Chapter 2
Project Profiling

True/False Questions

1. Even though all projects are unique, they do have common attributes among them.
   True; Easy

2. Project managers have always been assigned to projects based on their skills and the skills required by the project.
   False; Easy

3. When you characterize a project as domestic or global, the size of the project becomes the profiling characteristic.
   False; Moderate

4. Project profiling places a project into a category with other projects that have similar characteristics.
   True; Easy

5. In Shenhar and Dvir's typology, technological uncertainty ranged from low tech and medium tech, to high tech.
   False; Easy

6. Shenhar and Dvir develop criteria for each type of technological uncertainty that enabled the project to be typed.
   True; Easy

7. Shenhar and Dvir observed that the project execution approach was connected to the project type.
   True; Easy

8. Youker looked at system scope as an attribute that helped determine a project profile.
   False; Easy

9. Ordered systems tend to be heterogeneous.
   False; Easy

10. A definite way of finishing a project earlier is by removing or shortening a project kickoff activity.
    False; Moderate

11. Formal organizational charts indicate reporting relationships and are very effective at displaying project relationships.
    False; Moderate

12. A project manager should facilitate the adaptive behavior of the project organization by maximizing the impact of formal authority and processes.
    False; Moderate

13. All projects experience a degree of environmental turbulence, yet not all projects experience a form of environment shift during the life of the project.
    False; Moderate

14. The purpose of the change management process is to stop change.
    False; Easy

15. Projects are more likely to fail in the beginning, not in the end.
    True; Easy

16. External project attributes include those issues that are typically established early in the project definition phase.
    True; Easy

17. The more time and energy the management team must dedicate to searching for resources or alternatives places, the lesser is the stress on the project.
    False; Moderate

18. The client team approach of handling projects adds to project complexity.
    True; Moderate

19. The technology of a project refers to the technology used to manage the project.
    False; Easy

20. Duties for equipment and material brought into a country add complexity to the procurement plan.
    True; Easy

21. Institutions of higher learning have goal-based cultures.
    False; Easy

22. An increase in the number of cultures with which a project team must interface, and not the number of cultures represented on the team, increases the complexity of a project.
    False; Easy

23. The ecology includes the sights and sounds that can impact the quality of life.
    True; Easy

Multiple Choice Questions

1. Research by the Construction Industry Institute indicated that the number one criterion for assignment of a project manager to a project was:
    a. skills.
    b. availability.
    c. experience.
    d. reputation.
    e. cost.
    b; Easy

2. _____ is the process of extracting a characterization from the known attributes of a project.
    a. Project scoping
    b. Project execution
    c. Project profiling
    d. Project parametric

e. Project logic diagramming
    c; Easy

3. Which of the following statements is true about project profiling?
    a. It promotes the haphazard development of a project execution plan.
    b. It is of little, if any, help in selecting an appropriate project manager.
    c. The most commonly used attribute in project profiling is location.
    d. It summarizes what is known about the attributes of a project.
    e. It is the process of extracting the unknown attributes of a project.
    d; Moderate

4. Which of the following were the two dimensions of the typology developed by Shenhar and Dvir?
    a. System scope and organizational design
    b. Risk and technological uncertainty
    c. Project scope and project complexity
    d. Technological uncertainty and system scope
    e. Project scope and risk
    d; Moderate

5. As per the typology developed by Shenhar and Dvir, system scope ranged from _____ that included projects that dealt with building a single component, to _____ that included a wide dispersal of interactive systems and subsystems.
    a. array projects; system projects
    b. system projects; array projects
    c. assembly projects; array projects
    d. array projects; assembly projects
    e. system projects; assembly projects
    c; Moderate

6. According to Shenhar and Dvir, as the project system scope became more complex and the system scope of the project became larger:
    a. more sophisticated management tools were put in place to reduce project uncertainty.
    b. project managers became less invested in processes such as redesign and testing.
    c. project managers became more invested in informal planning and control issues.
    d. the project management approach most likely adjusted to a systematic classification.
    e. project managers used fewer risk management techniques.
    a; Moderate

7. _____ identified differences in project types based on uncertainty and risk, level of sophistication of the workers, the level of detail in the planning, the newness of the technology, and the time pressure.
    a. Aaron J. Shenhar
    b. Dov Dvir
    c. Albert Einsiedel
    d. Hans Thamhain
    e. Robert Youker
    e; Easy

8. Which of the following statements is true regarding complex systems?
    a. Complex systems are characterized by order and homogeneity.
    b. An interstate toll booth is a prime example of a complex system.
    c. The behavior of complex systems can be easily inferred from that of its components.

d. The complexity of a system is determined solely by the number of parts it has.
e. Irregularly configured systems are complex, such as junkyards.
e; Moderate

9. Which among the following is an example of an ordered system?
   a. Stock markets
   b. Organisms
   c. Airplanes
   d. A factory production line
   e. The ecosystem
   d; Moderate

