

TEST BANK



**INFORMATION SYSTEMS
PROJECT MANAGEMENT**
A PROCESS AND TEAM APPROACH



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Chapter 2 – The Project Management Life Cycle

Multiple Choice

1. The phases of managing a project are called:

- a. systems development life cycle.
- b. project management life cycle.
- c. project management phase model.
- d. project life cycle.

Answer: b **Page Reference: 37**

2. Most project life cycles share the following characteristics:

- a. cost and staffing levels are low at the start, higher at the end, and drop rapidly as the project nears an end.
- b. the probability of successfully completing the project is lowest at the beginning, so risk and uncertainty are also the highest at that point.
- c. the ability of stakeholders to influence final characteristics of the project's product is highest at the beginning and lowest at the end.
- d. all of the above.

Answer: d **Page Reference: 38**

3. Projects are divided into smaller parts called:

- a. phases.
- b. stages.
- c. parts.
- d. deliverables.

Answer: a **Page Reference: 38**

4. The review points at the end of each stage are called everything EXCEPT:

- a. phase exits.
- b. stage gates.
- c. kill points.
- d. terminators.

Answer: d **Page Reference: 38**

5. The five phases of the systems development life cycle include all EXCEPT:
- planning and selection.
 - design.
 - maintenance.
 - bug fixing.

Answer: d **Page Reference: 39**

6. The five phases of the systems development (in the correct order) are:
- planning and selection, analysis, design, implementation, and maintenance.
 - analysis, planning and selection, design, implementation, and maintenance.
 - planning and selection, design, analysis, maintenance, and implementation.
 - planning and selection, analysis, implementation, design, and maintenance.

Answer: a **Page Reference: 39**

7. Some systems analysts consider the life cycle to be:
- a system.
 - a spiral.
 - a pentagram.
 - an ellipse.

Answer: b **Page Reference: 40**

8. The phase of the systems development life cycle where the need for a new system is identified and the scope is determined is called:
- systems planning.
 - systems identification.
 - scope determination.
 - initiation phase.

Answer: a **Page Reference: 41**

9. An organization's information systems needs may result from:
- requests to deal with problems in current procedures.
 - the desire to perform additional tasks.
 - the realization that information technology could be used to capitalize on an existing opportunity.
 - all of the above.

Answer: d **Page Reference: 41**

10. The second phase of the systems development life cycle is called:
- a. systems requirements determination.
 - b. systems analysis.
 - c. systems alternative generation.
 - d. systems selection.

Answer: b **Page Reference: 41**

11. The second phase of the systems development life cycle encompasses all EXCEPT:
- a. requirements determination.
 - b. requirements structuring.
 - c. alternative generation.
 - d. requirements design.

Answer: d **Page Reference: 41**

12. The third phase of the systems development life cycle is called:
- a. logical design.
 - b. systems design.
 - c. physical design.
 - d. systems conversion.

Answer: b **Page Reference: 42**

13. Specifications which focus on the origin, flow, and processing of data in a system, but are not tied to any specific hardware and systems software platform are called:
- a. logical design.
 - b. systems design.
 - c. physical design.
 - d. systems conversion.

Answer: a **Page Reference: 42**

14. Structured systems design that can be broken down into smaller and smaller units for conversion into instructions written in a programming language is called:
- a. logical design.
 - b. systems design.
 - c. physical design.
 - d. systems conversion.

Answer: c **Page Reference: 42**

15. The fourth phase of the systems development life cycle is called:
- systems conversion.
 - coding.
 - systems implementation.
 - systems installation.

Answer: c **Page Reference: 42**

16. Systems implementation includes all EXCEPT:
- coding.
 - testing.
 - installation.
 - maintenance.

Answer: d **Page Reference: 43**

17. The final phase of the systems development life cycle is called:
- systems operation.
 - bug fixing.
 - systems maintenance.
 - systems modification.

Answer: c **Page Reference: 43**

18. Which aspects of the organizational environment can influence the success of a project?
- Stakeholders
 - Organizational structure
 - Environmental influences
 - All of the above

Answer: d **Page Reference: 44**

19. All of the following organizational influences can affect a project's success, EXCEPT for the:
- organizational culture.
 - organization's customers.
 - organization's structure.
 - role of the project management office.

