easier analysis
e) Distribute the interview report to the interviewee's manager.

Ans: a

42. Probably the first thing to do when conducting an interview is:
a) Turn on your tape recorder
b) Get started by asking the first question on your list
c) Build rapport with the interviewee so he or she trusts you
d) Ask a close ended question
e) Ask a probing question

Ans: c

43. During an interview with a technical support specialist, she uses an acronym XYZ that you are not familiar with. You should:
a) Note it in your interview notes to 'Google' it when you are done to learn about it
b) Not ask her for the meaning as you are a professional in the area and to ask would undermine your credibility
c) Let it pass as she will probably explain it more later in the interview
d) Act like you know the meaning and even use in a question like "How do you support XYZ in your processing"?
e) Ask her to explain the term. Some departments have special jargon that needs interpretation

Ans: e

44. Robin is conducting an e-JAD session. What might be the main benefit of an e-JAD session?
a) It can reduce the time to run a JAD session from 50% to 80%
b) It removes false interpretation of body language
c) It will eliminate the 'violent agreement' aspect of traditional JAD sessions
d) It will eliminate the 'unresolved conflict' aspects of traditional JAD sessions
e) It will eliminate the need for humor as found in traditional JAD sessions
Ans: a

45. In your JAD session, you have a range of participants – from hourly workers to managers and executives. As you are conducting the JAD session, you sense that Chris, an accounts receivable processor is reluctant to talk – and it seems that is because Karen, the manager of the accounting department is also involved. The BEST plan might be to:
a) Quietly ask Karen at a break to encourage Chris to join in more
b) Quietly ask Chris at a break to join in more
c) Let it be, and after the JAD session is over, schedule an interview with Chris
d) Ask Chris a direct factual question that you know he can answer
e) After the first day, replace Chris with another accounts receivable person who will speak up
Ans: d

46. Your new online customer relationship management (CRM) system has been in place for 3 months. You want to get feedback on how it has been received by customers. What might be the best approach?
a) Select three customers at random and call them for their feedback
b) Develop an online survey and e-mail a link to the survey to all customers that have used the system
c) Develop an online survey and e-mail a link to a random group of five customers that have used the system
d) Arrange to be with three customers when they use the system to observe how they use it
e) Interview three help desk staff people as to complaints and feedback they have gotten from users.
Ans: b

47. The interview process has gone well. There are a few things that need clarification and what really happens when specific financial analysts use the system. Which of the following might be the best way to verify what does happen?
a) Observation of how the analysts do their work
b) Document analysis of what the system was to do
c) A JAD session with end users, financial analysts and top managers
d) Additional interviews with top level managers in the finance area
e) Questionnaires / survey of end users of the system
Ans: a

48. Sridhar is interviewing the manager in the stock room about a new supply chain system project. He wants to start with some specific questions, and then move to broader general questions about stock room processes and procedures. Sridhar is using the _____ interview structure.
a) Closed ended
b) Open ended
c) Bottom up
d) Top down
e) Probing
Ans: c

49. To make his interviewee at ease, Karolyn has decided on asking general questions first and then moving to more detailed questions. She is using a _____ interviewing structure.
a) Top down
b) Bottom up
c) Closed ended
d) Open ended
e) Probing
Ans: a

50. Danielle has asked some closed ended questions to start an interview; then some open ended questions. Now she wants to really wants to get a greater depth of information about the process. She would probably use _____ questions.
a) More closed ended
b) More open ended
c) Probing
d) Structured
e) Boxing structure

Ans: c

51. Michael, a systems analyst, is preparing a closed wiki site for Northstate Bank. He has written permission from eight other companies to view their internal wiki sites, and also has approval from his manager and the project team to use these other sites for ideas and structure. This would be a form of:
a) Business Process Automation
b) Business Process Improvement
c) Informal Benchmarking
d) Formal Benchmarking
e) Technology Analysis

Ans: d

52. Rosa is creating an interview plan that lists the questions that she will ask and she is trying to anticipate the possible answers. This would be done in which step of the interview process?
a) Selecting interviewees
b) Designing interview questions
c) Preparing for the interview
d) Conducting the interview
e) Post-interview follow-up

Ans: c

53. Bridget needs to interview Yuri. She contacts him to verify the areas where he has knowledge so he is able to answer the questions. This would be done in which step of the interview process?
a) Selecting interviewees
b) Designing interview questions
c) Preparing for the interview
d) Conducting the interview
e) Post-interview follow-up

Ans: c

54. Paul is interviewing Ming. He first explains why he is there and what he wants to accomplish in the interview. This would be done in which step of the interview process?
a) Selecting interviewees
b) Designing interview questions
c) Preparing for the interview
d) Conducting the interview
e) Post-interview follow-up

Ans: d

55. Rafael, Fraud Unit Manager, has just received an interview report from Stefano, a systems analyst. Rafael was interviewed by Stefano, and was asked to make corrections and clarifications to the interview report. In what interview phase would this occur?
a) Selecting interviewees
b) Designing interview questions
c) Preparing for the interview
d) Conducting the interview
e) Post-interview follow-up

Ans: e

56. As part of the requirements gathering process, Mike is creating an interview schedule that lists all of the people who will be interviewed, when and for what purpose. In what part of the interview process would this occur?
a) Selecting interviewees
b) Designing interview questions
c) Preparing for the interview
d) Conducting the interview
e) Post-interview follow-up
Ans: a

57. Damian, a systems analysst, is getting frustrated. With the other analysts on the project team, he started developing an interview schedule. But, the list of interviewees has grown significantly. He should have known that would have happened as it was discussed in the textbook in which of the following interviewing phases?
a) Selecting interviewees
b) Designing interview questions
c) Preparing for the interview
d) Conducting the interview
e) Post-interview follow-up
Ans: a

58. Michelle is going to facilitate a JAD session. She has prepared ground rules. In what step of the JAD process is this done?
a) Selecting participants
b) Designing the JAD session
c) Preparing for the JAD session
d) Conducting the JAD session
e) Post-JAD follow-up
Ans: d

59. One of the major differences between a JAD session and an interview is:
a) Selecting participants
b) Figuring out what is to be done
c) Preparing for the session
d) Writing up results and a report
e) All JAD sessions are structured and *must* be carefully planned
Ans: e

60. One difference between the reports from interviews and from a JAD session is that:
a) It describes information from the interview or JAD session
b) The interview report will give a complete project management timeline; while the JAD session report will not
c) The interview report is generally written within 48 hours of the interview; while the JAD session report may take a week or two after the JAD session.
d) The JAD report will include results from questionnaires while the interview report will not
e) JAD reports will include technology analysis while interviews will only include root cause analysis
Ans: c

61. During an interview, the analyst has asked several open-ended questions regarding the procedures that are followed to handle a delinquent customer. Although the supervisor being interviewed has answered the questions, the analyst is still unclear about several details of the process. The analyst's best course of action is to _____.
a) Ask probing questions to try and get more detail
b) Assume that he can figure out the procedure late after the interview is concluded
c) Give up for now and talk to the supervisor again tomorrow
d) Jump to another unrelated topic
e) Stop the interview and seek a more cooperative subject
Ans: a

62. Creating an interview plan that lists the questions that you will ask and anticipates the possible answers is done in which step of the interview process?
a) Conducting the interview
b) Designing interview questions
c) Preparing for the interview
d) Following-up
e) Selecting an interviewee
Ans: c

63. An interview report is prepared in which step of the interview process?
a) Conducting the interview
b) Designing interview questions
c) Post interview following-up
d) Preparing for the interview
e) Selecting an interviewee
Ans: c

64. Lars wants to combine information from a variety of perspectives, as well as build consensus, and use a requirements gathering technique that has a good chance at reducing scope creep. He probably will use: _____.
a) document analysis
b) interview
c) JAD session
d) observation
e) questionnaire
Ans: c

65. A JAD facilitator does all of the following except:
a) Sets the meeting agenda
b) Encourages non-participants to join in
c) Tries to keep the discussion on track and avoid 'agenda merry-go-round'
d) Expresses his or her opinion when necessary
e) Attempts to keep the discussion from being controlled by just a few people
Ans: d

66. Which of the following is true about a JAD facilitator?
a) They can participate in the discussion to settle a disagreement
b) They keep track of all discussions by entering information into the computer
c) They allow sidebar discussions and unstructured activities
d) They recognize that some people know more about the system and proposed system and will dominate the discussion and know that is a positive thing
e) They set the meeting agenda
Ans: e

67. LaChelle has set the agenda, will record the group's input on a public display area (like a white board) and will guide the discussion during a JAD session. She is serving as the _____.
a) Systems analyst
b) Software engineer
c) Scribe
d) Participant
e) Facilitator
Ans: e

