CAPM.569q

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Certified Associate in Project Management (CAPM)

Sections

1. Volume A
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Exam A

QUESTION 1
Which changes occur in risk and uncertainty as well as the cost of changes as the life cycle of a typical project progresses?

A. Risk and uncertainty increase; the cost of changes increases.
B. Risk and uncertainty increase; the cost of changes decreases.
C. Risk and uncertainty decrease; the cost of changes increases.
D. Risk and uncertainty decrease; the cost of changes decreases.

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:

QUESTION 2
Which tool or technique is an examination of industry and specific vendor capabilities?

A. Independent estimates
B. Market research
C. Analytical techniques
D. Bidder conferences

Correct Answer: B
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
12.1.2.3 Market Research
Market research includes examination of industry and specific vendor capabilities. Procurement teams may leverage information gained at conferences, online reviews and a variety of sources to identify market capabilities.
The team may also refine particular procurement objectives to leverage maturing technologies while balancing risks associated with the breadth of vendors who can provide the materials or services desired.

QUESTION 3
Regression analysis, failure mode and effect analysis (FMEA), fault tree analysis (FTA), and trend analysis are examples of which tool or technique?

A. Expert judgment
B. Forecasting methods
C. Earned value management
D. Analytical techniques

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
4.4.2.2 Analytical Techniques
Analytical techniques are applied in project management to forecast potential outcomes based on possible variations of project or environmental variables and their relationships with other variables. Examples of analytical techniques used in projects are: ・Regression analysis,
・Grouping methods,
・Causal analysis,
・Root cause analysis,
・Forecasting methods (e.g., time series, scenario building, simulation, etc.),
・Failure mode and effect analysis (FMEA),
・Fault tree analysis (FTA),
・Reserve analysis,
・Trend analysis,
・Earned value management, and ・
Variance analysis.

QUESTION 4

The Perform Quality Assurance process occurs in which Process Group?

A. Executing
B. Monitoring and Controlling
C. Initiating
D. Planning

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Executing Process Group
4.3 Direct and Manage Project Work
8.2 Perform Quality Assurance
9.2 Acquire Project Team
9.3 Develop Project Team
9.4 Manage Project Team
10.2 Manage Communications
12.2 Conduct Procurements
13.3 Manage Stakeholder Engagement

QUESTION 5
Enterprise environmental factors are an input to which process?

A. Control Scope
B. Define Scope
C. Plan Scope Management
D. Collect Requirements

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Process: 5.1 Plan Scope Management

Definition: The process of creating a scope management plan that documents how the project scope will be defined, validated, and controlled.
Key Benefit: The key benefit of this process is that it provides guidance and direction on how scope will be managed throughout the project.

Inputs
1. Project management plan
2. Project charter
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Meetings

Outputs
Scope management plan
Requirements management plan

QUESTION 6
Which process develops options and actions to enhance opportunities and reduce threats to project objectives?

A. Identify Risks
B. Control Risks
C. Plan Risk Management
D. Plan Risk Responses

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Process: 11.5 Plan Risk Responses
Definition: The process of developing options and actions to enhance opportunities and to reduce threats to project objectives.
Key Benefit: The key benefit of this process is that it addresses the risks by their priority, inserting resources and activities into the budget, schedule and project management plan as needed.

Inputs
1. Risk management plan

2. Risk register

Tools & Techniques
1. Strategies for negative risks or threats
2. Strategies for positive risks or opportunities
3. Contingent response strategies
4. Expert judgment

Outputs
1. Project management plan updates
2. Project documents updates

QUESTION 7
The process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule is known as:

A. Plan Schedule Management.
B. Develop Project Charter.
C. Develop Schedule.
D. Plan Scope Management.

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Process: 6.1 Plan Schedule Management
Definition: The process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.
Key Benefit: The key benefit of this process is that it provides guidance and direction on how the project schedule will be managed throughout the project.

Inputs
1. Project management plan
2. Project charter
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analytical techniques
3. Meetings

Outputs
1. Schedule management plan

QUESTION 8
An input to the Plan Cost Management process is:

A. Cost estimates
B. Resource calendars
C. The project charter
D. The risk register

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
4.1.3.1 Project Charter
The project charter is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. It documents the business needs, assumptions, constraints, the understanding of the customer's needs and high-level requirements, and the new product, service, or result that it is intended to satisfy, such as:
・Project purpose or justification,
・Measurable project objectives and related success criteria,
・High-level requirements,
・Assumptions and constraints,
・High-level project description and boundaries,
・High-level risks,
・Summary milestone schedule,
・Summary budget,
・Stakeholder list,
・Project approval requirements (i.e., what constitutes project success, who decides the project is successful, and who signs off on the project), ・Assigned project manager, responsibility, and authority level, and
・Name and authority of the sponsor or other person(s) authorizing the project charter.

Process: 7.1 Plan Cost Management
Definition: The process that establishes the policies, procedures, and documentation for planning, managing, expending, and controlling project costs.
Key Benefit: The key benefit of this process is that it provides guidance and direction on how the project costs will be managed throughout the project.

Inputs
1. Project management plan
2. **Project charter**
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analytical techniques
3. Meetings

Outputs
Cost management plan

QUESTION 9
Which input provides suppliers with a clear set of goals, requirements, and outcomes?

A. Procurement statement of work
B. Purchase order
C. Source selection criteria
D. Bidder conference

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
12.1.3.2 Procurement Statement of Work
The statement of work (SOW) for each procurement is developed from the project scope baseline and defines only that portion of the project scope that is to be included within the related contract. The procurement SOW describes the procurement item in sufficient detail to allow prospective sellers to determine if they are capable of providing the products, services, or results. Sufficient detail can vary based on the nature of the item, the needs of the buyer, or the expected contract form. Information included in a SOW can include specifications, quantity desired, quality levels, performance data, period of performance, work location, and other requirements.

The procurement SOW is written to be clear, complete, and concise. It includes a description of any collateral services required, such as performance reporting or post-project operational support for the procured item. In some application areas, there are specific content and format requirements for a procurement SOW. Each individual procurement item requires a SOW; however, multiple products or services can be grouped as one procurement item within a single SOW. The procurement SOW can be revised and refined as required as it moves through the procurement process until incorporated into a signed agreement.

QUESTION 10
A project in which the scope, time, and cost of delivery are determined as early as possible is following a life cycle that is:

A. Adaptive
B. Predictive
C. Incremental
D. Iterative

Correct Answer: B
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
2.4.2.2 Predictive Life Cycles
Predictive life cycles (also known as fully plan-driven) are ones in which **the project scope, and the time and cost required to deliver that scope, are determined as early in the project life cycle as practically possible**. As shown in Figure 2-13, these projects proceed through a series of sequential or overlapping phases, with each phase generally focusing on a subset of project activities and project management processes. The work performed in each phase is usually different in nature to that in the preceding and subsequent phases, therefore, the makeup and skills required of the project team may vary from phase to phase.

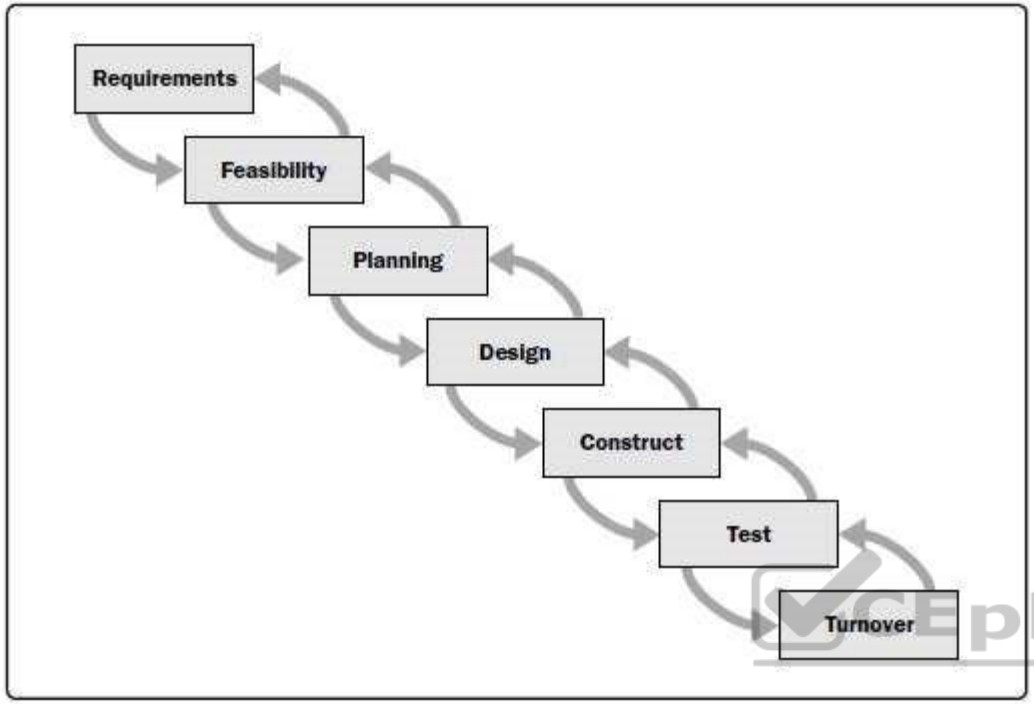


Figure 2-13. Example of Predictive Life Cycle

QUESTION 11
When alternative dispute resolution (ADR) is necessary, which tool or technique should be utilized?

A. Interactive communication
B. Claims administration
C. Conflict management
D. Performance reporting

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
12.3.2.6 Claims Administration
Contested changes and potential constructive changes are those requested changes where the buyer and seller cannot reach an agreement on compensation for the change or cannot agree that a change has occurred. These contested changes are variously called claims, disputes, or appeals. Claims are documented, processed, monitored, and managed throughout the contract life cycle, usually in accordance with the terms of the contract. If the parties themselves do not resolve a claim, it may have to be handled in accordance with alternative dispute resolution (ADR) typically following procedures established in the contract. Settlement of all claims and disputes through negotiation is the preferred method.

QUESTION 12
The only Process Group that comprises processes that typically occur from the beginning to the end of the project life cycle is:

A. Planning.
B. Executing,
C. Monitoring and Controlling.
D. Closing.

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 13
Organizational theory is a tool used in which Project Human Resource Management process?

A. Manage Project Team
B. Acquire Project Team
C. Develop Project Team
D. Plan Human Resource Management
Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
9.1.2.3 Organizational Theory

Organizational theory provides information regarding the way in which people, teams, and organizational units behave. Effective use of common themes identified in organizational theory can shorten the amount of time, cost, and effort needed to create the Plan Human Resource Management process outputs and improve planning efficiency. It is important to recognize that different organizational structures have different individual response, individual performance, and personal relationship characteristics. Also, applicable organizational theories may recommend exercising a flexible leadership style that adapts to the changes in a team's maturity level throughout the project life cycle.

Process: 9.1 Plan Human Resource Management
Definition: The process of identifying and documenting project roles, responsibilities, required skills, reporting relationships, and creating a staffing management plan.
Key Benefit: The key benefit of this process is that it establishes project roles and responsibilities, project organization charts, and the staffing management plan including the timetable for staff acquisition and release.

Inputs
1. Project management plan
2. Activity resource requirements
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Organization charts and position descriptions
2. Networking
3. **Organizational theory**
4. Expert judgment
5. Meetings

Outputs
Human resource management plan

QUESTION 14
A project charter is an output of which Process Group?

A. Executing
B. Planning
C. Initiating
D. Closing

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
4.2.1.1 Project Charter
Described in Section 4.1.3.1. The size of the project charter varies depending on the complexity of the project and the information known at the time of its creation. At a minimum, the project charter should define the high-level boundaries of the project. **The project team uses the project charter as the starting point for initial planning throughout the Initiating Process Group.**

4.1.3.1 Project Charter
The project charter is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. It documents the business needs, assumptions, constraints, the understanding of the customer's needs and high-level requirements, and the new product, service, or result that it is intended to satisfy, such as:
- Project purpose or justification,
- Measurable project objectives and related success criteria,
- High-level requirements,
- Assumptions and constraints,
- High-level project description and boundaries,
- High-level risks,
- Summary milestone schedule,
- Summary budget,
- Stakeholder list,
- Project approval requirements (i.e., what constitutes project success, who decides the project is successful, and who signs off on the project), - Assigned project manager, responsibility, and authority level, and
- Name and authority of the sponsor or other person(s) authorizing the project charter.

QUESTION 15
Which tool or technique is effective in a project in which the deliverable is not a service or result?

A. Inspection
B. Variance analysis
C. Decomposition
D. Product analysis

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
5.3.2.2 Product Analysis
For projects that have a product as a deliverable, as opposed to a service or result, product analysis can be an effective tool. Each application area has one or more generally accepted methods for translating high-level product descriptions into tangible deliverables. Product analysis includes techniques such as product breakdown, systems analysis, requirements analysis, systems engineering, value engineering, and value analysis.

QUESTION 16
An element of the project scope statement is:

A. Acceptance criteria.
B. A stakeholder list.
C. A summary budget.
D. High-level risks.

Correct Answer: A
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
5.3.3.1 Project Scope Statement
The project scope statement is the description of the project scope, major deliverables, assumptions, and constraints. The project scope statement documents the entire scope, including project and product scope. It describes, in detail, the project's deliverables and the work required to create those deliverables. It also provides a common understanding of the project scope among project stakeholders. It may contain explicit scope exclusions that can assist in managing stakeholder expectations. It enables the project team to perform more detailed planning, guides the project team's work during execution, and provides the baseline for evaluating whether requests for changes or additional work are contained within or outside the project's boundaries.
The degree and level of detail to which the project scope statement defines the work that will be performed and the work that is excluded can help determine how well the project management team can control the overall project scope. The detailed project scope statement, either directly, or by reference to other documents, includes the following:

- **Product scope description.** Progressively elaborates the characteristics of the product, service, or result described in the project charter and requirements documentation.
- **Acceptance criteria.** A set of conditions that is required to be met before deliverables are accepted.
- **Deliverable.** Any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project. Deliverables also include ancillary results, such as project management reports and documentation. These deliverables may be described at a summary level or in great detail.

- **Project exclusion.** Generally identifies what is excluded from the project. Explicitly stating what is out of scope for the project helps to manage stakeholders' expectations.
- **Constraints.** A limiting factor that affects the execution of a project or process. Constraints identified with the project scope statement list and describe the specific internal or external restrictions or limitations associated with the project scope that affect the execution of the project, for example, a predefined budget or any imposed dates or schedule milestones that are issued by the customer or performing organization. When a project is performed under an agreement, contractual provisions will generally be constraints. Information on constraints may be listed in the project scope statement or in a separate log.
- **Assumptions.** A factor in the planning process that is considered to be true, real, or certain, without proof or demonstration. Also describes the potential impact of those factors if they prove to be false.

Project teams frequently identify, document, and validate assumptions as part of their planning process.
Information on assumptions may be listed in the project scope statement or in a separate log.

Although the project charter and the project scope statement are sometimes perceived as containing a certain degree of redundancy, they are different in the level of detail contained in each. The project charter contains high level information, while the project scope statement contains a detailed description of the scope elements. These elements are progressively elaborated throughout the project. Table 5-1 describes some of the key elements for each document.

Table 5-1. Elements of the Project Charter and Project Scope Statement

Project Charter

- Project purpose or justification
- Measurable project objectives and related success criteria
- High-level requirements
- High-level project description
- High-level risks
- Summary milestone schedule
- Summary budget
- Stakeholder list
- Project approval requirements (what constitutes success, who decides it, who signs off)
- Assigned project manager, responsibility, and authority level
- Name and authority of the sponsor or other person(s) authorizing the project charter

Project Scope Statement

- Project scope description (progressively elaborated)
- Acceptance criteria
- Project deliverables
- Project exclusions
- Project constraints
- Project assumptions

QUESTION 17
Which document describes the necessary information to determine if a project is worth the required investment?
A. Cost baseline
B. Service level agreement
C. Memorandum of understanding
D. Business case

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
4.1.1.2 Business Case
The business case or similar document describes the necessary information from a business standpoint to determine whether or not the project is worth the required investment. It is commonly used for decision making by managers or executives above the project level. Typically, the business need and the cost-benefit analysis are contained in the business case to justify and establish boundaries for the project, and such analysis is usually completed by a business analyst using various stakeholder inputs. The sponsor should agree to the scope and limitations of the business case. The business case is created as a result of one or more of the following:
- Market demand (e.g., a car company authorizing a project to build more fuel-efficient cars in response to gasoline shortages),
- Organizational need (e.g., due to high overhead costs a company may combine staff functions and streamline processes to reduce costs.),
- Customer request (e.g., an electric utility authorizing a project to build a new substation to serve a new industrial park),
- Technological advance (e.g., an airline authorizing a new project to develop electronic tickets instead of paper tickets based on technological advances),
- Legal requirement (e.g., a paint manufacturer authorizing a project to establish guidelines for handling toxic materials),
- Ecological impacts (e.g., a company authorizing a project to lessen its environmental impact), or
- Social need (e.g., a nongovernmental organization in a developing country authorizing a project to provide potable water systems, latrines, and sanitation education to communities suffering from high rates of cholera).

Each of the examples in this list may contain elements of risk that should be addressed. In the case of multiphase projects, the business case may be periodically reviewed to ensure that the project is on track to deliver the business benefits. In the early stages of the project life cycle, periodic review of the business case by the sponsoring organization also helps to confirm that the project is still aligned with the business case. The project manager is responsible for ensuring that the project effectively and efficiently meets the goals of the organization and those requirements of a broad set of stakeholders, as defined in the business case.

QUESTION 18
Which group is formally chartered and responsible for reviewing, evaluating, approving, delaying, or rejecting changes to the project and for recording and communicating decisions?

A. Project team
B. Focus group
C. Change control board
D. Project stakeholders

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Change Control Board (CCB). A formally chartered group responsible for reviewing, evaluating, approving, delaying, or rejecting changes to the project, and for recording and communicating such decisions.

QUESTION 19
Plan Schedule Management is a process in which Knowledge Area?

A. Project Scope Management
B. Project Human Resource Management
C. Project Integration Management
D. Project Time Management

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Schedule -> Time Management Easy question

QUESTION 20
The Perform Integrated Change Control process occurs in which Process Group?

A. Initiating
B. Executing
C. Monitoring and Controlling
D. Planning
Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Monitoring and Controlling Process Group
4.4 Monitor and Control Project Work
4.5 **Perform Integrated Change Control**
5.5 Validate Scope
5.6 Control Scope
6.7 Control Schedule
7.4 Control Costs
8.3 Control Quality
10.3 Control Communications
11.6 Control Risks
12.3 Control Procurements
13.4 Control Stakeholder Engagement

QUESTION 21
Which input to the Plan Risk Management process provides information on high-level risks?

A. Project charter
B. Enterprise environmental factors
C. Stakeholder register
D. Organizational process assets

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
4.1.3.1 Project Charter
The project charter is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. It documents the business needs, assumptions, constraints, the understanding of the customer's needs and high-level requirements, and the new product, service, or result that it is intended to satisfy, such as:
- Project purpose or justification,
- Measurable project objectives and related success criteria,
- High-level requirements,
- Assumptions and constraints,
- High-level project description and boundaries, - **High-level risks,**
- Summary milestone schedule,
- Summary budget,
- Stakeholder list,
- Project approval requirements (i.e., what constitutes project success, who decides the project is successful, and who signs off on the project), - Assigned project manager, responsibility, and authority level, and
- Name and authority of the sponsor or other person(s) authorizing the project charter.

Process: 11.1 Plan Risk Management
Definition: The process of defining how to conduct risk management activities for a project.
Key Benefit: The key benefit of this process is it ensures that the degree, type, and visibility of risk management are commensurate with both the risks and the importance of the project to the organization. The risk management plan is vital to communicate with and obtain agreement and support from all stakeholders to ensure the risk management process is supported and performed effectively over the project life cycle.

Inputs
1. Project management plan
2. **Project charter**
3. Stakeholder register
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques

1. Analytical techniques
2. Expert judgment
3. Meetings

Outputs
1. Risk management plan

QUESTION 22
The iterative and interactive nature of the Process Groups creates the need for the processes in which Knowledge Area?

A. Project Communications Management
B. Project Integration Management
C. Project Risk Management
D. Project Scope Management

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 23
Market conditions and published commercial information are examples of which input to the Estimate Costs process?

A. Scope baseline
B. Organizational process assets
C. Enterprise environmental factors
D. Risk register

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
7.2.1.6 Enterprise Environmental Factors

Described in Section 2.1.5. The enterprise environmental factors that influence the Estimate Costs process include, but are not limited to:
- **Market conditions.** These conditions describe what products, services, and results are available in the market, from whom, and under what terms and conditions. Regional and/or global supply and demand conditions greatly influence resource costs.
- **Published commercial information.** Resource cost rate information is often available from commercial databases that track skills and human resource costs, and provide standard costs for material and equipment. Published seller price lists are another source of information.

Process: 7.2 Estimate Costs
Definition: The process of developing an approximation of the monetary resources needed to complete project activities.
Key Benefit: The key benefit of this process is that it determines the amount of cost required to complete project work.

Inputs
1. Cost management plan
2. Human resource management plan
3. Scope baseline
4. Project schedule
5. Risk register
6. **Enterprise environmental factors**
7. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analogous estimating
3. Parametric estimating
4. Bottom-up estimating
5. Three-point estimating
6. Reserve analysis
7. Cost of quality
8. Project management software
9. Vendor bid analysis
10. Group decision-making techniques

Outputs
1. Activity cost estimates
2. Basis of estimates
3. Project documents updates

QUESTION 24
The process of confirming human resource availability and obtaining the team necessary to complete project activities is known as:

A. Plan Human Resource Management.
B. Acquire Project Team.
C. Manage Project Team.
D. Develop Project Team.

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Process: 9.2 Acquire Project Team
Definition: The process of confirming human resource availability and obtaining the team necessary to complete project activities.
Key Benefit: The key benefit of this process consists of outlining and guiding the team selection and responsibility assignment to obtain a successful team.
Inputs
1. Human resource management plan
2. Enterprise environmental factors
3. Organizational process assets

Tools & Techniques
1. Pre-assignment
2. Negotiation
3. Acquisition
4. Virtual teams
5. Multi-criteria decision analysis

Outputs
1. Project staff assignments
2. Resource calendars
3. Project management plan updates

QUESTION 25
The Plan Stakeholder Management process belongs to which Process Group?

A. Executing
B. Initiating
C. Planning
D. Monitoring and Controlling

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Planning Process Group
4.2 Develop Project Management Plan
    5.1 Plan Scope Management
    5.2 Collect Requirements
    5.3 Define Scope
    5.4 Create WBS
    6.1 Plan Schedule Management
    6.2 Define Activities
    6.3 Sequence Activities
    6.4 Estimate Activity Resources
    6.5 Estimate Activity Durations
    6.6 Develop Schedule
    7.1 Plan Cost Management
    7.2 Estimate Costs
    7.3 Determine Budget
8.1 Plan Quality Management
9.1 Plan Human Resource Management
10.1 Plan Communications Management
    11.1 Plan Risk Management
    11.2 Identify Risks
    11.3 Perform Qualitative Risk Analysis
    11.4 Perform Quantitative Risk Analysis
    11.5 Plan Risk Responses
12.1 Plan Procurement Management
13.2 **Plan Stakeholder Management**

QUESTION 26
Which input to the Manage Stakeholder Engagement process provides guidance on how stakeholders can best be involved in a project?

A. Feedback analysis
B. Stakeholder analysis
C. Communication management plan

D. Stakeholder management plan

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
13.2.3.1 Stakeholder Management Plan
The stakeholder management plan is a component of the project management plan (Section 4.2.3.1) and identifies the management strategies required to effectively engage stakeholders. The stakeholder management plan can be formal or informal, highly detailed or broadly framed, based on the needs of the project. In addition to the data gathered in the stakeholder register, the stakeholder management plan often provides:
・Desired and current engagement levels of key stakeholders;
・Scope and impact of change to stakeholders; ・identified
interrelationships and potential overlap between stakeholders; ・
Stakeholder communication requirements for the current project phase;
・Information to be distributed to stakeholders, including language, format, content, and level of detail; ・
Reason for the distribution of that information and the expected impact to stakeholder engagement;
・Time frame and frequency for the distribution of required information to stakeholders; and
・Method for updating and refining the stakeholder management plan as the project progresses and develops.
Project managers should be aware of the sensitive nature of the stakeholder management plan and take appropriate precautions. For example, information on stakeholders who are resistant to the project can be potentially damaging, and due consideration should be given regarding the distribution of such information. When updating the stakeholder management plan, the validity of underlying assumptions should be reviewed to ensure continued accuracy and relevancy.

13.3 Manage Stakeholder Engagement
Definition: The process of communicating and working with stakeholders to meet their needs/expectations, address issues as they occur, and foster appropriate stakeholder engagement in project activities throughout the project life cycle.
Key Benefit: The key benefit of this process is that it allows the project manager to increase support and minimize resistance from stakeholders, significantly increasing the chances to achieve project success.

Inputs
1. **Stakeholder management plan**
2. Communications management plan
3. Change log
4. Organizational process assets

Tools & Techniques
1. Communication methods

2. Interpersonal skills
3. Management skills

Outputs
1. Issue log
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

QUESTION 27
A method of obtaining early feedback on requirements by providing a working model of the expected product before actually building is known as:

A. Benchmarking.
B. Context diagrams.
C. Brainstorming.
D. Prototyping.

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
5.2.2.8 Prototypes Prototyping is a method of obtaining early feedback on requirements by providing a working model of the expected product before actually building it. Since a prototype is tangible, it allows stakeholders to experiment with a model of the final product rather than being limited to discussing abstract representations of their requirements. Prototypes support the concept of progressive elaboration in iterative cycles of mock-up creation, user experimentation, feedback generation, and prototype revision. When enough feedback cycles have been performed, the requirements obtained from the prototype are sufficiently complete to move to a design or build phase. Storyboarding is a prototyping technique showing sequence or navigation through a series of images or illustrations. Storyboards are used on a variety of projects in a variety of industries, such as film, advertising, instructional design, and on agile and other software development projects. In software development, storyboards use mock-ups to show navigation paths through webpages, screens, or other user interfaces.

QUESTION 28
Which Plan Schedule Management tool or technique may involve choosing strategic options to estimate and schedule the project?

A. Facilitation techniques
B. Expert judgment

C. Analytical techniques
D. Variance analysis

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
4.4.2.2 Analytical Techniques
Analytical techniques are applied in project management to forecast potential outcomes based on possible variations of project or environmental variables and their relationships with other variables. Examples of analytical techniques used in projects are: ・Regression analysis,
・Grouping methods,
・Causal analysis,
・Root cause analysis,
・Forecasting methods (e.g., time series, scenario building, simulation, etc.),
・Failure mode and effect analysis (FMEA),
・Fault tree analysis (FTA),
・Reserve analysis,
・Trend analysis,
・Earned value management, and ・
Variance analysis.

Process: 6.1 Plan Schedule Management
Definition: The process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.
Key Benefit: The key benefit of this process is that it provides guidance and direction on how the project schedule will be managed throughout the project.

Inputs
1. Project management plan
2. Project charter
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. **Analytical techniques**
3. Meetings

Outputs
1. Schedule management plan

QUESTION 29
Which input to the Identify Stakeholders process provides information about internal or external parties related to the project?

A. Procurement documents
B. Communications plan
C. Project charter
D. Stakeholder register

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Process: 13.1 Identify Stakeholders
Definition: The process of identifying the people, groups, or organizations that could impact or be impacted by a decision, activity, or outcome of the project; and analyzing and documenting relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success. **Key Benefit:** The key benefit of this process is that it allows the project manager to identify the appropriate focus for each stakeholder or group of stakeholders.

Inputs
- **Project charter**
- Procurement documents
- Enterprise environmental factors
- Organizational process assets

Tools & Techniques
1. Stakeholder analysis
2. Expert judgment
3. Meetings

Outputs
1. Stakeholder register

QUESTION 30
The Identify Stakeholders process is found in which Process Group?

A. Initiating
B. Monitoring and Controlling
C. Planning
D. Executing

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Initiating Process Group
4.1 Develop Project Charter
13.1 **Identify Stakeholders**

QUESTION 31
An input to Develop Project Charter is a/an:

A. Business case.
B. Activity list.
C. Project management plan.
D. Cost forecast.

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Process: 4.1. Develop Project Charter
Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.

Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs

1. Project statement of work
2. **Business case**
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques

1. Expert judgment
2. Facilitation techniques

Outputs

1. Project charter

4.1.1.2 Business Case

The business case or similar document describes the necessary information from a business standpoint to determine whether or not the project is worth the required investment. It is commonly used for decision making by managers or executives above the project level. Typically, the business need and the cost-benefit analysis are contained in the business case to justify and establish boundaries for the project, and such analysis is usually completed by a business analyst using various stakeholder inputs. The sponsor should agree to the scope and limitations of the business case. The business case is created as a result of one or more of the following:

- Market demand (e.g., a car company authorizing a project to build more fuel-efficient cars in response to gasoline shortages),
- Organizational need (e.g., due to high overhead costs a company may combine staff functions and streamline processes to reduce costs.),
- Customer request (e.g., an electric utility authorizing a project to build a new substation to serve a new industrial park),
- Technological advance (e.g., an airline authorizing a new project to develop electronic tickets instead of paper tickets based on technological advances),
- Legal requirement (e.g., a paint manufacturer authorizing a project to establish guidelines for handling toxic materials),
- Ecological impacts (e.g., a company authorizing a project to lessen its environmental impact), or
- Social need (e.g., a nongovernmental organization in a developing country authorizing a project to provide potable water systems, latrines, and sanitation education to communities suffering from high rates of cholera).

Each of the examples in this list may contain elements of risk that should be addressed. In the case of multiphase projects, the business case may be periodically reviewed to ensure that the project is on track to deliver the business benefits. In the early stages of the project life cycle, periodic review of the business case by the sponsoring organization also helps to confirm that the project is still aligned with the business case. The project manager is responsible for ensuring that the project effectively and efficiently meets the goals of the organization and those requirements of a broad set of stakeholders, as defined in the business case.

QUESTION 32

Which item is a formal proposal to modify any document, deliverable, or baseline?

A. Change request
B. Requirements documentation
C. Scope baseline
D. Risk urgency assessment

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
4.3.3.3 Change Requests
A change request is a formal proposal to modify any document, deliverable, or baseline. An approved change request will replace the associated document, deliverable, or baseline and may result in an update to other parts of the project management plan. When issues are found while project work is being performed, change requests are submitted, which may modify project policies or procedures, project scope, project cost or budget, project schedule, or project quality. Other change requests cover the needed preventive or corrective actions to forestall negative impact later in the project. Requests for a change can be direct or indirect, externally or internally initiated, and can be optional or legally/ contractually mandated, and may include:

- **Corrective action**—An intentional activity that realigns the performance of the project work with the project management plan;
- **Preventive action**—An intentional activity that ensures the future performance of the project work is aligned with the project management plan;
- **Defect repai**r—An intentional activity to modify a nonconforming product or product component;
- **Updates**—Changes to formally controlled project documents, plans, etc., to reflect modified or additional ideas or content.

QUESTION 33
A project manager should document the escalation path for unresolved project risks in the:

A. Change control plan
B. Stakeholder register
C. Risk log
D. Communications management plan

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:

10.1.3.1 Communications Management Plan

The communications management plan is a component of the project management plan that describes how project communications will be planned, structured, monitored, and controlled. The plan contains the following information: ・Stakeholder communication requirements;
・Information to be communicated, including language, format, content, and level of detail; ・
Reason for the distribution of that information;
・Time frame and frequency for the distribution of required information and receipt of acknowledgment or response, if applicable; ・
Person responsible for communicating the information;
・Person responsible for authorizing release of confidential information;
・Person or groups who will receive the information;
・Methods or technologies used to convey the information, such as memos, e-mail, and/or press releases;
・Resources allocated for communication activities, including time and budget;
・Escalation process identifying time frames and the management chain (names) for escalation of issues that cannot be resolved at a lower staff level; ・Method for updating and refining the communications management plan as the project progresses and develops; ・Glossary of common terminology;
・Flow charts of the information flow in the project, workflows with possible sequence of authorization, list of reports, and meeting plans, etc.; and ・
Communication constraints usually derived from a specific legislation or regulation, technology, and organizational policies, etc.

The communications management plan can also include guidelines and templates for project status meetings, project team meetings, e-meetings, and e-mail messages. The use of a project website and project management software can also be included if these are to be used in the project

QUESTION 34

Which risk management strategy seeks to eliminate the uncertainty associated with a particular upside risk by ensuring that the opportunity is realized?

A. Enhance
B. Share
C. Exploit
D. Accept

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:

Explanation:
11.5.2.2 Strategies for Positive Risks or Opportunities
Three of the four responses are suggested to deal with risks with potentially positive impacts on project objectives.
The fourth strategy, *accept*, can be used for negative risks or threats as well as positive risks or opportunities. These strategies, described below, are to exploit, share, enhance, and accept.

- **Exploit.** *The exploit strategy may be selected for risks with positive impacts where the organization wishes to ensure that the opportunity is realized. This strategy seeks to eliminate the uncertainty associated with a particular upside risk by ensuring the opportunity definitely happens. Examples of directly exploiting responses include assigning an organization's most talented resources to the project to reduce the time to completion or using new technologies or technology upgrades to reduce cost and duration required to realize project objectives.*
- Enhance. The enhance strategy is used to increase the probability and/or the positive impacts of an opportunity. Identifying and maximizing key drivers of these positive-impact risks may increase the probability of their occurrence. Examples of enhancing opportunities include adding more resources to an activity to finish early.
- Share. Sharing a positive risk involves allocating some or all of the ownership of the opportunity to a third party who is best able to capture the opportunity for the beneft of the project. Examples of sharing actions include forming risk-sharing partnerships, teams, special-purpose companies, or joint ventures, which can be established with the express purpose of taking advantage of the opportunity so that all parties gain from their actions.
- Accept. Accepting an opportunity is being willing to take advantage of the opportunity if it arises, but not actively pursuing it.

QUESTION 35
Payback period, return on investment, internal rate of return, discounted cash flow, and net present value are all examples of:

A. Expert judgment.
B. Analytical techniques.
C. Earned value management.
D. Group decision-making techniques.

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
7.1.2.2 Analytical Techniques
Developing the cost management plan may involve choosing strategic options to fund the project such as:
self-funding, funding with equity, or funding with debt. The cost management plan may also detail ways to finance project resources such as making, purchasing, renting, or leasing. These decisions, like other financial decisions affecting the project, may affect project schedule and/or risks.
Organizational policies and procedures may influence which financial techniques are employed in these decisions. Techniques may include (but are not limited to):
payback period, return on investment, internal rate of return, discounted cash flow, and net present value.

QUESTION 36
The definition of when and how often the risk management processes will be performed throughout the project life cycle is included in which risk management plan component?

A. Timing
B. Methodology

C. Risk categories
D. Budgeting

Correct Answer: A
Section: Volume A
Explanation
Explanation/Reference:
Explanation:
11.1.3.1 Risk Management Plan
The risk management plan is a component of the project management plan and describes how risk management activities will be structured and performed. The risk management plan includes the following:
- **Methodology.** Defines the approaches, tools, and data sources that will be used to perform risk management on the project.
- **Roles and responsibilities.** Defines the lead, support, and risk management team members for each type of activity in the risk management plan, and clarifes their responsibilities.
- **Budgeting.** Estimates funds needed, based on assigned resources, for inclusion in the cost baseline and establishes protocols for application of contingency and management reserves.
- **Timing.** Defines when and how often the risk management processes will be performed throughout the project life cycle, establishes protocols for application of schedule contingency reserves, and establishes risk management activities for inclusion in the project schedule.

QUESTION 37
Which tool or technique allows a large number of ideas to be classified into groups for review and analysis?