Answer: b **Page Reference: 45**

20. What is NOT a common organizational structure?

- a. Functional
- b. Projectized
- c. Matrix
- d. Departmental

Answer: d **Page Reference: 45**

21. A functional organizational structure is sometimes thought of as resembling a:

- a. pyramid.
- b. matrix.
- c. square.
- d. network.

Answer: a **Page Reference: 46**

22. The organizational unit created to centralize and coordinate projects within an organization is called:

- a. coordination bureau.
- b. project management office.
- c. project coordination center.
- d. project organization office.

Answer: b **Page Reference: 48**

23. Social, economic, and environmental influences are comprised of:

- a. standards and regulations.
- b. internationalization.
- c. culture.
- d. all of the above.

Answer: d **Page Reference: 48**

24. A document approved by a recognized body, that provides, for common and repeated use, rules, guidelines, or characteristics for products, processes, or services with which compliance is not mandatory is called:

- a. regulation.
- b. standard.
- c. agreement.
- d. guideline.

Answer: b **Page Reference: 49**

25. A document, which lays down product, process, or service characteristics, including the applicable administrative provisions, with which compliance is mandatory, is called:
- regulation.
 - standard.
 - agreement.
 - guideline.

Answer: a **Page Reference: 49**

26. Key general management skills essential for successful project management include all EXCEPT:
- leading.
 - communicating.
 - commanding
 - problem solving.

Answer: c **Page Reference: 50**

27. Problem solving consists of:
- problem definition and decision making.
 - problem finding and problem clarification.
 - problem analysis and solution selection.
 - gathering information and problem finding.

Answer: a **Page Reference: 52**

28. What is NOT a characteristic of a Gantt chart?
- A Gantt chart visually shows the duration of tasks.
 - A Gantt chart shows the time overlap of tasks.
 - A Gantt chart can visually show slack times available.
 - A Gantt chart clearly shows how tasks must be ordered.

Answer: d **Page Reference: 53**

29. What is NOT characteristic of a network diagram?
- A network diagram visually shows the sequence dependencies between tasks.
 - A network diagram visually shows the duration of tasks.
 - A network diagram shows which tasks can be done in parallel.
 - A network diagram shows slack time within activity rectangles.

Answer: b **Page Reference: 55**

30. You should use a network diagram when:
- a. tasks are well-defined and have a clear beginning and endpoint.
 - b. tasks can be worked on independently of other tasks.
 - c. tasks are ordered.
 - d. all of the above.

Answer: d **Page Reference: 55**

31. Persons, groups of people, pieces of equipment, or materials used in accomplishing an activity are called:
- a. resources.
 - b. provisions.
 - c. requirements.
 - d. supplies.

Answer: a **Page Reference: 55**

32. The shortest time in which a project can be completed is shown by the:
- a. shortest path.
 - b. critical path.
 - c. longest path.
 - d. crucial path

Answer: b **Page Reference: 56**

33. The amount of time an activity can be delayed without delaying the project is called:
- a. slack time.
 - b. free time.
 - c. delay time.
 - d. lag time.

Answer: a **Page Reference: 56**

34. The amount of time a task can be delayed without delaying the early start of any immediately following task is called:
- a. total slack.
 - b. free slack.
 - c. overall slack.
 - d. optional slack.

Answer: b **Page Reference: 56**

35. The amount of time a task can be delayed without delaying the completion of the project is called:
- a. total slack.
 - b. free slack.
 - c. overall slack.
 - d. optional slack.

Answer: a **Page Reference: 56**

36. The technique that uses optimistic, pessimistic, and realistic time to calculate the expected time for a particular task is called:
- a. OPR technique.
 - b. PORT.
 - c. PERT.
 - d. expected time technique.

Answer: c **Page Reference: 58**

37. The PMBOK organizes project management processes into _____ groups.
- a. three
 - b. four
 - c. five
 - d. six

Answer: c **Page Reference: 61**

38. A series of continuous actions that bring about a particular result, end, or condition is called a(n):
- a. program.
 - b. process.
 - c. activity sequence.
 - d. continuum.