68. Hamid has selected one middle manager from each department that will be affected by the updated system and one lower-level manager from each department, along with a few senior staff as well as the project sponsor for a JAD session. He is trying to: _____
a) Balance the work load for departments so the regular day-to-day functions can still continue while the JAD team is off-site
b) Create a new hybrid department that will beta test the final system
c) Prevent domination by only a few individuals in the JAD session
d) Have a broad mix of organizational levels in the JAD session
e) Reduce the time necessary for the length of JAD session meetings

Ans: d

69. Rachel is a systems analyst working on an update to the customer update system. Which of the following might be the best group to interview?
a) At least one customer service agent (CSA), at least one shift supervisor, and the CSA department manager
b) Three shift supervisors and the department manager
c) Three customer service agents (one with less than one year experience; one with one to five years of experience and one with over five years of experience, and the finance vice president
d) Three shift supervisors from the customer service department; a shift manager from the call center; and a shift manager from the stockroom.
e) A manager in the human resources department

Ans: a

70. Thom wants to gather information from outside the organization. He would probably use:
a. Document analysis
b. Interviewing
c. Joint application design (JAD) sessions
d. Observation
e. Questionnaires

Ans: e

71. Marta wants to collect facts and opinions from a wide range of geographically dispersed people quickly and with the least expense. She would probably want to use:
a) Document analysis
b) Interview
c) JAD session
d) Observation
e) Questionnaires

Ans: e

72. Blaine is using a requirements gathering technique that begins with non-threatening questions, avoids abbreviations, groups items into logically coherent sections, and might best be used with outside users. He probably is using:
a) Document analysis
b) Interview
c) JAD session
d) Observation
e) Questionnaires

Ans: e

73. During the interview process, you were told how well the current system works. You have decided to observe how one of the electronic order forms is processed. Daniel, an order processing clerk, takes all the queued information and prints it out. He then circles the order number and the total amount and types it into a spreadsheet. Ultimately he will total the individual amounts. This is a(n) _____ system.
a) Customer friendly
b) Documentation
c) Formal
d) Informal
e) Policy

Ans: d

74. Henri examines existing paperwork in order to better understand the as-is system. This is called:
a) Document analysis
b) Interviewing
c) Joint application design (JAD) sessions
d) Observation
e) Questionnaires
Ans: a

75. What information-gathering strategy enables the analyst to see the reality of the situation rather than listen to others describe it?
a) Document analysis
b) Interviewing
c) Joint application design (JAD) sessions
d) Observation
e) Questionnaires
Ans: d

76. During observation Kim has learned that the users in the inventory monitoring department have created their own forms. This is a clear sign that the _____.
a) As-is system is meeting user needs
b) Department was overlooked during the interview process
c) Process does not need improvements
d) System needs to be changed
e) Users in the department are innovative
Ans: d

77. Theresa would like to gain a broad understanding of just the as-is system, but the IS department has not fully budgeted this phase of the analysis process and she has not been given permission to contact the users. She could probably use which of the following techniques?
a) Document analysis
b) Interviews
c) JAD
d) Observation
e) Questionnaires
Ans: a

True/False

78. One of the first activities of an analyst is to determine the business requirements for the new system ***True***
79. The SDLC moves from the current system (often called the "past system") to the new system (often called the "future system"). ***False***
80. The output of the analysis phase is the 'system proposal'. ***True***
81. The system proposal with all supporting materials generally goes to the Chief Information Officer (CIO), who is responsible for approval. ***False***
82. The SDLC phases are all very unique and sharply delineated. ***False***
83. Some people have suggested that the 'analysis' phase could be clearer if it was called the 'analysis and initial design' phase. ***True***
84. When dealing with a global information supply chain, functional requirements generally increase exponentially, while nonfunctional requirements tend to stay about the same. ***False***
85. Jorge, Vice President of Operations, has requested that the updated supply chain system keep a record of all 'stock-outs' for six years. This is an example of a functional requirement. ***True***
86. Maria, a systems analyst, is tweaking the high-level explanation of the business requirements into a more precise list of requirements. This is called 'requirements detemination'. ***True***
87. Generally 'system requirements' are developed in the analysis phase and evolve to more technical 'business requirements' in the design phase. ***False***
88. In interviews, Ross has learned that the new order entry system must be available in at least three formats (mobile, web browser, and local area network based); that it must function in either English or Spanish; and that the system must return order forms and data in less than 2 seconds. He recognizes these as nonfunctional requirements. ***True***
89. Kathy Ford is InformSystems Incorporated's compliance officer. In working with analyst Catherine Steele on the updated system for accounting for uncollectable debts ('write offs'), Kathy is creating some additional requirements for the system. These additional requirements will only be nonfunctional in nature as they specific data that management must provide to the system in order to satisfy Sarbanes-Oxley reporting standards . ***False***
90. The most important purpose of the requirements definition is to define the scope of the system. ***True***
91. When prioritizing business requirements, the analyst is probably using the Waterfall method. ***False***
92. Michael, a systems analyst, is working on a project. One thing he can do is to rank the business requirements as "high", "medium", or "low" importance. ***True***
93. To create the requirements definition, the project team first should consider the kinds of functional and non-functional requirements that they will collect about the system. ***True***
94. Miski has modified an existing time reporting system for hourly employees to be more efficient as they can text message when they are leaving a job site. This would be an example of Business Process Automation. ***True***

95. Management of requirements and system scope is one of the hardest parts of managing a project. ***True***

96. In BPA and BPI, analysis is generally divided into three steps: understanding the as-is system; developing a cost-benefit analysis; and understanding the technical feasibility. ***False***

97. In RAD or agile development methodology (especially with BPR), a significant amount of time and effort is spent in understanding the as-is system. ***False***

98. Andrei is an analyst on a project that is making small to moderate changes in an existing system. He needs to be able to recognize strengths and weaknesses in the as-is system and in the various improvements that have been suggested and he should be able to reformulate these ideas into a coherent plan. ***True***

99. Anne has asked users and managers to identify problems with the as-is system and to describe how to solve them in the to-be system. She is probably doing Business Process Automation (BPA) in this case.***True***

100. Marta wants to focus on 'why' a particular lockout situation occurs on a customer relationship management system, rather than just developing a work-around fix. She is doing activity elimination. ***False***

101. Online loan companies (like LendingTree) attempt to return quotes for loans within an hour. With more traditional banks, getting a quote on a loan may take weeks to a month. Two techniques that were probably carefully analyzed in creating online loan quotation systems would be duration analysis and activity elimination. ***True***

102. Standard Foundry had made drill bits for over 100 years as a family owned business. When Titus Newhouse took over as President from his uncle in 2008, he announced to their employees that they were no longer in the drill bit business, but in the hole making business. This would be an example of outcome analysis in BPR. ***True***

103. Cindi Flores distributed 'white-papers' on RFID, ERP, GPS and SOA to a user-management group. She then asked them to 'think outside the box' on where these technologies could be used in the company. This would be an example of 'technology analysis'. ***True***

104. Maxi-Dental systems had grown rapidly from a regional distributor of dental equipment to the largest dental equipment manufacture, rental, distributor and wholesaler by acquiring a variety of competitors and other associated companies. But, their accounting systems were very disjointed and it was almost impossible to integrate sales with supply chain and manufacturing logistics. An ambitious plan was promoted by the CIO to implement SAP throughout the company within eighteen months as an integrated enterprise relationship planning system. In terms of potential business value, this could be very rewarding, but the time frame and resources to accomplish this project were questioned. The company should do an analysis on the risk of failure to the system. ***True***

105. The requirements-gathering process is used for building financial support for the project and establishing common understanding of technologies and rapport between the project team building the system and the users of the system. ***False***

106. The most commonly used requirements gathering technique is the interview.. ***True***

107. In terms of reaching the most number of people in requirements gathering, interviews are considered better than questionnaires. ***False***

108. Melinda Formica is a systems analyst working on an alumni giving database for Western State University. She is planning on limiting the interviewing to four people: the campus president, the chair of the marketing academic department, the chair of the information systems management department, and the vice president of alumni affairs. She feels that this broad cross section will give her insights into the campus direction, marketing approaches, technologies of interest, and alumni viewpoints. This is an appropriate group for first round interviews. ***False***

109. Yuri wants to interview both managers and staff in the accounting department for the updated credit analysis project. This is an appropriate group for first round interviews. ***True***

110. Once the list of interviews is determined, it rarely grows. ***False***

111. For an updated global accounting system, Lisa has had trouble identifying which of the 34 accounting clerks to interview to better understand the process. Ultimately she decides on interviewing all of them, but limiting the interviews to no longer than twenty minutes each. This is an appropriate interviewee selection process. ***False***

112. For an updated global accounting system, Lisa has had trouble identifying which of the 34 accounting clerks to interview to better understand the process. She should work with the project sponsor, key business users and other members of the project team to narrow the list down. ***True***