A. Nominal group technique
B. Idea/mind mapping
C. Affinity diagram
D. Brainstorming

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
5.2.2.4 Group Creativity Techniques
Several group activities can be organized to identify project and product requirements. Some of the group creativity techniques that can be used are:
- **Brainstorming.** A technique used to generate and collect multiple ideas related to project and product requirements. Although brainstorming by itself does not include voting or prioritization, it is often used with other group creativity techniques that do.

- **Nominal group technique.** A technique that enhances brainstorming with a voting process used to rank the most useful ideas for further brainstorming or for prioritization.
- **Idea/mind mapping.** A technique in which ideas created through individual brainstorming sessions are consolidated into a single map to reflect commonality and differences in understanding, and generate new ideas.

- **Affinity diagram.** *A technique that allows large numbers of ideas to be classified into groups for review and analysis.*

- **Multicriteria decision analysis.** A technique that utilizes a decision matrix to provide a systematic analytical approach for establishing criteria, such as risk levels, uncertainty, and valuation, to evaluate and rank many ideas.

QUESTION 38

Sending letters, memos, reports, emails, and faxes to share information is an example of which type of communication?

A. Direct
B. Interactive
C. Pull
D. Push

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
10.1.2.4 Communication Methods
There are several communication methods that are used to share information among project stakeholders.
These methods are broadly classifed as follows:
- **Interactive communication.** Between two or more parties performing a multidirectional exchange of information. It is the most effcient way to ensure a common understanding by all participants on specified topics, and includes meetings, phone calls, instant messaging, video conferencing, etc.
- **Push communication.** Sent to specific recipients who need to receive the information. This ensures that the information is distributed but does not ensure that it actually reached or was understood by the intended audience. Push communications include letters, memos, reports, emails, faxes, voice mails, blogs, press releases, etc.
- **Pull communication.** Used for very large volumes of information, or for very large audiences, and requires the recipients to access the communication content at their own discretion. These methods include intranet sites, e-learning, lessons learned databases, knowledge repositories, etc.

The choices of communication methods that are used for a project may need to be discussed and agreed upon by the project stakeholders based on communication requirements; cost and time constraints; and familiarity and availability of the required tools and resources that may be applicable to the communications process.

QUESTION 39

Which earned value management (EVM) metric is a measure of the cost efficiency of budgeted resources expressed as a ratio of earned value (EV) to actual cost (AC) and is considered a critical EVM metric?

A. Cost variance (CV)
B. Cost performance index (CPI)
C. Budget at completion (BAC)
D. Variance at completion (VAC)

Correct Answer: B
Section: Volume A
Explanation
Explanation/Reference:
Explanation:
CPI = EV / AC

QUESTION 40
Inputs to the Plan Schedule Management process include:

A. Organizational process assets and the project charter,
B. Enterprise environmental factors and schedule tools.
C. Time tables and Pareto diagrams.
D. Activity attributes and resource calendars.

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
2.1.4 Organizational Process Assets
Organizational process assets are the plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization. They include any artifact, practice, or knowledge from any or all of the organizations involved in the project that can be used to perform or govern the project. The process assets also include the organization's knowledge bases such as lessons learned and historical information. Organizational process assets may include completed schedules, risk data, and earned value data. Organizational process assets are inputs to most planning processes. Throughout the project, the project team members may update and add to the organizational process assets as necessary. Organizational process assets may be grouped into two categories: (1) processes and procedures, and (2) corporate knowledge base.

6.1 Plan Schedule Management
Definition: The process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.
Key Benefit: The key benefit of this process is that it provides guidance and direction on how the project schedule will be managed throughout the project.
Inputs
1. Project management plan
2. **Project charter**
3. Enterprise environmental factors
4. **Organizational process assets**

Tools & Techniques
1. Expert judgment
2. Analytical techniques
3. Meetings

Outputs
1. Schedule management plan

QUESTION 41
Which Knowledge Area involves identifying the people, groups, or organizations that may be impacted by or impact a project?

A. Project Risk Management
B. Project Human Resource Management
C. Project Scope Management
D. Project Stakeholder Management

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
PROJECT STAKEHOLDER MANAGEMENT
Project Stakeholder Management includes the processes required to identify the people, groups, or organizations that could impact or be impacted by the project, to analyze stakeholder expectations and their impact on the project, and to develop appropriate management strategies for effectively engaging stakeholders in project decisions and execution. Stakeholder management also focuses on continuous communication with stakeholders to understand their needs and expectations, addressing issues as they occur, managing conflicting interests and fostering appropriate stakeholder engagement in project decisions and activities. Stakeholder satisfaction should be managed as a key project objective.

QUESTION 42
Which process identifies whether the needs of a project can best be met by acquiring products, services, or results outside of the organization?

A. Plan Procurement Management
B. Control Procurements
C. Collect Requirements
D. Plan Cost Management

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Process: 12.1 Plan Procurement Management
Definition: The process of documenting project procurement decisions, specifying the approach, and identifying potential sellers.
Key Benefit: The key benefit of this process is that it determines whether to acquire outside support, and if so, what to acquire, how to acquire it, how much is needed, and when to acquire it.

Inputs
1. Project management plan
2. Requirements documentation
3. Risk register
4. Activity resource requirements
5. Project schedule
6. Activity cost estimates
7. Stakeholder register
8. Enterprise environmental factors
9. Organizational process assets

Tools & Techniques
1. **Make-or-buy analysis**
2. Expert judgment
3. Market research
4. Meetings

Outputs

1. Procurement management plan
2. Procurement statement of work
3. Procurement documents
4. Source selection criteria
5. **Make-or-buy decisions**
6. Change requests
7. Project documents updates

QUESTION 43
Which tool or technique is used to manage change requests and the resulting decisions?

A. Change control tools
B. Expert judgment
C. Delphi technique
D. Change log

Correct Answer: A
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
4.5.2.3 Change Control Tools
In order to facilitate Configuration and change management, manual or automated tools may be used. Tool selection should be based on the needs of the project stakeholders including organizational and environmental considerations and/or constraints.
Tools are used to manage the change requests and the resulting decisions. Additional considerations should be made for communication to assist the CCB members in their duties as well as distribute the decisions to the appropriate stakeholders

4.3.3.3 Change Requests
A change request is a formal proposal to modify any document, deliverable, or baseline. An approved change request will replace the associated document, deliverable, or baseline and may result in an update to other parts of the project management plan. When issues are found while project work is being performed, change requests are submitted, which may modify project policies or procedures, project scope, project cost or budget, project schedule, or project quality. Other change requests cover the needed preventive or corrective actions to forestall negative impact later in the project. Requests for a change can be direct or indirect, externally or internally initiated, and can be optional or legally/contractually mandated, and may include:
- **Corrective action**—An intentional activity that realigns the performance of the project work with the project management plan;
- **Preventive action**—An intentional activity that ensures the future performance of the project work is aligned with the project management plan;
- **Defect repai**r—An intentional activity to modify a nonconforming product or product component;

- **Updates**—Changes to formally controlled project documents, plans, etc., to reflect modified or additional ideas or content.

QUESTION 44
The planned work contained in the lowest level of work breakdown structure (WBS) components is known as:

A. Work packages.
B. Accepted deliverables.
C. The WBS dictionary.
D. The scope baseline.

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:

QUESTION 45
In which Knowledge Area is the project charter developed?
A. Project Cost Management B.
Project Scope Management
C. Project Time Management
D. Project Integration Management

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Knowledge Areas

4. Project Integration Management
5. Project Scope Management
6. Project Time Management
7. Project Cost Management
8. Project Quality Management

9. Project Human Resource Management
10.Project Communications Management
11.Project Risk Management
12.Project Procurement Management
13.Project Stakeholder Management

Process: 4.1. Develop Project Charter
Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.
Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs
1. Project statement of work
2. Business case
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Facilitation techniques

Outputs
1. Project charter

QUESTION 46
A key benefit of the Manage Communications process is that it enables:

A. The best use of communication methods.
B. An efficient and effective communication flow.
C. Project costs to be reduced.
D. The best use of communication technology.

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Process: 10.2 Manage Communications
Definition: The process of creating, collecting, distributing, storing, retrieving and the ultimate disposition of project information in accordance with the communications management plan.
Key Benefit: The key benefit of this process is that it enables an **efficient and effective communications flow** between project stakeholders.
Inputs
1. Communications management plan
2. Work performance reports
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Communication technology
2. Communication models
3. Communication methods
4. Information management systems
5. Performance reporting

Outputs
1. Project communications
2. Project management plan updates
3. Project documents updates
4. Organizational process assets updates

QUESTION 47
The ways in which the roles and responsibilities, reporting relationships, and staffing management will be addressed and structured within a project is described in the:

A. Human resource management plan.
B. Activity resource requirements.
C. Personnel assessment tools,
D. Multi-criteria decision analysis.

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
9.1.3.1 Human Resource Management Plan
The human resource management plan, a part of the project management plan, provides guidance on how project human resources should be defined, staffed, managed, and eventually released. The human resource management plan and any subsequent revisions are also inputs into the Develop Project Management Plan process.

Process: 9.1 Plan Human Resource Management
Definition: The process of identifying and documenting project roles, responsibilities, required skills, reporting relationships, and creating a staffing management plan.
Key Benefit: The key benefit of this process is that it establishes project roles and responsibilities, project organization charts, and the staffing management plan including the timetable for staff acquisition and release.

Inputs
1. Project management plan
2. Activity resource requirements
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Organization charts and position descriptions
2. Networking
3. Organizational theory
4. Expert judgment
5. Meetings

Outputs
1. **Human resource management plan**
QUESTION 48
The process of identifying and documenting relationships among the project activities is known as:

A. Control Schedule.
B. Sequence Activities.
C. Define Activities.
D. Develop Schedule.

Correct Answer: B

Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Process: 6.3 Sequence Activities
Definition: The process of identifying and documenting relationships among the project activities.
Key Benefit: The key benefit of this process is that it defines the logical sequence of work to obtain the greatest efficiency given all project constraints.
Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Milestone list
5. Project scope statement
6. Enterprise environmental factors
7. Organizational process assets

Tools & Techniques
1. Precedence diagramming method (PDM)
2. Dependency determination
3. Leads and lags

Outputs
1. Project schedule network diagrams
2. Project documents updates

QUESTION 49
Conditions that are not under the control of the project team that influence, direct, or constrain a project are called:

A. Enterprise environmental factors
B. Work performance reports
C. Organizational process assets
D. Context diagrams

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
2.1.5 Enterprise Environmental Factors
Enterprise environmental factors refer to conditions, not under the control of the project team, that influence, constrain, or direct the project. Enterprise environmental factors are considered inputs to most planning processes, may enhance or constrain project management options, and may have a positive or negative influence on the outcome.
Enterprise environmental factors vary widely in type or nature. Enterprise environmental factors include, but are not limited to: ・
Organizational culture, structure, and governance;
・Geographic distribution of facilities and resources;
・Government or industry standards (e.g., regulatory agency regulations, codes of conduct, product standards, quality standards, and workmanship standards); ・
Infrastructure (e.g., existing facilities and capital equipment);
・Existing human resources (e.g., skills, disciplines, and knowledge, such as design, development, legal, contracting, and purchasing);
・Personnel administration (e.g., staffing and retention guidelines, employee performance reviews and training records, reward and overtime policy, and time tracking);
・Company work authorization systems;
・Marketplace conditions;
・Stakeholder risk tolerances;
・Political climate;
・Organization's established communications channels;
・Commercial databases (e.g., standardized cost estimating data, industry risk study information, and risk databases); and
・Project management information system (e.g., an automated tool, such as a scheduling software tool, a configuration management system, and
・Project management information system (e.g., an automated tool, such as a scheduling software tool, a configuration management system, an information collection and distribution system, or web interfaces to other online automated systems).

QUESTION 50
An input to the Plan Procurement Management process is:

A. Source selection criteria.
B. Market research.
C. A stakeholder register.
D. A records management system.
Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
5.2.1.5 Stakeholder Register

Described in Section 13.1.3.1. The stakeholder register is used to identify stakeholders who can provide information on the requirements. The stakeholder register also captures major requirements and main expectations stakeholders may have for the project.

13.1.3.1 Stakeholder Register

The main output of the Identify Stakeholders process is the stakeholder register. This contains all details related to the identified stakeholders including, but not limited to:

- **Identification information.** Name, organizational position, location, role in the project, contact information;
- **Assessment information.** Major requirements, main expectations, potential influence in the project, phase in the life cycle with the most interest; and
- **Stakeholder classification.** Internal/external, supporter/neutral/resistor, etc.

The stakeholder register should be consulted and updated on a regular basis, as stakeholders may change—or new ones identified—throughout the life cycle of the project.

Process: 12.1 Plan Procurement Management

Definition: The process of documenting project procurement decisions, specifying the approach, and identifying potential sellers.

Key Benefit: The key benefit of this process is that it determines whether to acquire outside support, and if so, what to acquire, how to acquire it, how much is needed, and when to acquire it.

Inputs

1. Project management plan
2. Requirements documentation
3. Risk register
4. Activity resource requirements
5. Project schedule
6. Activity cost estimates
7. **Stakeholder register**
8. Enterprise environmental factors
9. Organizational process assets

Tools & Techniques

1. Make-or-buy analysis
2. Expert judgment
3. Market research
4. Meetings

Outputs

1. Procurement management plan
2. Procurement statement of work
3. Procurement documents

4. Source selection criteria
5. Make-or-buy decisions
6. Change requests
7. Project documents updates

QUESTION 51
A regression line is used to estimate:

A. Whether or not a process is stable or has predictable performance.
B. How a change to the independent variable influences the value of the dependent variable.
C. The upper and lower specification limits on a control chart.
D. The central tendency, dispersion, and shape of a statistical distribution.

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Scatter Diagram. A correlation chart that uses a regression line to explain or to predict how the change in an independent variable will change a dependent variable.

QUESTION 52
Processes in the Planning Process Group are typically carried out during which part of the project life cycle?

A. Only once, at the beginning
B. At the beginning and the end
C. Once during each phase
D. Repeatedly

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
QUESTION 53
Which type of dependency is established based on knowledge of best practices within a particular application area or some unusual aspect of the project in which a specific sequence is desired, even though there may be other acceptable sequences?

A. External
B. Internal
C. Mandatory
D. Discretionary

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
6.3.2.2 Dependency Determination
Dependencies may be characterized by the following attributes: mandatory or discretionary, internal or external, as described below. Dependency has four attributes, but two can be applicable at the same time in following ways: mandatory external dependencies, mandatory internal dependencies, discretionary external dependencies, or discretionary internal dependencies.

· **Mandatory dependencies.** Mandatory dependencies are those that are legally or contractually required or inherent in the nature of the work. Mandatory dependencies often involve physical limitations, such as on a construction project, where it is impossible to erect the superstructure until after the foundation has been built, or on an electronics project, where a prototype has to be built before it can be tested.

Mandatory dependencies are also sometimes referred to as hard logic or hard dependencies. Technical dependencies may not be mandatory. The project team determines which dependencies are mandatory during the process of sequencing the activities. Mandatory dependencies should not be confused with assigning schedule constraints in the scheduling tool.

· **Discretionary dependencies.** Discretionary dependencies are sometimes referred to as preferred logic, preferential logic, or soft logic. Discretionary dependencies are established based on knowledge of best practices within a particular application area or some unusual aspect of the project where a specific sequence is desired, even though there may be other acceptable sequences. Discretionary dependencies should be fully documented since they can create arbitrary total float values and can limit later scheduling options. When fast tracking techniques are employed, these discretionary dependencies should be reviewed and considered for modification or removal. The project team determines which dependencies are discretionary during the process of sequencing the activities.
· **External dependencies.** External dependencies involve a relationship between project activities and non-project activities. These dependencies are usually outside the project team's control. For example, the testing activity in a software project may be dependent on the delivery of hardware from an external source, or governmental environmental hearings may need to be held before site preparation can begin on a construction project. The project management team determines which dependencies are external during the process of sequencing the activities.
· **Internal dependencies.** Internal dependencies involve a precedence relationship between project activities and are generally inside the project team's control. For example, if the team cannot test a machine until they assemble it, this is an internal mandatory dependency. The project management team determines which dependencies are internal during the process of sequencing the activities.
QUESTION 54

Sensitivity analysis is typically displayed as a/an:

A. Decision tree diagram.
B. Tornado diagram.
C. Pareto diagram.
D. Ishikawa diagram.

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
11.4.2.2 Quantitative Risk Analysis and Modeling Techniques
• Sensitivity analysis. Sensitivity analysis helps to determine which risks have the most potential impact on the project. It helps to understand how the variations in project's objectives correlate with variations in different uncertainties. Conversely, it examines the extent to which the uncertainty of each project element affects the objective being studied when all other uncertain elements are held at their baseline values. One typical display of sensitivity analysis is the tornado diagram (Figure 11-15), which is useful for comparing relative importance and impact of variables that have a high degree of uncertainty to those that are more stable. The Tornado diagram is also helpful in analyzing risk-taking scenarios enabled on specific risks whose quantitative analysis highlights possible benefits greater than corresponding identified negative impacts. A tornado diagram is a special type of bar chart used
in sensitivity analysis for comparing the relative importance of the variables. In a tornado diagram, the Y-axis contains each type of uncertainty at base values, and the X-axis contains the spread or correlation of the uncertainty to the studied output. In this fgure, each uncertainty contains a horizontal bar and is ordered vertically to show uncertainties with a decreasing spread from the base values.

QUESTION 55
Which Control Quality tool is also known as an arrow diagram?

A. Matrix diagram
B. Affinity diagram
C. Tree diagram
D. Activity network diagram

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:

8.2.2.1 Quality Management and Control Tools

The Perform Quality Assurance process uses the tools and techniques of the Plan Quality Management and Control Quality processes. In addition, other tools that are available include (see also Figure 8-10):

- **Affinity diagrams.** The affinity diagram is similar to mind-mapping techniques in that they are used to generate ideas that can be linked to form organized patterns of thought about a problem. In project management, the creation of the WBS may be enhanced by using the affinity diagram to give structure to the decomposition of scope.
- **Process decision program charts (PDPC).** Used to understand a goal in relation to the steps for getting to the goal. The PDPC is useful as a method for contingency planning because it aids teams in anticipating intermediate steps that could derail achievement of the goal.
- **Interrelationship digraphs.** An adaptation of relationship diagrams. The interrelationship digraphs provide a process for creative problem solving in moderately complex scenarios that possess intertwined logical relationships for up to 50 relevant items. The interrelationship digraph may be developed from data generated in other tools such as the affinity diagram, the tree diagram, or the fshbone diagram.
- **Tree diagrams.** Also known as systematic diagrams and may be used to represent decomposition hierarchies such as the WBS, RBS (risk breakdown structure), and OBS (organizational breakdown structure). In project management, tree diagrams are useful in visualizing the parent-to-child relationships in any decomposition hierarchy that uses a systematic set of rules that define a nesting relationship. Tree diagrams can be depicted horizontally (such as a risk breakdown structure) or vertically (such as a team hierarchy or OBS). Because tree diagrams permit the creation of nested branches that terminate into a single decision point, they are useful as decision trees for establishing an expected value for a limited number of dependent relationships that have been diagramed systematically.
- **Prioritization matrices.** Identify the key issues and the suitable alternatives to be prioritized as a set of decisions for implementation. Criteria are prioritized and weighted before being applied to all available alternatives to obtain a mathematical score that ranks the options.
- **Activity network diagrams.** Previously known as arrow diagrams. They include both the AOA (Activity on Arrow) and, most commonly used, AON (Activity on Node) formats of a network diagram. Activity network diagrams are used with project scheduling methodologies such as program evaluation and review technique (PERT), critical path method (CPM), and precedence diagramming method (PDM).
- **Matrix diagrams.** A quality management and control tool used to perform data analysis within the organizational structure created in the matrix. The matrix diagram seeks to show the strength of relationships between factors, causes, and objectives that exist between the rows and columns that form the matrix.

QUESTION 56

When does the project team determine which dependencies are discretionary?

A. Before the Define Activities process
B. During the Define Activities process
C. Before the Sequence Activities processD. During the Sequence Activities process

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:

Explanation:
6.3.2.2 Dependency Determination

Dependencies may be characterized by the following attributes: mandatory or discretionary, internal or external, as described below. Dependency has four attributes, but two can be applicable at the same time in following ways: mandatory external dependencies, mandatory internal dependencies, discretionary external dependencies, or discretionary internal dependencies.

- **Mandatory dependencies.** Mandatory dependencies are those that are legally or contractually required or inherent in the nature of the work. Mandatory dependencies often involve physical limitations, such as on a construction project, where it is impossible to erect the superstructure until after the foundation has been built, or on an electronics project, where a prototype has to be built before it can be tested. Mandatory dependencies are also sometimes referred to as hard logic or hard dependencies. Technical dependencies may not be mandatory. The project team determines which dependencies are mandatory during the process of sequencing the activities. Mandatory dependencies should not be confused with assigning schedule constraints in the scheduling tool.
- **Discretionary dependencies.** Discretionary dependencies are sometimes referred to as preferred logic, preferential logic, or soft logic. Discretionary dependencies are established based on knowledge of best practices within a particular application area or some unusual aspect of the project where a specific sequence is desired, even though there may be other acceptable sequences. Discretionary dependencies should be fully documented since they can create arbitrary total float values and can limit later scheduling options. When fast tracking techniques are employed, these discretionary dependencies should be reviewed and considered for modifcation or removal. The project team determines which dependencies are discretionary during the process of sequencing the activities.
- **External dependencies.** External dependencies involve a relationship between project activities and non-project activities. These dependencies are usually outside the project team's control. For example, the testing activity in a software project may be dependent on the delivery of hardware from an external source, or governmental environmental hearings may need to be held before site preparation can begin on a construction project. The project management team determines which dependencies are external during the process of sequencing the activities.
- **Internal dependencies.** Internal dependencies involve a precedence relationship between project activities and are generally inside the project team's control. For example, if the team cannot test a machine until they assemble it, this is an internal mandatory dependency. The project management team determines which dependencies are internal during the process of sequencing the activities.

Process: 6.3 Sequence Activities
Definition: The process of identifying and documenting relationships among the project activities.
Key Benefit: The key benefit of this process is that it defines the logical sequence of work to obtain the greatest efficiency given all project constraints.
Inputs

1. Schedule management plan
2. Activity list
3. Activity attributes
4. Milestone list
5. Project scope statement
6. Enterprise environmental factors
7. Organizational process assets

Tools & Techniques

1. Precedence diagramming method (PDM)
2. **Dependency determination**
3. Leads and lags

Outputs
1. Project schedule network diagrams
2. Project documents updates

QUESTION 57
Typical outcomes of a project include:

A. Products, services, and improvements.
B. Products, programs, and services.
C. Improvements, portfolios, and services.
D. Improvements, processes, and products.

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:

QUESTION 58
Which grid shows which resources are tied to work packages?

A. Work breakdown structure (WBS)
B. Responsibility assignment matrix (RAM)
C. Project assignment chart
D. Personnel assignment matrix

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Responsibility Assignment Matrix (RAM). A grid that shows the project resources assigned to each work package.

QUESTION 59
The iterative process of increasing the level of detail in a project management plan as greater amounts of information become available is known as:
A. Continuous improvement.
B. Predictive planning.
C. Progressive elaboration.
D. Quality assurance.

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:

QUESTION 60
An effective technique for resolving conflict that incorporates multiple viewpoints from differing perspectives to achieve consensus and commitment is:

A. smooth/accommodate
B. force/direct
C. collaborate/problem solve
D. compromise/reconcile

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:

QUESTION 61
A temporary endeavor that creates a unique product or service is called a:

A. Project
B. Plan
C. Program
D. Portfolio

Correct Answer: A
Section: Volume A
Explanation
Explanation/Reference:

QUESTION 62
Which item is an output of Plan Quality Management and an input to Perform Quality Assurance?

A. Organizational process updates
B. Quality metrics
C. Change requests
D. Quality control measurements

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
8.1.3.3 Quality Metrics
A quality metric specifically describes a project or product attribute and how the control quality process will measure it. A measurement is an actual value. The tolerance defines the allowable variations to the metric. For example, if the quality objective is to stay within the approved budget by ± 10%, the specific quality metric is used to measure the cost of every deliverable and determine the percent variance from the approved budget for that deliverable. Quality metrics are used in the perform quality assurance and control quality processes. Some examples of quality metrics include on-time performance, cost control, defect frequency, failure rate, availability, reliability, and test coverage.

Process: 8.1 Plan Quality Management
Definition: The process of identifying quality requirements and/or standards for the project and its deliverables and documenting how the project will demonstrate compliance with quality requirements and/or standards.

Key Benefit: The key benefit of this process is that it provides guidance and direction on how quality will be managed and validated throughout the project.

Inputs
1. Project management plan
2. Stakeholder register
3. Risk register
4. Requirements documentation
5. Enterprise environmental factors
6. Organizational process assets

1. Tools & Techniques
2. Cost-benefit analysis
3. Cost of quality
4. Seven basic quality tools
5. Benchmarking
6. Design of experiments
7. Statistical sampling
8. Additional quality planning tools
9. Meetings

Outputs
1. Quality management plan
2. Process improvement plan
3. **Quality metrics**
4. Quality checklists
5. Project documents updates

Process: 8.2 Perform Quality Assurance
Definition: The process of auditing the quality requirements and the results from quality control measurements to ensure that appropriate quality standards and operational definitions are used.
Key Benefit: The key benefit of this process is that it facilitates the improvement of quality processes.

Inputs
1. Quality management plan
2. Process improvement plan
3. **Quality metrics**
4. Quality control measurements
5. Project documents

Tools & Techniques
1. Quality management and control tools
2. Quality audits
3. Process analysis

Outputs
1. Change requests
2. Project management plan updates
3. Project documents updates
4. Organizational process assets updates

QUESTION 63
A project manager managing a cross-cultural virtual project team across several time zones should be concerned about the impacts of which communication technology factor?
A. Urgent information need B.
Sensitivity of information
C. Project environment
D. Ease of use

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Project environment. There is a need to determine if the team will meet and operate on a face-to-face basis or in a virtual environment; whether they will be located in one or multiple time zones; whether they will use multiple languages for communication; and finally, whether there are any other project environmental factors, such as culture, which may affect communications.

QUESTION 64
The process of prioritizing risks for further analysis or action is known as:

A. Plan Risk Management.
B. Plan Risk Responses.
C. Perform Qualitative Risk Analysis.
D. Perform Quantitative Risk Analysis.

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Process: 11.3 Perform Qualitative Risk Analysis
Definition: The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.
Key Benefit: The key benefit of this process is that it enables project managers to reduce the level of uncertainty and to focus on high-priority risks.

Inputs
1. Risk management plan
2. Scope baseline
3. Risk register
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Risk probability and impact assessment
2. Probability and impact matrix
3. Risk data quality assessment
4. Risk categorization
5. Risk urgency assessment
6. Expert judgment

Outputs
1. Project documents updates

QUESTION 65
An input to Close Project or Phase is:

A. Accepted deliverables.
B. Final products or services.
C. Document updates.
D. Work performance information.

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Process: 4.6. Close Project or Phase
Definition: The process of finalizing all activities across all of the Project Management Process Groups to formally complete the phase or project.
Key Benefit: The key benefit of this process is that it provides lessons learned, the formal ending of project work, and the release of organization resources to pursue new endeavors.

Inputs
1. Project management plan
2. **Accepted deliverables**
3. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analytical techniques
3. Meetings

Outputs
1. Final product, service, or result transition
2. Organizational process assets updates

QUESTION 66
External organizations that have a special relationship with the enterprise and provide specialized expertise are called:

A. Customers.
B. Business partners.
C. Sellers.
D. Functional managers.

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 67
Which process involves subdividing project deliverables and project work into smaller, more manageable portions?

A. Develop Schedule
B. Create VVBS
C. Estimate Activity Resources
D. Define Scope

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Process: 5.4 Create WBS
Definition: WBS is the process of subdividing project deliverables and project work into smaller, more manageable components.
Key Benefit: The key benefit of this process is that it provides a structured vision of what has to be delivered.

Inputs
1. Scope management plan
2. Project scope statement
3. Requirements documentation
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Decomposition
2. Expert judgment**Outputs**
1. Scope baseline
2. Project documents updates

QUESTION 68
In a project, total float measures the:

A. Ability to shuffle schedule activities to lessen the duration of the project.
B. Amount of time an activity can be extended or delayed without altering the project finish date.
C. Cost expended to restore order to the project schedule after crashing the schedule.
D. Estimate of the total resources needed for the project after performing a forward pass.

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 69
Stakeholder satisfaction should be managed as a key project:

A. Benefit
B. Initiative
C. Objective
D. Process

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:

QUESTION 70
Which cost is associated with nonconformance?

A. Liabilities
B. Inspections
C. Training
D. Equipment

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:

QUESTION 71
Which tool or technique of the Define Activities process allows for work to exist at various levels of detail depending on where it is in the project life cycle?

A. Historical relationships
B. Dependency determination
C. Bottom-up estimating
D. Rolling wave planning

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
6.2.2.2 Rolling Wave Planning
Rolling wave planning is an iterative planning technique in which the work to be accomplished in the near term is planned in detail, while the work in the future is planned at a higher level. It is a form of progressive elaboration.
Therefore, work can exist at various levels of detail depending on where it is in the project life cycle. During early strategic planning, when information is less defined, work packages may be decomposed to the known level of detail. As more is known about the upcoming events in the near term, work packages can be decomposed into activities.

Process: 6.2 Define Activities
Definition: The process of identifying and documenting the specific actions to be performed to produce the project deliverables.
Key Benefit: The key benefit of this process is to break down work packages into activities that provide a basis for estimating, scheduling, executing, monitoring, and controlling the project work.
Inputs
- Schedule management plan
- Scope baseline
- Enterprise environmental factors
- Organizational process assets

Tools & Techniques
- Decomposition
- **Rolling wave planning**
- Expert judgment

Outputs
- Activity list

- Activity attributes
- Milestone list

QUESTION 72
Which tool or technique is used in the Estimate Costs process?

A. Acquisition
B. Earned value management
C. Vendor bid analysis
D. Forecasting

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
7.2.2.9 Vendor Bid Analysis
Cost estimating methods may include analysis of what the project should cost, based on the responsive bids from qualified vendors. When projects are awarded to a vendor under competitive processes, additional cost estimating work may be required of the project team to examine the price of individual deliverables and to derive a cost that supports the final total project cost.

Process: 7.2 Estimate Costs
Definition: The process of developing an approximation of the monetary resources needed to complete project activities.
Key Benefit: The key benefit of this process is that it determines the amount of cost required to complete project work.

Inputs
1. Cost management plan
2. Human resource management plan
3. Scope baseline
4. Project schedule
5. Risk register
6. Enterprise environmental factors
7. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analogous estimating

3. Parametric estimating
4. Bottom-up estimating
5. Three-point estimating
6. Reserve analysis
7. Cost of quality
8. Project management software
9. **Vendor bid analysis**
10. Group decision-making techniques

Outputs
1. Activity cost estimates
2. Basis of estimates
3. Project documents updates

QUESTION 73
An input to the Identify Stakeholders process is:

A. The project management plan.
B. The stakeholder register.
C. Procurement documents.
D. Stakeholder analysis.

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
12.1.3.3 Procurement Documents
Procurement documents are used to solicit proposals from prospective sellers. Terms such as bid, tender, or quotation are generally used when the seller selection decision will be based on price (as when buying commercial or standard items), while a term such as proposal is generally used when other considerations, such as technical capability or technical approach are paramount. Common terms are in use for different types of procurement documents and may include request for information (RFI), invitation for bid (IFB), request for proposal (RFP), request for quotation (RFQ), tender notice, invitation for negotiation, and invitation for seller's initial response. Specific procurement terminology used may vary by industry and location of the procurement.
The buyer structures procurement documents to facilitate an accurate and complete response from each prospective seller and to facilitate easy evaluation of the responses. These documents include a description of the desired form of the response, the relevant procurement statement of work (SOW) and any required contractual provisions. With government contracting, some or all of the content and structure of procurement documents may be defined by regulation. The complexity and level of detail of the procurement documents should be consistent with the value of, and risks associated with, the planned procurement.

Procurement documents are required to be sufficient to ensure consistent, appropriate responses, but flexible enough to allow consideration of any seller suggestions for better ways to satisfy the same requirements.
Issuing a procurement request to potential sellers to submit a proposal or bid is normally done in accordance with the policies of the buyer's organization, which can include publication of the request in public newspapers, in trade journals, in public registries, or on the internet.

Process: 13.1 Identify Stakeholders
Definition: The process of identifying the people, groups, or organizations that could impact or be impacted by a decision, activity, or outcome of the project; and analyzing and documenting relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success. **Key Benefit:** The key benefit of this process is that it allows the project manager to identify the appropriate focus for each stakeholder or group of stakeholders.

Inputs
1. Project charter
2. **Procurement documents**
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Stakeholder analysis
2. Expert judgment
3. Meetings

Outputs
1. Stakeholder register

QUESTION 74
A logical relationship in which a successor activity cannot start until a predecessor activity has finished is known as:

A. Start-to-start (SS).
B. Start-to-finish (SF).
C. Finish-to-start (FS).
D. Finish-to-finish (FF).

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:

Explanation:
- A finish-to-start (FS) relationship between two activities implies that the initiation of successor is dependent on the completion of predecessor.
- A finish-to-finish (FF) relationship between two activities implies that the completion of successor is dependent on the completion of predecessor.
- A start-to-start (SS) relationship implies that the initiation of successor is dependent on the initiation of predecessor.
- A start-to-finish (SF) relationship between two activities implies that the completion of successor is dependent on the initiation of its predecessor

QUESTION 75
What is the estimate at completion (EAC) if the budget at completion (BAC) is $100, the actual cost (AC) is $50, and the earned value (EV) is $25?

A. $50
B. $100
C. $125
D. $175

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Estimate to completion calculates how much more of the budget is needed to complete the project if everything continues at the current level of performance.
EAC 'atypical' = AC + BAC - EV
EAC 'typical' = AC + ((BAC - EV) / CPI)

QUESTION 76
The business needs, assumptions, and constraints and the understanding of the customers' needs and high-level requirements are documented in the:

A. Project management plan.
B. Project charter.
C. Work breakdown structure.
D. Stakeholder register.

Correct Answer: B
Section: Volume A
Explanation
Explanation/Reference:

QUESTION 77
In the Plan Stakeholder Management process, expert judgment is used to:

A. Provide information needed to plan appropriate ways to engage project stakeholders.
B. Ensure comprehensive identification and listing of new stakeholders.
C. Analyze the information needed to develop the project scope statement.
D. Decide the level of engagement of the stakeholders at each required stage.

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
4.1.2.1 Expert Judgment
Expert judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including:
- Other units within the organization,
- Consultants,
- Stakeholders, including customers or sponsors,
- Professional and technical associations,
- Industry groups,
- Subject matter experts (SME), and
- Project management office (PMO).

Process: 13.2 Plan Stakeholder Management
Definition: Stakeholder Management is the process of developing appropriate management strategies to effectively engage stakeholders throughout the project life cycle, based on the analysis of their needs, interests, and potential impact on project success.
Key Benefit: The key benefit of this process is that it provides a clear, actionable plan to interact with project stakeholders to support the project's interests.
Inputs
1. Project management plan
2. Stakeholder register
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. **Expert judgment**
2. Meetings

3. Analytical techniques

Outputs

- Stakeholder management plan
- Project documents updates

QUESTION 78

Project deliverables that have been completed and checked for correctness through the Control Quality process are known as:

A. Verified deliverables.
B. Validated deliverables.
C. Acceptance criteria.
D. Activity resource requirements.

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

Explanation:

Process: 8.3 Control Quality

Definition: The process of monitoring and recording results of executing the quality activities to assess performance and recommend necessary changes.
Key Benefit: The key benefits of this process include: (1) identifying the causes of poor process or product quality and recommending and/or taking action to eliminate them; and (2) validating that project deliverables and work meet the requirements specified by key stakeholders necessary for final acceptance.