Answer: b **Page Reference: 62**

39. Developing a project charter is part of which process group?
- a. Initiating
 - b. Planning
 - c. Executing
 - d. Controlling

Answer: a **Page Reference: 64**

40. Activity definition is part of which process group?

- a. Initiating
- b. Planning
- c. Executing
- d. Controlling

Answer: b **Page Reference: 64**

41. Risk estimation is part of which process group?

- a. Initiating
- b. Planning
- c. Executing
- d. Controlling

Answer: b **Page Reference: 64**

42. Developing a project team is part of which process group?

- a. Initiating
- b. Planning
- c. Executing
- d. Controlling

Answer: c **Page Reference: 65**

43. Requesting seller responses is part of which process group?

- a. Initiating
- b. Planning
- c. Executing
- d. Controlling

Answer: c **Page Reference: 65**

44. Information distribution is part of which process group?

- a. Initiating
- b. Planning
- c. Executing
- d. Controlling

Answer: c **Page Reference: 65**

45. Scope verification is part of which process group?
- a. Initiating
 - b. Planning
 - c. Executing
 - d. Controlling

Answer: d **Page Reference: 65**

46. Managing the project team is part of which process group?
- a. Planning
 - b. Executing
 - c. Controlling
 - d. Closing

Answer: c **Page Reference: 65**

47. Performing quality control is part of which process group?
- a. Planning
 - b. Executing
 - c. Controlling
 - d. Closing

Answer: c **Page Reference: 65**

48. Contract closure is part of which process group?
- a. Planning
 - b. Executing
 - c. Controlling
 - d. Closing

Answer: d **Page Reference: 66**

Fill in the Blanks

49. Projects are divided into smaller parts called _____.

Answer: phases
Page Reference: 38

50. The first phase in the SDLC, where the need for a new or enhanced systems is identified and the proposed system's scope is determined is called _____.

Answer: systems planning
Page Reference: 41

51. The second phase in the SDLC is called _____.

Answer: systems analysis

Page Reference: 41

52. The third phase in the SDLC is called _____.

Answer: systems design

Page Reference: 42

53. The fourth phase in the SDLC is called _____.

Answer: systems implementation

Page Reference: 42

54. Specifications that focus on the origin, flow, and processing of data in a system, but are not tied to any specific hardware and systems software platform are called _____.

Answer: logical design

Page Reference: 42

55. Structured system design that can be broken down into smaller and smaller units for conversion into instructions written in a programming language is called _____.

Answer: physical design

Page Reference: 42

56. The fifth phase in the SDLC is called _____.

Answer: systems maintenance

Page Reference: 43

57. An organization's _____ reflects what those who work there hold to be most important.

Answer: culture

Page Reference: 45

58. A _____ organization structure is a traditional hierarchical organization.

Answer: functional

Page Reference: 46

59. A type of organizational structure where people from different backgrounds work with each other throughout the lifetime of a project is called _____ organization structure.

Answer: projectized

Page Reference: 46

60. A type of organizational structure that typically crosses functional design with some other design characteristic is called _____ organization structure.

Answer: matrix

Page Reference: 46

61. The organizational unit created to centralize and coordinate the projects within an organization is called _____.

Answer: project management office

Page Reference: 48

62. Compliance with a standard is _____.

Answer: not mandatory

Page Reference: 49

63. Compliance with regulations is _____.

Answer: mandatory

Page Reference: 49

64. Standards may over time become _____ regulations, driven by market pressures or habit.

Answer: de facto

Page Reference: 49

65. Problem solving has two aspects: _____ and decision making.

Answer: problem definition

Page Reference: 52

66. Problem solving has two aspects: problem definition and _____.

Answer: decision making

Page Reference: 52

67. Defining a problem correctly means distinguishing between _____.

Answer: causes and symptoms

Page Reference: 52

68. Due to limitations in terms of time and human processing, decision making often results in _____.

Answer: satisficing

Page Reference: 52

69. A _____ is a popular graph for displaying the duration of tasks.

Answer: Gantt chart

Page Reference: 53

70. A _____ shows the sequence dependencies between tasks.

Answer: network diagram

Page Reference: 55

71. The sequence of activities whose order and durations directly affect the completion date of a project is called _____.

Answer: critical path

Page Reference: 56

72. The critical path of a network diagram is represented by the sequence of connected activities that produce the _____ overall time period.