113. The three types of interview questions are: multiple choice, fill in the blank and short answer. ***False***

114. Frequently you should start an interview session with a single probing question. This will indicate to the interviewee that this is a serious interview and that by starting with a probing question you can eliminate some weaker questions and move the interview along faster. ***False***

115. The authors have suggested that open-ended questions are generally much better for interviews. ***False***

116. In preparing for an interview, TJ does research as to areas in which the interviewee has knowledge so that he does not ask questions that an interviewee cannot answer. ***True***

117. Generally beginning analysts should avoid unstructured interviews and likewise should avoid "winging it". ***True***

118. Sara, an analyst, has an interview with Michael Welter, senior accountant in the accounts receivable area. Prior to the interview, she sent an email to Michael giving him the reasons for the interview, some of the issues and areas she is studying, and some information about both the project and herself to help establish a good foundation for the interview. This is a reasonable way to prepare for an interview. ***True***

119. In order to observe body language, facial expressions and to build rapport through eye-to-eye contact, interviewers should only rarely take notes. ***False***

120. While you are interviewing a person, you should clarify points you didn't understand and also summarize key points. ***True***

121. You are interviewing Divya, one of the lead sales analysts. She states that the average returns on consumer electronic goods over $100 have run from 15 to 18% in the past six months. You should not question her as to whether it is fact or opinion. ***False***

122. You are finishing your interview with Sarah Steele, Human Resources Manager. This is part of the new online applicant submission system requirements gathering. With a few minutes left in the session, you should ask Sarah if she has any questions or any additional information about the system requirements. ***True***

123. Gary has eight interviews to conduct over the next week. Once he has completed all interviews, he should then write up a summary report. Preparing interview reports prior to completing all interviews will generally be premature until Gary has talked to all interviewees. ***False***

124. Unless ordered by the lead analyst for a project, you should not share your interview report with those that you interviewed. Doing so will almost always result in scope creep and changes in the requirements. ***False***

125. JAD stands for Joint Approval Design. ***False***

126. Some experts have claimed that JAD can reduce scope creep by 50% and generally create appropriate requirements that are neither too vague or specific. ***True***

127. Rebecca, a fairly new employee in the company and Matt, her boss (who has been with the company for 22 years) are in your JAD session. It would probably be expected that Rebecca would not share much in the session. ***True***

128. You are selecting participants for a two week JAD requirements session. The initial system proposal seemed to be a major revenue producer for the company but the requirements are still somewhat vague. You really want two specific people in the session – Ella Kinsey, senior account executive and Sean Duffy, who has been recognized for outstanding contributions to the department (and was highly suggested by the project sponsor). But, they are busy people and don't want to give up two weeks of their time for a JAD session. In this case, you should press the project sponsor to get these two people to the session. ***True***

129. In conducting a JAD session, you can tell Bruce (senior financial analyst) is not pleased with the direction the session is going. Bruce has become sarcastic and negative. He has insisted on going over an important point at least four times. The next time Bruce interrupts you should be prepared to cut him off and demand his attention and respect as he is wasting the time and good faith efforts of 14 other people. ***False***

130. Being a JAD facilitator is fairly easy. It is primarily a 'traffic cop' position – insuring that everybody gets a chance to share in the discussion, that all are focusing on the task at hand, that conflicts are effectively handled. It requires less preparation than interviewing and less knowledge of the topic area. ***False***

131. Your company has grown by acquisition and mergers with similar businesses in other parts of the world. You are working on an online vendor support system, where vendors can track orders with your company. The idea is still in the early stages of analysis. The best tool to get feedback from many vendors and supplier around the globe would be a questionnaire. ***True***

132. In developing a questionnaire, you should frequently alter scale order (for example on some questions 1 is best and 5 is worst; and on other questions 1 is worst and 5 is best). Many respondents will read the first two questions and then just fill out the questionnaire using the scale for the first two questions. By altering the scale order, respondents will have to read each question carefully and read the possible responses carefully, which will result in better and more reliable feedback. ***False***

133. Online questionnaires (using tools like SurveyMonkey and similar sites) are growing in use, but generally online questionnaires have a lower completion rate. ***True***

134. Your company updated its processes for financial reporting when Sarbanes-Oxley became law. Additional changes in Sarbanes-Oxley reporting have been mandated to start in one year. To help you understand the as-is system, you should review the documentation, processes and procedures that were developed with the initial Sarbanes-Oxley project. ***True***

135. You have found documentation from 1994 on an accounts payable system. In asking the project sponsor, you find out the system has not changed since then. Therefore, you should rely on the documentation that you found almost exclusively. ***False***

136. In studying duration analysis of a paper-based loan improvement process, you should be able to get all the information you need about the length of time sub-processes require from interviewing. ***False***

137. Document analysis and observation are usually best for understanding the as-in system. ***True***

138. To get to more depth in understanding the as-is system, document analysis and observation generally are more beneficial as compared to interviews and JAD sessions. ***False***

139. One of the most challenging aspects of requirement gathering is the integration of information from different sources. In using the various requirements gathering techniques, you may find some information is in conflict. To solve this, analysts should contact each information source in turn attempting to reconcile the differences. ***True***

Chapter 4: Business Process and Functional Modeling

Multiple Choice

1. Which is probably NOT true about building use cases?
a) Analysts are involved
b) Users are involved
c) Major processes are analyzed
d) Major costs are analyzed
e) External or internal triggers are analyzed

Ans: d

2. Which is NOT true of use cases?
a) They are formal ways of representing how a business system interacts with its environment
b) They illustrates the activities that are performed by the users of the system
c) They can be thought of as an external or functional view of a business process
d) They illustrate what starts (or triggers) an event, all the people that are involved, and how the system provides value
e) They sometimes are called 'business scenarios' (although 'use case' is generally preferred)

Ans: d

3. What is probably NOT a part of a Use Case?
a) Name
b) Number
c) Trigger
d) Major inputs
e) Statement of business value

Ans: e

4. The primary actor in a use case is generally:
a) An external user of the system
b) The Project Sponsor
c) The Champion
d) The Project manager
e) The Systems Analyst

Ans: a

5. A 'temporal' trigger might be which of the following:
a) A patient calls to make an appointment with a doctor
b) The accounting department needs information for a report
c) The human resources department needs a tax withholding form to be filled out by a new employee
d) The date changes to the first day of the month
e) A new shipping of goods arrives and needs to be added to the inventory

Ans: d

6. Which of the following is probably NOT a step for writing a use case?
a) Identify the use case
b) Identify the major steps within each use case
c) Identify elements within steps
d) Identify the analyst
e) Confirm the use case

Ans: d

7. Which of the following is probably NOT a part of most use cases?
a) Primary Actor
b) Secondary Actor
c) Major inputs descriptions
d) Major steps performed
e) Identification of the trigger
Ans: b

8. Omar is an analyst building a use case. Which of the following project roles might be the most important in terms of getting information about building the use case?
a) Users
b) Programmers
c) Other analysts
d) Project Sponsor
e) Equipment vendors
Ans: a

9. Use cases are used to more fully delineate _____.
a) Resources used in the system
b) System boundaries
c) System proposals
d) System requirements
e) Data flows
Ans: d

10. Austin is a systems analyst. Which of the follow people might be the most valuable to him in developing a use case for an accounts payable system upgrade?
a) Beth, a software vendor for Peachtree Accounting Software
b) Amy, a team manager in the accounts payable department
c) Lisa, the project manager for the project
d) Casey, a fellow analyst who is more experienced in making use cases
e) Bill, a Java programmer in the applications development area.
Ans: b

11. Barb is an analyst developing a use case. Which of the following will probably NOT be on her use case?
a) Importance level
b) Short Description
c) Information for steps
d) Destination for the major inputs
e) Type of trigger
Ans: d

12. Barton is an analyst developing a use case. Which of the following will probably NOT be on his use case?
a) Description of data flows
b) Use case name
c) A use case number
d) Source for the major inputs
e) Type of trigger
Ans: a

13. Destination would be described on a use case in which of the following areas?:
a) Trigger
b) Major inputs
c) Major outputs
d) Primary actor
e) Importance level
Ans: c

14. A use case helps:
a) Define interview questions
b) Clarify ongoing costs for a system
c) Identify risks with the project
d) Refine project management milestones
e) Understand system activities and requirements

Ans: e

15. Ralph wants to illustrate how a system interacts with the environment. The best solution for him would be to use a _____:
a) Requirements flow chart
b) Storyboard
c) HIPO chart (hierarchy, input, process, output)
d) Use case
e) Gantt chart

Ans: d

16. Marta has asked the users of a system to picture themselves performing the processes and to write down those processes in a sequential order. She should get a good idea of _____.
a) The major steps for each use case
b) The use case
c) The elements within steps
d) The temporal triggers
e) The external actors