10. In addition to the number of parts, the degree of differentiation between parts and _____ also influences the degree of complexity in system.
    a. the degree of uniformity in the project environment
    b. the number, type, and strength of relationships between parts
    c. the newness of technology and time pressure
    d. the level of detail in planning
    e. the project team structure and organizational design
    b; Moderate

11. A(n) _____ is defined as an organization of elements that change in response to events in its environment.
    a. adaptive system
    b. change management process
    c. complexity index
    d. scope change
    e. reactive system
    a; Easy

12. A complex adaptive system is adaptive if:
    a. the activities have a high degree of interdependence between them.
    b. the activities are resistant to changes in the project environment.
    c. the activities adjust or react to the events of the environment.
    d. the activities adjust in ways that prevent the system from achieving its purpose.
    e. the activities function independently of one another.
    c; Moderate

13. _____ refer(s) to activities that are affected by events that change the characteristics of other activities.
    a. Relationship dependence
    b. Complex systems
    c. Adaptability
    d. Change management
    e. Complexity
    a; Easy

14. A _____ system is a system that will produce the same results if you start with the same conditions.
    a. definite
    b. regulated
    c. deterministic

d. nonlinear
e. standard
c; Easy

15. Projects are usually _____ systems, that is, they produce wildly different results even if the starting conditions are almost exactly the same.
    a. definite
    b. regulated
    c. deterministic
    d. nonlinear
    e. standard
    d; Moderate

16. A _____ is a method of incorporating change into project planning and execution processes.
    a. project logic diagram
    b. change management process
    c. milestone schedule
    d. critical path
    e. rough order of magnitude
    b; Easy

17. Which of the following statements is true regarding the Darnall-Preston Complexity Index (DPCI)?
    a. The DPCI groups ten project attributes into four broad categories.
    b. The categories of the DPCI are internal attributes, external attributes, technological complexity, and system scope.
    c. The DPCI helps in defining the experience, knowledge, skills, and abilities needed by the project manager.
    d. The DPCI has the tendency to further complicate the process of developing a project execution plan.
    e. The DPCI has little impact on the composition and organization of the project leadership team.
    c; Moderate

18. According to the Darnall-Preston Complexity Index (DPCI), the clarity of project objectives and scope would be classified under:
    a. external attributes.
    b. internal attributes.
    c. ecological attributes.
    d. technological attributes.
    e. environmental attributes.
    b; Easy

19. According to the Darnall-Preston Complexity Index (DPCI), which of the following are external attributes that contribute to project complexity?
    a. Legal aspects
    b. Organizational complexity
    c. Project size
    d. Cultural factors
    e. Stakeholder agreement
    c; Moderate

20. Which of the following are the technological attributes that contribute to project complexity?

a. Newness of the technology and familiarity of team members with the technology
b. Relevance of the technology and the availability of the technology to the project team
c. Level of compatibility of the technology and the future applicability of the technology
d. Strategic value of the technology and the accessibility of technology
e. Technological sophistication and technological compatibility

a; Moderate

21. The DPCI was developed around four assumptions. Which of the following is one of them?
a. All projects are similar to one another.
b. Projects have distinct characteristics.
c. There is no such thing as an optimum execution approach.
d. Grouping of project characteristics to create a project profile is not always possible.
e. There is an optimum set of skills and experience for the project execution team.

e; Moderate

22. Which of the following statements is true about project size as an external attribute that contributes to project complexity?
a. Project size is an absolute concept.
b. The size of a project is determined by the context of the industry and the experience of the team executing the project.
c. When a company is executing a project that is much smaller than the company norm, it often results in schedule delays.
d. Though it seems practical, companies rarely divide large projects into smaller ones.
e. Large projects that fall outside the comfort zone of the project management team often create stress for the project, but small projects rarely do.

b; Moderate

23. Which of the following statements is NOT true about project duration as an external attribute that contributes to project complexity?
a. The duration of a project is often set by the parent organization that charters the project.
b. The project deadline reflects the business purpose of the project.
c. The project team estimates the duration of the project.
d. The project team establishes a project end date based on normal work.
e. The normal time needed to complete a project is always longer than the time available.

e; Easy

24. _____, the more stress that is placed on the project.
a. The more the people with the right experience, knowledge, and skills to accomplish the task
b. The lesser the time and energy the management team dedicates to searching for resources
c. The more scarce and more important the resources
d. The more the project size is within the comfort zone of the team
e. The more the time available to complete a project

c; Moderate

25. Internal attributes:
a. are within the control of the project manager.
b. include the newness of the technology.
c. once established are permanent in nature.
d. usually do not impact the level of complexity.
e. are determined during the later phases of the project.

a; Moderate

26. This defines what is inside the project and what is outside.
    a. Project objectives
    b. Stakeholder agreement
    c. Project scope
    d. Project execution plan
    e. Availability of resources
    c; Easy

27. Which of the following statements is true regarding organization complexity as an attribute that contributes to project complexity?
    a. Organizational complexity and project complexity are inversely related to one another.
    b. The client team approach of handling projects reduces project complexity.
    c. Projects with a team representing the client require less of the project manager's time and energy.
    d. A project with one client as the central point for all information has a streamlined communication process.
    e. The client team approach brings more expertise but often less comprehensive project oversight as well.
    d; Moderate