Inputs

1. Project management plan
2. Quality metrics
3. Quality checklists
4. Work performance data
5. Approved change requests
6. Deliverables
7. Project documents
8. Organizational process assets

Tools & Techniques

1. Seven basic quality tools

2. Statistical sampling
3. Inspection
4. Approved change requests review

Outputs

1. Quality control measurements
2. Validated changes
3. **Verified deliverables**
4. Work performance information
5. Change requests
6. Project management plan updates
7. Project documents updates
8. Organizational process assets updates

QUESTION 79

An output of the Perform Integrated Change Control process is:

A. Deliverables.
B. Validated changes.
C. The change log.
D. The requirements traceability matrix.

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:

Explanation:
4.5.3.2 Change Log
A change log is used to document changes that occur during a project. These changes and their impact to the project in terms of time, cost, and risk, are communicated to the appropriate stakeholders. Rejected change requests are also captured in the change log.

Process: 4.5 Perform Integrated Change Control
Perform Integrated Change Control is the process of reviewing all change requests; approving changes and managing changes to deliverables, organizational process assets, project documents, and the project management plan; and communicating their disposition. It reviews all requests for changes or modifications to project documents, deliverables, baselines, or the project management plan and approves or rejects the changes.

Key Benefit: The key benefit of this process is that it allows for documented changes within the project to be considered in an integrated fashion while reducing project risk, which often arises from changes made without consideration to the overall project objectives or plans.

Inputs
1. Project management plan
2. Work performance reports
3. Change requests
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Meetings
3. Change control tools

Outputs
1. Approved change requests
2. **Change log**
3. Project management plan updates
4. Project documents updates

QUESTION 80
The process of monitoring the status of the project and product scope as well as managing the changes to the scope baseline is known as:

A. Validate Scope.
B. Plan Scope Management.
C. Control Scope.
D. Define Scope.

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
5.4.3.1 Scope Baseline

The scope baseline is the approved version of a scope statement, work breakdown structure (WBS), and its associated WBS dictionary, that can be changed only through formal change control procedures and is used as a basis for comparison. It is a component of the project management plan. Components of the scope baseline include:

- **Project scope statement.** The project scope statement includes the description of the project scope, major deliverables, assumptions, and constraints.
- **WBS.** The WBS is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables. Each descending level of the WBS represents an increasingly detailed definition of the project work. The WBS is finalized by assigning each work package to a control account and establishing a unique identifier for that work package from a code of accounts. These identifiers provide a structure for hierarchical summation of costs, schedule, and resource information. A control account is a management control point where scope, budget, actual cost, and schedule are integrated and compared to the earned value for performance measurement. Control accounts are placed at selected management points in the WBS. Each control account may include one or more work packages, but each of the work packages should be associated with only one control account. A control account may include one or more planning packages. A planning package is a work breakdown structure component below the control account with known work content but without detailed schedule activities.
- **WBS dictionary.** The WBS dictionary is a document that provides detailed deliverable, activity, and scheduling information about each component in the WBS. The WBS dictionary is a document that supports the WBS. Information in the WBS dictionary may include, but is not limited to:
  - Code of account identifier,
  - Description of work,
  - Assumptions and constraints,
  - Responsible organization,
  - Schedule milestones,
  - Associated schedule activities,
  - Resources required,
  - Cost estimates,
  - Quality requirements,
  - Acceptance criteria,
  - Technical references, and
  - Agreement information

Process: 5.6 Control Scope

Definition: The process of monitoring the status of the project and product scope and managing changes to the scope baseline.

Key Benefit: The key benefit of this process is that it brings objectivity to the acceptance process and increases the chance of final product, service, or result acceptance by validating each deliverable.

Inputs

1. Project management plan
2. Requirements documentation
3. Requirements traceability matrix
4. Work performance data
5. Organizational process assets

Tools & Techniques
1. Variance analysis

Outputs
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

QUESTION 81
Which output is the approved version of the time-phased project budget?

A. Resource calendar
B. Scope baseline
C. Trend analysis
D. Cost baseline

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
A project budget includes all the funds authorized to execute the project. The cost baseline is the approved version of the time-phased project budget, but excludes management reserves.

7.3.3.1 Cost Baseline
The cost baseline is the approved version of the time-phased project budget, excluding any management reserves, which can only be changed through formal change control procedures and is used as a basis for comparison to actual results. It is developed as a summation of the approved budgets for the different schedule activities.

QUESTION 82
At the completion of a project, a report is prepared that details the outcome of the research conducted on a global trend during the project. Which item did this project create?

A. Result
B. Product

C. Service
D. Improvement

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 83
Power, urgency, and legitimacy are attributes of which stakeholder classification model?

A. Salience
B. Influence/impact
C. Power/interest
D. Power/influence

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
13.1.2.1 Stakeholder Analysis
Stakeholder analysis is a technique of systematically gathering and analyzing quantitative and qualitative information to determine whose interests should be taken into account throughout the project. It identifies the interests, expectations, and influence of the stakeholders and relates them to the purpose of the project. It also helps to identify stakeholder relationships (with the project and with other stakeholders) that can be leveraged to build coalitions and potential partnerships to enhance the project's chance of success, along with stakeholder relationships that need to be influenced differently at different stages of the project or phase.

Stakeholder analysis generally follows the steps described below:
- Identify all potential project stakeholders and relevant information, such as their roles, departments, interests, knowledge, expectations, and influence levels. Key stakeholders are usually easy to identify. They include anyone in a decision-making or management role who is impacted by the project outcome, such as the sponsor, the project manager, and the primary customer. Identifying other stakeholders is usually done by interviewing identified stakeholders and expanding the list until all potential stakeholders are included.
- Analyze the potential impact or support each stakeholder could generate, and classify them so as to define an approach strategy. In large stakeholder communities, it is important to prioritize the stakeholders to ensure the efficient use of effort to communicate and manage their expectations.

- Assess how key stakeholders are likely to react or respond in various situations, in order to plan how to influence them to enhance their support and mitigate potential negative impacts.

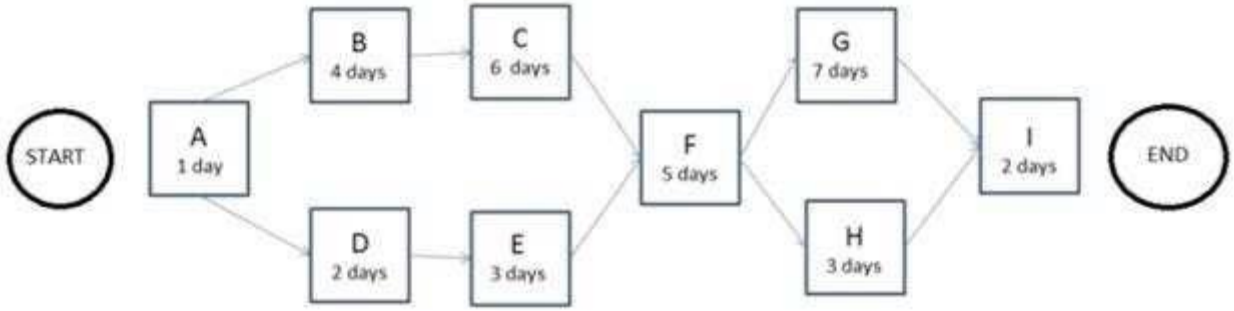
There are multiple classification models used for stakeholders analysis, such as:
- *Power/interest grid*, grouping the stakeholders based on their level of authority ("power") and their level or concern ("interest") regarding the project outcomes;
- *Power/influence grid*, grouping the stakeholders based on their level of authority ("power") and their active involvement ("influence") in the project;
- *Influence/impact grid*, grouping the stakeholders based on their active involvement ("influence") in the project and their ability to effect changes to the project's planning or execution ("impact"); and
- **Salience model, describing classes of stakeholders based on their power (ability to impose their will), urgency (need for immediate attention), and legitimacy (their involvement is appropriate).**

QUESTION 84
Through whom do project managers accomplish work?

A. Consultants and stakeholders
B. Stakeholders and functional managers
C. Project team members and consultants
D. Project team members and stakeholders
Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 85
The following is a network diagram for a project.



The free float for Activity E is how many days?

A. 2
B. 3
C. 5
D. 8

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 86
Retreating from an actual or potential conflict or postponing the issue to be better prepared or to be resolved by others describes which of the five general techniques for managing conflict?
A. Smooth/accommodate
B. Withdraw/avoid
C. Compromise/reconcile
D. Force/direct

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 87
Specification of both the deliverables and the processes is the focus of:

A. Change control
B. Configuration control
C. Project monitoring and control
D. Issue control

Correct Answer: B

Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Configuration control is focused on the specification of both the deliverables and the processes; while change control is focused on identifying, documenting, and approving or rejecting changes to the project documents, deliverables, or baselines.
Some of the configuration management activities included in the Perform Integrated Change Control process are as follows:

- **Configuration identification.** Identification and selection of a configuration item to provide the basis for which the product configuration is defined and verified, products and documents are labeled, changes are managed, and accountability is maintained.
- **Configuration status accounting.** Information is recorded and reported as to when appropriate data about the configuration item should be provided. This information includes a listing of approved configuration identification, status of proposed changes to the configuration, and the implementation status of approved changes.

- **Configuration verification and audit.** *Configuration verification and configuration audits ensure the composition of a project's configuration items is correct and that corresponding changes are registered, assessed, approved, tracked, and correctly implemented. This ensures the functional requirements defined in the configuration documentation have been met.*

QUESTION 88
When a project is undertaken to reduce defects in a product or service, the objective of the project is to create a/an:

A. improvement
B. program
C. result
D. portfolio

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 89
The degree of uncertainty an entity is willing to take on in anticipation of a reward is known as its risk:

A. management

B. response
C. tolerance
D. appetite

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
11 PROJECT RISK MANAGEMENT
[..]
Organizations perceive risk as the effect of uncertainty on projects and organizational objectives. Organizations and stakeholders are willing to accept varying degrees of risk depending on their risk attitude. The risk attitudes of both the organization and the stakeholders may be influenced by a number of factors, which are broadly classifed into three themes:

- *Risk appetite*, which is the degree of uncertainty an entity is willing to take on in anticipation of a reward.
- *Risk tolerance*, which is the degree, amount, or volume of risk that an organization or individual will withstand.
- *Risk threshold*, which refers to measures along the level of uncertainty or the level of impact at which a stakeholder may have a specific interest. Below that risk threshold, the organization will accept the risk. Above that risk threshold, the organization will not tolerate the risk.

For example, an organization's risk attitude may include its appetite for uncertainty, its threshold for risk levels that are unacceptable, or its risk tolerance at which point the organization may select a different risk response.
Positive and negative risks are commonly referred to as opportunities and threats. The project may be accepted if the risks are within tolerances and are in balance with the rewards that may be gained by taking the risks. Positive risks that offer opportunities within the limits of risk tolerances may be pursued in order to generate enhanced value. For example, adopting an aggressive resource optimization technique is a risk taken in anticipation of a reward for using fewer resources.

QUESTION 90
An example of a group decision-making technique is:

A. nominal group technique
B. majority
C. affinity diagram
D. multi-criteria decision analysis

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 91
Which tool or technique used in the Control Procurements process can be conducted during the execution of the project to verify compliance with deliverables?

A. Procurement documents
B. Inspection and audits
C. Estimate budget
D. Risk register

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Inspections and Audits. A process to observe performance of contracted work or a promised product against agreed-upon requirements.

Process: 12.3 Control Procurements
Definition: The process of managing procurement relationships, monitoring contract performance, and making changes and corrections as appropriate.
Key Benefit: The key benefit of this process is that it ensures that both the seller's and buyer's performance meets procurement requirements according to the terms of the legal agreement.

Inputs
1. Project management plan
2. Procurement documents
3. Agreements
4. Approved change requests
5. Work performance reports
6. Work performance data

Tools & Techniques
1. Contract change control system
2. Procurement performance reviews
3. **Inspections and audits**

4. Performance reporting
5. Payment systems
6. Claims administration
7. Records management system

Outputs
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

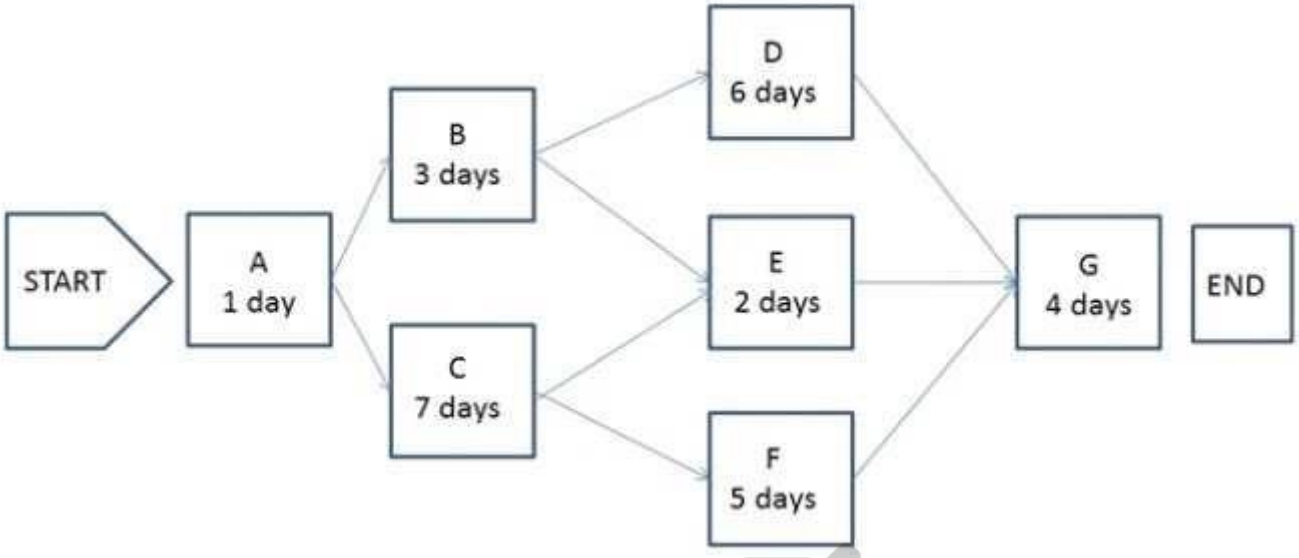
QUESTION 92
Job satisfaction, challenging work, and sufficient financial compensation are values related to which interpersonal skill?

A. Influencing
B. Motivation
C. Negotiation
D. Trust building

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
QUESTION 93
The following is a network diagram for a project.



The shortest non-critical path for the project is how many days in duration?

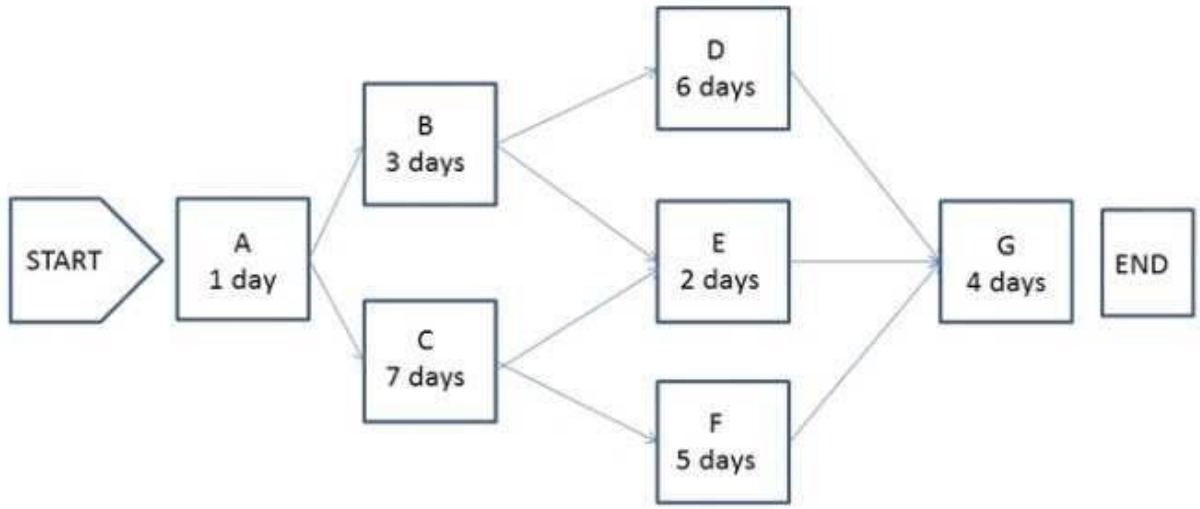
A. 10
B. 12
C. 14
D. 16

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 94
The following is a network diagram for a project.



The critical path for the project is how many days in duration?

A. 10
B. 12
C. 14
D. 17

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 95
The component of the human resource management plan that includes ways in which team members can obtain certifications that support their ability to benefit the project is known as:

A. recognition and rewards
B. compliance
C. staff acquisition

D. training needs

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 96
Stakeholders can be identified in later stages of the project because the Identify Stakeholders process should be:

A. Continuous
B. Discrete
C. Regulated
D. Arbitrary

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Process: 13.1 Identify Stakeholders
Definition: The process of identifying the people, groups, or organizations that could impact or be impacted by a decision, activity, or outcome of the project; and analyzing and documenting relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success. **Key Benefit:** The key benefit of this process is that it allows the project manager to identify the appropriate focus for each stakeholder or group of stakeholders.

Inputs
1. Project charter
2. Procurement documents
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Stakeholder analysis
2. Expert judgment

3. Meetings

Outputs
1. Stakeholder register

QUESTION 97
Which key interpersonal skill of a project manager is defined as the strategy of sharing power and relying on interpersonal skills to convince others to cooperate toward common goals?

A. Collaboration
B. Negotiation
C. Decision making
D. Influencing

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 98
Activity cost estimates and the project schedule are inputs to which Project Cost Management process?

A. Estimate Costs
B. Control Costs
C. Plan Cost Management
D. Determine Budget

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
7.2.3.1 Activity Cost Estimates

Activity cost estimates are quantitative assessments of the probable costs required to complete project work. Cost estimates can be presented in summary form or in detail. Costs are estimated for all resources that are applied to the activity cost estimate. This includes, but is not limited to, direct labor, materials, equipment, services, facilities, information technology, and special categories such as cost of financing (including interest charges), an inflation allowance, exchange rates, or a cost contingency reserve. Indirect costs, if they are included in the project estimate, can be included at the activity level or at higher levels.

Process: 7.3 Determine Budget
Definition: The process of aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline.
Key Benefit: The key benefit of this process is that it determines the cost baseline against which project performance can be monitored and controlled.

Inputs
1. Cost management plan
2. Scope baseline
3. **Activity cost estimates**
4. Basis of estimates
5. **Project schedule**
6. Resource calendars
7. Risk register
8. Agreements
9. Organizational process assets

Tools & Techniques
1. Cost aggregation
2. Reserve analysis
3. Expert judgment
4. Historical relationships
5. Funding limit reconciliation

Outputs
1. Cost baseline
2. Project funding requirements
3. Project documents updates

QUESTION 99
In project management, a temporary project can be:

A. Completed without planning
B. A routine business process
C. Long in duration

D. Ongoing to produce goods

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 100
Which document in the project management plan can be updated in the Plan Procurement Management process?

A. Budget estimates
B. Risk matrix
C. Requirements documentation

 D. Procurement documents

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Process: 12.1 Plan Procurement Management
Definition: The process of documenting project procurement decisions, specifying the approach, and identifying potential sellers.

Key Benefit: The key benefit of this process is that it determines whether to acquire outside support, and if so, what to acquire, how to acquire it, how much is needed, and when to acquire it.

Inputs
1. Project management plan
2. **Requirements documentation**
3. Risk register
4. Activity resource requirements
5. Project schedule
6. Activity cost estimates
7. Stakeholder register
8. Enterprise environmental factors
9. Organizational process assets

Tools & Techniques
1. Make-or-buy analysis
2. Expert judgment
3. Market research
4. Meetings

Outputs
1. Procurement management plan
2. Procurement statement of work
3. Procurement documents
4. Source selection criteria
5. Make-or-buy decisions
6. Change requests
7. Project documents updates

QUESTION 101
Which type of probability distribution is used to represent uncertain events such as the outcome of a test or a possible scenario in a decision tree?

A. Uniform
B. Continuous
C. Discrete
D. Linear

Correct Answer: C

Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Decision Tree Analysis. A diagramming and calculation technique for evaluating the implications of a chain of multiple options in the presence of uncertainty.

- Can only be used with discrete data.

QUESTION 102
Which change request is an intentional activity that realigns the performance of the project work with the project management plan?

A. Update
B. Preventive action
C. Defect repair
D. Corrective action

Correct Answer: D
Section: Volume B
Explanation
Explanation/Reference:
Explanation:
4.3.3.3 Change Requests
A change request is a formal proposal to modify any document, deliverable, or baseline. An approved change request will replace the associated document, deliverable, or baseline and may result in an update to other parts of the project management plan. When issues are found while project work is being performed, change requests are submitted, which may modify project policies or procedures, project scope, project cost or budget, project schedule, or project quality. Other change requests cover the needed preventive or corrective actions to forestall negative impact later in the project. Requests for a change can be direct or indirect, externally or internally initiated, and can be optional or legally/ contractually mandated, and may include:

- **Corrective action**—An intentional activity that realigns the performance of the project work with the project management plan;
- **Preventive action**—An intentional activity that ensures the future performance of the project work is aligned with the project management plan;
- **Defect repai**r—An intentional activity to modify a nonconforming product or product component;
- **Updates**—Changes to formally controlled project documents, plans, etc., to reflect modified or additional ideas or content.

QUESTION 103
Using parametric estimating, if an assigned resource is capable of producing 120 units per hour, how many hours are required to produce 12,000 units?

A. 100

B. 120
C. 1,000
D. 1,200

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 104
Which stakeholder approves a project's result?

A. Customer
B. Sponsor
C. Seller
D. Functional manager

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 105
Which process involves determining, documenting, and managing stakeholders' needs and requirements to meet project objectives?

A. Collect Requirements
B. Plan Scope Management
C. Define Scope
D. Define Activities

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Process: 5.2 Collect Requirements
Definition: The process of determining, documenting, and managing stakeholder needs and requirements to meet project objectives.
Key Benefit: The key benefit of this process is that it provides the basis for defining and managing the project scope including product scope.
Inputs
1. Scope management plan
2. Requirements management plan
3. Stakeholder management plan
4. Project charter
5. Stakeholder register

Tools & Techniques
1. Interviews
2. Focus groups
3. Facilitated workshops
4. Group creativity techniques
5. Group decision-making techniques
6. Questionnaires and surveys
7. Observations
8. Prototypes
9. Benchmarking
10. Context diagrams
11. Document analysis

Outputs
1. Requirements documentation
2. Requirements traceability matrix

QUESTION 106
When painting a bedroom, preparing the walls can be done while the paint is being chosen. This is an example of a:

A. lead
B. lag
C. mandatory dependency
D. internal dependency

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
6.3.2.2 Dependency Determination
Dependencies may be characterized by the following attributes: mandatory or discretionary, internal or external, as described below. Dependency has four attributes, but two can be applicable at the same time in following ways: mandatory external dependencies, mandatory internal dependencies, discretionary external dependencies, or discretionary internal dependencies.
- Mandatory dependencies. Mandatory dependencies are those that are legally or contractually required or inherent in the nature of the work. Mandatory dependencies often involve physical limitations, such as on a construction project, where it is impossible to erect the superstructure until after the foundation has been built, or on an electronics project, where a prototype has to be built before it can be tested. Mandatory dependencies are also sometimes referred to as hard logic or hard dependencies. Technical dependencies may not be mandatory. The project team determines which dependencies are mandatory during the process of sequencing the activities. Mandatory dependencies should not be confused with assigning schedule constraints in the scheduling tool.
- Discretionary dependencies. Discretionary dependencies are sometimes referred to as preferred logic, preferential logic, or soft logic. Discretionary dependencies are established based on knowledge of best practices within a particular application area or some unusual aspect of the project where a specific sequence is desired, even though there may be other acceptable sequences. Discretionary dependencies should be fully documented since they can create arbitrary total float values and can limit later scheduling options. When fast tracking techniques are employed, these discretionary dependencies should be reviewed and considered for modifcation or removal. The project team determines which dependencies are discretionary during the process of sequencing the activities.
- External dependencies. External dependencies involve a relationship between project activities and non-project activities. These dependencies are usually outside the project team's control. For example, the testing activity in a software project may be dependent on the delivery of hardware from an external source, or governmental environmental hearings may need to be held before site preparation can begin on a construction project. The project management team determines which dependencies are external during the process of sequencing the activities.
- Internal dependencies. Internal dependencies involve a precedence relationship between project activities and are generally inside the project team's control. For example, if the team cannot test a machine until they assemble it, this is an internal mandatory dependency. The project management team determines which dependencies are internal during the process of sequencing the activities.

QUESTION 107
What is the risk rating if the probability of occurrence is 0.30 and the impact if it does occur is moderate (0.20)?

A. 0.03
B. 0.06
C. 0.10
D. 0.50

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 108
A complete set of concepts, terms, and activities that make up an area of specialization is known as:

A. a Knowledge Area
B. a Process Group
C. program management
D. portfolio management

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:
Explanation:

3.9 Role of the Knowledge Areas
The 47 project management processes identified in the *PMBOK® Guide* are further grouped into ten separate Knowledge Areas. A Knowledge Area represents a complete set of concepts, terms, and activities that make up a professional field, project management field, or area of specialization. These ten Knowledge Areas are used on most projects most of the time. Project teams should utilize these ten Knowledge Areas and other Knowledge Areas, as appropriate, for their specific project. The Knowledge Areas are: Project Integration Management, Project Scope Management, Project Time Management, Project Cost Management, Project Quality Management, Project Human Resource Management, Project Communications Management, Project Risk Management, Project Procurement Management and Project Stakeholder Management. Each Knowledge Area within the *PMBOK® Guide* is contained in a separate section.
QUESTION 109
Project management processes ensure the:

A. alignment with organizational strategy
B. efficient means to achieve the project objectives
C. performance of the project team
D. effective flow of the project throughout its life cycle

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Project management processes. These processes ensure the effective flow of the project throughout its life cycle. These processes encompass the tools and techniques involved in applying the skills and capabilities described in the Knowledge Areas (Sections 4 through 13)

QUESTION 110
Which Project Time Management process includes bottom-up estimating as a tool or technique?

A. Estimate Activity Resources
B. Sequence Activities
C. Estimate Activity Durations
D. Develop Schedule

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Process: 6.4 Estimate Activity Resources
Definition: The process of estimating the type and quantities of material, human resources, equipment, or supplies required to perform each activity.
Key Benefit: The key benefit of this process is that it identifies the type, quantity, and characteristics of resources required to complete the activity which allows more accurate cost and duration estimates.

Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Resource calendars
5. Risk register
6. Activity cost estimates
7. Enterprise environmental factors
8. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Alternative analysis
3. Published estimating data

4. **Bottom-up estimating**
5. Project management software

Outputs
1. Activity resource requirements
2. Resource breakdown structure
3. Project documents updates

QUESTION 111
An input to the Control Quality process is:

A. Activity attributes
B. Quality control measurements
C. Enterprise environmental factors
D. Deliverables

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Process: 8.3 Control Quality
Definition: The process of monitoring and recording results of executing the quality activities to assess performance and recommend necessary changes.
Key Benefit: The key benefits of this process include: (1) identifying the causes of poor process or product quality and recommending and/or taking action to eliminate them; and (2) validating that project deliverables and work meet the requirements specified by key stakeholders necessary for final acceptance.

Inputs
1. Project management plan
2. Quality metrics
3. Quality checklists
4. Work performance data
5. Approved change requests
6. **Deliverables**
7. Project documents
8. Organizational process assets

Tools & Techniques

1. Seven basic quality tools
2. Statistical sampling
3. Inspection
4. Approved change requests review

Outputs
1. Quality control measurements
2. Validated changes
3. Verified deliverables
4. Work performance information
5. Change requests
6. Project management plan updates
7. Project documents updates
8. Organizational process assets updates

QUESTION 112
A disadvantage associated with virtual teams is that they:

A. Require communication technology that is not readily available.
B. Create difficulties when including people with disabilities.
C. Often cannot accommodate teams that work different hours or shifts.
D. Create the possibility for misunderstandings to arise.

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
9.2.2.4 Virtual Teams
The use of virtual teams creates new possibilities when acquiring project team members. Virtual teams can be defined as groups of people with a shared goal who fulfill their roles with little or no time spent meeting face to face. The availability of communication technology such as e-mail, audio conferencing, social media, webbased meetings and video conferencing has made virtual teams feasible. The virtual team model makes it possible to:
- Form teams of people from the same organization who live in widespread geographic areas;
- Add special expertise to a project team even though the expert is not in the same geographic area;
- Incorporate employees who work from home offices;
- Form teams of people who work different shifts, hours, or days;
- Include people with mobility limitations or disabilities; and

- Move forward with projects that would have been ignored due to travel expenses.

There are some disadvantages related to virtual teams, such as possibility for misunderstandings, feeling of isolation, difficulties in sharing knowledge and experience between team members, and cost of appropriate technology. Communication planning becomes increasingly important in a virtual team environment. Additional time may be needed to set clear expectations, facilitate communications, develop protocols for resolving conflict, include people in decision making, understand cultural differences, and share credit in successes.

QUESTION 113

Which project risk listed in the table below is most likely to occur?

Project Risks	Probability	Impact
Risk 1	L	M
Risk 2	H	H
Risk 3	L	L
Risk 4	M	L

A. 1
B. 2
C. 3
D. 4

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 114

A risk that arises as a direct result of implementing a risk response is called a:

A. contingent risk
B. residual risk
C. potential risk

D. secondary risk

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
11.5.2 Plan Risk Responses: Tools and Techniques
Several risk response strategies are available. The strategy or mix of strategies most likely to be effective should be selected for each risk. Risk analysis tools, such as decision tree analysis (Section 11.4.2.2), can be used to choose the most appropriate responses. Specific actions are developed to implement that strategy, including primary and backup strategies, as necessary. A fallback plan can be developed for implementation if the selected strategy turns out not to be fully effective or if an accepted risk occurs. **Secondary risks should also be reviewed. Secondary risks are risks that arise as a direct result of implementing a risk response.** A contingency reserve is often allocated for time or cost. If developed, it may include identification of the conditions that trigger its use.

QUESTION 115
A tool and technique used in the Develop Project Charter process is:

A. change control tools
B. expert judgment
C. meetings
D. analytical techniques

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
4.1.2.1 Expert Judgment
Expert judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including:
- Other units within the organization,
- Consultants,
- Stakeholders, including customers or sponsors,
- Professional and technical associations,
- Industry groups,

- Subject matter experts (SME), and
- Project management office (PMO).

4.1.3.1 Project Charter

The project charter is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. It documents the business needs, assumptions, constraints, the understanding of the customer's needs and high-level requirements, and the new product, service, or result that it is intended to satisfy, such as:

- Project purpose or justification,
- Measurable project objectives and related success criteria,
- High-level requirements,
- Assumptions and constraints,
- High-level project description and boundaries,
- High-level risks,
- Summary milestone schedule,
- Summary budget,
- Stakeholder list,
- Project approval requirements (i.e., what constitutes project success, who decides the project is successful, and who signs off on the project),
- Assigned project manager, responsibility, and authority level, and
- Name and authority of the sponsor or other person(s) authorizing the project charter.

Process: 4.1. Develop Project Charter

Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.

Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs

1. Project statement of work
2. Business case
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques

1. **Expert judgment**
2. Facilitation techniques

Outputs

1. Project charter

QUESTION 116

The following chart contains information about the tasks in a project.

Task	PV	AC	EV
1	10,000	10,000	10,000
2	10,000	8,000	10,000
3	10,000	8,000	8,000
4	9,000	12,000	10,000
5	10,000	12,000	12,000
6	10,000	10,000	12,000
7	12,000	12,000	10,000
8	10,000	8,000	9,000
9	12,000	10,000	11,000

Based on the chart, what is the schedule performance index (5PI) for Task 4?

A. 0.83
B. 0.9
C. 1.11
D. 1.33

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
QUESTION 117
Which type of analysis is used to determine the cause and degree of difference between the baseline and actual performance?

A. Schedule network analysis
B. Reserve analysis
C. Alternative analysis
D. Variance analysis

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
5.6.2.1 Variance Analysis
Variance analysis is a technique for determining the cause and degree of difference between the baseline and actual performance. Project performance measurements are used to assess the magnitude of variation from the original scope baseline. Important aspects of project scope control include determining the cause and degree of variance relative to the scope baseline (Section 5.4.3.1) and deciding whether corrective or preventive action is required.

QUESTION 118
A project's purpose or justification, measurable project objectives and related success criteria, a summary milestone schedule, and a summary budget are all components of which document?

A. Work breakdown structure
B. Requirements document
C. Project charter
D. Project management plan

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:

4.1.3.1 Project Charter

The project charter is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. It documents the business needs, assumptions, constraints, the understanding of the customer's needs and high-level requirements, and the new product, service, or result that it is intended to satisfy, such as:

- Project purpose or justification,
- Measurable project objectives and related success criteria,
- High-level requirements,
- Assumptions and constraints,
- High-level project description and boundaries,
- High-level risks,
- Summary milestone schedule,
- Summary budget,
- Stakeholder list,
- Project approval requirements (i.e., what constitutes project success, who decides the project is successful, and who signs off on the project), ·

Assigned project manager, responsibility, and authority level, and

- Name and authority of the sponsor or other person(s) authorizing the project charter.

Process: 4.1. Develop Project Charter

Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.

Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs

1. Project statement of work
2. Business case
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques

1. Expert judgment
2. Facilitation techniques

Outputs

1. Project charter

QUESTION 119
A project team attempts to produce a deliverable and finds that they have neither the expertise nor the time to complete the deliverable in a timely manner. This issue could have been avoided if they had created and followed a:

A. risk management plan
B. human resource management plan
C. scope management plan
D. procurement management plan

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
12.1.3.1 Procurement Management Plan
The procurement management plan is a component of the project management plan that describes how a project team will acquire goods and services from outside the performing organization. It describes how the procurement processes will be managed from developing procurement documents through contract closure. The procurement management plan can include guidance for:

· Types of contracts to be used; ·
Risk management issues;
· Whether independent estimates will be used and whether they are needed as evaluation criteria;
· Those actions the project management team can take unilaterally, if the performing organization has a prescribed procurement, contracting, or purchasing department;
· Standardized procurement documents, if needed;
· Managing multiple suppliers;
· Coordinating procurement with other project aspects, such as scheduling and performance reporting;
· Any constraints and assumptions that could affect planned procurements;
· Handling the long lead times to purchase certain items from sellers and coordinating the extra time needed to procure these items with the development of the project schedule;
· Handling the make-or-buy decisions and linking them into the Estimate Activity Resources and Develop Schedule processes
· Setting the scheduled dates in each contract for the contract deliverables and coordinating with the schedule development and control processes;
· Identifying requirements for performance bonds or insurance contracts to mitigate some forms of project risk;
· Establishing the direction to be provided to the sellers on developing and maintaining a work breakdown structure (WBS); · Establishing the form and format to be used for the procurement/contract statements of work; · Identifying prequalified sellers, if any, to be used; and
· Procurement metrics to be used to manage contracts and evaluate sellers.

A procurement management plan can be formal or informal, can be highly detailed or broadly framed, and is based upon the needs of each project.

QUESTION 120
A benefit of using virtual teams in the Acquire Project Team process is the reduction of the:

A. cultural differences of team members
B. possibility of communication misunderstandings
C. costs associated with travel
D. costs associated with technology

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
9.2.2.4 Virtual Teams
The use of virtual teams creates new possibilities when acquiring project team members. Virtual teams can be defined as groups of people with a shared goal who fulfill their roles with little or no time spent meeting face to face. The availability of communication technology such as e-mail, audio conferencing, social media, webbased meetings and video conferencing has made virtual teams feasible. The virtual team model makes it possible to:
- Form teams of people from the same organization who live in widespread geographic areas;
- Add special expertise to a project team even though the expert is not in the same geographic area;
- Incorporate employees who work from home offices;
- Form teams of people who work different shifts, hours, or days;
- Include people with mobility limitations or disabilities; and
- **Move forward with projects that would have been ignored due to travel expenses.**

There are some disadvantages related to virtual teams, such as possibility for misunderstandings, feeling of isolation, difficulties in sharing knowledge and experience between team members, and cost of appropriate technology. Communication planning becomes increasingly important in a virtual team environment. Additional time may be needed to set clear expectations, facilitate communications, develop protocols for resolving conflict, include people in decision making, understand cultural differences, and share credit in successes.