Ans: a

17. You might have to go back and adjust the steps in a use case, if _____
a) There are more than three major inputs to a step
b) The steps are of varying size
c) The trigger is an external one
d) The importance level is 'high'
e) The primary actor is an external customer

Ans: b

18. Special cases (like customer cancels an appointment or returns an item) are: _____
a) Frequently overlooked by users
b) Described on special 'exception' use cases
c) Not of importance at this stage
d) Written as exceptions at the bottom of the relevant use case
e) Given use case ID's of "SC" (for special case) and a number

Ans: a

19. Role-playing the use case with actual users is a good way to:
a) Identify the use case
b) Identify the major steps within each use case
c) Identify elements within steps
d) Confirm the use case
e) Identify the primary actor

Ans: d

20. Use cases generally have three parts: _____.
a) Basic information, details, and event-driven modeling
b) Inputs and outputs, and events
c) Details, event-driven modeling, basic information
d) Technical feasibility, economic feasibility and organizational feasibility
e) Basic information, inputs and outputs, and details

Ans: e

21. The Major Inputs section of a use case describes their:
a) File structure
b) Cardinality
c) Modality
d) Source
e) Destination
Ans: d

22. After working with Chris (who is a staff member in the registrar's office) on major steps in the registration process, Maureen (a systems analyst) will:
a) Discuss these steps with Thomas, the project manager
b) Create data-entity maps
c) Create use cases
d) Create user interface screens
e) Create narrative storyboards
Ans: c

23. As a last step in building a use case for the study-abroad registration system, Brianna will:
a) Ask Patrick in the study abroad office to confirm the use case
b) Ask Wendy in the registrar's office to confirm the use case
c) Ask Jonathan, a student who just completed a study-abroad experience, to confirm the use case
d) Ask Drew in the students affairs office to confirm the use case
e) Ask Taylor, another systems analyst to confirm the use case
Ans: b

24. The Major Inputs section on a use case will give the _____
a) Sources of that input
b) Destinations of that input
c) Creator of that input
d) User of that input
e) What triggers the input to occur
Ans: a

25. The Major Outputs section on a use case will give the _____
a) Sources of that input
b) Destinations of that input
c) Creator of that input
d) User of that input
e) What triggers the input to occur
Ans: b

26. The Major Steps Performed section on a use case will give the _____
a) Name of the user for each step
b) What triggers each step
c) Where the processes will run (such as manual processes, client-server processes, etc.)
d) The telecommunications infrastructure requirements for that step
e) Information for each step
Ans: e

27. When developing the Major Inputs and Major Outputs for a use case, the analyst and users should consider:
a) Only the common inputs and outputs
b) Developing separate use cases for every possible input and every possible output
c) All possible inputs and outputs (even with rare occurrences)
d) What triggers these inputs and outputs
e) Using activity elimination to see if these inputs and outputs are really needed
Ans: c

28. Arianna is an analyst studying credit card fraud. She is working on developing a use case for when a stolen credit card is used. The trigger would be:
a) Customer starts to buy gas
b) Alarm is activated for stolen credit card use
c) Gas attendant asks for customer's driver's license
d) When the card-holder reports the card as stolen
e) When car pulls into gas station

Ans: b

29. The second principal part of use cases is 'input and output'. Another name might be:
a) Origin and ending
b) Data normalization
c) Data flows
d) Parallelism
e) Program specifications

Ans: c

30. Which is NOT true of use cases?
a) They contain all the information needed to build one part of a process model
b) Each use case has a name, a number, importance level, brief description, primary actor, trigger, major inputs and outputs, and a list of major steps
c) Use cases can be identified by reviewing the functional requirements
d) Use cases should be confirmed by users
e) Use cases normally contain ten to twelve major steps

Ans: e

True / False

31. Use Cases give more detail about requirements. ***True***
32. A Use Case is a formal way of representing how a business system interacts with its environment. ***True***
33. Each Use Case generally describes one or more systems requirements. ***True***
34. Use cases are the same as process diagrams. ***False***
35. Use cases sometimes are called 'business scenarios'. ***True***
36. Use cases are frequently called 'process tables'. ***False***
37. Use cases illustrate the activities that are performed by the users of the system. ***True***
38. Use cases illustrate the activities that are performed by the designers of the system. ***False***
39. Use cases are always internal and rarely shared or discussed with business users. ***False***
40. A use case depicts a set of activities performed to produce some output result. ***True***
41. Use cases are diagrams with three components: selection, process, iteration. ***False***
42. How an external user triggers an event is described in a use case. ***True***
43. Use cases are a type of 'event-driven modeling'. ***True***
44. Use cases are a type of 'data-driven modeling'. ***False***
45. When you are 'reengineering' a process, it is rarely necessary to employ use cases. ***False***
46. Each use case contains a fairly complete description of all the activities that occur in response to a trigger event. ***True***

47. Each use case has a name and a number. ***True***

Each use case has the same name (like "Customer Relationship Management System") followed by an identifying letter ("A", "B", etc.). ***False***

48. Use cases will generally have the following components: name, number, primary actor, trigger, major inputs, major outputs, and major steps performed. ***True***
49. Use cases are always numbered sequentially from start to finish. ***False***
50. Essential use cases, describing activities that the system *must* perform are numbered in the 100's (100, 200, etc.). ***False***
51. The 'primary actor' is the external user that triggers the event to which the system responds. ***True***
52. The 'primary actor' is the internal action that occurs based on a SQL query (like: sort, select). ***False***
53. Generally the primary actor will be someone external to the system, such as a customer. ***True***
54. A trigger is based on cost/benefit analysis, like an employee labor report, a sale of an item, or the purchase of new hardware. ***False***
55. External triggers might be something like a customer calling a doctor for an appointment or a student registering for a class. ***True***
56. A temporal trigger might be related to time, such as 30 days have passed and a late fee needs to be assessed. ***True***
57. Use cases will have inputs and outputs. ***True***
58. Use cases will give details on the major steps. ***True***
59. The most common ways to gather information for use cases are through interviews and JAD sessions. ***True***
60. The most common ways to gather information for use cases is with questionnaires of the affected users. ***False***
61. Use cases generally have up to 20 major steps spelled out in great detail. ***False***
62. Dr. O'Brien's dental office calls a patient three days before an appointment. This could be an example of a temporal trigger. ***True***
63. Tina is a systems analysis and is describing how a system should react to an event. She is creating a use case. ***True***
64. Liang has identified the payroll authorization office as the primary actor in a use case. This would be incorrect as primary actors need to be singular like a customer or a patient or a student. ***False***
65. If there are more than 20 major use cases, you should group them into segments. ***False***
66. Project managers, business analysts and systems analysts create all use cases without user input. ***False***
67. The final step in Building Use Cases is to use a CASE analysis tool to verify that the inputs and outputs are discrete items triggered by external events. ***False***
68. The final step in building use cases is for the users to confirm the use cases as written with the users. ***True***

Chapter 5: Structural Modeling

Multiple Choice

1. A process model is:
a) The output of the interviewing process
b) The work plan
c) The model that is produced by extreme prototyping
d) The expanded and thoroughly balanced use case for a system
e) A formal way of representing how a business system operates

Ans: e

2. A process model can _____:
a) Only document the as-is system
b) Only document the to-be system
c) Document both the as-is and the to-be system
d) Only be used in BPR situations
e) Only be used with JAD sessions

Ans: c

3. Data flow diagramming is:
a) The only process modeling currently used
b) A detailed description of data
c) Almost the same as a flow chart
d) Focused on the processes or activities that are performed
e) A visual version of a use case

Ans: d

4. Logical process models are:
a) Models that describe processes without suggesting how they are conducted
b) Coded logic models
c) Models based upon implementing the if-then-else programming structure
d) Developed by the infrastructure analyst
e) Created in the system walkthough

Ans: a

5. Processes in data flow diagramming are represented by:
a) Rounded boxes
b) Arrows
c) Rectangles that is open on the right end
d) Enclosed rectangles
e) Circles

Ans: a

6. Data flows in data flow diagramming are represented by:
a) Rounded boxes
b) Arrows
c) Rectangles that are open on the right end
d) Closed rectangles
e) Circles

Ans: b

7. Data stores in data flow diagramming are represented by:
a) Rounded boxes
b) Arrows
c) Rectangles that are open on the right end
d) Rectangles
e) Circles
Ans: c

8. An external entity in data flow diagramming is represented by:
a) Rounded boxes
b) Arrows
c) Rectangles that are open on the right end
d) Rectangles
e) Circles
Ans: d

9. The relation between use cases and data flow diagrams is generally:
a) Use cases are developed by users and data flow diagrams are developed by systems analysts
b) Data flow diagrams are developed first and then use cases ensue
c) Use cases are developed first and then data flow diagrams ensue
d) Use cases show logical processes, while data flow diagrams show physical processes
e) There is not a relationship between use cases and data flow diagrams
Ans: c