28. In terms of stakeholder agreement, which of the following does NOT increase the complexity of a project?
    a. An increase in the number of stakeholders
    b. The inability of stakeholders to influence project outcomes
    c. The emotional investment of the stakeholders in the project
    d. The ability of the stakeholders to influence the project execution approach
    e. The degree to which the project stakeholders disagree
    b; Moderate

29. _____, the greater the stress and the contribution to the complexity of the project.
    a. The newer the technology
    b. The more familiar the project team is with the technology
    c. The lesser the amount of time needed by the leadership team to develop a clear scope
    d. The clearer the project team is on the project goals and objectives
    e. The simpler the structure of the project's client organization
    a; Moderate

30. _____ is a term that reflects the community's assumptions, norms, values, and artifacts.
    a. Reference
    b. Culture
    c. Orientation
    d. Civility
    e. Context
    b; Easy

31. Institutions of higher learning and most government organizations are examples of:
    a. goal-based cultures.
    b. flat organizations.
    c. rule-based organizations.
    d. decentralized organizations.
    e. organic cultures.

c; Moderate

32. Goal-based cultures:
    a. inhibit risk taking through established rules and policies.
    b. focus on plans and processes to achieve goals.
    c. can be seen in organizations related to judicial organizations.
    d. produce the least amount of cultural conflict.
    e. promote assuming risk to achieve goals.
    e; Moderate

33. Projects have the potential to impact the living conditions or the health of people, plants, and animals. This relates to which of the following attributes that contribute to project complexity?
    a. Resource availability
    b. Stakeholder agreement
    c. Political
    d. Cultural
    e. Ecological
    e; Easy

Short Answer Questions

1. Define project profiling.
   Project profiling is the process of extracting a characterization from the known attributes of a project.
   Easy

2. Name and describe two project attributes that can be used for project profiling.
   Even though all projects are by definition unique, there are attributes that are common among projects that allow the characterization or profiling of a project. We can look at just two project attributes and develop some understanding of the project. A large project that will be executed in at least three locations will have a very different profile than a small project that will be executed in one location. These two attributes—size and location—provide information about the project that will enable a manager in the parent organization to assign a project manager with the appropriate knowledge and skills.
   Moderate

3. Briefly describe the typology developed by Shenhar and Dvir.
   Shenhar and Dvir developed a typology of engineering projects that reflected two dimensions. The first dimension reflected the technological uncertainty and ranged from low tech, medium tech, and high tech to super high tech. Although projects involve the use of various levels of technology, Shenhar and Dvir develop criteria for each type of technological uncertainty that enabled the project to be typed. The second dimension reflected the system scope. The system scope dimension ranged from assembly projects that included projects that dealt with building a single component, to system projects that included interactive elements, to array projects that included a wide dispersal of interactive systems and subsystems.
   Moderate

4. Projects are complex adaptive systems. Explain.
   A complex adaptive system is a system consisting of a large number of parts or activities that interact with each other in numerous and various ways. A complex adaptive system is adaptive if the activities

adjust or react to the events of the environment. Successful adaptive systems adjust in a way that facilitates or allows the system or project to achieve its purpose.
Easy

5. What is the Darnall-Preston Complexity Index?
    The Darnall-Preston Complexity Index (DPCI) is a project profiling system that groups project attributes into four categories: internal attributes, external attributes, technological complexity, and ecological attributes. The DPCI provides project stakeholders with information about the project to define the experience, knowledge, skills, and abilities needed by the project manager. The DPCI also has implications for the composition, organization, and skills needed by the project leadership team. The DPCI provides information and a context for developing the project execution plan and for assessing the probability of success.
    Moderate

6. Briefly describe the four categories of the Darnall-Preston Complexity Index (DPCI).
    The Darnall-Preston Complexity Index (DPCI) is designed to develop a project profile that reflects different aspects of the project that will influence the approach to leading and executing the project. The DPCI is built on four categories of attributes:
    *   External: Environmental attributes that are in existence at the beginning of the project, such as size, duration, and available resources
    *   Internal: Clarity of project objectives, the clarity of scope, the organizational complexity, and stakeholder agreement
    *   Technological: Newness of the technology and familiarity of team members with the technology
    *   Environmental: Legal, cultural, political, and ecological

Fill in the Blanks

1. The term _____ is defined as the characteristic of an entity or object.
    attribute; Easy

2. _____ refers to the classification or profiling of items that have characteristics or traits in common.
    Typology; Easy

3. The _____ Index is a project profiling system that groups project attributes into four categories: internal attributes, external attributes, technological complexity, and ecological attributes.
    Darnall-Preston Complexity; Moderate

4. The _____ attributes include those issues that are typically established early in the project definition phase and are usually outside the direct control of the project management team.
    external; Easy

5. _____ is an internal project attribute that defines what is inside the project and what is outside.
    Project scope; Moderate

6. _____ cultures promote assuming risk to achieve goals.
    Goal-based; Easy