QUESTION 121
Those who enter into a contractual agreement to provide services necessary for a project are:

A. buyers
B. sellers
C. business partners

D. product users

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 122
Project managers who lead by example and follow through on the commitments they make demonstrate the key interpersonal skill of:

A. influencing
B. leadership
C. motivation
D. coaching

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 123
Which items are an output of the Perform Integrated Change Control process?

A. Work performance reports
B. Accepted deliverables
C. Project management plan updates
D. Organizational process assets

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Process: 4.5 Perform Integrated Change Control
Perform Integrated Change Control is the process of reviewing all change requests; approving changes and managing changes to deliverables, organizational process assets, project documents, and the project management plan; and communicating their disposition. It reviews all requests for changes or modifications to project documents, deliverables, baselines, or the project management plan and approves or rejects the changes.
Key Benefit: The key benefit of this process is that it allows for documented changes within the project to be considered in an integrated fashion while reducing project risk, which often arises from changes made without consideration to the overall project objectives or plans.

Inputs
1. Project management plan
2. Work performance reports
3. Change requests
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Meetings
3. Change control tools

Outputs
1. Approved change requests
2. Change log
3. **Project management plan updates**
4. Project documents updates

QUESTION 124
Which term describes an assessment of correctness?

A. Accuracy
B. Precision
C. Grade
D. Quality

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Accuracy. Within the quality management system, *accuracy* is an assessment of correctness

QUESTION 125
The Project Human Resource Management process that involves confirming human resource availability and obtaining the team necessary to complete project activities is:

A. Acquire Project Team.
B. Plan Human Resource Management.
C. Manage Project Team.
D. Develop Project Team.

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Process: 9.2 Acquire Project Team
Definition: The process of confirming human resource availability and obtaining the team necessary to complete project activities.
Key Benefit: The key benefit of this process consists of outlining and guiding the team selection and responsibility assignment to obtain a successful team.
Inputs
1. Human resource management plan
2. Enterprise environmental factors
3. Organizational process assets

Tools & Techniques
1. Pre-assignment
2. Negotiation
3. Acquisition
4. Virtual teams
5. Multi-criteria decision analysis

Outputs
1. Project staff assignments
2. Resource calendars
3. Project management plan updates

QUESTION 126
At the start of a typical project life cycle, costs are:

A. low, peak as work is carried out, and drop as the project nears the end.
B. low, become steady as work is carried out, and increase as the project nears the end.
C. high, drop as work is carried out, and increase as the project nears the end.
D. high, become low as work is carried out, and drop as the project nears the end.

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 127
Success is measured by benefits realization for a:
A. strategic plan
B. project
C. portfolio
D. program

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
1.4.2 Portfolio Management
A portfolio refers to projects, programs, subportfolios, and operations managed as a group to achieve strategic objectives. The projects or programs of the portfolio may not necessarily be interdependent or directly related. For example, an infrastructure firm that has the strategic objective of “maximizing the return on its investments” may put together a portfolio that includes a mix of projects in oil and gas, power, water, roads, rail, and airports. From this mix, the firm may choose to manage related projects as one program. All of the power projects may be grouped together as a power program. Similarly, all of the water projects may be grouped together as a water program.
Thus, the power program and the water program become integral components of the enterprise portfolio of the infrastructure firm.

QUESTION 128
Organizational process assets, a lessons-learned database, and historical information are all inputs to which process?

A. Plan Cost Management
B. Plan Scope Management
C. Plan Stakeholder Management
D. Plan Schedule Management

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 129
Technical capability, past performance, and intellectual property rights are examples of:

A. performance measurement criteria
B. source selection criteria
C. product acceptance criteria
D. phase exit criteria

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 130
Which process is usually a rapid and cost-effective means of establishing priorities for Plan Risk Responses?

A. Identify Risks
B. Plan Risk Management
C. Perform Qualitative Risk Analysis

D. Perform Quantitative Risk Analysis

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Perform Qualitative Risk Analysis assesses the priority of identified risks using their relative probability or likelihood of occurrence, the corresponding impact on project objectives if the risks occur, as well as other factors such as the time frame for response and the organization's risk tolerance associated with the project constraints of cost, schedule, scope, and quality. Such assessments reflect the risk attitude of the project team and other stakeholders. Effective assessment therefore requires explicit identification and management of the risk approaches of key participants in the Perform Qualitative Risk Analysis process. Where these risk approaches introduce bias into the assessment of identified risks, attention should be paid to identifying bias and correcting for it.
Establishing definitions of the levels of probability and impact can reduce the influence of bias. The time criticality of risk-related actions may magnify the importance of a risk. An evaluation of the quality of the available information on project risks also helps to clarify the assessment of the risk's importance to the project. **Perform Qualitative Risk Analysis is usually a rapid and cost-effective means of establishing priorities for Plan Risk Responses and lays the foundation for Perform Quantitative Risk Analysis, if required**. The Perform Qualitative Risk Analysis process is performed regularly throughout the project life cycle, as defined in the project's risk management plan. This process can lead into Perform Quantitative Risk Analysis (Section 11.4) or directly into Plan Risk Responses (Section 11.5).

Process: 11.3 Perform Qualitative Risk Analysis
Definition: The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.
Key Benefit: The key benefit of this process is that it enables project managers to reduce the level of uncertainty and to focus on high-priority risks.

Inputs
1. Risk management plan
2. Scope baseline
3. Risk register
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Risk probability and impact assessment
2. Probability and impact matrix
3. Risk data quality assessment
4. Risk categorization
5. Risk urgency assessment

6. Expert judgment

Outputs
1. Project documents updates

QUESTION 131
A full-time project manager with low to moderate authority and part-time administrative staff is working in an organizational structure with which type of matrix?

A. Strong
B. Weak
C. Managed
D. Balanced

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Project managers have the highest level of power and authority in a projectized organization. They also have high levels of power and authority in a strong matrix; however, a matrix organization is a blend of functional and projectized organizations, and therefore, the project manager does not have quite the same level of authority as they would in a projectized organization.

QUESTION 132
Project Scope Management is primarily concerned with:
A. Developing a detailed description of the project and product.
B. Determining how requirements will be analyzed, documented, and managed.
C. Defining and controlling what is and is not included in the project.
D. Formalizing acceptance of the completed project deliverables.

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Project Scope Management

Project Scope Management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. **Managing the project scope is primarily concerned with defining and controlling what is and is not included in the project.**

QUESTION 133
For a stakeholder with low interest and high power, the project manager should:

A. Monitor the stakeholder.
B. Manage the stakeholder closely.
C. Keep the stakeholder satisfied.
D. Keep the stakeholder informed.

Correct Answer: C
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 134
Which schedule method allows the project team to place buffers on the project schedule path to account for limited resources and project uncertainties?

A. Critical path method
B. Critical chain method
C. Resource leveling
D. Schedule network analysis
Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
6.6.2.3 Critical Chain Method
The critical chain method (CCM) is a schedule method that allows the project team to place buffers on any project schedule path to **account for limited resources and project uncertainties.** It is developed from the critical path method approach and considers the effects of resource allocation, resource optimization, resource leveling, and activity duration uncertainty on the critical path determined using the critical path method. To do so, the critical chain method introduces the concept of buffers and buffer management. The critical chain method uses activities with durations that do not include safety margins, logical relationships, and resource availability with statistically determined buffers composed of the aggregated safety margins of activities at specified points on the

project schedule path to account for limited resources and project uncertainties. The resource-constrained critical path is known as the critical chain. The critical chain method adds duration buffers that are non-work schedule activities to manage uncertainty.
One buffer, placed at the end of the critical chain, as shown in Figure 6-19, is known as the project buffer and protects the target finish date from slippage along the critical chain. Additional buffers, known as feeding buffers, are placed at each point where a chain of dependent activities that are not on the critical chain feeds into the critical chain. Feeding buffers thus protect the critical chain from slippage along the feeding chains. The size of each buffer should account for the uncertainty in the duration of the chain of dependent activities leading up to that buffer. Once the buffer schedule activities are determined, the planned activities are scheduled to their latest possible planned start and finish dates. Consequently, instead of managing the total float of network paths, the critical chain method focuses on managing the remaining buffer durations against the remaining durations of chains of activities.

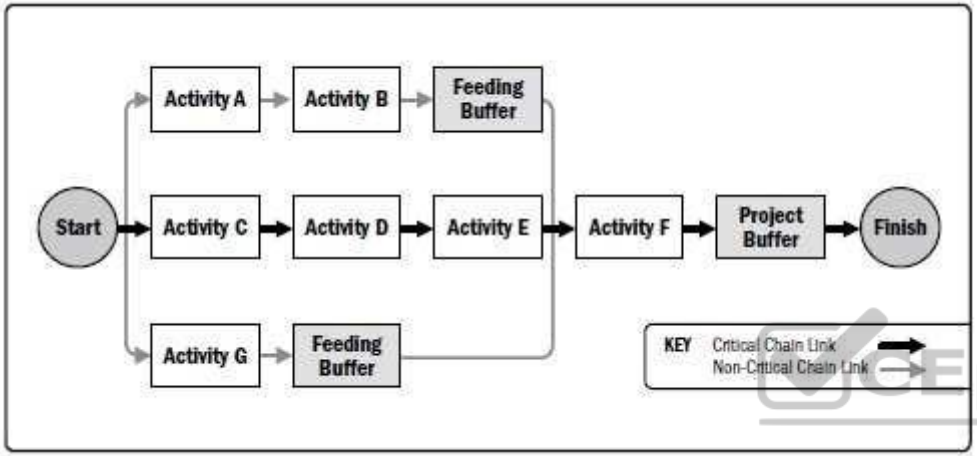


Figure 6-19. Example of Critical Chain Method

QUESTION 135
The lowest level normally depicted in a work breakdown structure (VVBS) is called a/an:

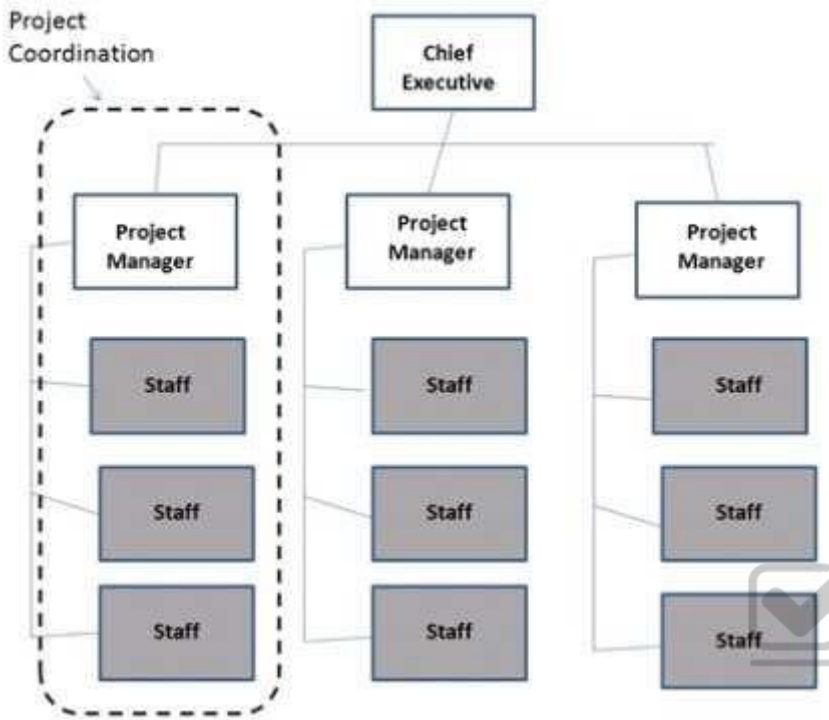
A. work package
B. deliverable
C. milestone
D. activity

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 136
Which type of organizational structure is displayed in the diagram provided?



A. Balanced matrix
B. Projectized
C. Strong matrix
D. Functional

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 137

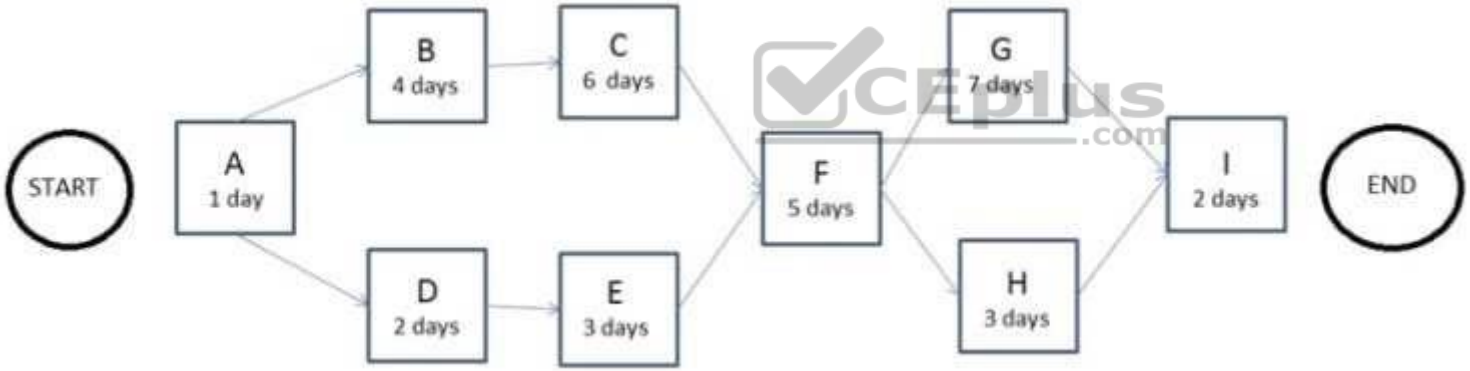
Stakeholder communication requirements should be included as a component of:
A. enterprise environmental factors
B. organizational process assets
C. the project management plan
D. the stakeholder register

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 138
The following is a network diagram for a project.



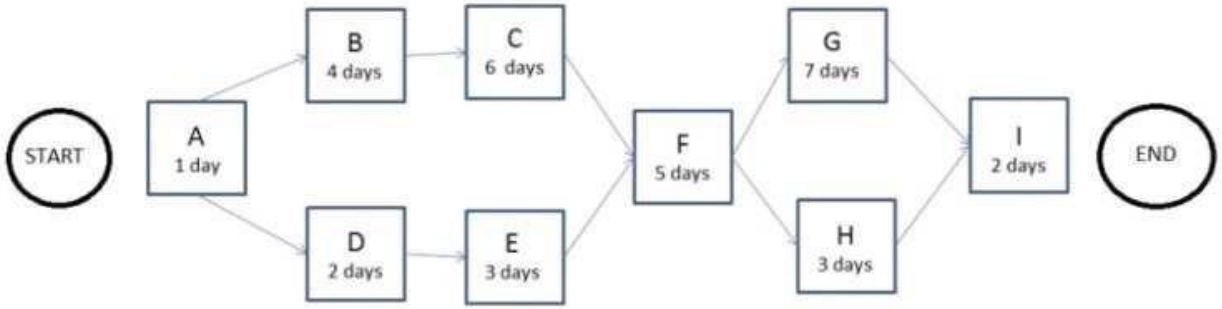
What is the critical path for the project?

A. A-B-C-F-G-I
B. A-B-C-F-H-I
C. A-D-E-F-G-ID. A-D-E-F-H-I

Correct Answer: A
Section: Volume B

Explanation
Explanation/Reference:

QUESTION 139
The following is a network diagram for a project.



How many possible paths are identified for this project?

A. 3
B. 4
C. 6
D. 7

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 140
The process of obtaining seller responses, selecting a seller, and awarding a contract is called:

A. Close Procurements.
B. Control Procurements.
C. Plan Procurements.

D. Conduct Procurements.
Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Process: 12.2 Conduct Procurements
Definition: The process of obtaining seller responses, selecting a seller, and awarding a contract.
Key Benefit: The key benefit of this process is that it provides alignment of internal and external stakeholder expectations through established agreements.

Inputs
1. Procurement management plan
2. Procurement documents
3. Source selection criteria
4. Seller proposals
5. Project documents
6. Make-or-buy decisions
7. Procurement statement of work
8. Organizational process assets**Tools & Techniques**
1. Bidder conference
2. Proposal evaluation techniques
3. Independent estimates
4. Expert judgment
5. Advertising
6. Analytical techniques
7. Procurement negotiations

Outputs
1. .Selected sellers
2. .Agreements
3. .Resource calendars
4. .Change requests
5. .Project management plan updates
6. .Project documents updates

QUESTION 141
Impacts to other organizational areas, levels of service, and acceptance criteria are typical components of which document?

A. Business case

B. Work breakdown structure
C. Requirements documentation
D. Risk register

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
5.2.3.1 Requirements Documentation
Requirements documentation describes how individual requirements meet the business need for the project.
Requirements may start out at a high level and become progressively more detailed as more about the requirements is known. Before being baselined, requirements need to be unambiguous (measurable and testable), traceable, complete, consistent, and acceptable to key stakeholders. The format of a requirements document may range from a simple document listing all the requirements categorized by stakeholder and priority, to more elaborate forms containing an executive summary, detailed descriptions, and attachments.
Components of requirements documentation can include, but, are not limited to: ▪
Business requirements, including:
○ Business and project objectives for traceability;
○ Business rules for the performing organization; and
○ Guiding principles of the organization
• Stakeholder requirements, including:
○ **Impacts to other organizational areas;**
○ Impacts to other entities inside or outside the performing organization; and
○ Stakeholder communication and reporting requirements.
• Solution requirements, including:
○ Functional and nonfunctional requirements;
○ Technology and standard compliance requirements;
○ Support and training requirements;
○ Quality requirements; and
○ Reporting requirements, etc. (solution requirements can be documented textually, in models, or both). ▪
Project requirements, such as:
○ **Levels of service,** performance, safety, compliance, etc.; and
○ **Acceptance criteria.**
▪ Transition requirements.
▪ Requirements assumptions, dependencies, and constraints.

QUESTION 142
Which Process Group includes the Manage Stakeholder Engagement process?

A. Executing
B. Planning
C. Monitoring and Controlling
D. Initiating

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Executing Process Group
4.3 Direct and Manage Project Work
8.2 Perform Quality Assurance
    9.2 Acquire Project Team
    9.3 Develop Project Team
    9.4 Manage Project Team
10.2 Manage Communications
12.2 Conduct Procurements
13.3 Manage Stakeholder Engagement

13.3 Manage Stakeholder Engagement
Definition: The process of communicating and working with stakeholders to meet their needs/expectations, address issues as they occur, and foster appropriate stakeholder engagement in project activities throughout the project life cycle.
Key Benefit: The key benefit of this process is that it allows the project manager to increase support and minimize resistance from stakeholders, significantly increasing the chances to achieve project success.

Inputs
1. Stakeholder management plan
2. Communications management plan
3. Change log
4. Organizational process assets

Tools & Techniques

1. Communication methods
2. Interpersonal skills
3. Management skills

Outputs
1. Issue log
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

QUESTION 143
Funding limit reconciliation is a tool and technique of which Project Cost Management process?

A. Estimate Costs
B. Control Costs
C. Plan Cost Management
D. Determine Budget

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
7.3.2.5 Funding Limit Reconciliation
The expenditure of funds should be reconciled with any funding limits on the commitment of funds for the project.
A variance between the funding limits and the planned expenditures will sometimes necessitate the rescheduling of work to level out the rate of expenditures. This is accomplished by placing imposed date constraints for work into the project schedule.

Process: 7.3 Determine Budget
Definition: The process of aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline.
Key Benefit: The key benefit of this process is that it determines the cost baseline against which project performance can be monitored and controlled.

Inputs
1. Cost management plan
2. Scope baseline
3. Activity cost estimates

4. Basis of estimates
5. Project schedule
6. Resource calendars
7. Risk register
8. Agreements
9. Organizational process assets

Tools & Techniques
1. Cost aggregation
2. Reserve analysis
3. Expert judgment
4. Historical relationships
5. **Funding limit reconciliation**

Outputs
1. Cost baseline
2. Project funding requirements
3. Project documents updates

QUESTION 144
In complex projects/ initiating processes should be completed:

A. Within a work package.
B. In each phase of the project.
C. To estimate schedule constraints.
D. To estimate resource allocations.

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 145
A project manager requesting industry groups and consultants to recommend project intervention is relying on:

A. Communication models.

B. Stakeholder participation.
C. Expert judgment
D. Enterprise environmental factors.

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
4.1.2.1 Expert Judgment
Definition: Judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including: ・Other units within the organization,
・Consultants,
・Stakeholders, including customers or sponsors,
・Professional and technical associations,
・Industry groups,
・Subject matter experts (SME), and ・
Project management office (PMO).

QUESTION 146
The degree, amount, or volume of risk that an organization or individual will withstand is called risk:

A. appetite
B. tolerance
C. threshold
D. management

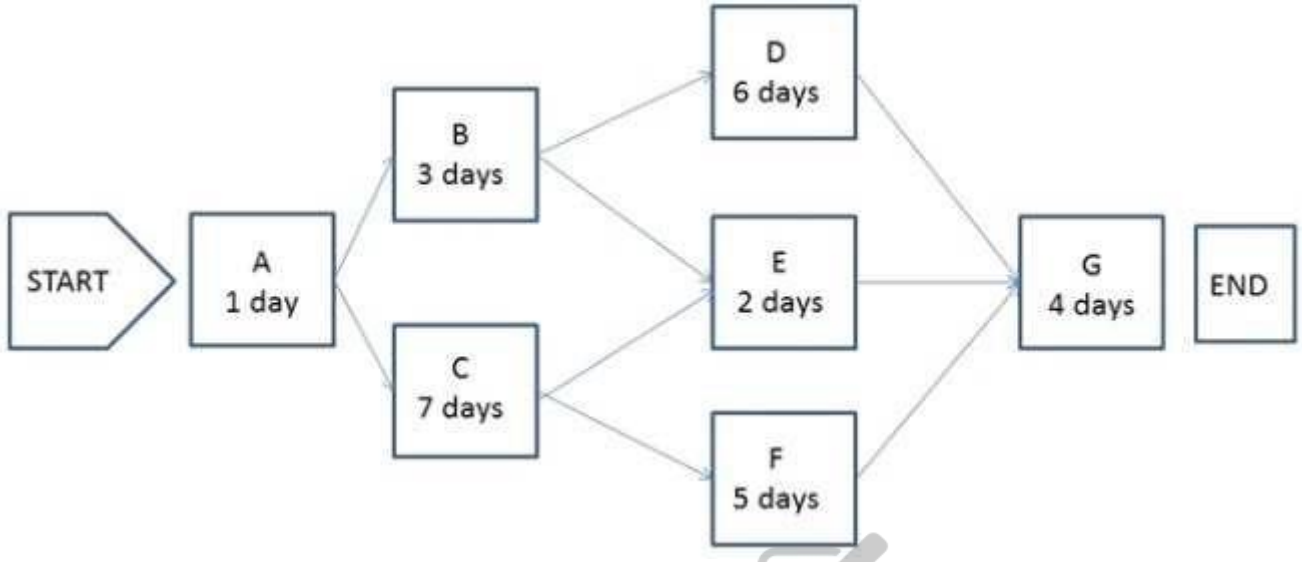
Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 147

The following is a network diagram for a project.



What is the critical path for the project?

A. A-B-D-G
B. A-B-E-G
C. A-C-F-GD. A-C-E-G

Correct Answer: C
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 148
Tools and techniques used in Direct and Manage Project Work include:

A. Process analysis and expert judgment
B. Analytical techniques and a project management information system
C. Performance reviews and meetings

D. Expert judgment and meetings

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
4.3.2.3 Meetings
Meetings are used to discuss and address pertinent topics of the project when directing and managing project work. Attendees at the meetings may include the project manager, the project team and appropriate stakeholders involved or affected by the topics addressed. Each attendee should have a defined role to ensure appropriate participation. Meetings tend to be one of three types:
- Information exchange;
- Brainstorming, option evaluation, or design; or
- Decision making.

Meeting types should not be mixed as a best practice. Meetings should be prepared with a well-defined agenda, purpose, objective, and time frame and should be appropriately documented with meeting minutes and action items. Meeting minutes should be stored as defined in the project management plan. Meetings are most effective when all participants can be face-to-face in the same location. Virtual meetings can be held using audio and/or video conferencing tools, but generally require additional preparation and organization to achieve the same effectiveness of a face-to-face meeting.

4.1.2.1 Expert Judgment
Expert judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including:
- Other units within the organization,
- Consultants,
- Stakeholders, including customers or sponsors,
- Professional and technical associations,
- Industry groups,
- Subject matter experts (SME), and
- Project management office (PMO).

Process: 4.3. Direct and Manage Project Work
Definition: The process of leading and performing the work defined in the project management plan and implementing approved changes to achieve the project's objectives.
Key Benefit: The key benefit of this process is that it provides overall management of the project work.

Inputs

1. Project management plan
2. Approved change requests
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. **Expert judgment**
2. Project management information system
3. **Meetings**

Outputs
1. Deliverables
2. Work performance data
3. Change requests
4. Project management plan updates
5. Project documents updates

QUESTION 149
Which Control Stakeholder Engagement tool or technique allows the project manager to consolidate and facilitate distribution of reports?

A. Information management systems
B. Work performance reports
C. Stakeholder analysis
D. Data gathering and representation

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Process: 13.4 Control Stakeholder Engagement
Definition: The process of monitoring overall project stakeholder relationships and adjusting strategies and plans for engaging stakeholders.
Key Benefit: The key benefit of this process is that it will maintain or increase the efficiency and effectiveness of stakeholder engagement activities as the project evolves and its environment changes.

Inputs
1. Project management plan
2. Issue log
3. Work performance data
4. Project documents

Tools & Techniques
1. **Information management systems**
2. Expert judgment
3. Meetings

Outputs
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

QUESTION 150
High-level project risks are included in which document?

A. Business case
B. Risk breakdown structure
C. Project charter
D. Risk register

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
4.2.1.1 Project Charter
Described in Section 4.1.3.1. The size of the project charter varies depending on the complexity of the project and the information known at the time of its creation. At a minimum, **the project charter should define the high-level boundaries of the project**. The project team uses the project charter as the starting point for initial planning throughout the Initiating Process Group.

4.1.3.1 Project Charter

The project charter is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. It documents the business needs, assumptions, constraints, the understanding of the customer's needs and high-level requirements, and the new product, service, or result that it is intended to satisfy, such as:

- Project purpose or justification,
- Measurable project objectives and related success criteria,
- High-level requirements,
- Assumptions and constraints,
- High-level project description and boundaries,
- **High-level risks,**
- Summary milestone schedule,
- Summary budget,
- Stakeholder list,
- Project approval requirements (i.e., what constitutes project success, who decides the project is successful, and who signs off on the project), ·
Assigned project manager, responsibility, and authority level, and
- Name and authority of the sponsor or other person(s) authorizing the project charter.

Process: 4.1. Develop Project Charter

Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.

Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs

1. Project statement of work
2. Business case
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques

1. Expert judgment
2. Facilitation techniques

Outputs

1. Project charter

QUESTION 151

Which enterprise environmental factors may influence Plan Schedule Management?

A. Cultural views regarding time schedules and professional and ethical behaviors
B. Historical information and change control procedures
C. Risk control procedures and the probability and impact matrix
D. Resource availability and organizational culture and structure

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
6.1.1.3 Enterprise Environmental Factors
Described in Section 2.1.5. The enterprise environmental factors that influence the Plan Schedule Management process include, but are not limited to: ・ **Organizational culture** and structure can all influence schedule management;
・**Resource availability** and skills that may influence schedule planning;
・Project management software provides the scheduling tool and alternative possibilities for managing the schedule;
・Published commercial information, such as resource productivity information, is often available from commercial databases; and ・ Organizational work authorization systems.

Process: 6.1 Plan Schedule Management
Definition: The process of establishing the policies, procedures, and documentation for planning, developing, managing, executing, and controlling the project schedule.
Key Benefit: The key benefit of this process is that it provides guidance and direction on how the project schedule will be managed throughout the project.

Inputs
1. Project management plan
2. Project charter
3. **Enterprise environmental factors**
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analytical techniques
3. Meetings

Outputs
1. Schedule management plan

QUESTION 152
Which type of dependency used in the Sequence Activities process is sometimes referred to as preferred logic, preferential logic, or soft logic?

A. Internal
B. External
C. Discretionary
D. Mandatory

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
6.3.2.2 Dependency Determination
Dependencies may be characterized by the following attributes: mandatory or discretionary, internal or external, as described below. Dependency has four attributes, but two can be applicable at the same time in following ways: mandatory external dependencies, mandatory internal dependencies, discretionary external dependencies, or discretionary internal dependencies.

· **Mandatory dependencies.** Mandatory dependencies are those that are legally or contractually required or inherent in the nature of the work. Mandatory dependencies often involve physical limitations, such as on a construction project, where it is impossible to erect the superstructure until after the foundation has been built, or on an electronics project, where a prototype has to be built before it can be tested.

Mandatory dependencies are also sometimes referred to as hard logic or hard dependencies. Technical dependencies may not be mandatory. The project team determines which dependencies are mandatory during the process of sequencing the activities. Mandatory dependencies should not be confused with assigning schedule constraints in the scheduling tool.

· **Discretionary dependencies.** Discretionary dependencies are sometimes referred to as preferred logic, preferential logic, or soft logic. Discretionary dependencies are established based on knowledge of best practices within a particular application area or some unusual aspect of the project where a specific sequence is desired, even though there may be other acceptable sequences. Discretionary dependencies should be fully documented since they can create arbitrary total float values and can limit later scheduling options. When fast tracking techniques are employed, these discretionary dependencies should be reviewed and considered for modification or removal. The project team determines which dependencies are discretionary during the process of sequencing the activities.

· **External dependencies.** External dependencies involve a relationship between project activities and non-project activities. These dependencies are usually outside the project team's control. For example, the testing activity in a software project may be dependent on the delivery of hardware from an external source, or governmental environmental hearings may need to be held before site preparation can begin on a construction project. The project management team determines which dependencies are external during the process of sequencing the activities.
· **Internal dependencies.** Internal dependencies involve a precedence relationship between project activities and are generally inside the project team's control. For example, if the team cannot test a machine until they assemble it, this is an internal mandatory dependency. The project management team determines which dependencies are internal during the process of sequencing the activities.

QUESTION 153
Which of the Perform Quality Assurance tools and techniques may enhance the creation of the work breakdown structure (VVBS) to give structure to the decomposition of the scope?

A. Activity network diagrams
B. Affinity diagrams
C. Matrix diagrams
D. Interrelationship digraphs

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
8.2.2 Perform Quality Assurance: Tools and Techniques
8.2.2.1 Quality Management and Control Tools
The Perform Quality Assurance process uses the tools and techniques of the Plan Quality Management and Control Quality processes. In addition, other tools that are available include (see also Figure 8-10):
· **Affinity diagrams.** The affinity diagram is similar to mind-mapping techniques in that they are used to generate ideas that can be linked to form organized patterns of thought about a problem. In project management, the creation of the WBS may be enhanced by using the affinity diagram to give structure to the decomposition of scope.

Process: 8.2 Perform Quality Assurance
Definition: The process of auditing the quality requirements and the results from quality control measurements to ensure that appropriate quality standards and operational definitions are used.
Key Benefit: The key benefit of this process is that it facilitates the improvement of quality processes.

Inputs

1. Quality management plan
2. Process improvement plan
3. Quality metrics
4. Quality control measurements
5. Project documents

Tools & Techniques
1. **Quality management and control tools**
2. Quality audits
3. Process analysis

Outputs
1. Change requests
2. Project management plan updates
3. Project documents updates
4. Organizational process assets updates

QUESTION 154
Requirements documentation will typically contain at least:

A. Stakeholder requirements, staffing requirements, and transition requirements.
B. Business requirements, the stakeholder register, and functional requirements.
C. Stakeholder impact, budget requirements, and communications requirements.
D. Business objectives, stakeholder impact, and functional requirements.
Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
5.2.3.1 Requirements Documentation
Requirements documentation describes how individual requirements meet the business need for the project.
Requirements may start out at a high level and become progressively more detailed as more about the requirements is known. Before being baselined, requirements need to be unambiguous (measurable and testable), traceable, complete, consistent, and acceptable to key stakeholders. The format of a requirements document may range from a simple document listing all the requirements categorized by stakeholder and priority, to more elaborate forms containing an executive summary, detailed descriptions, and attachments.
Components of requirements documentation can include, but, are not limited to: ·
Business requirements, including:

○ Business and project objectives for traceability;
○ Business rules for the performing organization; and
○ Guiding principles of the organization
• Stakeholder requirements, including:
○ Impacts to other organizational areas;
○ Impacts to other entities inside or outside the performing organization; and
○ Stakeholder communication and reporting requirements.
• Solution requirements, including:
○ Functional and nonfunctional requirements;
○ Technology and standard compliance requirements;
○ Support and training requirements;
○ Quality requirements; and
○ Reporting requirements, etc. (solution requirements can be documented textually, in models, or both).
• Project requirements, such as:
○ Levels of service, performance, safety, compliance, etc.; and
○ Acceptance criteria.
• Transition requirements.
• Requirements assumptions, dependencies, and constraints.

QUESTION 155
Which process involves the creation of a document that provides the project manager with the authority to apply resources to a project?

A. Define Activities
B. Direct and Manage Project Work
C. Develop Project Management Plan
D. Develop Project Charter
Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Process: 4.1. Develop Project Charter
Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.
Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs
1. Project statement of work
2. Business case
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Facilitation techniques

Outputs
1. Project charter

QUESTION 156
The stakeholder register is an output of:

A. Identify Stakeholders.
B. Plan Stakeholder Management.
C. Control Stakeholder Engagement.
D. Manage Stakeholder Engagement.

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
5.2.1.5 Stakeholder Register
Described in Section 13.1.3.1. The stakeholder register is used to identify stakeholders who can provide information on the requirements. The stakeholder register also captures major requirements and main expectations stakeholders may have for the project.

13.1.3.1 Stakeholder Register
The main output of the Identify Stakeholders process is the stakeholder register. This contains all details related to the identified stakeholders including, but not limited to:
- **Identification information.** Name, organizational position, location, role in the project, contact information;

· **Assessment information.** Major requirements, main expectations, potential influence in the project, phase in the life cycle with the most interest; and · **Stakeholder classification.** Internal/external, supporter/neutral/resistor, etc.

The stakeholder register should be consulted and updated on a regular basis, as stakeholders may change—or new ones identified—throughout the life cycle of the project.

Process: 13.1 Identify Stakeholders

Definition: The process of identifying the people, groups, or organizations that could impact or be impacted by a decision, activity, or outcome of the project; and analyzing and documenting relevant information regarding their interests, involvement, interdependencies, influence, and potential impact on project success. **Key Benefit:** The key benefit of this process is that it allows the project manager to identify the appropriate focus for each stakeholder or group of stakeholders.

Inputs

1. Project charter
2. Procurement documents
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques

1. Stakeholder analysis
2. Expert judgment
3. Meetings

Outputs

1. **Stakeholder register**

QUESTION 157

An output of the Develop Project Team process is:

A. change requests
B. team performance assessments
C. project staff assignments
D. project documents updates

Correct Answer: B
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
Process: 9.3 Develop Project Team
Definition: The process of improving competencies, team member interaction, and overall team environment to enhance project performance. The key benefit of this process is that it results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.
Key Benefit: The key benefit of this process is that it results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.