10. A process is:
a) An activity or a function that is performed for some specific business reason
b) A single piece of data
c) A collection of data
d) A trigger to a use case
e) A person, organization or system outside of the system
Ans: a

11. A data flow is:
a) An activity or a function that is performed for some specific business reason
b) A single piece of data
c) A collection of data
d) A trigger to a use case
e) A person, organization or system outside of the system
Ans: b

12. A data store is:
a) An activity or a function that is performed for some specific business reason
b) A single piece of data
c) A collection of data
d) A trigger to a use case
e) A person, organization or system outside of the system
Ans: c

13. An external entity is:
a) An activity or a function that is performed for some specific business reason
b) A single piece of data
c) A collection of data
d) A trigger to a use case
e) A person, organization or system outside of the system
Ans: e

14. Brianna has a process has two inputs but only one output.
a) This is an error as there needs to be the same amount of inputs as outputs
b) This is an error as process do not have inputs or outputs
c) This is normal as all processes have two inputs and one output
d) This is normal as all processes need at least one input and at least one output
e) This is an error as processes only produce output

Ans: d

15. The relationship between use cases and data flow diagrams is:
a) Use cases tend to be developed with users to make sure the analyst has fully captured the processes and relationships; DFD's are built upon the use cases to more fully formally understand the processes involved
b) Both are tools in a systems analysts toolbox, although they do unrelated things
c) Use cases are developed by users exclusively; while DFD's are developed by analysts exclusively
d) Use cases come out of JAD sessions and clarify what was discussed by users in those sessions; DFD's come out of analysts interviews.
e) They are the same thing – use cases are process models using the DeMarco and Yourdon notation; and DFD's are process models using the Gane and Sarson notation.

Ans: a

16. A new patient calls up an optometrist office to make an appointment. On a DFD diagram, the new patient would be represented by:
a) a data flow
b) a process
c) an external entity
d) a trigger
e) a data store

Ans: c

17. Andrea is creating a diagram model for processes (without regard to whether it is computerized or a manual process). She is probably creating _____.
a) A physical process model
b) A PMT (process management tool) model
c) A logical process model
d) A user process model
e) A UML system case model

Ans: c

18. Ruth is an analyst. On her DFD diagram she has just placed a process. She will
a) Give it a verb phrase name, like 'search inventory'
b) Give it a noun description phrase, like 'Inventory-process-1'
c) Give it only a number – and depending on whether it is a major process (a whole number) or a subsidiary process (a whole number with a decimal point and value – like 1.3)
d) Give it a sentence name, like 'Customer arrives at checkout counter'
e) Use whatever process she feels comfortable with – as long as she is consistent

Ans: a

19. Which Data Flow Diagram shows the entire system with its environment with only one process?
a) Context Diagram
b) Level 0 diagrams
c) Level 1 diagrams
d) Level 2 diagrams
e) All DFDs show this

Ans: a

20. Which Data Flow Diagrams shows all the major high-level processes of the system and how they are interrelated?
a) Context Diagrams
b) Level 0 diagram
c) Level 1 diagram
d) Level 2 diagram
e) Use Diagram
Ans: b

21. Which Data Flow Diagram does not have data stores?
a) Context diagram
b) Level 0 diagram
c) Level 1 diagrams
d) Level 2 diagrams
e) Process Diagram
Ans: a

22. The act of taking a level 1 diagram and creating level 2 diagrams is called:
a) Breakdown
b) Division
c) Decomposing
d) Splitting
e) Halving
Ans: c

23. On your level 0 diagram you have a process #2 and when you create a level 1 diagram for process #2, you might have processes like:
a) 2.1, 2.2, 2.3
b) 2-1, 2-2, 2-3
c) 2A, 2B, 2C
d) 2-A, 2-B, 2-C
e) 2-initial, 2-main, 2-end
Ans: a

24. On your level 0 diagrams you have a process #3 and on your level 1 diagrams for process #3, you have processes numbered 3.1, 3.2, and 3.3. These would be called:
a) Offspring of process 3
b) Sons of process 3
c) Children of process 3
d) Roots of process 3
e) Leaves of process 3
Ans: c

25. A payroll data flow diagram has a data-store called Accumulated Salary Data. At one stage in the DFD, a process "Calculate YTD-Taxes" gets data from that data store, updates it in the process, and writes it back out. The diagram should show:
a) A single line with arrows on both ends labeled YTD Payroll Details
b) A dashed line with arrows on both ends labeled YTD Payroll Details
c) A line out of the data store labeled: Current YTD Payroll Details; and a line into the data store labeled: Updated YTD Payroll Details
d) Two separate data flow lines but each with the same name YTD Payroll Details
e) Two dashed lines but each with the same name of YTD Payroll Details
Ans: c

26. James is developing a DFD. What would be a good name for him to use on a data flow from the Calculate Federal Withholding process to a data store called YTD Payroll Data?

a) Move withholding to YTD storage
b) Transfer fed taxes to YTD storage
c) Calculation Result
d) Federal Withholding Taxes
e) Add amounts to YTD total

Ans: d

27. Mark has a data store called 'Items' and it includes all the items sold in a convenience store – sorted by UPC code with the retail price of the item. He has only one data flow called 'Item Details' that flows from the data store to the Process Checkout process. What will be true in this case?

a) This is incorrect as every data store must have both inputs and outputs
b) This is incorrect as every process must have both inputs and outputs
c) This is incorrect as the data flow should have a verb phrase like 'Get Item Details'
d) This is incorrect as there is no way to update the 'Items' data store
e) This is correct

Ans: e

28. On a data flow diagram, there is an arrow called 'student record details'. This would be:

a) A process
b) A data flow
c) A data store
d) An external entity
e) It is impossible to tell from the information given

Ans: b

29. Vanessa has a data flow diagram with an item called 'Register for Class'. That item would be:

a) A process
b) A data flow
c) A data store
d) An external entity
e) A process relationship

Ans: a

30. On the context diagram, Tim has a process called "Start the Process". It has one output data flow 'Initial Data' and no input data flows. This is:

a) Totally acceptable for a context diagram
b) Incorrect for a context diagram, but acceptable on the Level 0 diagram
c) Incorrect for both a context and Level 0 diagrams, but acceptable for a Level 1 diagram
d) Incorrect for context, level 0, level 1, but acceptable for a level 2 diagram
e) Incorrect in all situations

Ans: e

31. Andrei has a diagram that shows only one process and external entities. He is developing a:

a) Context diagram
b) Use case diagram
c) Level 0 diagram
d) Level 1 diagram
e) Level 2 diagram

Ans: a

32. What diagram will show all the major processes numbered 1, 2, 3, (etc.) external entities and major data stores?
a) Context diagram
b) Decision Tree
c) Level 1 diagram
d) Level 2 diagram
e) Level 0 diagram
Ans: e

33. What diagram will have processes with one decimal place (like 3.1, 3.2, and 3.3) and might have flows coming in (or going out) that are not illustrated?
a) Context diagram
b) Level 0 diagram
c) Level 1 diagram
d) UML state diagram
e) Level 0 diagram
Ans: c

34. What diagram will have sub-processes with numbers like 3.3.1, 3.3.2, 3.3.3 (etc) and also have flows coming in (or going out) that are not illustrated?
a) Context diagram
b) Level 0 diagram
c) Gantt diagram
d) Level 1 diagram
e) Level 2 diagram
Ans: e

35. Data that might be in data bases or tables that is accessed in DFD diagrams is called:
a) Data base repository
b) Data table
c) Data flow
d) Data store
e) Data bank
Ans: d

36. The context diagram shows:
a) Detailed processing logic
b) All major processes
c) All the data stores in the system
d) The "big picture" of the system with external entities and only one process
e) The system in context with all other systems in that department (for example, accounts payable, accounts receivable, etc.)
Ans: d

37. A process is:
a) An activity of a function that is performed for some specific business reason
b) A single piece of data within a system
c) A collection of data within a system
d) A person, organization or system that is external to the system
e) A combination of function and the data it acts upon
Ans: a

38. A data flow is:
a) An activity of a function that is performed for some specific business reason
b) A single piece of data within a system
c) A collection of data within a system
d) A person, organization or system that is external to the system
e) A combination of function and the data it acts upon
Ans: b

39. A data store is:
a) An activity of a function that is performed for some specific business reason
b) A single piece of data within a system
c) A collection of data within a system
d) A person, organization or system that is external to the system
e) A combination of function and the data it acts upon

Ans: c

40. An external entity is:
a) An activity of a function that is performed for some specific business reason
b) A single piece of data within a system
c) A collection of data within a system
d) A person, organization or system that is external to the system
e) A combination of function and the data it acts upon