Answer: longest

Page Reference: 56

73. The critical path represents the _____ time in which a project can be completed.

Answer: shortest

Page Reference: 56

74. Nodes not on the critical path contain _____.

Answer: slack time

Page Reference: 56

75. The _____ expected completion time refers to the time in which an activity can be completed without delaying the project.

Answer: latest

Page Reference: 56

76. Activities with a slack time of zero are on the _____.

Answer: critical path

Page Reference: 56

77. A project can have _____ critical path(s).

Answer: multiple

Page Reference: 56

78. _____ refers to the amount of time a task can be delayed without delaying the early start of any immediately following task.

Answer: Free slack
Page Reference: 57

79. _____ refers to the amount of time a task can be delayed without delaying the completion of the project.

Answer: Total slack
Page Reference: 57

80. The technique that uses optimistic, pessimistic, and realistic time to calculate the expected time for a particular task is known as _____.

Answer: Program Evaluation and Review Technique (PERT)
Page Reference: 58

81. A _____ is a series of continuous actions that bring about a particular results, end, or condition.

Answer: process
Page Reference: 62

82. The five process groups identified by the PMBOK are initiating, planning, executing, monitoring and controlling, and _____.

Answer: closing
Page Reference: 62

83. The process group concerned with authorizing a project to begin is called _____.

Answer: initiating
Page Reference: 62

84. The process group involving defining goals and selecting the best way to achieve them is called _____.

Answer: planning
Page Reference: 62

85. The process group involving coordinating people and resources to carry out the plan is called _____.

Answer: executing
Page Reference: 62

86. The process group concerned with measuring progress during execution of a project is called _____.

Answer: monitoring and controlling

Page Reference: 62

87. The process group concerned with formal acceptance of a project is called _____.

Answer: closing

Page Reference: 62

88. Process groups are _____ by the results they produce.

Answer: linked

Page Reference: 62

True /False

89. Projects are divided into smaller parts called phases.

Answer: True

Page Reference: 38

90. The steps of an SDLC (in the correct order) are analysis, planning, design, implementation, maintenance.

Answer: False

Reason: The steps of an SDLC (in the correct order) are planning, analysis, design, implementation, maintenance.

Page Reference: 39

91. Systems planning has one primary activity.

Answer: False

Reason: Systems planning has two primary activities.

Page Reference: 41

92. During systems design, the descriptions of the recommended alternative are converted into physical and then logical design.

Answer: False

Reason: During systems design, the descriptions of the recommended alternative are converted into logical and then physical design.

Page Reference: 42

93. Systems implementation includes coding, testing, and installation.

Answer: True

Page Reference: 42

94. During systems maintenance, changes are made to the system to reflect changing business conditions.

Answer: True

Page Reference: 43

95. Project managers only have to be concerned with the project itself.

Answer: False

Reason: Projects exist in a broader environment than just the project itself.

Page Reference: 44

96. Failure to identify a key stakeholder can cause major problems for a project.

Answer: True

Page Reference: 44

97. An organizations' culture often influences the projects it undertakes.

Answer: True

Page Reference: 45

98. A functional organization structure can be thought of as a pyramid.

Answer: True

Page Reference: 46

99. In an organization with a functional structure, each employee reports to different entities.

Answer: False

Reason: Each employee has one clear supervisor.

Page Reference: 46

100. In an organization with a projectized structure, team members belong to different functional areas.

Answer: False

Reason: Team members belong to the same organizational unit

Page Reference: 46

101. A strong matrix organization structure has many characteristics of a projectized organization.

Answer: True

Page Reference: 46

102. A weak matrix organization structure resembles to some extent a functional organization.

Answer: True

Page Reference: 47

103. Companies can choose whether or not to follow a regulation.

Answer: False

Reason: Compliance with regulations is necessary.

Page Reference: 49

104. Standards may become de facto regulations, driven by market pressures or by habit.

Answer: True

Page Reference: 49

105. On large projects, the project manager and project leader should always be the same person.

Answer: False

Reason: Project manager and project leader may not be the same person.

Page Reference: 50

106. Correctly defining a problem is critical for successful problem solving.

Answer: True

Page Reference: 52

107. Network diagrams are useful to visually show the duration of tasks.

Answer: False

Reason: Network diagrams do not visually show the duration of tasks.