Inputs
1. Human resource management plan
2. Project staff assignments
3. Resource calendars

Tools & Techniques
1. Interpersonal skills
2. Training
3. Team-building activities
4. Ground rules
5. Colocation
6. Recognition and rewards
7. Personnel assessment tools

Outputs
1. **Team performance assessments**
2. Enterprise environmental factors updates

QUESTION 158
Which type of manager is assigned by the performing organization to lead the team that is responsible for achieving the project objectives?

A. Program
B. Functional
C. Project
D. Portfolio
Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 159
An input of the Plan Procurement Management process is:

A. Make-or-buy decisions.
B. Activity cost estimates.
C. Seller proposals.
D. Procurement documents.

Correct Answer: B
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
7.2.3.1 Activity Cost Estimates
Activity cost estimates are quantitative assessments of the probable costs required to complete project work. Cost estimates can be presented in summary form or in detail. Costs are estimated for all resources that are applied to the activity cost estimate. This includes, but is not limited to, direct labor, materials, equipment, services, facilities, information technology, and special categories such as cost of financing (including interest charges), an inflation allowance, exchange rates, or a cost contingency reserve. Indirect costs, if they are included in the project estimate, can be included at the activity level or at higher levels.

Process: 12.1 Plan Procurement Management
Definition: The process of documenting project procurement decisions, specifying the approach, and identifying potential sellers.
Key Benefit: The key benefit of this process is that it determines whether to acquire outside support, and if so, what to acquire, how to acquire it, how much is needed, and when to acquire it.

Inputs
1. Project management plan
2. Requirements documentation
3. Risk register
4. Activity resource requirements
5. Project schedule
6. **Activity cost estimates**
7. Stakeholder register
8. Enterprise environmental factors
9. Organizational process assets

Tools & Techniques
1. Make-or-buy analysis
2. Expert judgment
3. Market research
4. Meetings

Outputs
1. Procurement management plan
2. Procurement statement of work
3. Procurement documents
4. Source selection criteria
5. Make-or-buy decisions
6. Change requests
7. Project documents updates

QUESTION 160
Which organizational process assets update is performed during the Close Procurements process?

A. Procurement audit
B. Lessons learned
C. Performance reporting
D. Payment requests

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
12.4.3.2 Organizational Process Assets Updates
Elements of the organizational process assets that may be updated include, but are not limited to:
- **Procurement file.** A complete set of indexed contract documentation, including the closed contract, is prepared for inclusion with the final project fles.
- **Deliverable acceptance.** Documentation of formal acceptance of seller-provided deliverables may be required to be retained by the organization. The Close Procurement process ensures this documentation requirement is satisfed. Requirements for formal deliverable acceptance and how to address nonconforming deliverables are usually defined in the agreement.

· **Lessons learned documentation.** Lessons learned, what has been experienced, and process improvement recommendations, should be developed for the project fle to improve future procurements.

12.4 Close Procurements

The process of completing each project procurement.

Key Benefit: The key benefit of this process is that it documents agreements and related documentation for future reference.

Inputs

1. Project management plan
2. Procurement documents

Tools & Techniques

1. Procurement audits
2. Procurement negotiations
3. Records management system

Outputs

1. Closed procurements
2. **Organizational process assets updates**

QUESTION 161

Which Process Group's purpose is to track, review, and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes?

A. Monitoring and Controlling
B. Initiating
C. Planning
D. Executing

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 162
The formal and informal interaction with others in an organization industry, or professional environment is known as:

A. negotiation
B. organizational theory
C. meeting
D. networking

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
9.1.2.2 Networking
Networking is the formal and informal interaction with others in an organization, industry, or professional environment. It is a constructive way to understand political and interpersonal factors that will impact the effectiveness of various staffing management options. Human resource management benefits from successful networking by improving knowledge of and access to human resource assets such as strong competencies, specialized experience, and external partnership opportunities. Examples of human resources networking activities include proactive correspondence, luncheon meetings, informal conversations including meetings and events, trade conferences, and symposia. Networking can be a useful technique at the beginning of a project. It can also be an effective way to enhance project management professional development during the project and after the project ends.

QUESTION 163
Which process is included in the Project Integration Management Knowledge Area?

A. Manage Project Team
B. Collect Requirements
C. Sequence Activities
D. Direct and Manage Project Work

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Knowledge Area: 4. Project Integration Management

Process: 4.3. Direct and Manage Project Work
Definition: The process of leading and performing the work defined in the project management plan and implementing approved changes to achieve the project's objectives.
Key Benefit: The key benefit of this process is that it provides overall management of the project work.

Inputs
1. Project management plan
2. Approved change requests
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Project management information system
3. Meetings

Outputs
1. Deliverables
2. Work performance data
3. Change requests
4. Project management plan updates
5. Project documents updates

QUESTION 164
The process of identifying and documenting the specific actions to be performed to produce the project deliverables is known as:

A. Define Activities.
B. Sequence Activities.
C. Define Scope.
D. Control Schedule.

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 6.2 Define Activities
Definition: The process of identifying and documenting the specific actions to be performed to produce the project deliverables.
Key Benefit: The key benefit of this process is to break down work packages into activities that provide a basis for estimating, scheduling, executing, monitoring, and controlling the project work.

Inputs
1. Schedule management plan
2. Scope baseline
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Decomposition
2. Rolling wave planning
3. Expert judgment

Outputs
1. Activity list
2. Activity attributes
3. Milestone list

QUESTION 165
When an activity cannot be estimated with a reasonable degree of confidence, the work within the activity is decomposed into more detail using which type of estimating?

A. Bottom-up
B. Parametric
C. Analogous
D. Three-point

Correct Answer: A

Section: Volume C
Explanation

Explanation/Reference:
Explanation:
7.2.2.4 Bottom-Up Estimating
Bottom-up estimating is a method of estimating a component of work. The cost of individual work packages or activities is estimated to the greatest level of specified detail. The detailed cost is then summarized or “rolled up” to higher levels for subsequent reporting and tracking purposes. The cost and accuracy of bottom-up cost estimating are typically influenced by the size and complexity of the individual activity or work package.

QUESTION 166
Definitions of probability and impact, revised stakeholder tolerances, and tracking are components of which subsidiary plan?

A. Cost management plan
B. Quality management plan
C. Communications management plan
D. Risk management plan

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 167
Project or phase closure guidelines or requirements, historical information, and the lessons learned knowledge base are examples of which input to the Close Project or Phase process?

A. Organizational process assets
B. A work breakdown structure
C. The project management plan
D. Enterprise environmental factors

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
2.1.4 Organizational Process Assets
Organizational process assets are the plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization. They include any artifact, practice, or knowledge from any or all of the organizations involved in the project that can be used to perform or govern the project. The process assets also include the organization's knowledge bases such as lessons learned and historical information. Organizational process assets may include completed schedules, risk data, and earned value data. Organizational process assets are inputs to most planning processes. Throughout the project, the project team members may update and add to the organizational process assets as necessary. Organizational process assets may be grouped into two categories: (1) processes and procedures, and (2) corporate knowledge base.

Process: 4.6. Close Project or Phase
Definition: The process of finalizing all activities across all of the Project Management Process Groups to formally complete the phase or project.
Key Benefit: The key benefit of this process is that it provides lessons learned, the formal ending of project work, and the release of organization resources to pursue new endeavors.

Inputs
1. Project management plan
2. Accepted deliverables
3. **Organizational process assets**

Tools & Techniques
1. Expert judgment
2. Analytical techniques
3. Meetings

Outputs
1. Final product, service, or result transition
2. Organizational process assets updates

QUESTION 168
Which of the seven basic quality tools is especially useful for gathering attributes data while performing inspections to identify defects?

A. Histograms
B. Scatter diagrams
C. Flowcharts
D. Checksheets

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanations:
• *Checksheets*, which are also known as tally sheets and may be used as a checklist when gathering data.
Checksheets are used to organize facts in a manner that will facilitate the effective collection of useful data about a potential quality problem. They are especially useful for gathering attributes data while performing inspections to identify defects. For example, data about the frequencies or consequences of defects collected in checksheets are often displayed using Pareto diagrams.

QUESTION 169
The most commonly used type of precedence relationship in the precedence diagramming method (PDM) is:

A. start-to-start (SS)
B. start-to-finish (SF)
C. finish-to-start (FS)
D. finish-to-finish (FF)

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 170
Work performance information and cost forecasts are outputs of which Project Cost Management process?

A. Estimate Costs
B. Plan Cost Management
C. Determine Budget
D. Control Costs

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
7.4.3.2 Cost Forecasts
Either a calculated EAC value or a bottom-up EAC value is documented and communicated to stakeholders.

4.4.1.5 Work Performance Information
Work performance information is the performance data collected from various controlling processes, analyzed in context, and integrated based on relationships across areas. Thus work performance data has been transformed into work performance information. Data in itself cannot be used in the decision-making process as it has only out-of-context meaning. Work performance information, however, is correlated and contextualized, and provides a sound foundation for project decisions.
Work performance information is circulated through communication processes. Examples of performance information are status of deliverables, implementation status for change requests, and forecasted estimates to complete.

Process: 7.4 Control Costs
Definition: The process of monitoring the status of the project to update the project costs and managing changes to the cost baseline.
Key Benefit: The key benefit of this process is that it determines the cost baseline against which project performance can be monitored and controlled.

Inputs
1. Project management plan
2. Project funding requirements
3. Work performance data
4. Organizational process assets

Tools & Techniques
1. Earned value management
2. Forecasting
3. To-complete performance index (TCPI)
4. Performance reviews
5. Project management software
6. Reserve analysis

Outputs
1. **Work performance information**
2. **Cost forecasts**
3. Change requests
4. Project management plan updates
5. Project documents updates

6. Organizational process assets updates

QUESTION 171
The procurement process that documents agreements and related documentation for future reference is known as:

A. Plan Procurements.
B. Control Procurements.
C. Close Procurements.
D. Conduct Procurements.

Correct Answer: C
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
Process: 12.4 Close Procurements
Definition: The process of completing each project procurement.
Key Benefit: The key benefit of this process is that it documents agreements and related documentation for future reference.
Inputs
1. Project management plan
2. Procurement documents

Tools & Techniques
1. Procurement audits
2. Procurement negotiations
3. Records management system

Outputs
1. Closed procurements
2. Organizational process assets updates

QUESTION 172
Which component of the human resource management plan describes when and how project team members are acquired and how long they will be needed?

A. Resource breakdown structure
B. Staffing management plan
C. Project organizational chart

D. Scope management plan

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Staffing management plan. **The staffing management plan is a component of the human resource management plan that describes when and how project team members will be acquired and how long they will be needed.** It describes how human resource requirements will be met. The staffing management plan can be formal or informal, highly detailed, or broadly framed, depending upon the needs of the project. The plan is updated continually during the project to direct ongoing team member acquisition and development actions.

QUESTION 173
The process of formalizing acceptance of the completed project deliverables is known as:

A. Validate Scope.
B. Close Project or Phase.
C. Control Quality.
D. Verify Scope.

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 5.5 Validate Scope
Definition: The process of formalizing acceptance of the completed project deliverables.
Key Benefit: The key benefit of this process is that it brings objectivity to the acceptance process and increases the chance of final product, service, or result acceptance by validating each deliverable.

Inputs
1. Project management plan
2. Requirements documentation
3. Requirements traceability matrix

4. Verified deliverables
5. Work performance data

Tools & Techniques
1. Inspection
2. Group decision-making techniques

Outputs
1. Accepted deliverables
2. Change requests
3. Work performance information
4. Project documents updates

QUESTION 174
What is the name of the statistical method that helps identify which factors may influence specific variables of a product or process under development or in production?

A. Failure modes and effects analysis
B. Design of experiments
C. Quality checklist
D. Risk analysis

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 175
Which is the Define Scope technique used to generate different approaches to execute and perform the work of the project?
A. Build vs. buy
B. Expert judgment
C. Alternatives identification
D. Product analysis

Correct Answer: C

Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 5.3 Define Scope
Definition: The process of developing a detailed description of the project and product.
Key Benefit: The key benefit of this process is that it describes the product, service, or result boundaries by defining which of the requirements collected will be included in and excluded from the project scope.

Inputs
1. Scope management plan
2. Project charter
3. Requirements documentation
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. **Product analysis**
3. Alternatives generation
4. Facilitated workshops

Outputs
1. Project scope statement
2. Project documents updates

QUESTION 176
The product scope description is used to:

A. Gain stakeholders' support for the project.
B. Progressively elaborate the characteristics of the product, service, or result.
C. Describe the project in great detail.
D. Define the process and criteria for accepting a completed product, service, or result.
Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
5.3.3.1 Project Scope Statement
The project scope statement is the description of the project scope, major deliverables, assumptions, and constraints. The project scope statement documents the entire scope, including project and product scope. It describes, in detail, the project's deliverables and the work required to create those deliverables. It also provides a common understanding of the project scope among project stakeholders. It may contain explicit scope exclusions that can assist in managing stakeholder expectations. It enables the project team to perform more detailed planning, guides the project team's work during execution, and provides the baseline for evaluating whether requests for changes or additional work are contained within or outside the project's boundaries.
The degree and level of detail to which the project scope statement defines the work that will be performed and the work that is excluded can help determine how well the project management team can control the overall project scope. The detailed project scope statement, either directly, or by reference to other documents, includes the following:
- **Product scope description.** Progressively elaborates the characteristics of the product, service, or result described in the project charter and requirements documentation.
- **Acceptance criteria.** A set of conditions that is required to be met before deliverables are accepted.
- **Deliverable.** Any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project. Deliverables also include ancillary results, such as project management reports and documentation. These deliverables may be described at a summary level or in great detail.

QUESTION 177
Which of the following is TRUE about most project life cycles?

A. Staffing level is highest at the start.
B. The stakeholders' influence is highest at the start.
C. The level of uncertainty is lowest at the start.
D. The cost of changes is highest at the start.

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 178
An input required in Define Scope is an organizational:
A. structure.
B. process asset.

C. matrix.
D. breakdown structure.

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
2.1.4 Organizational Process Assets
Organizational process assets are the plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization. They include any artifact, practice, or knowledge from any or all of the organizations involved in the project that can be used to perform or govern the project. The process assets also include the organization's knowledge bases such as lessons learned and historical information. Organizational process assets may include completed schedules, risk data, and earned value data. Organizational process assets are inputs to most planning processes. Throughout the project, the project team members may update and add to the organizational process assets as necessary. Organizational process assets may be grouped into two categories: (1) processes and procedures, and (2) corporate knowledge base.

Process: 5.3 Define Scope
Definition: The process of developing a detailed description of the project and product.
Key Benefit: The key benefit of this process is that it describes the product, service, or result boundaries by defining which of the requirements collected will be included in and excluded from the project scope.

Inputs
1. Scope management plan
2. Project charter
3. Requirements documentation
4. **Organizational process assets**

Tools & Techniques
1. Expert judgment
2. Product analysis
3. Alternatives generation
4. Facilitated workshops

Outputs
1. Project scope statement
2. Project documents updates

QUESTION 179
What cost control technique is used to compare actual project performance to planned or expected performance?

A. Cost aggregation
B. Trend analysis
C. Forecasting
D. Variance analysis

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
5.6.2.1 Variance Analysis
Variance analysis is a technique for determining the cause and degree of difference between the baseline and actual performance. Project performance measurements are used to assess the magnitude of variation from the original scope baseline. Important aspects of project scope control include determining the cause and degree of variance relative to the scope baseline (Section 5.4.3.1) and deciding whether corrective or preventive action is required.

QUESTION 180
What is the term assigned to products or services having the same functional use but different technical characteristics?

A. Scope
B. Quality
C. Specification
D. Grade

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 181
Which of the following is a tool and technique for Estimate Activity Durations?

A. Parametric estimating
B. Monte Carlo analysis
C. Alternatives analysis D. Bottom-up estimating

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
7.2.2.3 Parametric Estimating
Parametric estimating uses a statistical relationship between relevant historical data and other variables (e.g., square footage in construction) to calculate a cost estimate for project work. This technique can produce higher levels of accuracy depending upon the sophistication and underlying data built into the model. Parametric cost estimates can be applied to a total project or to segments of a project, in conjunction with other estimating methods.

Process: 6.5 Estimate Activity Durations
Definition: The process of estimating the number of work periods needed to complete individual activities with estimated resources.
Key Benefit: The key benefit of this process is that it provides the amount of time each activity will take to complete, which is a major input into the Develop Schedule process.

Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Activity resource requirements
5. Resource calendars
6. Project scope statement
7. Risk register
8. Resource breakdown structure
9. Enterprise environmental factors
10. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analogous estimating
3. **Parametric estimating**
4. Three-point estimating
5. Group decision-making techniques

6. Reserve analysis

Outputs
1. Activity duration estimates
2. Project documents updates

QUESTION 182
Projects can be divided into phases to provide better management control. Collectively, what are these phases known as?

A. Complete project phase
B. Project life
C. The project life cycle
D. Project cycle

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 183
When would resource leveling be applied to a schedule model?

A. Before constraints have been identified
B. Before it has been analyzed by the critical path method
C. After it has been analyzed by the critical path method
D. After critical activities have been removed from the critical path

Correct Answer: C
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
6.6.2.2 Critical Path Method
The critical path method, which is a method used to estimate the minimum project duration and determine the amount of scheduling flexibility on the logical network paths within the schedule model. This schedule network analysis technique calculates the early start, early finish, late start, and late finish dates for all

activities without regard for any resource limitations by performing a forward and backward pass analysis through the schedule network, as shown in Figure 6-18. In this example the longest path includes activities A, C, and D, and, therefore, the sequence of A-C-D is the critical path. The critical path is the sequence of activities that represents the longest path through a project, which determines the shortest possible project duration. The resulting early and late start and finish dates are not necessarily the project schedule, rather they indicate the time periods within which the activity could be executed, using the parameters entered in the schedule model for activity durations, logical relationships, leads, lags, and other known constraints. The critical path method is used to calculate the amount of scheduling flexibility on the logical network paths within the schedule model.

On any network path, the schedule flexibility is measured by the amount of time that a schedule activity can be delayed or extended from its early start date without delaying the project finish date or violating a schedule constraint, and is termed “total float.” A CPM critical path is normally characterized by zero total float on the critical path. As implemented with PDM sequencing, critical paths may have positive, zero, or negative total float depending on constraints applied. Any activity on the critical path is called a critical path activity. Positive total float is caused when the backward pass is calculated from a schedule constraint that is later than the early finish date that has been calculated during forward pass calculation. Negative total float is caused when a constraint on the late dates is violated by duration and logic. Schedule networks may have multiple near-critical paths. Many software packages allow the user to define the parameters used to determine the critical path(s).

Adjustments to activity durations (if more resources or less scope can be arranged), logical relationships (if the relationships were discretionary to begin with), leads and lags, or other schedule constraints may be necessary to produce network paths with a zero or positive total float. Once the total float for a network path has been calculated, then the free float—the amount of time that a schedule activity can be delayed without delaying the early start date of any successor or violating a schedule constraint—can also be determined. For example the free float for Activity B, in Figure 6-18, is 5 days.

QUESTION 184

Information collected on the status of project activities being performed to accomplish the project work is known as what?

A. Project management information system
B. Work performance information
C. Work breakdown structure
D. Variance analysis

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

Explanation:

4.4.1.5 Work Performance Information

Work performance information is the performance data collected from various controlling processes, analyzed in context, and integrated based on relationships across areas. Thus work performance data has been transformed into work performance information. Data in itself cannot be used in the decision-making process as it has only out-of-context meaning. Work performance information, however, is correlated and contextualized, and provides a sound foundation for project decisions.

Work performance information is circulated through communication processes. Examples of performance information are status of deliverables, implementation status for change requests, and forecasted estimates to complete.

QUESTION 185
What is the number of stakeholders, if the project has 28 potential communication channels?

A. 7
B. 8
C. 14
D. 16

Correct Answer: B
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
Number of communication channels with 'n' members = n*(n-1)/2

QUESTION 186
Which of the following risk response strategies involves allocating ownership of a positive risk to a third party?

A. Mitigate
B. Transfer
C. Share
D. Avoid

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 187
Which activity is an input to the Conduct Procurements process?

A. Organizational process assets
B. Resource availability
C. Perform Integrated Change Control
D. Team performance assessment

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
2.1.4 Organizational Process Assets
Organizational process assets are the plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization. They include any artifact, practice, or knowledge from any or all of the organizations involved in the project that can be used to perform or govern the project. The process assets also include the organization's knowledge bases such as lessons learned and historical information. Organizational process assets may include completed schedules, risk data, and earned value data. Organizational process assets are inputs to most planning processes. Throughout the project, the project team members may update and add to the organizational process assets as necessary. Organizational process assets may be grouped into two categories: (1) processes and procedures, and (2) corporate knowledge base.

Process: 12.2 Conduct Procurements
Definition: The process of obtaining seller responses, selecting a seller, and awarding a contract.
Key Benefit: The key benefit of this process is that it provides alignment of internal and external stakeholder expectations through established agreements.

Inputs
1. Procurement management plan
2. Procurement documents
3. Source selection criteria
4. Seller proposals
5. Project documents
6. Make-or-buy decisions
7. Procurement statement of work
8. **Organizational process assets**

Tools & Techniques
1. Bidder conference
2. Proposal evaluation techniques
3. Independent estimates
4. Expert judgment

5. Advertising
6. Analytical techniques
7. Procurement negotiations

Outputs

1. .Selected sellers
2. .Agreements
3. .Resource calendars
4. .Change requests
5. .Project management plan updates
6. .Project documents updates

QUESTION 188

Which of the following investigates the likelihood that each specific risk will occur?

A. Risk register
B. Risk audits
C. Risk urgency assessment
D. Risk probability and impact assessment

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:

Explanation:

11.3.2.1 Risk Probability and Impact Assessment

Risk probability assessment investigates the likelihood that each specific risk will occur. Risk impact assessment investigates the potential effect on a project objective such as schedule, cost, quality, or performance, including both negative effects for threats and positive effects for opportunities.

Probability and impact are assessed for each identified risk. Risks can be assessed in interviews or meetings with participants selected for their familiarity with the risk categories on the agenda. Project team members and knowledgeable persons external to the project are included. The level of probability for each risk and its impact on each objective is evaluated during the interview or meeting.

Explanatory detail, including assumptions justifying the levels assigned, are also recorded. Risk probabilities and impacts are rated according to the definitions given in the risk management plan. Risks with low ratings of probability and impact will be included within the risk register as part of the watch list for future monitoring.

QUESTION 189

Taking out insurance in relation to risk management is called what?

A. Transference
B. Avoidance
C. Exploring
D. Mitigation

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 190
During which process group is the quality policy determined?

A. Initiating
B. Executing
C. Planning
D. Controlling

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 191
Which estimating technique uses the actual costs of previous similar projects as a basis for estimating the costs of the current project?

A. Analogous
B. Parametric
C. Bottom-up
D. Top-down

Correct Answer: A

Section: Volume C

Explanation

Explanation/Reference:

QUESTION 192
What is the difference between the critical path and the critical chain?

A. Scope changes
B. Resource limitations
C. Risk analysis
D. Quality audits

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
6.6.2.2 Critical Path Method
The critical path method, which is a method used to estimate the minimum project duration and determine the amount of scheduling flexibility on the logical network paths within the schedule model.

6.6.2.3 Critical Chain Method
The critical chain method (CCM) is a schedule method that allows the project team to place buffers on any project schedule path to account for **limited resources** and project uncertainties. It is developed from the critical path method approach and considers the effects of resource allocation, resource optimization, resource leveling, and activity duration uncertainty on the critical path determined using the critical path method. To do so, the critical chain method introduces the concept of buffers and buffer management. The critical chain method uses activities with durations that do not include safety margins, logical relationships, and resource availability with statistically determined buffers composed of the aggregated safety margins of activities at specified points on the project schedule path to account for limited resources and project uncertainties. The resource-constrained critical path is known as the critical chain.

QUESTION 193
Which of the following is an enterprise environmental factor that can influence the Develop Project Charter process?

A. Organizational standard processes
B. Marketplace conditions

C. Historical information
D. Templates

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
4.1.1.4 Enterprise Environmental Factors
Described in Section 2.1.5. The enterprise environmental factors that can influence the Develop Project Charter process include, but are not limited to: ▪ Governmental standards, industry standards, or regulations (e.g. codes of conduct, quality standards, or worker protection standards), ▪ Organizational culture and structure, and ▪ **Marketplace conditions.**

Process: 4.1. Develop Project Charter
Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.
Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs
1. Project statement of work
2. Business case
3. Agreements
4. **Enterprise environmental factors**
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Facilitation techniques

Outputs
Project charter

QUESTION 194
The Define Scope process is in which of the following Process Groups?

A. Initiating
B. Planning
C. Monitoring and Controlling
D. Executing

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Planning Process Group
4.2 Develop Project Management Plan
    5.1 Plan Scope Management
    5.2 Collect Requirements
    5.3 **Define Scope**
    5.4 Create WBS
    6.1 Plan Schedule Management
    6.2 Define Activities
    6.3 Sequence Activities
    6.4 Estimate Activity Resources
    6.5 Estimate Activity Durations
    6.6 Develop Schedule
    7.1 Plan Cost Management
    7.2 Estimate Costs
    7.3 Determine Budget
8.1 Plan Quality Management
9.1 Plan Human Resource Management
10.1 Plan Communications Management
    11.1 Plan Risk Management
    11.2 Identify Risks
    11.3 Perform Qualitative Risk Analysis
    11.4 Perform Quantitative Risk Analysis
    11.5 Plan Risk Responses
12.1 Plan Procurement Management
13.2 Plan Stakeholder Management

QUESTION 195
Organizations perceive risks as:

A. events that will inevitably impact project and organizational objectives.
B. the effect of uncertainty on their project and organizational objectives.
C. events which could have a negative impact on project and organizational objectives.
D. the negative impact of undesired events on their project and organizational objectives.

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 196
In an organization with a projectized organizational structure, who controls the project budget?

A. Functional manager
B. Project manager
C. Program manager
D. Project management office

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
QUESTION 197
Who, along with the project manager, is supposed to direct the performance of the planned project activities and manage the various technical and organizational interfaces that exist within the project?

A. The customer and functional managers
B. The risk owners and stakeholders
C. The sponsors and stakeholders
D. The project management team

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 198
Which enterprise environmental factors are considered during cost estimating?

A. Market conditions and published commercial information
B. Company structure and market conditions
C. Commercial information and company structure
D. Existing human resources and market conditions

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
7.2.1.6 Enterprise Environmental Factors
Described in Section 2.1.5. The enterprise environmental factors that influence the Estimate Costs process include, but are not limited to:
- **Market conditions.** These conditions describe what products, services, and results are available in the market, from whom, and under what terms and conditions. Regional and/or global supply and demand conditions greatly influence resource costs.
- **Published commercial information.** Resource cost rate information is often available from commercial databases that track skills and human resource costs, and provide standard costs for material and equipment. Published seller price lists are another source of information.

Process: 7.2 Estimate Costs
Definition: The process of developing an approximation of the monetary resources needed to complete project activities.
Key Benefit: The key benefit of this process is that it determines the amount of cost required to complete project work.

Inputs
1. Cost management plan
2. Human resource management plan
3. Scope baseline

4. Project schedule
5. Risk register
6. **Enterprise environmental factors**
7. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analogous estimating
3. Parametric estimating
4. Bottom-up estimating
5. Three-point estimating
6. Reserve analysis
7. Cost of quality
8. Project management software
9. Vendor bid analysis
10. Group decision-making techniques

Outputs
1. Activity cost estimates
2. Basis of estimates
3. Project documents updates

QUESTION 199
Who selects the appropriate processes for a project?

A. Project stakeholders
B. Project sponsor and project stakeholder
C. Project manager and project team
D. Project manager and project sponsor

Correct Answer: C
Section: Volume C
Explanation
Explanation/Reference:

QUESTION 200
An input of the Control Schedule process is the:

A. resource calendar.
B. activity list.
C. risk management plan.
D. organizational process assets.

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
13.2.1.4 Organizational Process Assets
Described in Section 2.1.4. All organizational process assets are used as inputs for the Plan Stakeholder Management process. Of these, lessons learned database and historical information are of particular importance, because they provide insights on previous stakeholder management plans and their effectiveness. These can be used to plan the stakeholder management activities for the current project.

Process: 6.7 Control Schedule
Definition: Control Schedule is the process of monitoring the status of project activities to update project progress and manage changes to the schedule baseline to achieve the plan.
Key Benefit: The key benefit of this process is that it provides the means to recognize deviation from the plan and take corrective and preventive actions and thus minimize risk.

Inputs
1. Project management plan
2. Project schedule
3. Work performance data
4. Project calendars
5. Schedule data
6. **Organizational process assets**

Tools & Techniques
1. Performance reviews
2. Project management software
3. Resource optimization techniques
4. Modeling techniques
5. Leads and lags

6. Schedule compression
7. Scheduling tool

Outputs
1. Work performance information
2. Schedule forecasts
3. Change requests
4. Project management plan updates
5. Project documents updates
6. Organizational process assets updates

QUESTION 201
The Verify Scope process is primarily concerned with:

A. formalizing acceptance of the completed project deliverables.
B. accuracy of the work deliverables.
C. formalizing approval of the scope statement.
D. accuracy of the work breakdown structure (WBS).

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 202
What is the total float of the critical path?

A. Can be any number
B. Zero or positive
C. Zero or negative
D. Depends on the calendar

Correct Answer: C
Section: Volume C
Explanation

Explanation/Reference:

QUESTION 203
Portfolio Management is management of:

A. a project by dividing the project into more manageable sub-projects.
B. a project by utilizing a portfolio of general management skills such as planning, organizing, staffing, executing, and controlling.
C. all projects undertaken by a company.
D. a collection of projects that are grouped together to facilitate effective management and meet strategic business objectives.

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
1.4.2 Portfolio Management
A portfolio refers to projects, programs, subportfolios, and operations managed as a group to achieve strategic objectives. The projects or programs of the portfolio may not necessarily be interdependent or directly related. For example, an infrastructure firm that has the strategic objective of “maximizing the return on its investments” may put together a portfolio that includes a mix of projects in oil and gas, power, water, roads, rail, and airports. From this mix, the firm may choose to manage related projects as one program. All of the power projects may be grouped together as a power program. Similarly, all of the water projects may be grouped together as a water program.
Thus, the power program and the water program become integral components of the enterprise portfolio of the infrastructure firm.

QUESTION 204
Which action should a project manager take to ensure that the project management plan is effective and current?

A. Conduct periodic project performance reviews.
B. Identify quality project standards.
C. Follow ISO 9000 quality standards.
D. Complete the quality control checklist.

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

Explanation:

4.2.3.1 Project Management Plan

The project management plan is the document that describes how the project will be executed, monitored, and controlled. It integrates and consolidates all of the subsidiary plans and baselines from the planning processes.

Project baselines include, but are not limited to:

- Scope baseline (Section 5.4.3.1),
- Schedule baseline (Section 6.6.3.1), and
- Cost baseline (Section 7.3.3.1).

Subsidiary plans include, but are not limited to:

- Scope management plan (Section 5.1.3.1),
- Requirements management plan (Section 5.1.3.2),
- Schedule management plan (Section 6.1.3.1),
- Cost management plan (Section 7.1.3.1),
- Quality management plan (Section 8.1.3.1),
- Process improvement plan (Section 8.1.3.2),
- Human resource management plan (Section 9.1.3.1),
- Communications management plan (Section 10.1.3.1),
- Risk management plan (Section 11.1.3.1),
- Procurement management plan (Section 12.1.3.1), and
- Stakeholder management plan (Section 13.2.3.1).

Among other things, the project management plan may also include the following:

- Life cycle selected for the project and the processes that will be applied to each phase;
- Details of the tailoring decisions specified by the project management team as follows:
  - Project management processes selected by the project management team,
  - Level of implementation for each selected process,
  - Descriptions of the tools and techniques to be used for accomplishing those processes, and
  - Description of how the selected processes will be used to manage the specific project, including the dependencies and interactions among those processes and the essential inputs and outputs.
- Description of how work will be executed to accomplish the project objectives;
- Change management plan that documents how changes will be monitored and controlled;
- Configuration management plan that documents how Configuration management will be performed;
- Description of how the integrity of the project baselines will be maintained;
- Requirements and techniques for communication among stakeholders; and
- Key management reviews for content, the extent of, and timing to address, open issues and pending decisions.

The project management plan may be either summary level or detailed, and may be composed of one or more subsidiary plans. Each of the subsidiary plans is detailed to the extent required by the specific project. Once the project management plan is baselined, it may only be changed when a change request is generated and approved through the Perform Integrated Change Control process.

QUESTION 205
While implementing an approved change, a critical defect was introduced. Removing the defect will delay the product delivery. What is the MOST appropriate approach to managing this situation?
A. Utilize the change control process.
B. Crash the schedule to fix the defect.
C. Leave the defect in and work around it.
D. Fast-track the remaining development.

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 206
The integrative nature of project management requires which Process Group to interact with the other Process Groups?

A. Planning
B. Executing
C. Monitoring and Controlling
D. Project Management

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 207
Which is a tool or technique used in Define Scope?

A. Templates, forms, and standards
B. Change requests
C. Product analysis
D. Project assumptions

Correct Answer: C
Section: Volume C
Explanation
Explanation/Reference:
Explanation:
Process: 5.3 Define Scope
Definition: The process of developing a detailed description of the project and product.
Key Benefit: The key benefit of this process is that it describes the product, service, or result boundaries by defining which of the requirements collected will be included in and excluded from the project scope.

Inputs
1. Scope management plan
2. Project charter
3. Requirements documentation
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. **Product analysis**
3. Alternatives generation
4. Facilitated workshops

Outputs
1. Project scope statement
2. Project documents updates

QUESTION 208
What is the function of a Project Management Office (PMO)?

A. To focus on the coordinated planning, prioritization, and execution of projects and subprojects that are tied to the parent organizations or the client's overall business objectives.
B. To coordinate and manage the procurement of projects relevant to the parent organization's business objectives and to administer the project charters accordingly.

C. To administer performance reviews for the project manager and the project team members and to handle any personnel and payroll issues.
D. To focus on the specified project objectives and to manage the scope, schedule, cost, and quality of the work packages.

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
A primary function of a PMO is to support project managers in a variety of ways which may include, but are not limited to:
- Managing shared resources across all projects administered by the PMO;
- Identifying and developing project management methodology, best practices, and standards;
- Coaching, mentoring, training, and oversight;
- Monitoring compliance with project management standards, policies, procedures, and templates by means of project audits;
- Developing and managing project policies, procedures, templates, and other shared documentation (organizational process assets); and
- Coordinating communication across projects.

QUESTION 209
Which of the following is an output of the Define Activities process?

A. Activity list
B. Project plan
C. Activity duration estimates
D. Project schedule

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 6.2 Define Activities
Definition: The process of identifying and documenting the specific actions to be performed to produce the project deliverables.
Key Benefit: The key benefit of this process is to break down work packages into activities that provide a basis for estimating, scheduling, executing, monitoring, and controlling the project work.

Inputs

1. Schedule management plan
2. Scope baseline
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Decomposition
2. Rolling wave planning
3. Expert judgment

Outputs
1. **Activity list**
2. Activity attributes
3. Milestone list

QUESTION 210
When is a project finished?

A. After verbal acceptance of the customer or sponsor
B. After lessons learned have been documented in contract closure
C. When the project objectives have been met
D. After resources have been released

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 211
Which of the following involves making information available to project stakeholders in a timely manner?

A. Plan Communications
B. Performance reporting
C. Project status reports
D. Distribute Information

Correct Answer: D
Section: Volume C
Explanation

Explanation/Reference:

QUESTION 212
Which process uses occurrence probability and impact on project objectives to assess the priority of identified risks?

A. Identify Risks
B. Perform Qualitative Risk Analysis
C. Plan Risk Management
D. Perform Quantitative Risk Analysis
Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 11.3 Perform Qualitative Risk Analysis
Definition: The process of prioritizing risks for further analysis or action by **assessing and combining their probability of occurrence and impact.**
Key Benefit: The key benefit of this process is that it enables project managers to reduce the level of uncertainty and to focus on high-priority risks.