Ans: d

41. Carlos has a Level 0 DFD diagram where one of the external entities is the "Internal Revenue Service" – and he has a data store called "Tax Rate Table". He has drawn a data flow arrow from the Internal Revenue Service to the data store as the data has been loaded into the Tax Rate Table prior to the processing. What would be true?
a) This is correct
b) This is incorrect, 'data at rest stays at rest until moved by a process' so he needs a process (like 'load Tax Rate Table') first in this system
c) This is incorrect – he doesn't need a data flow as the data was loaded into the Tax Rate Table someplace else (within the payroll system someplace, but not in this process)
d) This is almost correct. The correct diagram would be a dashed line indicating that the loading of the data was implied prior to the start of this process
e) This is incorrect. What should happen is an 'external process' should be called at the start of the process – like "Call IRS for data load"

Ans: c

42. You have a Patient Processing data flow diagram for a hospital system. Data that is retrieved from a Patient data store includes: patient name, phone number, health insurance, HIPAA identifier, and more. In creating the level 1 diagram where you retrieve data from that data store you:
a) Must explicitly list each data item coming from the data store
b) May give the data flow as 'Patient Details' instead of listing all data items
c) May aggregate as many as four data items together (so if twelve data items are being moved, you need to show three data flows)
d) List only the items normally used in the process (with data that might not be used unless there is some rare processing situation not listed)
e) Either (a) or (c) above

Ans: b

43. Amy has created a context diagram. What one DFD component is probably not shown?
a) Process
b) Data flow
c) UML Stage
d) Data store
e) External Entity

Ans: d

44. Which of the following is NOT true?
a) Every process has at least one input data flow
b) Every data flow connects to at least one process
c) Every external entity has at least one input or one output data flow
d) Every data flow has a unique name that is a verb phrase
e) Every process has at least one output data flow

Ans: d

45. Which of the following is NOT correct?
a) Every set of DFD's must have one context diagram
b) Every process is wholly and completely described by the processes on its children DFD's
c) Every process must be broken down farther on Level 1 and Level 2 diagrams
d) Every data store has at least one input data flow someplace in the entire DFD system
e) Every process has a unique name that is a action oriented verb phrase
Ans: c

46. Decomposing a DFD means:
a) Balancing the processes so that each process has three and only three sub-processes
b) Breaking complex processes into a structured set of detailed diagrams
c) Doing a walk through on the entire DFD structure with all the analysts on the project team
d) Taking lower levels of process refinement and aggregating them into a major system
e) Making sure that all data stores are shown on each child DFD diagram
Ans: b

47. Chunxia is balancing her DFD. This means she is:
a) Making sure that all information presented at one level is accurately represented in the next level
b) Making sure that each data store has at least one input data flow and at least one output data flow
c) Making sure that each process has at least one input data flow and at least one output data flow
d) Making sure that all processes start with action verb phrases
e) Making sure that all data flows have noun names
Ans: a

48. Data flow diagrams are:
a) Usually created by users and reviewed by analysts
b) Usually jointly created by analysts and users
c) Usually created by the project team and reviewed by users for correctness
d) Usually created by the project champion and reviewed by the project team
e) Usually created by business analyst and reviewed by the infrastructure analyst
Ans: c

49. Which would be the normal order of tasks?
a) Requirements gathering, creating DFDs, creating use cases
b) Creating use cases; creating DFD, holding JAD sessions
c) Interviewing and/or JAD sessions; creating use cases; creating data flow diagrams
d) Doing BPR, analyzing documents, creating DFDs, creating use cases
e) Doing activity elimination, doing use cases, doing DFDs
Ans: c

50. Tom is trying to change his Use Case into a Data Flow Diagram. He has found that a use case step generally is the same as a _____ on the Level 1 Data flow diagram.
a) Process
b) External Entity
c) Data flow
d) Internal Entity
e) Data store
Ans: a

51. Which of the following would be a "miracle" error on a DFD?
a) A data store has only an output data flow
b) A data store has only an input data flow
c) A process has no input data flows
d) A process has no output data flows
e) An external entity shows up on a Level 2 diagram
Ans: c

52. Which of the following would be a 'black hole' error on a DFD?
a) A process has no input
b) A process has no output
c) A process has four inputs and only three outputs
d) Data moves directly from a data store from an external entity
e) Two processes send data flows to the same data store

Ans: b

53. Ramesh has drawn a set of DFD's that are not properly balanced. This is probably a:
a) Syntax error
b) Semantic error
c) Modeling error
d) First law of conservation of data error
e) Second law of conservation of data eror

Ans: a

TRUE / FALSE

54. The normal order of processes would be: requirements gathering, use case development, process modeling (data flow diagrams). ***True***
55. A process model is an informal way of showing the external entities, event triggers, inputs and outputs. ***False***
56. A process model is a formal way of representing how a business system operates. ***True***
57. Process models are only used to document the current system (that is, the "as-is" system), since that is the system the users know and is the system that will be modified. ***False***
58. Process models can be used with either 'as-is' systems or 'to-be' systems. ***True***
59. There are many process modeling techniques used today. ***True***
60. Data Flow diagramming is a tool for doing process modeling. ***True***
61. Data flow diagrams (as the name implies) focus on the physical data in a system. ***False***
62. According to the authors "Process modeling – and creating DFDs in particular – is one of the most important skills needed by systems analysts". ***True***
63. According to the authors "Process modeling – and the creating of PMPs in particular – is one of the most important skills needed by systems analysts". ***False***
64. With logical process modeling (using data flow diagrams), you can tell if the process is a manual one or a computerized one. ***False***
65. External entities in a DFD are shown as circles. ***False***
66. Processes in DFDs are shown as circles in the Gane and Sarson notation. ***False***
67. Processes in DFDs are shown as rounded rectangles in the Gane and Sarson notation. ***True***

68. Data that is moving from a process to another process is called a 'data stream'. ***False***
69. Data that is moving from a process to another process is called a 'data flow'. ***False***
70. In drawing DFD's, arrows are used to show data flows. ***True***
71. A repository for data in DFDs is called a 'data store' ***True***
72. Data that is coming from a process and going to a data store (or database) will have an arrow head pointing towards the data store. ***True***
73. Data (like Year-to-date totals) that come from a data store and are used in a process (like 'Calculate YTD Totals') and then the updated amounts are written back to the data store – can be drawn on a DFD model as a two-headed arrow. ***False***
74. A well-constructed use case makes developing a data flow diagram fairly straightforward. ***True***
75. The major inputs and major outputs listed on the use case provide a list of the sources and destinations of the inflows and outflows on the processes on a DFD. ***True***
76. The data stores on the DFD correspond to Major Steps Performed on a use case. ***False***
77. Every process on a DFD must have at least one input data flow. ***True***
78. Data flows to a process must be balanced, like if there are two input data flows, there MUST be two output data flows. ***False***
79. Processes on a DFD are named with noun phrases (like: Payroll Update Process). ***False***
80. Every process has a unique identification number, a name and a description. ***True***
81. Processes should be named with a verb and ending with a noun (like Calculate Sales Tax). ***True***
82. A data flow is a single piece of data – or a logical collection of several pieces of information. ***True***
83. Data flows are named with verb phrases (like 'Move Payroll Information to Payroll Database'). ***False***
84. One end of every data flow will always come from – or go to – a process – with an arrow showing the direction into or out of the process. ***True***
85. A data repository is a collection of data that is stored in some way on a DFD. ***False***
86. Data stores are named with nouns and have an identification number and description. ***True***
87. Data flows coming out of a data store are dashed lines, data flows coming into a data store are solid lines with a head on the arrow pointing to the data store. ***False***
88. External entities are a person, organization, or system that is external to the system, but interacts with it. ***True***
89. The external entity on a DFD generally corresponds to the primary actor on the use case. ***True***
90. Many business processes are too complex to be explained in one DFD. ***True***
91. One important principal in process modeling with DFD's is the decomposition on the business processes into a series of DFD's. ***True***
92. The first DFD in every business process model is the Level 0 diagram. ***False***
93. Context diagrams show the entire system in context with the environment (like external entities). ***True***
94. All major processes are shown on the context diagram. ***False***

95. The level 0 diagram shows all the major processes (at the first level of numbering – like 1 through 4), the data stores, data flows, but does not show external entities. ***False***
96. The purpose of the Level 0 DFD is to show all the major high-level processes of the system and how they are interrelated. ***True***
97. Context diagrams and Level 0 diagrams deliberately hide some of the system's complexity. ***True***
98. In general, all process models will have as many level 1 diagrams as there are processes on the level 0 diagram. ***True***
99. On the Level 0 DFD diagram, Anthony had processes 1, 2, 3, 4 and 5. When decomposing process 2 further, he ended up with processes 2.1, 2.2, 2.3, 2.4, 2.5 and 2.6. The sub processes (2.1 to 2.6) are called 'offspring' processes. ***False***
100. Children processes collectively make up the parent process (but give more detail). ***True***
101. It is possible to decompose level 1 processes even farther, so for example, process 2.1 on a Level 1 DFD might become 2.1A, 2.1B, 2.1C, etc. ***False***
102. The first law of conservation of data states: "data at rest stays at rest until moved by a process". ***True***
103. The second law of conservation of data states: "Processes cannot consume or create data". ***True***
104. A 'black hole' error on a DFD is when a process creates output without an input. ***False***
105. A 'black hole' error on a DFD is when a process has inputs but no outputs. ***True***
106. Data cannot go from one process to another process without going to a data store first ***False***