Page Reference: 55

108. The critical path is the shortest path through a network diagram.

Answer: False

Reason: The critical path is the sequence of connected activities that produce the longest overall time period.

Page Reference: 56

109. The critical path represents the shortest time in which a project can be completed.

Answer: True

Page Reference: 56

110. Nodes not on the critical contain slack time.

Answer: True

Page Reference: 56

Essay Questions

111. Describe the systems planning phase of the systems development life cycle.

Answer: The first phase in the SDLC, systems planning, has two primary activities. First, someone identifies the need for a new or enhanced system. Information needs of the organization are examined and projects to meet these needs are identified.

The systems analyst prioritizes and translates the needs into a written plan for the IS department, including a schedule for developing new major systems. Requests for new systems spring from users who need new or enhanced systems. During the systems planning phase, an organization determines whether or not resources should be devoted to the development or enhancement of each information system under consideration. A feasibility study is conducted before the second phase of the SDLC to determine the economic and organizational impact of the system.

The second task in the systems planning phase is to investigate the system and determine the proposed system's scope. The team of systems analysts then produces a specific plan for the proposed project for the team to follow. This baseline project plan customizes the standardized SDLC and specifies the time and resources needed for its execution. The formal definition of a project is based on the likelihood that the organization's IS department is able to develop a system that will solve the problem or exploit the opportunity and determine whether the costs of developing the system outweigh the possible benefits. The final presentation to the organization's management of the plan for proceeding with the subsequent project phases is usually made by the project leader and other team members.

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112. Describe the systems analysis phase of the systems development life cycle.

Answer: During this phase, the analysts thoroughly study the organization's current procedures and the information systems used to perform tasks such as general ledger, shipping, order entry, machine scheduling, and payroll. Analysis has several subphases. The first subphase involves determining the requirements of the system. In this subphase, analysts work with users to determine what the users want from a proposed system. This subphase involves a careful study of any current systems, manual and computerized, that might be replaced or enhanced as part of this project. Next, analysts study the requirements and structure them according to their interrelationships, eliminating any redundancies. Third, analysts generate alternative initial designs to match the requirements. Then they compare these alternatives to determine which best meets the requirements within the cost, labor, and technical levels the organization is willing to commit to the development process. The output of the analysis phase is a description of the alternative solution recommended by the analysis team. Once the recommendation is accepted by the organization, analysts can make plans to acquire any hardware and system software necessary to build or operate the system as proposed

Page Reference: 41

113. Describe the systems design phase of the systems development life cycle.

Answer: During systems design, analysts convert the description of the recommended alternative solution into logical and then physical system specifications. Analysts must design all aspects of the system from input and output screens to reports, databases, and computer processes.

Logical design is not tied to any specific hardware and systems software platform. Theoretically, the system being designed could be implemented on any hardware and systems software. Logical design concentrates on the business aspects of the system; that is, how the system will impact the functional units within the organization. In physical design, the logical design is turned into physical, or technical, specifications. For example, analysts must convert diagrams that map the origin, flow, and processing of data in a system into a structured systems design that can then be broken down into smaller and smaller units for conversion to instructions written in a programming language. During physical design, the analyst team decides which programming languages the computer instructions will be written in, which database systems and file structures will be used for the data, and which hardware platform, operating system, and network environment the system will run under. These decisions finalize the hardware and software plans initiated at the end of the analysis phase. The final product of the design phase is the physical system specifications, presented in a form, such as a diagram or written report, ready to be turned over to programmers and other system builders for construction.

Page Reference: 42

114. Describe the systems implementation phase of the systems development life cycle.

Answer: During the systems implementation phase of the SDLC, system specifications are turned into a working system that is tested and then put into use. Implementation includes coding, testing, and installation. During coding, programmers write the programs that make up the system. During testing, programmers and analysts test individual programs and the entire system in order to find and correct errors. During installation, the new system becomes a part of the daily activities of the organization. Application software is installed, or loaded, on existing or new hardware; then users are introduced to the new system and trained. Planning for both testing and installation should begin as early as the project planning and selection phase, because they both require extensive analysis in order to develop exactly the right approach.