Inputs
1. Risk management plan
2. Scope baseline
3. Risk register
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Risk probability and impact assessment
2. Probability and impact matrix
3. Risk data quality assessment
4. Risk categorization
5. Risk urgency assessment
6. Expert judgment

Outputs
1. Project documents updates

QUESTION 213
Which Project Management Process Group includes Collect Requirements, Define Activities, Sequence Activities, Perform Qualitative Risk Analysis, and Perform Quantitative Risk Analysis?

A. Initiating
B. Monitoring and Controlling
C. Planning
D. Closing

Correct Answer: C
Section: Volume C
Explanation
Explanation/Reference:
Explanation:
Planning Process Group
4.2 Develop Project Management Plan
5.1 Plan Scope Management
5.2 **Collect Requirements**
5.3 Define Scope
5.4 Create WBS
6.1 Plan Schedule Management
6.2 **Define Activities**
6.3 **Sequence Activities**
6.4 Estimate Activity Resources
6.5 Estimate Activity Durations
6.6 Develop Schedule
7.1 Plan Cost Management
7.2 Estimate Costs
7.3 Determine Budget
8.1 Plan Quality Management
9.1 Plan Human Resource Management
10.1 Plan Communications Management
11.1 Plan Risk Management
11.2 Identify Risks

11.3 **Perform Qualitative Risk Analysis**
11.4 **Perform Quantitative Risk Analysis**
11.5 Plan Risk Responses
12.1 Plan Procurement Management
13.2 Plan Stakeholder Management

QUESTION 214
Which type of managers do composite organizations involve?

A. Functional managers and manager of project managers
B. Functional managers only
C. Project managers only
D. Technical managers and project managers
Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 215
Which tool is used to develop technical details within the project management plan?

A. Expert judgment
B. Project management methodology
C. Project management information system (PMIS)
D. Project selection methods

Correct Answer: A
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
4.1.2.1 Expert Judgment
Expert judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including:
- Other units within the organization,
- Consultants,
- Stakeholders, including customers or sponsors,
- Professional and technical associations,
- Industry groups,
- Subject matter experts (SME), and
- Project management office (PMO).

QUESTION 216
What is the name of a graphic display of project team members and their reporting relationships?

A. Role dependencies chart
B. Reporting flow diagram
C. Project organization chart
D. Project team structure diagram
Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 217
What type of reward can hurt team cohesiveness?

A. Sole-sum
B. Win-lose
C. Lose-win

D. Partial-sum

Correct Answer: B
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
Recognition and rewards. Clear criteria for rewards and a planned system for their use help promote and reinforce desired behaviors. To be effective, recognition and rewards should be based on activities and performance under a person's control. For example, a team member who is to be rewarded for meeting cost objectives should have an appropriate level of control over decisions that affect expenses. Creating a plan with established times for distribution of rewards ensures that recognition takes place and is not forgotten. Recognition and rewards are part of the Develop Project Team process (Section 9.3).

Process: 9.3 Develop Project Team
Definition: The process of improving competencies, team member interaction, and overall team environment to enhance project performance.
Key Benefit: The key benefit of this process is that it results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.

Inputs
1. Human resource management plan
2. Project staff assignments
3. Resource calendars

Tools & Techniques
1. Interpersonal skills
2. Training
3. Team-building activities
4. Ground rules
5. Colocation
6. **Recognition and rewards**
7. Personnel assessment tools

Outputs
1. Team performance assessments
2. Enterprise environmental factors updates

QUESTION 218
Which Develop Schedule tool and technique produces a theoretical early start date and late start date?

A. Critical path method
B. Variance analysis
C. Schedule compression
D. Schedule comparison bar charts

Correct Answer: A
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
6.6.2.2 Critical Path Method
The critical path method, which is a method used to estimate the minimum project duration and determine the amount of scheduling flexibility on the logical network paths within the schedule model. This schedule network analysis technique calculates the early start, early finish, late start, and late finish dates for all activities without regard for any resource limitations by performing a forward and backward pass analysis through the schedule network, as shown in Figure 6-18. In this example the longest path includes activities A, C, and D, and, therefore, the sequence of A-C-D is the critical path. The critical path is the sequence of activities that represents the longest path through a project, which determines the shortest possible project duration. The resulting early and late start and finish dates are not necessarily the project schedule, rather they indicate the time periods within which the activity could be executed, using the parameters entered in the schedule model for activity durations, logical relationships, leads, lags, and other known constraints. The critical path method is used to calculate the amount of scheduling flexibility on the logical network paths within the schedule model.

On any network path, the schedule flexibility is measured by the amount of time that a schedule activity can be delayed or extended from its early start date without delaying the project finish date or violating a schedule constraint, and is termed “total float.” A CPM critical path is normally characterized by zero total float on the critical path. As implemented with PDM sequencing, critical paths may have positive, zero, or negative total float depending on constraints applied. Any activity on the critical path is called a critical path activity. Positive total float is caused when the backward pass is calculated from a schedule constraint that is later than the early finish date that has been calculated during forward pass calculation. Negative total float is caused when a constraint on the late dates is violated by duration and logic. Schedule networks may have multiple near-critical paths.
Process: 6.6 Develop Schedule
Definition: The process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule model.
Key Benefit: The key benefit of this process is that by entering schedule activities, durations, resources, resource availabilities, and logical relationships into the scheduling tool, it generates a schedule model with planned dates for completing project activities.

Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Project schedule network diagrams
5. Activity resource requirements
6. Resource calendars

7. Activity duration estimates
8. Project scope statement
9. Risk register
10. Project staff assignments
11. Resource breakdown structure
12. Enterprise environmental factors
13. Organizational process assets

Tools & Techniques

1. Schedule network analysis
2. **Critical path method**
3. Critical chain method
4. Resource optimization techniques
5. Modeling techniques
6. Leads and lags
7. Schedule compression
8. .Scheduling tool

Outputs

1. Schedule baseline
2. .Project schedule
3. Schedule data
4. Project calendars
5. Project management plan updates
6. Project documents updates

QUESTION 219

Perform Quality Control is accomplished by:

A. Identifying quality standards that are relevant to the project and determining how to satisfy them.

Monitoring and recording the results of executing the quality activities to assess performance and recommend necessary changes.
C. Ensuring that the entire project team has been adequately trained in quality assurance processes.
D. Applying Monte Carlo, sampling, Pareto analysis, and benchmarking techniques to ensure conformance to quality standards.

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 220
Which type of estimating can produce higher levels of accuracy, depending upon the sophistication and underlying data built into the model?

A. Bottom-up
B. Three-point
C. Parametric
D. Analogous

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
7.2.2.3 Parametric Estimating
Parametric estimating uses a statistical relationship between relevant historical data and other variables (e.g., square footage in construction) to calculate a cost estimate for project work. This technique can produce higher levels of accuracy depending upon the sophistication and underlying data built into the model. Parametric cost estimates can be applied to a total project or to segments of a project, in conjunction with other estimating methods.

QUESTION 221
Activity resource requirements and the resource breakdown structure (RBS) are outputs of which Project Time Management process?

A. Control Schedule
B. Define Activities
C. Develop Schedule

B.

D. Estimate Activity Resources

Correct Answer: D
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
6.4.3.2 Resource Breakdown Structure
The resource breakdown structure is a hierarchical representation of resources by category and type. Examples of resource categories include labor, material, equipment, and supplies. Resource types may include the skill level, grade level, or other information as appropriate to the project. The resource breakdown structure is useful for organizing and reporting project schedule data with resource utilization information.

Process: 6.4 Estimate Activity Resources
Definition: Activity Resources is the process of estimating the type and quantities of material, human resources, equipment, or supplies required to perform each activity.
Key Benefit: The key benefit of this process is that it identifies the type, quantity, and characteristics of resources required to complete the activity which allows more accurate cost and duration estimates.

Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Resource calendars
5. Risk register
6. Activity cost estimates
7. Enterprise environmental factors
8. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Alternative analysis
3. Published estimating data
4. Bottom-up estimating
5. Project management software

Outputs
1. **Activity resource requirements**
2. **Resource breakdown structure**

3. Project documents updates

QUESTION 222
Which process includes prioritizing risks for subsequent further analysis or action by assessing and combining their probability of occurrence and impact?

A. Perform Qualitative Risk Analysis

Perform Quantitative Risk Analysis
C. Plan Risk Management
D. Plan Risk Responses

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 11.3 Perform Qualitative Risk Analysis
Definition: The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.
Key Benefit: The key benefit of this process is that it enables project managers to reduce the level of uncertainty and to focus on high-priority risks.

Inputs
1. Risk management plan
2. Scope baseline
3. Risk register
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Risk probability and impact assessment
2. Probability and impact matrix
3. Risk data quality assessment
4. **Risk categorization**
5. Risk urgency assessment
6. Expert judgment

Outputs

B.

1. Project documents updates

QUESTION 223
A change log for communications can be used to communicate to the appropriate stakeholders that there are changes:

A. To the project management plan.
B. To the risk register.
C. In the scope verification processes.
D. And their impact to the project in terms of time, cost, and risk.
Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
4.5.3.2 Change Log
A change log is used to document changes that occur during a project. These changes and their impact to the project in terms of time, cost, and risk, are communicated to the appropriate stakeholders. Rejected change requests are also captured in the change log.

13.3.1.3 Change Log
Described in Section 4.5.3.2. A change log is used to document changes that occur during a project. These **changes—and their impact on the project in terms of time, cost, and risk**—are communicated to the appropriate stakeholders.

QUESTION 224
Which of the following processes are part of the Project Integration Management Knowledge Area?

A. Develop Project Management Plan, Collect Requirements, Create WBS
B. Develop Project Management Plan, Control Scope, Develop Schedule
C. Develop Project Charter, Define Scope, Estimate Costs
D. Develop Project Charter, Direct and Manage Project Execution, Close Project or Phase

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
4. Project Integration Management

4.1 Develop Project Charter
4.2 **Develop Project Management Plan**
4.3 **Direct and Manage Project Work**
4.4 Monitor and Control Project Work
4.5 Perform Integrated Change Control
4.6 **Close Project or Phase**

QUESTION 225
What tool and technique is used to determine whether work and deliverables meet requirements and product acceptance criteria?

A. Decomposition
Benchmarking
C. Inspection
D. Checklist analysis

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 226
Cost baseline is an output of which of the following processes?

A. Control Costs
B. Determine Budget
C. Estimate Costs
D. Estimate Activity Resources

Correct Answer: B
Section: Volume C

Explanation

B.

Explanation/Reference:
Explanation:
7.3.3.1 Cost Baseline
The cost baseline is the approved version of the time-phased project budget, excluding any management reserves, which can only be changed through formal change control procedures and is used as a basis for comparison to actual results. It is developed as a summation of the approved budgets for the different schedule activities.

Process: 7.3 Determine Budget
Definition: The process of aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline.
Key Benefit: The key benefit of this process is that it determines the cost baseline against which project performance can be monitored and controlled.

Inputs
1. Cost management plan
2. Scope baseline
3. Activity cost estimates
4. Basis of estimates
5. Project schedule
6. Resource calendars
7. Risk register
8. Agreements
9. Organizational process assets

Tools & Techniques
1. Cost aggregation
2. Reserve analysis
3. Expert judgment
4. Historical relationships
5. Funding limit reconciliation

Outputs
1. **Cost baseline**
2. Project funding requirements
3. Project documents updates

QUESTION 227
Which group creativity technique asks a selected group of experts to answer questionnaires and provide feedback regarding the responses from each round of requirements gathering?

A. The Delphi technique
B. Nominal group technique
C. Affinity diagram
D. Brainstorming

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Delphi technique. The Delphi technique is a way to reach a consensus of experts. Project risk experts participate in this technique anonymously. A facilitator uses a questionnaire to solicit ideas about the important project risks. The responses are summarized and are then recirculated to the experts for further comment. Consensus may be reached in a few rounds of this process. The Delphi technique helps reduce bias in the data and keeps any one person from having undue influence on the outcome.

QUESTION 228
What type of project structure is a hierarchically organized depiction of the resources by type?

A. Organizational breakdown structure (OBS)
B. Resource breakdown structure (RBS)
C. Work breakdown structure (WBS)
D. Project breakdown structure (PBS)

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
6.4.3.2 Resource Breakdown Structure
The resource breakdown structure is a hierarchical representation of resources by category and type. Examples of resource categories include labor, material, equipment, and supplies. Resource types may include the skill level, grade level, or other information as appropriate to the project. The resource breakdown structure is useful for organizing and reporting project schedule data with resource utilization information.

QUESTION 229
When can pre-assignment of project team members occur?

A. When the project uses capital expenditures
B. When the required staff can be acquired from outside sources
C. When the project would be ignored due to travel expenses
D. When the project is the result of specific people being promised as part of a competitive proposal

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
9**.2.2.1 Pre-assignment**
When project team members are selected in advance, they are considered pre-assigned. This situation can occur if the project is the result of specific people being **identified as part of a competitive proposal, if the project is dependent upon the expertise of particular persons, or** if some staff assignments are defined within the project charter.

QUESTION 230

Change requests are an output from which Project Integration Management process?

A. Direct and Manage Project Execution
B. Develop Project Management Plan
C. Close Project
D. Develop Project Charter

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 231
Which process involves aggregating the estimated costs of the individual schedule activities or work packages?

A. Estimate Costs
B. Estimate Activity Resources
C. Control Costs
D. Determine Budget

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 7.3 Determine Budget
Definition: The process of aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline.
Key Benefit: The key benefit of this process is that it determines the cost baseline against which project performance can be monitored and controlled.
Inputs
1. Cost management plan
2. Scope baseline
3. Activity cost estimates
4. Basis of estimates

5. Project schedule
6. Resource calendars
7. Risk register
8. Agreements
9. Organizational process assets

Tools & Techniques
1. Cost aggregation
2. Reserve analysis
3. Expert judgment
4. Historical relationships
5. Funding limit reconciliation

Outputs
1. Cost baseline
2. Project funding requirements
3. Project documents updates

QUESTION 232
Plan Risk Management is the process of defining how to:

A. Communicate identified risks to the project stakeholders.
B. Conduct risk management activities for a project.
C. Analyze the impact a specific risk may have on the project.
D. Address unexpected risks that may occur during a project.

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 11.1 Plan Risk Management
Definition: The process of **defining how to conduct risk management activities for a project.**
Key Benefit: The key benefit of this process is it ensures that the degree, type, and visibility of risk management are commensurate with both the risks and the importance of the project to the organization. The risk management plan is vital to communicate with and obtain agreement and support from all stakeholders to ensure the risk management process is supported and performed effectively over the project life cycle.

Inputs
1. Project management plan
2. Project charter
3. Stakeholder register
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Analytical techniques
2. Expert judgment
3. Meetings

Outputs
1. Risk management plan

QUESTION 233
If the most likely duration of an activity is five weeks, the best-case duration is two weeks, and the worst-case duration is 14 weeks, how many weeks is the expected duration of the activity?

A. One
B. Five
C. Six
D. Seven

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
E = (a + 4m + b) / 6
(2+ (4*5) +14)=36 /6 =6

QUESTION 234
Which type of analysis is used to examine project results through time to determine if performance is improving or deteriorating?

A. Control chart

B. Earned value
C. Variance
D. Trend

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
6.7.2.1 Performance Reviews
Performance reviews measure, compare, and analyze schedule performance such as actual start and finish dates, percent complete, and remaining duration for work in progress. Various techniques may be used, among them:
・Trend analysis. Trend analysis examines project performance over time to determine whether performance is improving or deteriorating. Graphical analysis techniques are valuable for understanding performance to date and for comparison to future performance goals in the form of completion dates.
・Critical path method (Section 6.6.2.2). Comparing the progress along the critical path can help determine schedule status. The variance on the critical path will have a direct impact on the project end date. Evaluating the progress of activities on near critical paths can identify schedule risk.
・Critical chain method (Section 6.6.2.3). Comparing the amount of buffer remaining to the amount of buffer needed to protect the delivery date can help determine schedule status. The difference between the buffer needed and the buffer remaining can determine whether corrective action is appropriate.
・Earned value management (Section 7.4.2.1). Schedule performance measurements such as schedule variance (SV) and schedule performance index (SPI), are used to assess the magnitude of variation to the original schedule baseline. The total float and early finish variances are also essential planning components to evaluate project time performance. Important aspects of schedule control include determining the cause and degree of variance relative to the schedule baseline (Section 6.6.3.1), estimating the implications of those variances for future work to completion, and deciding whether corrective or preventive action is required. For example, a major delay on any activity not on the critical path may have little effect on the overall project schedule, while a much shorter delay on a critical or nearcritical activity may require immediate action. For projects not using earned value management, similar variance analysis can be performed by comparing planned activity start or finish dates against actual start or finish dates to identify variances between the schedule baseline and actual project performance. Further analysis can be performed to determine the cause and degree of variance relative to the schedule baseline and any corrective or preventative actions needed.

QUESTION 235
Which is one of the major outputs of Sequence Activities?

A. Responsibility assignment matrix (RAM)
B. Work breakdown structure (WBS) update
C. Project schedule network diagram
D. Mandatory dependencies list

Correct Answer: C

Section: Volume C

Explanation

Explanation/Reference:
Explanation:
6.3.3.1 Project Schedule Network Diagrams
A project schedule network diagram is a graphical representation of the logical relationships, also referred to as dependencies, among the project schedule activities. Figure 6-11 illustrates a project schedule network diagram. A project schedule network diagram is produced manually or by using project management software. It can include full project details, or have one or more summary activities. A summary narrative can accompany the diagram and describe the basic approach used to sequence the activities. Any unusual activity sequences within the network should be fully described within the narrative.

Process: 6.3 Sequence Activities
Definition: The process of identifying and documenting relationships among the project activities.
Key Benefit: The key benefit of this process is that it defines the logical sequence of work to obtain the greatest efficiency given all project constraints.
Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Milestone list
5. Project scope statement
6. Enterprise environmental factors
7. Organizational process assets

Tools & Techniques
1. Precedence diagramming method (PDM)
2. Dependency determination
3. Leads and lags

Outputs
1. **Project schedule network diagrams**
2. Project documents updates

QUESTION 236
Organizational planning impacts projects by means of project prioritization based on risk, funding, and an organizations:

A. Budget plan
B. Resource plan

C. Scope plan
D. Strategic plan

Correct Answer: D
Section: Volume C
Explanation

Explanation/Reference:
Explanation:
4.1.1.1 Project Statement of Work
The project statement of work (SOW) is a narrative description of products, services, or results to be delivered by a project. For internal projects, the project initiator or sponsor provides the statement of work based on business needs, product, or service requirements. For external projects, the statement of work can be received from the customer as part of a bid document, (e.g., a request for proposal, request for information, or request for bid) or as part of a contract. The SOW references the following:
・Business need. An organization's business need may be based on a market demand, technological advance, legal requirement, government regulation, or environmental consideration. Typically, the business need and the cost-beneft analysis are contained in the business case to justify the project.
・Product scope description. The product scope description documents the characteristics of the product, service, or results that the project will be undertaken to create. The description should also document the relationship between the products, services, or results being created and the business need that the project will address.
・Strategic plan. The strategic plan documents the organization's strategic vision, goals, and objectives and may contain a high-level mission statement. All projects should be aligned with their organization's strategic plan. Strategic plan alignment ensures that each project contributes to the overall objectives of the organization.

QUESTION 237
Which schedule compression technique has phases or activities done in parallel that would normally have been done sequentially?

A. Crashing
B. Fast tracking
C. Leads and lags adjustment
D. Parallel task development

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:

6.6.2.7 Schedule Compression
Schedule compression techniques are used to shorten the schedule duration without reducing the project scope, in order to meet schedule constraints, imposed dates, or other schedule objectives. Schedule compression techniques include, but are not limited to:
・Crashing. A technique used to shorten the schedule duration for the least incremental cost by adding resources. Examples of crashing include approving overtime, bringing in additional resources, or paying to expedite delivery to activities on the critical path. Crashing works only for activities on the critical path where additional resources will shorten the activity's duration. Crashing does not always produce a viable alternative and may result in increased risk and/or cost.
・Fast tracking. A schedule compression technique in which activities or phases normally done in sequence are performed in parallel for at least a portion of their duration. An example is constructing the foundation for a building before completing all of the architectural drawings. Fast tracking may result in rework and increased risk. Fast tracking only works if activities can be overlapped to shorten the project duration.

QUESTION 238
Which of the following techniques is used during Control Scope?

A. Cost-benefit analysis
B. Variance analysis
C. Reserve analysis
D. Stakeholder analysis

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
5.6.2.1 Variance Analysis
Variance analysis is a technique for determining the cause and degree of difference between the baseline and actual performance. Project performance measurements are used to assess the magnitude of variation from the original scope baseline. Important aspects of project scope control include determining the cause and degree of variance relative to the scope baseline (Section 5.4.3.1) and deciding whether corrective or preventive action is required.

Process: 5.6 Control Scope
Definition: The process of monitoring the status of the project and product scope and managing changes to the scope baseline.
Key Benefit: The key benefit of this process is that it allows the scope baseline to be maintained throughout the project.

Inputs
1. Project management plan
2. Requirements documentation
3. Requirements traceability matrix
4. Work performance data

5. Organizational process assets

Tools & Techniques
1. **Variance analysis**

Outputs
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

QUESTION 239
Which type of chart is a graphic representation of a process showing the relationships among process steps?

A. Control
B. Bar
C. Flow
D. Pareto

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
QUESTION 240
What is the schedule performance index (SPI) using the following data? BAC = $100,000 PV = $50,000 AC = $80,000 EV = $40,000

A. 1
B. 0.4
C. 0.5
D. 0.8

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 241
What provides information regarding the ways people, teams, and organizational units behave?

A. Organizational chart
B. Organizational theory
C. Organizational structure
D. Organizational behavior

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 242
What causes replanning of the project scope?

A. Project document updates
B. Project scope statement changes
C. Variance analysis
D. Change requests
Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 243
Which process determines the risks that might affect the project?

A. Perform Qualitative Risk Analysis
B. Identify Risks

C. Plan Risk Management
D. Perform Quantitative Risk Analysis

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 244
What risk technique is used to quantify the probability and impact of risks on project objectives?

A. Expert judgment
B. Risk registry
C. Risk response planning
D. Interviewing

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
11.2.2.2 Information Gathering Techniques
Examples of information gathering techniques used in identifying risks can include:
· **Brainstorming.** The goal of brainstorming is to obtain a comprehensive list of project risks. The project team usually performs brainstorming, often with a multidisciplinary set of experts who are not part of the team. Ideas about project risk are generated under the leadership of a facilitator, either in a traditional freeform brainstorm session or structured mass interviewing techniques. Categories of risk, such as in a risk breakdown structure, can be used as a framework. Risks are then identified and categorized by type of risk and their definitions are refined.
· **Delphi technique.** The Delphi technique is a way to reach a consensus of experts. Project risk experts participate in this technique anonymously. A facilitator uses a questionnaire to solicit ideas about the important project risks. The responses are summarized and are then recirculated to the experts for further comment. Consensus may be reached in a few rounds of this process. The Delphi technique helps reduce bias in the data and keeps any one person from having undue influence on the outcome.

· **Interviewing.** Interviewing experienced project participants, stakeholders, and subject matter experts helps to identify risks.

- **Root cause analysis.** Root-cause analysis is a specific technique used to identify a problem, discover the underlying causes that lead to it, and develop preventive action.

QUESTION 245
Which of the following terms indicates a deliverable-oriented hierarchical decomposition of the project work?

A. WBS directory
B. Activity list
C. WBS
D. Project schedule

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 246
How is the schedule variance calculated using the earned value technique?

A. EV less AC
B. AC less PV
C. EV less PV
D. AC less EV

Correct Answer: C
Section: Volume D
Explanation
Explanation/Reference:

QUESTION 247
Which of the following tools and techniques is used in the Verify Scope process?

A. Inspection
B. Variance analysis

C. Expert judgment
D. Decomposition

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 248
In which process is a project manager identified and given the authority to apply resources to project activities?

A. Acquire Project Team
B. Develop Project Management Plan
C. Manage Project Execution
D. Develop Project Charter

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Process: 4.1. Develop Project Charter
Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.
Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs
1. Project statement of work
2. Business case
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Facilitation techniques

Outputs
1. Project charter

QUESTION 249
Which process involves identifying and documenting the logical relationships between project activities?

A. Develop Schedule
B. Sequence Activities
C. Create WBS
D. Applying leads and lags

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Process: 6.3 Sequence Activities
Definition: The process of identifying and documenting relationships among the project activities.
Key Benefit: The key benefit of this process is that it defines the logical sequence of work to obtain the greatest efficiency given all project constraints.
Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Milestone list
5. Project scope statement
6. Enterprise environmental factors
7. Organizational process assets

Tools & Techniques
1. Precedence diagramming method (PDM)
2. Dependency determination

3. Leads and lags

Outputs
1. Project schedule network diagrams
2. Project documents updates

QUESTION 250
Which of the following is an example of the simplest fixed-price contract?

A. Purchase requisition
B. Purchase order
C. Verbal agreement D. Request for quote

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 251
Analogous cost estimating relies on which of the following techniques?

A. Expert judgment
B. Project management software
C. Vendor bid analysis
D. Reserve analysis

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
4.1.2.1 Expert Judgment

Definition: Expert judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including:

- Other units within the organization,
- Consultants,
- Stakeholders, including customers or sponsors,
- Professional and technical associations,
- Industry groups,
- Subject matter experts (SME), and
- Project management office (PMO).

QUESTION 252

A method to manage stakeholder expectations in the scope statement is to clearly:

A. state the guiding principles of the organization.
B. identify alternatives to generate different approaches.
C. state what is out of scope.
D. outline the results of the Delphi technique.

Correct Answer: C
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 253

Which type of management focuses on ensuring that projects and programs are reviewed to prioritize resource allocation?

A. Project
B. Functional
C. Program
D. Portfolio

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
1.4.2 Portfolio Management
A portfolio refers to projects, programs, subportfolios, and operations managed as a group to achieve strategic objectives. The projects or programs of the portfolio may not necessarily be interdependent or directly related. For example, an infrastructure firm that has the strategic objective of "maximizing the return on its investments" may put together a portfolio that includes a mix of projects in oil and gas, power, water, roads, rail, and airports. From this mix, the firm may choose to manage related projects as one program. All of the power projects may be grouped together as a power program. Similarly, all of the water projects may be grouped together as a water program.
Thus, the power program and the water program become integral components of the enterprise portfolio of the infrastructure firm.

QUESTION 254
One of the tools and techniques of the Manage Project Team process is:

A. organization charts.
B. ground rules.
C. organizational theory,
D. conflict management.

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
9.4.2.3 Conflict Management
Conflict is inevitable in a project environment. Sources of conflict include scarce resources, scheduling priorities, and personal work styles. Team ground rules, group norms, and solid project management practices, like communication planning and role definition, reduce the amount of conflict.
Successful conflict management results in greater productivity and positive working relationships. When managed properly, differences of opinion can lead to increased creativity and better decision making. If the differences become a negative factor, project team members are initially responsible for their resolution. If conflict escalates, the project manager should help facilitate a satisfactory resolution. Conflict should be addressed early and usually in private, using a direct, collaborative approach. If disruptive conflict continues, formal procedures may be used, including disciplinary actions.
The success of project managers in managing their project teams often depends a great deal on their ability to resolve conflict. Different project managers may utilize different conflict resolution methods. Factors that influence conflict resolution methods include:
- Relative importance and intensity of the conflict,
- Time pressure for resolving the conflict,
- Position taken by persons involved, and
- Motivation to resolve conflict on a long-term or a short-term basis.

There are five general techniques for resolving conflict. As each one has its place and use, these are not given in any particular order:

- **Withdraw/Avoid.** Retreating from an actual or potential conflict situation; postponing the issue to be better prepared or to be resolved by others.
- **Smooth/Accommodate.** Emphasizing areas of agreement rather than areas of difference; conceding one's position to the needs of others to maintain harmony and relationships.
- **Compromise/Reconcile.** Searching for solutions that bring some degree of satisfaction to all parties in order to temporarily or partially resolve the conflict.
- **Force/Direct.** Pushing one's viewpoint at the expense of others; offering only win-lose solutions, usually enforced through a power position to resolve an emergency.
- **Collaborate/Problem Solve.** Incorporating multiple viewpoints and insights from differing perspectives; requires a cooperative attitude and open dialogue that typically leads to consensus and commitment.

Process: 9.4 Manage Project Team

Definition: The process of tracking team member performance, providing feedback, resolving issues, and managing changes to optimize project performance.
Key Benefit: The key benefit of this process is that it influences team behavior, manages conflict, resolves issues, and appraises team member performance.

Inputs

1. Human resource management plan
2. Project staff assignments
3. Team performance assessments
4. Issue log
5. Work performance reports
6. Organizational process assets

Tools & Techniques

1. Observation and conversation
2. Project performance appraisals
3. **Conflict management**
4. Interpersonal skills

Outputs

1. Change requests
2. Project management plan updates
3. Project documents updates
4. Enterprise environmental factors updates
5. Organizational process assets updates

QUESTION 255

The process of monitoring the status of the project to update project progress and manage changes to the schedule baseline is:

A. Control Schedule.

B. Quality Control.
C. Perform Integrated Change Control.
D. Develop Schedule.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
6.6.3.1 Schedule Baseline
A schedule baseline is the approved version of a schedule model that can be changed only through formal change control procedures and is used as a basis for comparison to actual results. It is accepted and approved by the appropriate stakeholders as the schedule baseline with baseline start dates and baseline finish dates. During monitoring and controlling, the approved baseline dates are compared to the actual start and finish dates to determine whether variances have occurred. The schedule baseline is a component of the project management plan.

Process: 6.7 Control Schedule
Definition: **Control Schedule is the process of monitoring the status of project activities to update project progress and manage changes to the schedule baseline to achieve the plan.**
Key Benefit: The key benefit of this process is that it provides the means to recognize deviation from the plan and take corrective and preventive actions and thus minimize risk.

Inputs
1. Project management plan
2. Project schedule
3. Work performance data
4. Project calendars
5. Schedule data
6. Organizational process assets

Tools & Techniques
1. Performance reviews
2. Project management software
3. Resource optimization techniques
4. Modeling techniques
5. Leads and lags
6. Schedule compression

7. Scheduling tool

Outputs
1. Work performance information
2. Schedule forecasts
3. Change requests
4. Project management plan updates
5. Project documents updates
6. Organizational process assets updates

QUESTION 256
Changes to formally controlled documentation, plans, etc. to reflect modified or additional ideas or content are known as:
A. updates.
B. defect repairs.
C. preventive actions.
D. corrective actions.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
4.3.3.3 Change Requests
A change request is a formal proposal to modify any document, deliverable, or baseline. An approved change request will replace the associated document, deliverable, or baseline and may result in an update to other parts of the project management plan. When issues are found while project work is being performed, change requests are submitted, which may modify project policies or procedures, project scope, project cost or budget, project schedule, or project quality. Other change requests cover the needed preventive or corrective actions to forestall negative impact later in the project. Requests for a change can be direct or indirect, externally or internally initiated, and can be optional or legally/ contractually mandated, and may include:

- **Corrective action**—An intentional activity that realigns the performance of the project work with the project management plan;
- **Preventive action**—An intentional activity that ensures the future performance of the project work is aligned with the project management plan;
- **Defect repai**r—An intentional activity to modify a nonconforming product or product component;
- **Updates**—Changes to formally controlled project documents, plans, etc., to reflect modified or additional ideas or content.

QUESTION 257
In the Estimate Activity Durations process, productivity metrics and published commercial information inputs are part of the:

A. enterprise environmental factors
B. organizational process assets
C. project management plan
D. project funding requirements

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
6.5.1.9 Enterprise Environmental Factors
Described in Section 2.1.5. The enterprise environmental factors that can influence the Estimate Activity Durations process include, but are not limited to:
- **Duration estimating** databases and other reference data,
- **Productivity metrics**,
- **Published commercial information**, and
- Location of team members.

Process: 6.5 Estimate Activity Durations
Definition: The process of estimating the number of work periods needed to complete individual activities with estimated resources.
Key Benefit: The key benefit of this process is that it provides the amount of time each activity will take to complete, which is a major input into the Develop Schedule process.

Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Activity resource requirements
5. Resource calendars
6. Project scope statement
7. Risk register
8. Resource breakdown structure
9. **Enterprise environmental factors**
10. Organizational process assets

Tools & Techniques
1. Expert judgment

2. Analogous estimating
3. Parametric estimating
4. Three-point estimating
5. Group decision-making techniques
6. Reserve analysis

Outputs
1. Activity duration estimates
2. Project documents updates

QUESTION 258
The milestone list is an input to which process from the Planning Process Group?

A. Define Activities
B. Estimate Activity Durations
C. Estimate Activity Resources
D. Sequence Activities

Correct Answer: D
Section: Volume D
Explanation

Explanation/Reference:
Explanation:
6.2.3.3 Milestone List
A milestone is a significant point or event in a project. A milestone list is a list identifying all project milestones and indicates whether the milestone is mandatory, such as those required by contract, or optional, such as those based upon historical information. Milestones are similar to regular schedule activities, with the same structure and attributes, but they have zero duration because milestones represent a moment in time.

Process: 6.3 Sequence Activities
Definition: The process of identifying and documenting relationships among the project activities.
Key Benefit: The key benefit of this process is that it defines the logical sequence of work to obtain the greatest efficiency given all project constraints.

Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes

4. **Milestone list**
5. Project scope statement
6. Enterprise environmental factors
7. Organizational process assets

Tools & Techniques
1. Precedence diagramming method (PDM)
2. Dependency determination
3. Leads and lags

Outputs
1. Project schedule network diagrams
2. Project documents updates

QUESTION 259
Quality metrics are an output of which process?

A. Plan Quality Management
B. Perform Quality Control
C. Perform Quality Assurance
D. Perform Qualitative Risk Analysis

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
8.1.3.3 Quality Metrics
A quality metric specifically describes a project or product attribute and how the control quality process will measure it. A measurement is an actual value. The tolerance defines the allowable variations to the metric. For example, if the quality objective is to stay within the approved budget by ± 10%, the specific quality metric is used to measure the cost of every deliverable and determine the percent variance from the approved budget for that deliverable. Quality metrics are used in the perform quality assurance and control quality processes. Some examples of quality metrics include on-time performance, cost control, defect frequency, failure rate, availability, reliability, and test coverage.

Process: 8.1 Plan Quality Management
Definition: The process of identifying quality requirements and/or standards for the project and its deliverables, and documenting how the project will demonstrate compliance with relevant quality requirements and/or standards.

Key Benefit: The key benefit of this process is that it provides guidance and direction on how quality will be managed and validated throughout the project.

Inputs
1. Project management plan
2. Stakeholder register
3. Risk register
4. Requirements documentation
5. Enterprise environmental factors
6. Organizational process assets

Tools & Techniques
1. Cost-benefit analysis
2. Cost of quality
3. Seven basic quality tools
4. Benchmarking
5. Design of experiments
6. Statistical sampling
7. Additional quality planning tools
8. Meetings

Outputs
1. Quality management plan
2. Process improvement plan
3. **Quality metrics**
4. Quality checklists
5. Project documents updates

QUESTION 260
The project manager at an organization has just realized that some of the engineering staff has been allocated to project Y and will not be available to finish task X. The project manager has also discovered that at the current pace, it will not be possible to complete the project on time. Due to cost constraints, hiring more work force is not a viable option. Which tools are at the manager's disposal?

A. Resource leveling and fast tracking
B. Fast tracking and crashing
C. Crashing and applying leads and lags
D. Scheduling tools and applying leads and lags

Correct Answer: A

Section: Volume D

Explanation

Explanation/Reference:
Explanation:
6.6.2.7 Schedule Compression
Schedule compression techniques are used to shorten the schedule duration without reducing the project scope, in order to meet schedule constraints, imposed dates, or other schedule objectives. Schedule compression techniques include, but are not limited to:
- Crashing. A technique used to shorten the schedule duration for the least incremental cost by adding resources. Examples of crashing include approving overtime, bringing in additional resources, or paying to expedite delivery to activities on the critical path. Crashing works only for activities on the critical path where additional resources will shorten the activity's duration. Crashing does not always produce a viable alternative and may result in increased risk and/or cost.
- Fast tracking. A schedule compression technique in which activities or phases normally done in sequence are performed in parallel for at least a portion of their duration. An example is constructing the foundation for a building before completing all of the architectural drawings. Fast tracking may result in rework and increased risk. Fast tracking only works if activities can be overlapped to shorten the project duration.