Chapter 6: Behavioral Modeling

Multiple Choice

1. A data model is a:
a) The mathematical model of formulas and logic used in a system
b) The abstract creating of an ideal system transformation
c) The model that is produced by extreme programming
d) The expanded, thoroughly balanced and normalized use case for a system
e) A formal way of representing the data that are used and created by a business system

Ans: e

2. A data model can _____:
a) Illustrate return-on-investment, break-even point, and economic feasibility
b) Represent actions or processes that occur in the to-be system
c) Be used as a logical data model in analysis and as a physical data model in design
d) Only be used in BPR situations
e) Only be used with JAD sessions

Ans: c

3. Which of the following is NOT illustrated by a data model?
a) People
b) Places
c) Things
d) Actions
e) Nouns

Ans: d

4. Which of the following software packages does NOT provide data modeling capabilities?
a) ERwin
b) Visual Basic
c) Oracle Designer
d) Visible Analyst Workbench
e) Visio

And: b

5. ERwin, a CASE tool with data modeling features, was created by:
a) Oracle
b) Microsoft
c) Platinum Technology
d) Sun Systems
e) United Technologies

Ans: c

6. Which is NOT true about using Visible Analyst Workbench?
a) It can be used with many different databases
b) It integrates the data model with other parts of the project
c) It is a full-service CASE tool
d) Data modeling is one of many capabilities
e) It can generate Java code when the data modeling is done

Ans: e

7. ERD is an acronym for:
a) Enterprise Relationship Diagramming
b) Entity Relationship Diagramming
c) Electronic Repository Diagramming
d) Enhanced Relationship Diagramming
e) Entity Repository Design
Ans: b

8. Entity relationship diagramming (ERD) is a graphical drawing technique developed by:
a) Cole and Weston
b) Thomas Barton
c) Peter Chen
d) Alan Dennis
e) Martin and Chang
Ans: c

9. An entity relationship diagram (ERD):
a) Is a use-case diagram enhanced graphically to show data and process modeling
b) Is a high-level CASE diagram of data modeling used in business systems
c) Is an illustration of external data flows to and from a business systems
d) Is a picture that shows the information that is created, stored and used by a business system
e) Is a graphical display of the processes in a business system
Ans: d

10. An analyst can read an ERD to:
a) Discover the individual pieces of information in a system and how they are organized and related to each other
b) Find what processes use what data
c) Determine the cardinality of processes in a system and if the modality of process is 1:M; 1:1; or M:N
d) Evaluate data structure hierarchies as to processing anomalies in a business system
e) Discover how the people, places and things in a business system are generated, moved, transformed and stored
Ans: a

11. On an ERD _____:
a) Processes are listed alphabetically with relationship connections drawn between processes
b) Data elements are listed alphabetically with a cross listing to the processes that manipulate them
c) Data elements are described as singular (1:1); plurals (1:N); or didactic (M:N)
d) Data elements are grouped in a hierarchical structure that is uniquely identified by number
e) Data elements are listed together and place inside boxes called entities.
Ans: e

12. Lines on an ERD diagram indicate:
a) Hierarchies between processes
b) Relationships among the data
c) Plurality of data items
d) Uniqueness of data items
e) Primary keys
Ans: b

13. Which of the following is NOT true about ERDs?
a) Special symbols are added to show high-level business rules
b) The diagrams are drawn in a sequential order – from top to bottom
c) Similar kinds of information are listed together in entities
d) ERD's are data modeling techniques
e) Lines are drawn to show relationships among the data
Ans: b

14. Which is NOT an element of an Entity Relationship Diagram?
a) Cardinality
b) Modality
c) Attribute
d) Relationship
e) Data stores
Ans: e

15. An entity:
a) Is the association between two related processes
b) Has cardinality (1:1, 1:N, or M:N)
c) Shows if it can be null or no null
d) Is a person, place or thing
e) Is described with a verb phrase
Ans: d

16. An attribute:
a) Is some type of information that is captured about an entity
b) Is the basic building block for a data model
c) Is the association between entities
d) Is the identification of parent and child entities
e) Is drawn as a line between processes
Ans: a

17. Which would NOT likely be an attribute of an entity called "Student"?
a) Age
b) Student identification number
c) Class room number
d) Home phone
e) Gender
Ans: c

18. Which would NOT likely be an entity on a car insurance ERD?
a) Customer
b) Policy
c) Agent
d) Zip code
e) Car
Ans: d

19. You have entities of ITEM, SOLD-ITEM, SALE and PAYMENT. Which most likely is NOT a relationship?
a) SALE is paid by PAYMENT
b) PAYMENT pays for ITEM
c) ITEM is included in SOLD-ITEM
d) SALE involves SOLD-ITEM
e) PAYMENT pays for SALE
Ans: b

20. Modality refers to:
a) Relationships of one-to-one; one-to-many; or many-to-many
b) Whether a child entity can exist with or without a related instance in the parent entity
c) The hierarchical structure that was developed in process models applied to data models
d) The number of attributes generated by an entity
e) Whether the entity has a unique identifier (aka 'primary key') or a concatenated identifier (aka 'composite key')
Ans: b

21. Jack is developing an ERD for a small dental practice office patient record system. The dental practice has three dentists, six hygienists, and many patients. A patient is always assigned to the same dentist for all appointments. In particular, he is working on the relationship between dentists and patients. Should it be:

a) 1 to 1, with a modality of null
b) 1 to many with a modality of not null
c) Many to many with a modality of null
d) Many to many with a modality of not null
e) 1 to many with a modality of null

Ans: b

22. CASE tools have a(n) _____ where information about entities, attributes and relationships on the ERD are stored.

a) Information space
b) Data store
c) Meta file
d) Data flow
e) Data dictionary

Ans: e

23. Information in the data dictionary is called: _____

a) Metadata
b) Cached information
c) Compiled data
d) Data repository
e) File silo

Ans: a

24. In the IDEF1X ERD notation, an entity is drawn as:

a) A diamond with the entity name in the middle
b) A circle with the upper part of the circle with the entity name
c) A rectangle with the identifier written above (outside) the rectangle
d) A rectangle with the identifier written in a darker color inside at the top of the rectangle
e) A rectangle with the identifier written at the top of the rectangle with an asterisk

Ans: d

25. Mike is drawing an ERD diagram. He has a one-to-many relationship. To identify the end of the relationship for the main relationship, Mike should draw:

a) An oval
b) A crow's foot
c) The letter M
d) An infinity symbol ∞
e) A diamond

Ans: b

26. Entity Relationship Diagrams show relationships between entities that are _____.

a) Outputs from JAD sessions
b) Consistent with the ACM guidelines
c) In line with the business rules and processing
d) Defined by the project sponsor
e) Extensions of the process models

Ans: c

27. The three major parts of an ERD diagram are:
a) Process, data flow, data store
b) Attribute, modularity, cardinality
c) Relationship, data flow, entity
d) Relationship, attribute, entity
e) Process, entity and relationship
Ans: d

28. The basic building block of a data model is the:
a) Entity
b) Relationship
c) Attribute
d) Cardinality
e) Modality
Ans: a

29. Which would most likely NOT be an entity on an ERD?
a) Student
b) Professor
c) Class
d) Practice
e) Enroll
Ans: e

30. What is true about creating an entity relationship diagram?
a) There will be at most seven entities
b) There will be at most seven relationships
c) If you identify more than seven entities, analyze and combine until you have seven or less
d) It is an iterative process
e) Entities will have at most seven attributes
Ans: d

31. In creating ERD's, which would most likely NOT be a source for entities?
a) Use cases
b) Level 0 DFD diagrams
c) External entities
d) Data flows
e) Cost / benefit reports
Ans: e

32. In adding attributes to an ERD, which of the following might NOT be a good resource for attributes?
a) From the CASE tool
b) Data flows from DFD's
c) Requirements documents
d) The system proposal document
e) Through interviews (what users need for reports and processing)
Ans: d

33. The last step in creating basic ERD's is to:
a) Identify relationships
b) Define attributes and assign identifiers
c) Recognize entities
d) Test them with users
e) Compile them with Java
Ans: a