Page Reference: 42

115. Describe the systems maintenance phase of the systems development life cycle.

Answer: The fifth and final phase is systems maintenance. While a system is operating in an organization, users sometimes find problems with how it works and often think of improvements. During maintenance, programmers make the changes that users ask for and modify the system to reflect changing business conditions. These changes are necessary to keep the system running and useful. The amount of time and effort devoted to system enhancements during the maintenance phase depends a great deal on the performance of the previous phases of the life cycle. There inevitably comes a time, however, when an information system is no longer performing as desired, when the costs of keeping a system running become prohibitive, or when an organization's needs have changed substantially.

Such problems indicate that it is time to begin designing the system's replacement, thereby completing the loop and starting the life cycle over again.

Page Reference: 43

116. Describe a functional organization structure and its effect on the organization's projects.

Answer: A functional organization structure is a traditional hierarchical organization, sometimes thought of as resembling a pyramid, with top management at the fulcrum, direct workers at the bottom, and middle managers in between. Each employee has one clear supervisor, and employees are grouped by specialization into accounting, marketing, information systems, manufacturing, and other functional groups. In such organizations, the scope of a project is limited to the boundaries of function. Different parts of a project are worked on separately by people within different functional areas. For example, Marketing determines what will sell, Engineering designs the product based on what they learned from Marketing, and Engineering passes its specifications on to Manufacturing, which separately figures out how to build the product. Many times, Engineering has to make changes in the product that Marketing doesn't like, simply because they cannot develop a design that satisfies all of Marketing's desires, and Manufacturing has to make changes Engineering doesn't like in order to build a working product based on the manufacturing technologies they have in place. This process is often called the "over the wall" problem – one group takes their part of the project and throws it "over the wall" to the next group. The result is often more work for everybody involved and a product that is less than what it could have been.

Page Reference: 46

117. Describe a projectized organization structure and its effect on the organization's projects.

Answer: With a projectized organization structure, the project team is really a team. The project scope and team members cross organizational boundaries. People from different functional backgrounds work with each other throughout the lifetime of the project. Team members are all part of the same organizational unit instead of belonging to different functional areas. The organization structure is designed to provide the necessary resources for project work. Project managers have the authority and independence necessary to carry the project through to successful completion because they report directly to the organization's chief executive.

Page Reference: 46

118. Describe a matrix organization structure and its subtypes.

Answer: Matrix organizations are so named because they typically cross functional design (on one axis) with some other design characteristic (on the other axis), in this case project management. There are several ways to organize matrix organizations. A strong matrix has many of the characteristics of a projectized organization, with full-time project managers with authority and full-time project administrative staff. Project staff report to project managers as well as to the heads of their functional areas. A weak matrix structure would more closely resemble a functional organization, with project managers acting more as coordinators than as independent managers.

Page Reference: 46

119. Define standard and regulations and highlight the differences between the two.

Answer: Sample answer from the book: The International Organization for Standardization defines a standard as a “document approved by a recognized body, that provides, for common and repeated use, rules, guidelines, or characteristics for products, processes, or services with which compliance is not mandatory” (ISO, 1994). Similarly, a regulation is defined as a “document, which lays down product, process, or service characteristics, including the applicable administrative provisions, with which compliance is mandatory” (ISO, 1994). Standards may eventually become de facto regulations, driven by market pressures or by habit. Compliance with standards and regulations can be mandated at different levels. The project manager may determine which standards need to be applied; the organization may have certain expectations for its projects or the products they result in; the government, at whatever jurisdictional level, may impose regulations in the name of safety or other public goods.

Page Reference: 49

120. List and describe the five project management process groups.

Answer:

- Initiating – This involves authorizing a project or process to begin.
- Planning – One of the most extensive sets of processes, planning involves defining goals and selecting best way to achieve them. Many of the activities that are the subject of management techniques and of project management software involve planning processes.
- Executing – Once the project is planned, the next step is carrying out the plan. Executing processes involved coordinating people and other resources to carry out the plan.
- Monitoring and Controlling – Controlling processes are designed to regularly monitor and measure progress during execution in order to identify variances from the plan and to take corrective action when necessary.
- Closing – The counterpart to the initiating process, closing processes occur when it is time for the formal acceptance of a project and for bringing it to an end.

Page Reference: 62