QUESTION 261
Which of the following is a tool or technique of the Define Activities process?

A. Rolling wave planning
B. Precedence diagramming method (PDM)
C. Alternatives analysis
D. Parametric estimating

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:
Explanation:
6.2.2.2 Rolling Wave Planning
Rolling wave planning is an iterative planning technique in which the work to be accomplished in the near term is planned in detail, while the work in the future is planned at a higher level. It is a form of progressive elaboration.
Therefore, work can exist at various levels of detail depending on where it is in the project life cycle. During early strategic planning, when information is less defined, work packages may be decomposed to the known level of detail. As more is known about the upcoming events in the near term, work packages can be decomposed into activities.

Process: 6.2 Define Activities

Definition: The process of identifying and documenting the specific actions to be performed to produce the project deliverables.
Key Benefit: The key benefit of this process is to break down work packages into activities that provide a basis for estimating, scheduling, executing, monitoring, and controlling the project work.

Inputs
1. Schedule management plan
2. Scope baseline
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Decomposition
2. **Rolling wave planning**
3. Expert judgment

Outputs
1. Activity list
2. Activity attributes
3. Milestone list

QUESTION 262
Which of the following is a set of interrelated actions and activities performed to achieve a prespecified product, result, or service?

A. Portfolio
B. Process
C. Project
D. Program
Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 263
Which degree of authority does a project manager have on a project in a strong matrix organizational structure?

A. Limited

B. Low to moderate
C. Moderate to high
D. High to almost total

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 264
Which of the following is an information gathering technique in Identify Risks?

A. Influence diagrams
B. Brainstorming
C. Assumption analysis
D. SWOT analysis

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 265
Documented identification of a flaw in a project component together with a recommendation is termed a:
A. corrective action.
B. preventive action.
C. non-conformance report,
D. defect repair.

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 266
Which of the following is developed from the project scope baseline and defines only that portion of the project scope that is to be included within a related contract?

A. Product scope description
B. Procurement statement of work
C. Project schedule
D. Work breakdown structure (WBS)

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
12.1.3.2 Procurement Statement of Work
The statement of work (SOW) for each procurement is developed from the project scope baseline and defines only that portion of the project scope that is to be included within the related contract. The procurement SOW describes the procurement item in sufficient detail to allow prospective sellers to determine if they are capable of providing the products, services, or results. sufficient detail can vary based on the nature of the item, the needs of the buyer, or the expected contract form. Information included in a SOW can include specifications, quantity desired, quality levels, performance data, period of performance, work location, and other requirements.
The procurement SOW is written to be clear, complete, and concise. It includes a description of any collateral services required, such as performance reporting or post-project operational support for the procured item. In some application areas, there are specific content and format requirements for a procurement SOW. Each individual procurement item requires a SOW; however, multiple products or services can be grouped as one procurement item within a single SOW. The procurement SOW can be revised and refined as required as it moves through the procurement process until incorporated into a signed agreement.

QUESTION 267
In Project Cost Management, which input is exclusive to the Determine Budget process?
A. Scope baseline
B. Organizational process assets
C. Project schedule
D. Resource calendars

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
7.3.1.6 Resource Calendars
Described in Sections 9.2.3.2 and 12.2.3.3. Resource calendars provide information on which resources are assigned to the project and when they are assigned. This information can be used to indicate resource costs over the duration of the project.

9.2.3.2 Resource Calendars
Resource calendars document the time periods that each project team member is available to work on the project.
Creating a reliable schedule (Section 6.6.3.1) depends on having a good understanding of each person's availability and schedule constraints, including time zones, work hours, vacation time, local holidays, and commitments to other projects.

12.2.3.3 Resource Calendars
The quantity and availability of contracted resources and those dates on which each specific resource or resource group can be active or idle are documented.

Process: 7.3 Determine Budget
Definition: The process of aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline.
Key Benefit: The key benefit of this process is that it determines the cost baseline against which project performance can be monitored and controlled.

Inputs
1. Cost management plan
2. Scope baseline
3. Activity cost estimates
4. Basis of estimates
5. Project schedule
6. **Resource calendars**
7. Risk register
8. Agreements
9. Organizational process assets

Tools & Techniques
1. Cost aggregation
2. Reserve analysis
3. Expert judgment

4. Historical relationships
5. Funding limit reconciliation

Outputs
1. Cost baseline
2. Project funding requirements
3. Project documents updates

QUESTION 268
The precedence diagramming method (PDM) is also known as:

A. Arrow Diagram.
B. Critical Path Methodology (CPM).
C. Activity-On-Node (AON).
D. schedule network diagram.

Correct Answer: C
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 269
Which Process Group contains those processes performed to define a new project?

A. Initiating
B. Planning

C. Executing
D. Closing
Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 270
To please the customer, a project team member delivers a requirement which is uncontrolled. This is not part of the plan. This describes:

A. scope creep.
B. a change request.
C. work performance information.
D. deliverables.

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 271
How many Project Management Process Groups are there?

A. 3
B. 4
C. 5
D. 6

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
1. Initiating Process Group
2. Planning Process Group
3. Executing Process Group
4. Monitoring and Controlling Process Group
5. Closing Process Group

QUESTION 272
Which of the following are outputs of Develop Project Team?

A. Human resources plan changes and project staff assignment updates
B. Project management plan updates and enterprise environmental factor updates
C. Resource calendars and project management plan updates
D. Team performance assessments and enterprise environmental factor updates

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Process: 9.3 Develop Project Team
Definition: The process of improving competencies, team member interaction, and overall team environment to enhance project performance.
Key Benefit: The key benefit of this process is that it results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.

Inputs
1. Human resource management plan
2. Project staff assignments
3. Resource calendars

Tools & Techniques
1. Interpersonal skills
2. Training
3. Team-building activities
4. Ground rules

5. Colocation
6. Recognition and rewards
7. Personnel assessment tools

Outputs
1. **Team performance assessments**
2. **Enterprise environmental factors updates**

QUESTION 273
Which tool or technique is used in Manage Stakeholder Expectations?

A. Stakeholder management strategy
B. Communication methods
C. Issue log
D. Change requests

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 274
The output that defines an approach to increase the support and minimize negative impacts of stakeholders is the:

A. stakeholder management strategy.
B. communications management plan,
C. stakeholder register,
D. performance report.

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 275
Which of the following project documents is an input to the Control Scope process?

A. Vendor risk assessment diagram
B. Risk register
C. Requirements traceability matrix
D. Area of responsibility summary
Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
5.2.3.2 Requirements Traceability Matrix
The requirements traceability matrix is a grid that links product requirements from their origin to the deliverables that satisfy them. The implementation of a requirements traceability matrix helps ensure that each requirement adds business value by linking it to the business and project objectives. It provides a means to track requirements throughout the project life cycle, helping to ensure that requirements approved in the requirements documentation are delivered at the end of the project. Finally, it provides a structure for managing changes to the product scope. Tracing includes, but is not limited to, tracing requirements for the following:

- Business needs, opportunities, goals, and objectives;
- Project objectives;
- Project scope/WBS deliverables; ·
Product design;
- Product development;
- Test strategy and test scenarios; and
- High-level requirements to more detailed requirements.

Attributes associated with each requirement can be recorded in the requirements traceability matrix. These attributes help to define key information about the requirement. Typical attributes used in the requirements traceability matrix may include: a unique identifier, a textual description of the requirement, the rationale for inclusion, owner, source, priority, version, current status (such as active, cancelled, deferred, added, approved, assigned, completed), and status date. Additional attributes to ensure that the requirement has met stakeholders' satisfaction may include stability, complexity, and acceptance criteria.

Process: 5.6 Control Scope
Definition: The process of monitoring the status of the project and product scope and managing changes to the scope baseline.
Key Benefit: The key benefit of this process is that it allows the scope baseline to be maintained throughout the project.

Inputs
1. Project management plan
2. Requirements documentation

3. **Requirements traceability matrix**
4. Work performance data
5. Organizational process assets

Tools & Techniques
1. Variance analysis

Outputs
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

QUESTION 276
In which Project Management Process Group is the project charter developed?

A. Monitoring and Controlling
B. Executing
C. Initiating
D. Planning

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Initiating Process Group. Those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase.

Process: 4.1. Develop Project Charter
Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.
Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs
1. Project statement of work
2. Business case
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Facilitation techniques

Outputs
1. Project charter

QUESTION 277
Which can be used to determine whether a process is stable or has predictable performance?

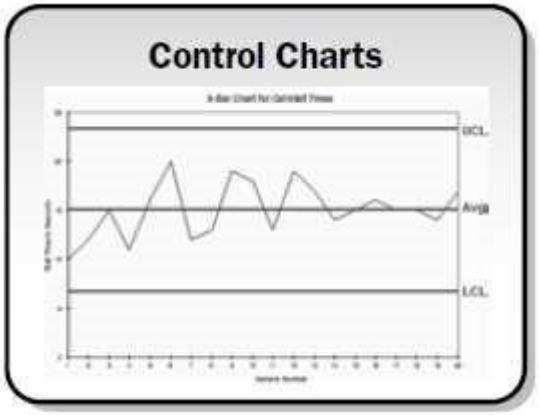
A. Matrix diagram
B. Histogram
C. Control chart
D. Flowchart

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Control charts, are used to determine whether or not a process is stable or has predictable performance.
Upper and lower specification limits are based on requirements of the agreement. They reflect the maximum and minimum values allowed. There may be penalties associated with exceeding the specification limits. Upper and lower control limits are different from specification limits. The control limits are determined using standard statistical calculations and principles to ultimately establish the natural capability for a stable process. The project manager and appropriate stakeholders may use the statistically calculated control limits to identify the points at which corrective action will be taken to prevent unnatural performance. The corrective action typically seeks to maintain the natural stability of a stable and capable process. For repetitive processes, the control limits are generally set at ±3 s around a process mean that has been set at 0 s. A process is considered out of control when: (1) a data point exceeds a control limit; (2) seven consecutive plot points are above the mean; or (3) seven consecutive plot points are below the mean. Control charts can be used to monitor various types of output variables.

Although used most frequently to track repetitive activities required for producing manufactured lots, control charts may also be used to monitor cost and schedule variances, volume, and frequency of scope changes, or other management results to help determine if the project management processes are in control.



QUESTION 278
When sequencing activities, what does the common acronym FF stand for?

A. Fixed Fee
B. Free Float
C. Fixed Finish
D. Finish-to-Finish

Correct Answer: D
Section: Volume D
Explanation

Explanation/Reference:
Explanation:
- A finish-to-start (FS) relationship between two activities implies that the initiation of successor is dependent on the completion of predecessor.
- A finish-to-finish (FF) relationship between two activities implies that the completion of successor is dependent on the completion of predecessor.
- A start-to-start (SS) relationship implies that the initiation of successor is dependent on the initiation of predecessor.
- A start-to-finish (SF) relationship between two activities implies that the completion of successor is dependent on the initiation of its predecessor

QUESTION 279
Which is the correct formula for calculating expected activity cost for three-point estimating?

A. Ce = (C0 + 6Cm + Cp)/4
B. Ce = (6C0 + Cm + Cp)/4
C. Ce = (C0 + 4Cm + Cp)/6 D. Ce = (C0 + C„, + 4Cp) /6

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
6.5.2.4 Three-Point Estimating
The accuracy of single-point activity duration estimates may be improved by considering estimation uncertainty and risk. This concept originated with the program evaluation and review technique (PERT). PERT uses three estimates to define an approximate range for an activity's duration:
- **Most likely** (*tM*). This estimate is based on the duration of the activity, given the resources likely to be assigned, their productivity, realistic expectations of availability for the activity, dependencies on other participants, and interruptions.
- **Optimistic** (*tO*). The activity duration based on analysis of the best-case scenario for the activity.
- **Pessimistic** (*tP*). The activity duration based on analysis of the worst-case scenario for the activity.

Depending on the assumed distribution of values within the range of the three estimates the expected duration, tE, can be calculated using a formula. Two commonly used formulas are triangular and beta distributions. The formulas are:
- **Triangular Distribution.** *tE = (tO + tM + tP)* / 3
- **Beta Distribution** (from the traditional PERT technique). *tE = (tO + 4tM + tP)* / 6

Duration estimates based on three points with an assumed distribution provide an expected duration and clarify the range of uncertainty around the expected duration.

QUESTION 280
Monte Carlo is which type of risk analysis technique?

A. Probability
B. Quantitative
C. Qualitative
D. Sensitivity

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Monte Carlo Simulation. A process which generates hundreds or thousands of probable performance outcomes based on probability distributions for cost and schedule on individual tasks. The outcomes are then used to generate a probability distribution for the project as a whole.

QUESTION 281
When addressing roles and responsibilities, which item ensures that the staff has the skills required to complete project activities?

A. Authority
B. Role
C. Competency
D. Responsibility

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 282
Which of the following reduces the probability of potential consequences of project risk events?

A. Preventive action
B. Risk management
C. Corrective action
D. Defect repair

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:
Explanation:
4.3.3.3 Change Requests
A change request is a formal proposal to modify any document, deliverable, or baseline. An approved change request will replace the associated document, deliverable, or baseline and may result in an update to other parts of the project management plan. When issues are found while project work is being performed, change requests are submitted, which may modify project policies or procedures, project scope, project cost or budget, project schedule, or project

quality. Other change requests cover the needed preventive or corrective actions to forestall negative impact later in the project. Requests for a change can be direct or indirect, externally or internally initiated, and can be optional or legally/ contractually mandated, and may include:

- **Corrective action**—An intentional activity that realigns the performance of the project work with the project management plan;
- **Preventive action**—An intentional activity that ensures the future performance of the project work is aligned with the project management plan;
- **Defect repai**r—An intentional activity to modify a nonconforming product or product component;
- **Updates**—Changes to formally controlled project documents, plans, etc., to reflect modified or additional ideas or content.

QUESTION 283
Lessons learned documentation is gathered during which of the following Project Management Process Groups?

A. Planning
B. Executing
C. Closing
D. Initiating

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
3.7 Closing Process Group
The Closing Process Group consists of those processes performed to conclude all activities across all Project Management Process Groups to formally complete the project, phase, or contractual obligations. This Process Group, when completed, verifes that the defined processes are completed within all of the Process Groups to close the project or a project phase, as appropriate, and formally establishes that the project or project phase is complete.
This Process Group also formally establishes the premature closure of the project. Prematurely closed projects may include, for example: aborted projects, cancelled projects, and projects having a critical situation. In specific cases, when some contracts cannot be formally closed (e.g. claims, termination clauses, etc.) or some activities are to be transferred to other organizational units, specific hand-over procedures may be arranged and finalized.
At project or phase closure, the following may occur:
- Obtain acceptance by the customer or sponsor to formally close the project or phase,
- Conduct post-project or phase-end review,
- Record impacts of tailoring to any process,
- **Document lessons learned,**
- Apply appropriate updates to organizational process assets,
- Archive all relevant project documents in the project management information system (PMIS) to be used as historical data, ・Close out all procurement activities ensuring termination of all relevant agreements, and ・Perform team members' assessments and release project resources.

QUESTION 284
Which written document helps monitor who is responsible for resolving specific problems and concerns by a target date?

A. Project Plan
B. Responsibility Matrix
C. Issue Log
D. Scope Document

Correct Answer: C
Section: Volume D
Explanation

Explanation/Reference:
Explanation:
9.4.1.4 Issue Log
Issues arise in the course of managing the project team. An issue log can be used to document and monitor who is responsible for resolving specific issues by a target date.

QUESTION 285
Which of the following is the primary output of the Identify Risks process?

A. Risk management plan
B. Risk register
C. Change requests
D. Risk response plan

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Process: 11.2 Identify Risks
Definition: The process of determining which risks may affect the project and documenting their characteristics.
Key Benefit: The key benefit of this process is the documentation of existing risks and the knowledge and ability it provides to the project team to anticipate events.

Inputs

1. Risk management plan
2. Cost management plan
3. Schedule management plan
4. Quality management plan
5. Human resource management plan
6. Scope baseline
7. Activity cost estimates
8. Activity duration estimates
9. Stakeholder register
10. Project documents
11. Procurement documents
12. Enterprise environmental factors
13. Organizational process assets

Tools & Techniques

1. Documentation reviews
2. Information gathering techniques
3. Checklist analysis
4. Assumptions analysis
5. Diagramming techniques
6. SWOT analysis
7. Expert judgment

Outputs

1. **Risk register**

11.2.3.1 Risk Register

The primary output from Identify Risks is the initial entry into the risk register. The risk register is a document in which the results of risk analysis and risk response planning are recorded. It contains the outcomes of the other risk management processes as they are conducted, resulting in an increase in the level and type of information contained in the risk register over time. The preparation of the risk register begins in the Identify Risks process with the following information, and then becomes available to other project management and risk management processes:

- **List of identified risks.** The identified risks are described in as much detail as is reasonable. A structure for describing risks using risk statements may be applied, for example, EVENT may occur causing IMPACT, or If CAUSE exists, EVENT may occur leading to EFFECT. In addition to the list of identified risks, the root causes of those risks may become more evident. These are the fundamental conditions or events that may give rise to one or more identified risks. They should be recorded and used to support future risk identification for this and other projects.
- **List of potential responses.** Potential responses to a risk may sometimes be identified during the Identify Risks process. These responses, if identified in this process, should be used as inputs to the Plan Risk Responses process.

QUESTION 286
Which type of elaboration allows a project management team to manage at a greater level of detail as the project evolves?

A. Cyclic
B. Progressive
C. Repetitive
D. Iterative

Correct Answer: B
Section: Volume D
Explanation
Explanation/Reference:

QUESTION 287
Which of the following helps to ensure that each requirement adds business value by linking it to the business and project objectives?

A. Requirements traceability matrix
B. Work breakdown structure (WBS) dictionary
C. Requirements management plan
D. Requirements documentation

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
5.2.3.2 Requirements Traceability Matrix
The requirements traceability matrix is a grid that links product requirements from their origin to the deliverables that satisfy them. The implementation of a requirements traceability matrix helps ensure that each requirement adds business value by linking it to the business and project objectives. It provides a means to track requirements throughout the project life cycle, helping to ensure that requirements approved in the requirements documentation are delivered at the end of the project. Finally, it provides a structure for managing changes to the product scope. Tracing includes, but is not limited to, tracing requirements for the following:

- Business needs, opportunities, goals, and objectives;
- Project objectives;
- Project scope/WBS deliverables;

- Product design;
- Product development;
- Test strategy and test scenarios; and
- High-level requirements to more detailed requirements.

Attributes associated with each requirement can be recorded in the requirements traceability matrix. These attributes help to define key information about the requirement. Typical attributes used in the requirements traceability matrix may include: a unique identifier, a textual description of the requirement, the rationale for inclusion, owner, source, priority, version, current status (such as active, cancelled, deferred, added, approved, assigned, completed), and status date. Additional attributes to ensure that the requirement has met stakeholders' satisfaction may include stability, complexity, and acceptance criteria.

QUESTION 288

Which category of contracts are sellers legally obligated to complete, with possible financial damages if the project objectives are not met?

A. Cost-reimbursable contracts
B. Time and Material contracts (T&M)
C. Fixed-price contracts
D. Cost Plus Fixed Fee Contracts (CPFF)

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

Explanation:

Fixed-price contracts. This category of contracts involves setting a fixed total price for a defined product, service, or result to be provided. Fixed-price contracts may also incorporate financial incentives for achieving or exceeding selected project objectives, such as schedule delivery dates, cost and technical performance, or anything that can be quantified and subsequently measured. Sellers under fixed-price contracts are legally obligated to complete such contracts, with possible financial damages if they do not. Under the fixed-price arrangement, buyers need to precisely specify the product or services being procured. Changes in scope may be accommodated, but generally with an increase in contract price.

QUESTION 289

Types of internal failure costs include:

A. inspections.
B. equipment and training.
C. lost business.
D. reworking and scrapping.

Correct Answer: D

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 290
Which of the following types of a dependency determination is used to define the sequence of activities?

A. Legal
B. Discretionary
C. Internal
D. Resource

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
6.3.2.2 Dependency Determination
Dependencies may be characterized by the following attributes: mandatory or discretionary, internal or external, as described below. Dependency has four attributes, but two can be applicable at the same time in following ways: mandatory external dependencies, mandatory internal dependencies, discretionary external dependencies, or discretionary internal dependencies.
・Mandatory dependencies. Mandatory dependencies are those that are legally or contractually required or inherent in the nature of the work. Mandatory dependencies often involve physical limitations, such as on a construction project, where it is impossible to erect the superstructure until after the foundation has been built, or on an electronics project, where a prototype has to be built before it can be tested. Mandatory dependencies are also sometimes referred to as hard logic or hard dependencies. Technical dependencies may not be mandatory. The project team determines which dependencies are mandatory during the process of sequencing the activities. Mandatory dependencies should not be confused with assigning schedule constraints in the scheduling tool.
・Discretionary dependencies. Discretionary dependencies are sometimes referred to as preferred logic, preferential logic, or soft logic. Discretionary dependencies are established based on knowledge of best practices within a particular application area or some unusual aspect of the project where a specific sequence is desired, even though there may be other acceptable sequences. Discretionary dependencies should be fully documented since they can create arbitrary total float values and can limit later scheduling options. When fast tracking techniques are employed, these discretionary dependencies should be reviewed and considered for modifcation or removal. The project team determines which dependencies are discretionary during the process of sequencing the activities.
・External dependencies. External dependencies involve a relationship between project activities and non-project activities. These dependencies are usually outside the project team's control. For example, the testing activity in a software project may be dependent on the delivery of hardware from an external source, or

governmental environmental hearings may need to be held before site preparation can begin on a construction project. The project management team determines which dependencies are external during the process of sequencing the activities.
・Internal dependencies. Internal dependencies involve a precedence relationship between project activities and are generally inside the project team's control. For example, if the team cannot test a machine until they assemble it, this is an internal mandatory dependency. The project management team determines which dependencies are internal during the process of sequencing the activities.

QUESTION 291
Control charts, flowcharting, histograms, Pareto charts, and scatter diagrams are tools and techniques of which process?

A. Perform Quality Control
B. Perform Quality Assurance
C. Plan Quality
D. Report Performance

Correct Answer: C
Section: Volume D
Explanation
Explanation/Reference:

QUESTION 292
Co-location is a tool and technique of:

A. Develop Human Resource Plan.
B. Manage Project Team.
C. Develop Project Team.
D. Acquire Project Team.

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
9.3.2.5 Colocation
Colocation, also referred to as "tight matrix," involves placing many or all of the most active project team members in the same physical location to enhance their ability to perform as a team. Colocation can be temporary, such as at strategically important times during the project, or for the entire project. Colocation strategies can include a team meeting room (sometimes called "war room"), places to post schedules, and other conveniences that enhance communication and a sense of

community. While colocation is considered a good strategy, the use of virtual teams can bring benefits such as the use of more skilled resources, reduced costs, less travel, and relocation expenses and the proximity of team members to suppliers, customers, or other key stakeholders.

Process: 9.3 Develop Project Team
Definition: The process of improving competencies, team member interaction, and overall team environment to enhance project performance. The key benefit of this process is that it results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.
Key Benefit: The key benefit of this process is that it results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.

Inputs
1. Human resource management plan
2. Project staff assignments
3. Resource calendars

Tools & Techniques
1. Interpersonal skills
2. Training
3. Team-building activities
4. Ground rules
5. **Colocation**
6. Recognition and rewards
7. Personnel assessment tools

Outputs
1. Team performance assessments
2. Enterprise environmental factors updates

QUESTION 293
The PV is $1000, EV is $2000, and AC is $1500. What is CPI?

A. 1.33
B. 2
C. 0.75
D. 0.5

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
CPI = EV / AC

QUESTION 294
What is the primary benefit of meeting quality requirements?

A. Quality metrics
B. Less rework
C. Quality control measurements
D. Benchmarking

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 295
What is a tool to improve team performance?
A. Staffing plan
B. External feedback
C. Performance reports
D. Co-location

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
9.3.2.5 Colocation

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Inputs
1. Human resource management plan
2. Project staff assignments
3. Resource calendars

Tools & Techniques
1. Interpersonal skills
2. Training
3. Team-building activities
4. Ground rules
5. **Colocation**
6. Recognition and rewards
7. Personnel assessment tools

Outputs
1. Team performance assessments
2. Enterprise environmental factors updates

QUESTION 296
Which tool within the Perform Quality Control process identifies whether or not a process has a predictable performance?

A. Cause and effect diagram
B. Control charts
C. Pareto chart
D. Histogram

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
- **Control charts, are used to determine whether or not a process is stable or has predictable performance.**

Upper and lower specification limits are based on requirements of the agreement. They reflect the maximum and minimum values allowed. There may be penalties associated with exceeding the specification limits. Upper and lower control limits are different from specification limits. The control limits are determined using standard statistical calculations and principles to ultimately establish the natural capability for a stable process. The project manager and appropriate stakeholders may use the statistically calculated control limits to identify the points at which corrective action will be taken to prevent unnatural performance. The corrective action typically seeks to maintain the natural stability of a stable and capable process. For repetitive processes, the control limits are generally set at ±3 s around a process mean that has been set at 0 s. A process is considered out of control when: (1) a data point exceeds a control limit; (2) seven consecutive plot points are above the mean; or (3) seven consecutive plot points are below the mean. Control charts can be used to monitor various types of output variables.
Although used most frequently to track repetitive activities required for producing manufactured lots, control charts may also be used to monitor cost and schedule variances, volume, and frequency of scope changes, or other management results to help determine if the project management processes are in control.

QUESTION 297
Based on the following metrics: EV= $20,000, AC= $22,000, and PV= $28,000, what is the project CV?

A. -8000
B. -2000
C. 2000
D. 8000

Correct Answer: B
Section: Volume D
Explanation
Explanation/Reference:

QUESTION 298
Which type of risk diagram is useful for showing time ordering of events?

A. Ishikawa
B. Milestone
C. Influence

D. Decision tree

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 299
In a construction project schedule, what is the logical relationship between the delivery of the concrete materials and the pouring of concrete?

A. Start-to-start (SS)
B. Start-to-finish (SF)
C. Finish-to-finish (FF)
D. Finish-to-start (FS)

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 300
A required input for Create WBS is a project:

A. quality plan.
B. schedule network.
C. management document update.
D. scope statement.

Correct Answer: D
Section: Volume D
Explanation

Explanation/Reference:

Explanation:

5.3.3.1 Project Scope Statement

The project scope statement is the description of the project scope, major deliverables, assumptions, and constraints. The project scope statement documents the entire scope, including project and product scope. It describes, in detail, the project's deliverables and the work required to create those deliverables. It also provides a common understanding of the project scope among project stakeholders. It may contain explicit scope exclusions that can assist in managing stakeholder expectations. It enables the project team to perform more detailed planning, guides the project team's work during execution, and provides the baseline for evaluating whether requests for changes or additional work are contained within or outside the project's boundaries.

The degree and level of detail to which the project scope statement defines the work that will be performed and the work that is excluded can help determine how well the project management team can control the overall project scope. The detailed project scope statement, either directly, or by reference to other documents, includes the following:

- **Product scope description.** Progressively elaborates the characteristics of the product, service, or result described in the project charter and requirements documentation.
- **Acceptance criteria.** A set of conditions that is required to be met before deliverables are accepted.
- **Deliverable.** Any unique and verifiable product, result, or capability to perform a service that is required to be produced to complete a process, phase, or project. Deliverables also include ancillary results, such as project management reports and documentation. These deliverables may be described at a summary level or in great detail.
- **Project exclusion.** Generally identifies what is excluded from the project. Explicitly stating what is out of scope for the project helps to manage stakeholders' expectations.
- **Constraints.** A limiting factor that affects the execution of a project or process. Constraints identified with the project scope statement list and describe the specific internal or external restrictions or limitations associated with the project scope that affect the execution of the project, for example, a predefined budget or any imposed dates or schedule milestones that are issued by the customer or performing organization. When a project is performed under an agreement, contractual provisions will generally be constraints. Information on constraints may be listed in the project scope statement or in a separate log.
- **Assumptions.** A factor in the planning process that is considered to be true, real, or certain, without proof or demonstration. Also describes the potential impact of those factors if they prove to be false. Project teams frequently identify, document, and validate assumptions as part of their planning process. Information on assumptions may be listed in the project scope statement or in a separate log.

The project team must complete a scope statement for developing a common understanding of the project scope among stakeholders. This lists project deliverables - summary level sub-products, whose full and satisfactory delivery marks the completion of the project.

Process: 5.4 Create WBS

Definition: WBS is the process of subdividing project deliverables and project work into smaller, more manageable components.

Key Benefit: The key benefit of this process is that it provides a structured vision of what has to be delivered.

Inputs

1. Scope management plan
2. **Project scope statement**
3. Requirements documentation
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques

1. Decomposition
2. Expert judgment

Outputs

1. Scope baseline
2. Project documents updates

QUESTION 301

Which of the following statements is true regarding project and product lifecycles?

A. A single product lifecycle may consist of multiple project lifecycles.
B. A product lifecycle is always shorter than the project lifecycle.
C. A single product lifecycle can only have one project lifecycle.
D. A single project lifecycle may consist of multiple product lifecycles.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 302

Which standard has interrelationships to other project management disciplines such as program management and portfolio management?

A. Program Management Body of Knowledge Guide
B. The Standard for Program Management
C. Organizational Project Management Maturity Model (OPM3$)
D. Guide to the Project Management Body of Knowledge (PMBOK®)

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 303

Which of the following strategies is used to deal with risks that may have a negative impact on project objectives?

A. Exploit
B. Share
C. Enhance
D. Transfer

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
11.5.2.1 Strategies for Negative Risks or Threats
Three strategies, which typically deal with threats or risks that may have negative impacts on project objectives if they occur, are: *avoid*, *transfer*, and *mitigate*. The fourth strategy, *accept*, can be used for negative risks or threats as well as positive risks or opportunities. Each of these risk response strategies have varied and unique influence on the risk condition. These strategies should be chosen to match the risk's probability and impact on the project's overall objectives. Avoidance and mitigation strategies are usually good strategies for critical risks with high impact, while transference and acceptance are usually good strategies for threats that are less critical and with low overall impact. The four strategies for dealing with negative risks or threats are further described as follows:

- Avoid. Risk avoidance is a risk response strategy whereby the project team acts to eliminate the threat or protect the project from its impact. It usually involves changing the project management plan to eliminate the threat entirely. The project manager may also isolate the project objectives from the risk's impact or change the objective that is in jeopardy. Examples of this include extending the schedule, changing the strategy, or reducing scope. The most radical avoidance strategy is to shut down the project entirely. Some risks that arise early in the project can be avoided by clarifying requirements, obtaining information, improving communication, or acquiring expertise.
- **Transfer.** *Risk transference is a risk response strategy whereby the project team shifts the impact of a threat to a third party, together with ownership of the response. Transferring the risk simply gives another party responsibility for its management—it does not eliminate it. Transferring does not mean disowning the risk by transferring it to a later project or another person without his or her knowledge or agreement. Risk transference nearly always involves payment of a risk premium to the party taking on the risk. Transferring liability for risk is most effective in dealing with financial risk exposure. Transference tools can be quite diverse and include, but are not limited to, the use of insurance, performance bonds, warranties, guarantees, etc. Contracts or agreements may be used to transfer liability for specified risks to another party. For example, when a buyer has capabilities that the seller does not possess, it may be prudent to transfer some work and its concurrent risk contractually back to the buyer. In many cases, use of a cost-plus contract may transfer the cost risk to the buyer, while a fixed-price contract may transfer risk to the seller.*
- Mitigate. Risk mitigation is a risk response strategy whereby the project team acts to reduce the probability of occurrence or impact of a risk. It implies a reduction in the probability and/or impact of an adverse risk to be within acceptable threshold limits. Taking early action to reduce the probability and/or impact of a risk occurring on the project is often more effective than trying to repair the damage after the risk has occurred. Adopting less complex processes, conducting more tests, or choosing a more stable supplier are examples of mitigation actions. Mitigation may require prototype development to reduce the risk of scaling up from a bench-scale model of a process or product. Where it is not possible to reduce probability, a mitigation response might address the risk impact by targeting linkages that determine the severity. For example, designing redundancy into a system may reduce the impact from a failure of the original component.

- Accept. Risk acceptance is a risk response strategy whereby the project team decides to acknowledge the risk and not take any action unless the risk occurs. This strategy is adopted where it is not possible or cost-effective to address a specific risk in any other way. This strategy indicates that the project team has decided not to change the project management plan to deal with a risk, or is unable to identify any other suitable response strategy. This strategy can be either passive or active. Passive acceptance requires no action except to document the strategy, leaving the project team to deal with the risks as they occur, and to periodically review the threat to ensure that it does not change significantly. The most common active acceptance strategy is to establish a contingency reserve, including amounts of time, money, or resources to handle the risks.

QUESTION 304
Which of the following correctly explains the term "progressive elaboration'?

A. Changing project specifications continuously
B. Elaborate tracking of the project progress
C. Elaborate tracking of the project specifications with a change control system
D. Project specifications becoming more explicit and detailed as the project progresses

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Progressive Elaboration. The iterative process of increasing the level of detail in a project management plan as greater amounts of information and more accurate estimates become available.

QUESTION 305
Which characteristic do projects and operational work share in common?

A. Performed by systems
B. Constrained by limited resources
C. Repetitiveness
D. Uniqueness

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 306
Which of the following is an output from Control Scope?

A. Change requests
B. Variance analysis
C. Accepted deliverables
D. Requirements documentation

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Process: 5.6 Control Scope
Definition: The process of monitoring the status of the project and product scope and managing changes to the scope baseline.
Key Benefit: The key benefit of this process is that it allows the scope baseline to be maintained throughout the project.

Inputs
- Project management plan
- Requirements documentation
- Requirements traceability matrix
- Work performance data
- Organizational process assets

Tools & Techniques ▪
Variance analysis

Outputs
- Work performance information
- **Change requests**
- Project management plan updates ▪
Project documents updates
- Organizational process assets updates

QUESTION 307
Managing procurement relationships and monitoring contract performance are part of which process?

A. Conduct Procurements
B. Plan Procurements
C. Administer Procurements
D. Close Procurements

Correct Answer: C
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 308
In which type of organizational structure are staff members grouped by specialty?

A. Functional
B. Projectized
C. Matrix
D. Balanced

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 309
Which of the following is an input to the Perform Qualitative Risk Analysis process?

A. Risk register
B. Risk data quality assessment
C. Risk categorization
D. Risk urgency

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
11.2.3.1 Risk Register
The primary output from Identify Risks is the initial entry into the risk register. The risk register is a document in which the results of risk analysis and risk response planning are recorded. It contains the outcomes of the other risk management processes as they are conducted, resulting in an increase in the level and type of information contained in the risk register over time. The preparation of the risk register begins in the Identify Risks process with the following information, and then becomes available to other project management and risk management processes:
- **List of identified risks.** The identified risks are described in as much detail as is reasonable. A structure for describing risks using risk statements may be applied, for example, EVENT may occur causing IMPACT, or If CAUSE exists, EVENT may occur leading to EFFECT. In addition to the list of identified risks, the root causes of those risks may become more evident. These are the fundamental conditions or events that may give rise to one or more identified risks. They should be recorded and used to support future risk identification for this and other projects.
- **List of potential responses.** Potential responses to a risk may sometimes be identified during the Identify Risks process. These responses, if identified in this process, should be used as inputs to the Plan Risk Responses process.