34. Sanjay is identifying relationships as he draws ERD's. He will need to:
a) Determine originality and functionality
b) Include cardinality and crows feet
c) Add modality and functionality
d) Determine modality and cardinality
e) Include 1:1, 1:N and M:N relationships
Ans: d

35. Ting-You is creating an ERD diagram. She knows that it is a(n) _____
a) Well defined process
b) Sequential process
c) Process defined by five steps
d) Iterative process
e) User defined process
Ans: d

36. Anthony is working on the cardinality of doctors and patients in a large urban hospital. With the large number of doctors with varying specialties and patients that may have more than one aliment, he thinks the relationship might be noted as:
a) 1 to 1
b) 1 to 2
c) 1 to many
d) Many to many
e) Many to 1
Ans: d

37. Omar has a model with 85 entities. He can:
a) Compress these into at most seven entity grouping units
b) Group these into related subject areas
c) Stop – he has all entities defined
d) Sort the entities alphabetically
e) Co-validate the entities with the level 2 DFD diagrams
Ans: b

38. The first step to building an Entity Relationship Diagram is to _____
a) Identify data flows from the level 0 DFD diagram
b) draw the relationships between the entities
c) identify the attributes for each entity
d) identify the entities
e) identify the processes, data flows and data stores
Ans: d

39. When normalizing data models, if you take attributes that have multiple values for a single instance of an entity and create separate entities for those attributes you are moving from:
a) O normal form to 1st normal form (1NF)
b) 1st normal form (1NF) to 2nd normal form (2NF)
c) 2nd normal form (2NF) to 3rd normal form (3NF)
d) Generalized normal form (GNF) to fully normalized form (FNF)
e) Dependent normal form (DNF) to Independent normal form (INF)
Ans: a

40. Independent entities are:
a) When a child requires attributes from the parent
b) When there is only one entity for a data process model
c) When an entity can exist without the help of another entity
d) Where the entity identifier is also the primary key
e) When a entity comes from an external source (aka 'external entity')
Ans: c

41. A(n) _____ entity is an entity at the "1" end of a relationship or an entity with an identifier that describes only the entity.
a) dependent
b) incomplete
c) independent
d) intersection
e) non-identifying
Ans: c

42. A(n) _____ entity cannot exist without the presence of another entity and is normally on the "many" end of a relationship or has an identifier that is based on another entity's attribute.
a. independent
b. incomplete
c. dependent
d. variable
e. non-complying
Ans: c

43. The two methods to validate that an ERD is well formed are _____.
a) Balancing with process models and following design guidelines created by Chen
b) Normalization and balancing with process models
c) Renaming theory
d) Balancing with process models and renaming theory
e) Normalization and following design guidelines created by Chen
Ans: b

44. What are the rules covering the layout of ERD components?
a) Items that are related must be grouped into subject areas
b) Items that are not related must be drawn on the bottom of the page
c) They must be placed in alphabetical order
d) They must be placed in numerical order
e) There are no rules
Ans: e

45. Andrew, an analyst for PaxMedia Inc, has just learned that the business rules for a system he has been working on have changed. This means that _____.
a) Nothing – once the ERD data models have been drawn, they are 'frozen' for the system
b) Andrew will be reassigned to a different project that is in its beginning stages
c) The ERD components will have to be changed
d) The ERD data model will have to be put on hold while new DFD diagrams are created
e) The project will have to be scrapped and restarted
Ans: c

46. A logical data model that does not lead to repeating fields and that the data models leads to tables containing fields that are dependent on the whole identifier is in _____ normal form.
a) balanced
b) first
c) primary
d) second
e) third
Ans: d

47. When the analyst is evaluating a data model to ensure that all fields in a record depend fully on the entire primary key, which step of normalization is being performed?
a) base normal form
b) first normal form
c) second normal form
d) third normal form
e) cannot tell from the above information
Ans: c

48. If the logical data model does not contain attributes that have repeating values it is in _____.
a) base normal form
b) first normal form
c) non-normal form
d) second normal form
e) third normal form
Ans: b

49. If the logical data model contains attribute values that depend on an attribute that is not the identifier, then it is in _____.
a) base normal form
b) first normal form
c) non-normal form
d) second normal form
e) third normal form
Ans: d

50. Balance occurs between DFDs and ERDs when the data stores _____
a) Are uniquely named
b) Have only one input and one output flow
c) Are named the same as the relationships on the ERD
d) Can be compared to ERD data flows and attributes on the ERD are included in data stores on the DFD
e) Can be equated to entities on the ERD and when entities are referred to by data stores on the DFD
Ans: e

TRUE / FALSE

51. Data models can be either logical or physical. ***True***
52. During the analysis phase, analysts create programming models to represent how the business system will operate. ***False***
53. A data model is a formal way of representing the data that are used and created by a business system. ***True***
54. The data that are used and created by a business system are illustrated by a process model. ***False***
55. Project teams generally use either Gantt or PERT charts to draw data models. ***False***
56. Project teams can use packages like ERwin or Oracle Designer or Visible Analyst Workbench to draw data models. ***True***
57. Logical data models are most commonly drawn with the Data Flow Diagram technique. ***False***
58. ERD is an acronym for Enterprise Reliability Diagrams. ***False***
59. One of the most commonly used techniques for data modeling is ERD's. ***True***
60. ERD's are drawn in several levels: Context ERD diagrams; Level 0 ERD diagrams; Level 1 ERD diagrams. ***False***
61. ERD's and DFD's are two techniques for data modeling. ***False***
62. ERD's and DFD's are two techniques for process modeling. ***False***
63. A textbook-provided example of a 'full-service CASE' tool is Visible Analyst Workbench. ***True***
64. An ERD is a picture that shows how data and information is processed and transformed by a business system.

Ans: ***False***

65. A graphical illustration that shows the information that is created, stored and used by a business system would be an ERD. ***True***
66. An illustration of the transformation of data into business value is an ERD. ***False***
67. An analyst can read an ERD to discover the individual pieces of information in a system and how they are organized and related to each other. ***True***
68. On an ERD, similar kinds of information are listed together and placed inside boxes called data containers. ***False***
69. An entity is the basic building block for a data model. ***True***
70. An entity is described by an action verb.

Ans: ***False***

71. Entities are further designed with attributes. ***True***
72. In an entity called STUDENT, you might find attributes of Student-ID, Last-Name, First-Name and cell-phone. ***True***
73. In an entity called STUDENT, you might find attributes of PROFESSOR-ID, Last-Name, First-Name and CLASSROOM. ***False***
74. Relationships are some type of information that is captured about entities. ***False***
75. Relationships are associations between entities. ***True***
76. Relationships are drawn with lines showing cardinality and plurality. ***False***
77. ERD's can be quite complex and might have hundreds or thousands of entities. ***True***

78. The three steps in creating an ERD are: (1) identify the entities; (2) identify the processes; (3) identify the relationships ***False***

79. Metadata is data about data. ***True***

80. CASE tools have 'data repositories' ***False***

81. In defining the data characteristics of Universal Product Codes, we might describe them as twelve characters made up of digits – numeric only. ***True***

82. In defining LAST-NAME in the data dictionary, we might describe it as a character field having from 1 to 15 alphabetic characters. ***False***

83. One of the first places to start developing Entity Relationship Diagrams is by looking at the level 0 process models (DFD) and the use cases for data flows and data stores. ***True***

84. Looking at external entities can be helpful with creating entities. ***True***

85. Data modeling is an iterative process. ***True***

86. Most novice analysts understand quickly how to create ERD's. ***False***

Response: see Creating an Entity Relationship Diagram

Difficulty: medium

87. Fortunately for novice analysts, there are fairly straight-forward rules and guidelines for creating ERD's. ***False***

88. The authors suggest that creating ERDs is pretty tough to do. ***True***

89. Michele has an entity called "client" and an entity called "customer" and an entity called "shopper". All three names seem to refer to the same data in the business system. It is acceptable to use different names for an entity as it helps clarify the purpose of the entity. ***False***

90. Following carefully prepared and numbered use cases and DFDs, Chang has named his entities ITEM-1, ITEM-2, ITEM-3, etc. Because of the documentation, this is acceptable and recommended. ***False***

91. If an ERD gets too complex, it can be broken down into related subject areas. ***True***

92. When validating ERD's you should balance ERD entities with the data flows and data stores from the DFD process diagrams. ***True***

93. When depicting the inter-realationship between process and data models it can be useful to refer to the CRUDE matrix (create, relate, update, define, edit). ***False***

94. The processes of creating process models, data models and using CASE tools are interrelated. ***True***

95. CRUD stands for create, read, update and delete and can be used to verify DFDs and ERDs. ***True***

96. Normalizing data models is a five step process: not-normalized; create first normal form (1NF); create second normal form (2NF); create third normal form (3NF); create fourth normal form (4NF) and finally create the fully normalized form (5NF). ***False***