Process: 11.3 Perform Qualitative Risk Analysis
Definition: The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact.
Key Benefit: The key benefit of this process is that it enables project managers to reduce the level of uncertainty and to focus on high-priority risks.

Inputs
1. Risk management plan
2. Scope baseline
3. **Risk register**
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Risk probability and impact assessment
2. Probability and impact matrix
3. Risk data quality assessment
4. Risk categorization
5. Risk urgency assessment
6. Expert judgment

Outputs

1. Project documents updates

QUESTION 310
Which of the following Process Groups covers all Project Management Knowledge Areas?

A. Executing
B. Monitoring and Controlling
C. Planning
D. Initiating
Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 311
The process of identifying the stakeholders' information needs is completed during:

A. Plan Communications.
B. Manage Stakeholder Expectations.
C. Stakeholder Analysis.D. Identify Stakeholders.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Process: 10.1 Plan Communications Management
Definition: The process of developing an appropriate approach and plan for project communications **based on stakeholder's information needs** and requirements, and available organizational assets.
Key Benefit: The key benefit of this process is that it identifies and documents the approach to communicate most effectively and efficiently with stakeholders.

Inputs
1. Project management plan
2. Stakeholder register

3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Communication requirements analysis
2. Communication technology
3. Communication models
4. Communication methods
5. Meetings

Outputs
1. Communications management plan
2. Project documents updates

QUESTION 312
Which is an output from Distribute Information?

A. Earned value analysis
B. Trend analysis
C. Project records
D. Performance reviews

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 313
Fast tracking is a schedule compression technique used to shorten the project schedule without changing project scope. Which of the following can result from fast tracking?

A. The risk of achieving the shortened project time is increased.
B. The critical path will have positive total float.
C. Contingency reserves are released for redeployment by the project manager.
D. Duration buffers are added to maintain a focus on planned activity durations.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Fast tracking is a compression technique that increases risk and potentially causes rework. Fast tracking is starting two projects previously scheduled to start one after the other at the same time.

QUESTION 314
Requirements documentation, requirements management plan, and requirements traceability matrix are all outputs of which process?

A. Control Scope

B. Collect Requirements
C. Create WBS
D. Define Scope

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 315
Which of the following is a strategy to deal with positive risks or opportunities?

A. Mitigate
B. Transfer
C. Exploit
D. Avoid

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
11.5.2.2 Strategies for Positive Risks or Opportunities
Three of the four responses are suggested to deal with risks with potentially positive impacts on project objectives.
The fourth strategy, *accept*, can be used for negative risks or threats as well as positive risks or opportunities. These strategies, described below, are to exploit, share, enhance, and accept.
・**Exploit.** *The exploit strategy may be selected for risks with positive impacts where the organization wishes to ensure that the opportunity is realized. This strategy seeks to eliminate the uncertainty associated with a particular upside risk by ensuring the opportunity definitely happens. Examples of directly exploiting responses include assigning an organization's most talented resources to the project to reduce the time to completion or using new technologies or technology upgrades to reduce cost and duration required to realize project objectives.*
・Enhance. The enhance strategy is used to increase the probability and/or the positive impacts of an opportunity. Identifying and maximizing key drivers of these positive-impact risks may increase the probability of their occurrence. Examples of enhancing opportunities include adding more resources to an activity to finish early.
・Share. Sharing a positive risk involves allocating some or all of the ownership of the opportunity to a third party who is best able to capture the opportunity for the beneft of the project. Examples of sharing actions include forming risk-sharing partnerships, teams, special-purpose companies, or joint ventures, which can be established with the express purpose of taking advantage of the opportunity so that all parties gain from their actions.
・Accept. Accepting an opportunity is being willing to take advantage of the opportunity if it arises, but not actively pursuing it.

QUESTION 316
What are the identified risks for doing excessive decomposition in a WBS?

A. Insufficient project funding and disqualification of sellers
B. Insufficient project funding and ineffective use of resources
C. Disqualification of sellers and non-productive management efforts
D. Non-productive management effort and inefficient use of resources

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
5.4.2.1 Decomposition
Decomposition is a technique used for dividing and subdividing the project scope and project deliverables into smaller, more manageable parts. The work package is the work defined at the lowest level of the WBS for which cost and duration can be estimated and managed. The level of decomposition is often guided by the degree of control needed to effectively manage the project. The level of detail for work packages will vary with the size and complexity of the project.
Decomposition of the total project work into work packages generally involves the following activities:

- Identifying and analyzing the deliverables and related work;
- Structuring and organizing the WBS;
- Decomposing the upper WBS levels into lower-level detailed components;
- Developing and assigning identification codes to the WBS components; and
- Verifying that the degree of decomposition of the deliverables is appropriate.

QUESTION 317
The initial development of a Project Scope Management plan uses which technique?

A. Alternatives identification
B. Scope decomposition
C. Expert judgmentD. Product analysis

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
4.1.2.1 Expert Judgment
Expert judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including:
- Other units within the organization,
- Consultants,
- Stakeholders, including customers or sponsors,
- Professional and technical associations,
- Industry groups,
- Subject matter experts (SME), and
- Project management office (PMO).

QUESTION 318
An input to the Estimate Activity Resources process is:

A. Activity resource requirements.
B. Published estimating data.
C. Resource calendars.
D. Resource breakdown structure (RBS).

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 6.4 Estimate Activity Resources
Definition: The process of estimating the type and quantities of material, human resources, equipment, or supplies required to perform each activity.
Key Benefit: The key benefit of this process is that it identifies the type, quantity, and characteristics of resources required to complete the activity which allows more accurate cost and duration estimates.

Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. **Resource calendars**
5. Risk register
6. Activity cost estimates
7. Enterprise environmental factors
8. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Alternative analysis
3. Published estimating data
4. Bottom-up estimating
5. Project management software

Outputs
1. Activity resource requirements
2. Resource breakdown structure
3. Project documents updates

QUESTION 319
Which technique is utilized in the Control Schedule process?

A. Performance measure
B. Baseline schedule

C. Schedule network analysis
D. Variance analysis

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 320
Which is one of the determining factors used to calculate CPI?

A. EV
B. SPI
C. PV
D. ETC

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
CPI = EV / AC

QUESTION 321
At the end of the project, what will be the value of SV?

A. Positive
B. Zero
C. Negative
D. Greater than one

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 322
What is project management?

A. A logical grouping of project management inputs, outputs, tools, and techniques
B. Applying knowledge, skills, tools, and techniques to project activities to meet the project requirements
C. Launching a process that can result in the authorization of a new project
D. A formal, approved document that defines how the project is executed, monitored, and controlled

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:

1.3 What is Project Management?
Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management is accomplished through the appropriate application and integration of the 47 logically grouped project management processes, which are categorized into fve Process Groups. These five Process Groups are:
- Initiating,
- Planning,
- Executing,
- Monitoring and Controlling, and
- Closing.

QUESTION 323
Resource calendars are included in the:

A. staffing management plan.
B. work breakdown structure (WBS).
C. project communications plan.
D. project charter.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 324
An input to the Collect Requirements process is the:

A. stakeholder register.
B. project management plan.
C. project scope statement.
D. requirements management plan.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
5.2.1.5 Stakeholder Register
Described in Section 13.1.3.1. The stakeholder register is used to identify stakeholders who can provide information on the requirements. The stakeholder register also captures major requirements and main expectations stakeholders may have for the project.

13.1.3.1 Stakeholder Register
The main output of the Identify Stakeholders process is the stakeholder register. This contains all details related to the identified stakeholders including, but not limited to:
· **Identification information.** Name, organizational position, location, role in the project, contact information;
· **Assessment information.** Major requirements, main expectations, potential influence in the project, phase in the life cycle with the most interest; and · **Stakeholder classification.** Internal/external, supporter/neutral/resistor, etc.

The stakeholder register should be consulted and updated on a regular basis, as stakeholders may change—or new ones identified—throughout the life cycle of the project.

Process: 5.2 Collect Requirements
Definition: The process of determining, documenting, and managing stakeholder needs and requirements to meet project objectives.

Key Benefit: The key benefit of this process is that it provides the basis for defining and managing the project scope including product scope.

Inputs

1. Scope management plan
2. Requirements management plan
3. Stakeholder management plan
4. Project charter
5. **Stakeholder register**

Tools & Techniques

1. Interviews
2. Focus groups
3. Facilitated workshops
4. Group creativity techniques
5. Group decision-making techniques
6. Questionnaires and surveys
7. Observations
8. Prototypes
9. Benchmarking
10. Context diagrams
11. Document analysis

Outputs

1. Requirements documentation
2. Requirements traceability matrix

QUESTION 325

Which of the following is an input to the Develop Project Charter process?

A. Work performance information

B. Project management plan
C. Business case
D. Change requests

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 4.1. Develop Project Charter
Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.
Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs
1. Project statement of work
2. **Business case**
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Facilitation techniques

Outputs
1. Project charter

4.1.1.2 Business Case
The business case or similar document describes the necessary information from a business standpoint to determine whether or not the project is worth the required investment. It is commonly used for decision making by managers or executives above the project level. Typically, the business need and the cost-benefit analysis are contained in the business case to justify and establish boundaries for the project, and such analysis is usually completed by a business analyst using various stakeholder inputs. The sponsor should agree to the scope and limitations of the business case. The business case is created as a result of one or more of the following:
・Market demand (e.g., a car company authorizing a project to build more fuel-efficient cars in response to gasoline shortages),

- Organizational need (e.g., due to high overhead costs a company may combine staff functions and streamline processes to reduce costs.),
- Customer request (e.g., an electric utility authorizing a project to build a new substation to serve a new industrial park),
- Technological advance (e.g., an airline authorizing a new project to develop electronic tickets instead of paper tickets based on technological advances), • Legal requirement (e.g., a paint manufacturer authorizing a project to establish guidelines for handling toxic materials),
- Ecological impacts (e.g., a company authorizing a project to lessen its environmental impact), or
- Social need (e.g., a nongovernmental organization in a developing country authorizing a project to provide potable water systems, latrines, and sanitation education to communities suffering from high rates of cholera).

Each of the examples in this list may contain elements of risk that should be addressed. In the case of multiphase projects, the business case may be periodically reviewed to ensure that the project is on track to deliver the business benefits. In the early stages of the project life cycle, periodic review of the business case by the sponsoring organization also helps to confirm that the project is still aligned with the business case. The project manager is responsible for ensuring that the project effectively and efficiently meets the goals of the organization and those requirements of a broad set of stakeholders, as defined in the business case.

QUESTION 326
Activity cost estimates are quantitative assessments of the probable costs required to:

A. Create WBS.
B. complete project work.
C. calculate costs.
D. Develop Project Management Plan.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
7.2.3.1 Activity Cost Estimates
Activity cost estimates are quantitative assessments of the probable costs required to complete project work. Cost estimates can be presented in summary form or in detail. Costs are estimated for all resources that are applied to the activity cost estimate. This includes, but is not limited to, direct labor, materials, equipment, services, facilities, information technology, and special categories such as cost of financing (including interest charges), an inflation allowance, exchange rates, or a cost contingency reserve. Indirect costs, if they are included in the project estimate, can be included at the activity level or at higher levels.

QUESTION 327
The item that provides more detailed descriptions of the components in the work breakdown structure (WB5) is called a WBS:

A. dictionary.

B. chart.
C. report.
D. register.
Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
• **WBS dictionary.** The WBS dictionary is a document that provides detailed deliverable, activity, and scheduling information about each component in the WBS. The WBS dictionary is a document that supports the WBS. Information in the WBS dictionary may include, but is not limited to: ▪ Code of account identifier,
▪ Description of work,
▪ Assumptions and constraints,
▪ Responsible organization,
▪ Schedule milestones,
▪ Associated schedule activities,
▪ Resources required,
▪ Cost estimates,
▪ Quality requirements,
▪ Acceptance criteria, ▪
Technical references, and ▪
Agreement information.

QUESTION 328
How should a stakeholder who is classified as high power and low interest be grouped in a power/interest grid during stakeholder analysis?

A. Keep satisfied
B. Keep informed
C. Manage closely
D. Monitor

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
13.1.2.1 Stakeholder Analysis
Stakeholder analysis is a technique of systematically gathering and analyzing quantitative and qualitative information to determine whose interests should be taken into account throughout the project. It identifies the interests, expectations, and influence of the stakeholders and relates them to the purpose of the project. It also helps to identify stakeholder relationships (with the project and with other stakeholders) that can be leveraged to build coalitions and potential partnerships to enhance the project's chance of success, along with stakeholder relationships that need to be influenced differently at different stages of the project or phase. Stakeholder analysis generally follows the steps described below:
- Identify all potential project stakeholders and relevant information, such as their roles, departments, interests, knowledge, expectations, and influence levels. Key stakeholders are usually easy to identify. They include anyone in a decision-making or management role who is impacted by the project outcome, such as the sponsor, the project manager, and the primary customer. Identifying other stakeholders is usually done by interviewing identified stakeholders and expanding the list until all potential stakeholders are included.
- Analyze the potential impact or support each stakeholder could generate, and classify them so as to define an approach strategy. In large stakeholder communities, it is important to prioritize the stakeholders to ensure the efficient use of effort to communicate and manage their expectations.
- Assess how key stakeholders are likely to react or respond in various situations, in order to plan how to influence them to enhance their support and mitigate potential negative impacts.

There are multiple classification models used for stakeholders analysis, such as:
- *Power/interest grid*, grouping the stakeholders based on their level of authority ("power") and their level or concern ("interest") regarding the project outcomes;
- *Power/influence grid*, grouping the stakeholders based on their level of authority ("power") and their active involvement ("influence") in the project;
- *Influence/impact grid*, grouping the stakeholders based on their active involvement ("influence") in the project and their ability to effect changes to the project's planning or execution ("impact"); and
- *Salience model*, describing classes of stakeholders based on their power (ability to impose their will), urgency (need for immediate attention), and legitimacy (their involvement is appropriate).

QUESTION 329
The project has a current cost performance index of 0.80. Assuming this performance will continue, the new estimate at completion is $1000. What was the original budget at completion for the project?

A. $800
B. $1000
C. $1250
D. $1800

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 330
Who determines which dependencies are mandatory during the Sequence Activities process?

A. Project manager
B. External stakeholders
C. Internal stakeholders
D. Project team

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Who determines which dependencies are mandatory during the Sequence Activities process?

QUESTION 331
Which type of contract is a hybrid of both a cost-reimbursable and a fixed-price contract?

A. Cost Plus Award Fee Contract (CPAF)
B. Firm-Fixed -Price Contract (FFP)
C. Time and Material Contract (T&M)
D. Cost Plus Incentive Fee Contract (CPIF)

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Time and Material Contracts (T&M). Time and material contracts are a hybrid type of contractual arrangement that contain aspects of both costreimbursable and fixed-price contracts. They are often used for staff augmentation, acquisition of experts, and any outside support when a precise statement of work cannot be quickly prescribed. These types of contracts resemble cost-reimbursable contracts in that they can be left open ended and may be

subject to a cost increase for the buyer. The full value of the agreement and the exact quantity of items to be delivered may not be defined by the buyer at the time of the contract award. Thus, T&M contracts can increase in contract value as if they were costreimbursable contracts. Many organizations require not-to-exceed values and time limits placed in all T&M contracts to prevent unlimited cost growth. Conversely, T&M contracts can also resemble fixed unit price arrangements when certain parameters are specified in the contract. Unit labor or material rates can be preset by the buyer and seller, including seller profit, when both parties agree on the values for specific resource categories, such as senior engineers at specified rates per hour, or categories of materials at specified rates per unit.

QUESTION 332
Which characteristics do effective project managers possess?

A. Project management knowledge, performance skills, and personal effectiveness
B. Preparedness, project management knowledge, and personality characteristics
C. General management, preparedness, and project management knowledge
D. Assertiveness, collaboration, and performance skills

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
1.7.1 Responsibilities and Competencies of the Project Manager
In general, project managers have the responsibility to satisfy the needs: task needs, team needs, and individual needs. As project management is a critical strategic discipline, the project manager becomes the link between the strategy and the team. Projects are essential to the growth and survival of organizations. Projects create value in the form of improved business processes, are indispensable in the development of new products and services, and make it easier for companies to respond to changes in the environment, competition, and the marketplace. The project manager's role therefore becomes increasingly strategic. However, understanding and applying the knowledge, tools, and techniques that are recognized as good practice are not sufficient for effective project management. In addition to any area-specific skills and general management proficiencies required for the project, effective project management requires that the project manager possess the following competencies:

- **Knowledge**—Refers to what the project manager knows about project management.
- **Performance**—Refers to what the project manager is able to do or accomplish while applying his or her project management knowledge.
- **Personal**—Refers to how the project manager behaves when performing the project or related activity. Personal effectiveness encompasses attitudes, core personality characteristics, and leadership, which provides the ability to guide the project team while achieving project objectives and balancing the project constraints.

QUESTION 333
In the basic communication model, which term refers to the method that is used to convey the message?

A. Decode
B. Encode
C. Medium
D. Noise

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 334
During project selection, which factor is most important?

A. Types of constraints
B. Internal business needs
C. Budget
D. Schedule

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Projects are initiated by an entity external to the project such as a sponsor, program or project management offce (PMO) staff person, or a portfolio governing body chairperson or authorized representative. The project initiator or sponsor should be at the level that is appropriate to procure funding and commit resources to the project. **Projects are initiated due to internal business needs or external influences.** These needs or influences often trigger the creation of a needs analysis, feasibility study, business case, or description of the situation that the project will address. Chartering a project validates alignment of the project to the strategy and ongoing work of the organization. A project charter is not considered to be a contract, because there is no consideration or money promised or exchanged in its creation.

QUESTION 335
The staffing management plan is part of the:

A. organizational process assets.
B. resource calendar.
C. human resource plan.
D. Develop Project Team process.

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 336
Which is an output of the Collect Requirements process?

A. Requirements traceability matrix
B. Project scope statement
C. WBS dictionary
D. Work performance measurements

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
5.2.3.2 Requirements Traceability Matrix
The requirements traceability matrix is a grid that links product requirements from their origin to the deliverables that satisfy them. The implementation of a requirements traceability matrix helps ensure that each requirement adds business value by linking it to the business and project objectives. It provides a means to track requirements throughout the project life cycle, helping to ensure that requirements approved in the requirements documentation are delivered at the end of the project. Finally, it provides a structure for managing changes to the product scope. Tracing includes, but is not limited to, tracing requirements for the following:

- Business needs, opportunities, goals, and objectives;
- Project objectives;
- Project scope/WBS deliverables;
- Product design;

- Product development;
- Test strategy and test scenarios; and
- High-level requirements to more detailed requirements.

Attributes associated with each requirement can be recorded in the requirements traceability matrix. These attributes help to define key information about the requirement. Typical attributes used in the requirements traceability matrix may include: a unique identifier, a textual description of the requirement, the rationale for inclusion, owner, source, priority, version, current status (such as active, cancelled, deferred, added, approved, assigned, completed), and status date. Additional attributes to ensure that the requirement has met stakeholders' satisfaction may include stability, complexity, and acceptance criteria.

Process: 5.2 Collect Requirements

Definition: The process of determining, documenting, and managing stakeholder needs and requirements to meet project objectives.

Key Benefit: The key benefit of this process is that it provides the basis for defining and managing the project scope including product scope.

Inputs

1. Scope management plan
2. Requirements management plan
3. Stakeholder management plan
4. Project charter
5. Stakeholder register

Tools & Techniques

1. Interviews
2. Focus groups
3. Facilitated workshops
4. Group creativity techniques
5. Group decision-making techniques
6. Questionnaires and surveys
7. Observations
8. Prototypes
9. Benchmarking
10. Context diagrams
11. Document analysis

Outputs

1. Requirements documentation
2. **Requirements traceability matrix**

QUESTION 337

Which of the following is an input to Direct and Manage Project Execution?

A. Performance reports

B. Project charter
C. Outputs from planning processes
D. Enterprise environmental factors

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 338
A project lifecycle is defined as:

A. a collection of generally sequential and sometimes overlapping project phases.
B. a process required to ensure that the project includes all the work required, and only the work required, to complete the project successfully.
C. a recognized standard for the project management profession.
D. the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:
Explanation:
2.4 Project Life Cycle
A project life cycle is the series of phases that a project passes through from its initiation to its closure. **The phases are generally sequential,** and their names and numbers are determined by the management and control needs of the organization or organizations involved in the project, the nature of the project itself, and its area of application. The phases can be broken down by functional or partial objectives, intermediate results or deliverables, specific milestones within the overall scope of work, or financial availability. Phases are generally time bounded, with a start and ending or control point. A life cycle can be documented within a methodology. The project life cycle can be determined or shaped by the unique aspects of the organization, industry, or technology employed.
While every project has a definite start and a definite end, the specific deliverables and activities that take place in between will vary widely with the project. The life cycle provides the basic framework for managing the project, regardless of the specific work involved.

QUESTION 339
The process to ensure that appropriate quality standards and operational definitions are used is:

A. Plan Quality.
B. Perform Quality Assurance.
C. Perform Quality Control.
D. Total Quality Management.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 8.2 Perform Quality Assurance
Definition: The process of auditing the quality requirements and the results from quality control measurements to ensure that appropriate quality standards and operational definitions are used.
Key Benefit: The key benefit of this process is that it facilitates the improvement of quality processes.

Inputs
1. Quality management plan
2. Process improvement plan
3. Quality metrics
4. Quality control measurements
5. Project documents

Tools & Techniques
1. Quality management and control tools
2. Quality audits
3. Process analysis

Outputs
1. Change requests
2. Project management plan updates
3. Project documents updates
4. Organizational process assets updates

QUESTION 340
Which Process Group contains the processes performed to complete the work defined in the project management plan to satisfy the project specifications?

A. Initiating

B. Planning
C. Executing
D. Closing

Correct Answer: C
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 341
The completion of the project scope is measured against the:

A. requirements documentation.
B. project scope statement.
C. project management plan.
D. work performance measurements.

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
4.2.3.1 Project Management Plan
The project management plan is the document that describes how the project will be executed, monitored, and controlled. It integrates and consolidates all of the subsidiary plans and baselines from the planning processes.
Project baselines include, but are not limited to:
- Scope baseline (Section 5.4.3.1),
- Schedule baseline (Section 6.6.3.1), and -
Cost baseline (Section 7.3.3.1).

Subsidiary plans include, but are not limited to:
- Scope management plan (Section 5.1.3.1),
- Requirements management plan (Section 5.1.3.2),
- Schedule management plan (Section 6.1.3.1),

・Cost management plan (Section 7.1.3.1),
・Quality management plan (Section 8.1.3.1),
・Process improvement plan (Section 8.1.3.2),
・Human resource management plan (Section 9.1.3.1),
・Communications management plan (Section 10.1.3.1),
・Risk management plan (Section 11.1.3.1),
・Procurement management plan (Section 12.1.3.1), and ・
Stakeholder management plan (Section 13.2.3.1).
Among other things, the project management plan may also include the following: ・Life cycle selected for the project and the processes that will be applied to each phase; ・
Details of the tailoring decisions specified by the project management team as follows:
○ Project management processes selected by the project management team,
○ Level of implementation for each selected process,
○ Descriptions of the tools and techniques to be used for accomplishing those processes, and
○ Description of how the selected processes will be used to manage the specific project, including the dependencies and interactions among those processes and the essential inputs and outputs.
・Description of how work will be executed to accomplish the project objectives;
・Change management plan that documents how changes will be monitored and controlled;
・Configuration management plan that documents how Configuration management will be performed;
・Description of how the integrity of the project baselines will be maintained;
・Requirements and techniques for communication among stakeholders; and
・Key management reviews for content, the extent of, and timing to address, open issues and pending decisions.

The project management plan may be either summary level or detailed, and may be composed of one or more subsidiary plans. Each of the subsidiary plans is detailed to the extent required by the specific project. Once the project management plan is baselined, it may only be changed when a change request is generated and approved through the Perform Integrated Change Control process.

QUESTION 342
The processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project has been undertaken to achieve are grouped within which Process Group?

A. Initiating
B. Planning C. Executing
D. Monitoring and Controlling

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 343
Which input will be used when tasked with developing the human resource plan?

A. Project management plan
B. Activity resource requirements
C. Resource calendar
D. Project staff assignments

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
9.1.1.2 Activity Resource Requirements
Described in Section 6.4.3.1. Human resource planning uses activity resource requirements to determine the human resource needs for the project. The preliminary requirements regarding the required project team members and their competencies are progressively elaborated as part of the Plan Human Resource Management process.

6.4.3.1 Activity Resource Requirements
Activity resource requirements identify the types and quantities of resources required for each activity in a work package. These requirements then can be aggregated to determine the estimated resources for each work package and each work period. The amount of detail and the level of specificity of the resource requirement descriptions can vary by application area. The resource requirements documentation for each activity can include the basis of estimate for each resource, as well as the assumptions that were made in determining which types of resources are applied, their availability, and what quantities are used.

Process: 9.1 Plan Human Resource Management
Definition: The process of identifying and documenting project roles, responsibilities, required skills, reporting relationships, and creating a staffing management plan.
Key Benefit: The key benefit of this process is that it establishes project roles and responsibilities, project organization charts, and the staffing management plan including the timetable for staff acquisition and release.
Inputs
1. Project management plan
2. **Activity resource requirements**
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Organization charts and position descriptions
2. Networking
3. Organizational theory
4. Expert judgment
5. Meetings

Outputs
1. Human resource management plan

QUESTION 344
Which process is responsible for monitoring the status of the project and product scope and managing changes to the scope baseline?

A. Variance Analysis
B. Define Scope
C. Verify Scope
D. Control Scope

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 5.6 Control Scope
Definition: The process of monitoring the status of the project and product scope and managing changes to the scope baseline.
Key Benefit: The key benefit of this process is that it allows the scope baseline to be maintained throughout the project.

Inputs
1. Project management plan
2. Requirements documentation
3. Requirements traceability matrix
4. Work performance data
5. Organizational process assets

Tools & Techniques
1. Variance analysis

Outputs
1. Work performance information
2. Change requests
3. Project management plan updates
4. Project documents updates
5. Organizational process assets updates

QUESTION 345
Plan-do-check-act is also known as:

A. prevention over inspection.
B. statistical sampling.
C. management responsibility,
D. continuous improvement.

Correct Answer: D
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 346
The project management processes are usually presented as discrete processes with defined interfaces, while in practice they:

A. operate separately.
B. move together in batches,
C. overlap and interact.
D. move in a sequence.

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 347
A tool and technique used during the Define Scope process is:

A. facilitated workshops.
B. observations.
C. questionnaires and surveys.
D. group creativity techniques.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Facilitated Workshops. An elicitation technique using focused sessions that bring key cross-functional stakeholders together to define product requirements.

Process: 5.3 Define Scope
Definition: The process of developing a detailed description of the project and product.
Key Benefit: The key benefit of this process is that it describes the product, service, or result boundaries by defining which of the requirements collected will be included in and excluded from the project scope.

Inputs
1. Scope management plan
2. Project charter
3. Requirements documentation
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Product analysis
3. Alternatives generation
4. **Facilitated workshops**

Outputs
1. Project scope statement
2. Project documents updates

QUESTION 348
Which of the following response strategies are appropriate for negative risks or threats?
A. Share, Accept, Transfer, or Mitigate
B. Exploit, Enhance, Share, or Accept
C. Mitigate, Share, Avoid, or Accept
D. Avoid, Mitigate, Transfer, or Accept

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
11.5.2.1 Strategies for Negative Risks or Threats
Three strategies, which typically deal with threats or risks that may have negative impacts on project objectives if they occur, are: *avoid*, *transfer*, and *mitigate*. The fourth strategy, *accept*, can be used for negative risks or threats as well as positive risks or opportunities. Each of these risk response strategies have varied and unique influence on the risk condition. These strategies should be chosen to match the risk's probability and impact on the project's overall objectives. Avoidance and mitigation strategies are usually good strategies for critical risks with high impact, while transference and acceptance are usually good strategies for threats that are less critical and with low overall impact. The four strategies for dealing with negative risks or threats are further described as follows:

- Avoid. Risk avoidance is a risk response strategy whereby the project team acts to eliminate the threat or protect the project from its impact. It usually involves changing the project management plan to eliminate the threat entirely. The project manager may also isolate the project objectives from the risk's impact or change the objective that is in jeopardy. Examples of this include extending the schedule, changing the strategy, or reducing scope. The most radical avoidance strategy is to shut down the project entirely. Some risks that arise early in the project can be avoided by clarifying requirements, obtaining information, improving communication, or acquiring expertise.
- Transfer. Risk transference is a risk response strategy whereby the project team shifts the impact of a threat to a third party, together with ownership of the response. Transferring the risk simply gives another party responsibility for its management—it does not eliminate it. Transferring does not mean disowning the risk by transferring it to a later project or another person without his or her knowledge or agreement. Risk transference nearly always involves payment of a risk premium to the party taking on the risk. Transferring liability for risk is most effective in dealing with financial risk exposure. Transference tools can be quite diverse and include, but are not limited to, the use of insurance, performance bonds, warranties, guarantees, etc. Contracts or agreements may be used to transfer liability for specified risks to another party. For example, when a buyer has capabilities that the seller does not possess, it may be prudent to transfer some work and its concurrent risk contractually back to the buyer. In many cases, use of a cost-plus contract may transfer the cost risk to the buyer, while a fixed-price contract may transfer risk to the seller.
- Mitigate. Risk mitigation is a risk response strategy whereby the project team acts to reduce the probability of occurrence or impact of a risk. It implies a reduction in the probability and/or impact of an adverse risk to be within acceptable threshold limits. Taking early action to reduce the probability and/or impact of a risk occurring on the project is often more effective than trying to repair the damage after the risk has occurred. Adopting less complex processes, conducting more tests, or choosing a more stable supplier are examples of mitigation actions. Mitigation may require prototype development to reduce the risk of scaling up from a

bench-scale model of a process or product. Where it is not possible to reduce probability, a mitigation response might address the risk impact by targeting linkages that determine the severity. For example, designing redundancy into a system may reduce the impact from a failure of the original component.
・Accept. Risk acceptance is a risk response strategy whereby the project team decides to acknowledge the risk and not take any action unless the risk occurs. This strategy is adopted where it is not possible or cost-effective to address a specific risk in any other way. This strategy indicates that the project team has decided not to change the project management plan to deal with a risk, or is unable to identify any other suitable response strategy. This strategy can be either passive or active. Passive acceptance requires no action except to document the strategy, leaving the project team to deal with the risks as they occur, and to periodically review the threat to ensure that it does not change significantly. The most common active acceptance strategy is to establish a contingency reserve, including amounts of time, money, or resources to handle the risks.

QUESTION 349
Which of the following is a tool or technique used in the Acquire Project Team process?

A. Networking
B. Training
C. Negotiation
D. Issue log

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 9.2 Acquire Project Team
Definition: The process of confirming human resource availability and obtaining the team necessary to complete project activities.
Key Benefit: The key benefit of this process consists of outlining and guiding the team selection and responsibility assignment to obtain a successful team.
Inputs
1. Human resource management plan
2. Enterprise environmental factors
3. Organizational process assets

Tools & Techniques
1. Pre-assignment
2. **Negotiation**
3. Acquisition
4. Virtual teams
5. Multi-criteria decision analysis

Outputs
1. Project staff assignments
2. Resource calendars
3. Project management plan updates

QUESTION 350
Which of the following change requests can bring expected future performance of the project work in line with the project management plan?
A. Corrective action
B. Defect repair
C. Preventative action
D. Probable action

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
4.3.3.3 Change Requests
A change request is a formal proposal to modify any document, deliverable, or baseline. An approved change request will replace the associated document, deliverable, or baseline and may result in an update to other parts of the project management plan. When issues are found while project work is being performed, change requests are submitted, which may modify project policies or procedures, project scope, project cost or budget, project schedule, or project quality. Other change requests cover the needed preventive or corrective actions to forestall negative impact later in the project. Requests for a change can be direct or indirect, externally or internally initiated, and can be optional or legally/ contractually mandated, and may include:

- **Corrective action**—An intentional activity that realigns the performance of the project work with the project management plan;
- **Preventive action**—An intentional activity that ensures the future performance of the project work is aligned with the project management plan;
- **Defect repai**r—An intentional activity to modify a nonconforming product or product component;
- **Updates**—Changes to formally controlled project documents, plans, etc., to reflect modified or additional ideas or content.

QUESTION 351
Which of the following are three inputs to the risk register?

A. Risk register updates, stakeholder register, and quality management plan
B. Communication management plan, enterprise environmental factors, and activity duration estimates
C. Risk management plan, activity cost estimates, and project documents

D. Project scope statement, organizational process assets, and scope baseline

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 352
In Plan Risk Management, which of the management plans determines who will be available to share information on various risks and responses at different times and locations?

A. Schedule
B. Quality
C. Communications
D. Cost

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 11.1 Plan Risk Management
Definition: The process of defining how to conduct risk management activities for a project.
Key Benefit: The key benefit of this process is it ensures that the degree, type, and visibility of risk management are commensurate with both the risks and the importance of the project to the organization. *The risk management plan is vital to* **communicate with and obtain agreement and support from all stakeholders** *to ensure the risk management process is supported and performed effectively over the project life cycle.*

Inputs
1. Project management plan
2. Project charter
3. Stakeholder register
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Analytical techniques
2. Expert judgment
3. Meetings

Outputs
Risk management plan

QUESTION 353
Under which type of contract does the seller receive reimbursement for all allowable costs for performing contract work, as well as a fixed-fee payment calculated as a percentage of the initial estimated project costs?

A. Cost Plus Fixed Fee Contract (CPFF)
B. Cost Plus Incentive Fee Contract (CPIF)
C. Firm Fixed Price Contract (FFP)
D. Fixed Price with Economic Price Adjustment Contract (FP-EPA)

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 354
Inputs to the Plan Risk Management process include the:

A. cost management plan.
B. risk management plan,
C. activity list,
D. risk register.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 355
Which of the following is an output of Define Scope?

A. Project scope statement
B. Project charter
C. Project plan
D. Project schedule

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

Explanation:
Process: 5.3 Define Scope
Definition: The process of developing a detailed description of the project and product.
Key Benefit: The key benefit of this process is that it describes the product, service, or result boundaries by defining which of the requirements collected will be included in and excluded from the project scope.

Inputs
1. Scope management plan
2. Project charter
3. Requirements documentation
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Product analysis
3. Alternatives generation
4. Facilitated workshops

Outputs
1. **Project scope statement**
2. Project documents updates

QUESTION 356
After Define Activities and Sequence Activities, the next process is:

A. Estimate Activity Resources.
B. Estimate Activity Durations.
C. Develop Schedule.
D. Control Schedule.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
6. Project Time Management

- 6.1 Plan Schedule Management
- 6.2 Define Activities
- 6.3 Sequence Activities
- **6.4 Estimate Activity Resources**
- 6.5 Estimate Activity Durations
- 6.6 Develop Schedule
- 6.7 Control Schedule

QUESTION 357
The technique of subdividing project deliverables into smaller, more manageable components until the work and deliverables are defined to the work package level is called:

A. a control chart.
B. baseline.
C. Create WBS.
D. decomposition.

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
5.4.2.1 Decomposition
Decomposition is a technique used for dividing and subdividing the project scope and project deliverables into smaller, more manageable parts. The work package is the work defined at the lowest level of the WBS for which cost and duration can be estimated and managed. The level of decomposition is often guided by the degree of control needed to effectively manage the project. The level of detail for work packages will vary with the size and complexity of the project.
Decomposition of the total project work into work packages generally involves the following activities:
- Identifying and analyzing the deliverables and related work;
- Structuring and organizing the WBS;
- Decomposing the upper WBS levels into lower-level detailed components;
- Developing and assigning identification codes to the WBS components; and -
Verifying that the degree of decomposition of the deliverables is appropriate.

QUESTION 358
The application of knowledge, skills, tools, and techniques to project activities to meet project requirements describes management of which of the following?

A. Project
B. Scope
C. Contract
D. Program

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
1.3 What is Project Management?
Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. Project management is accomplished through the appropriate application and integration of the 47 logically grouped project management processes, which are categorized into fve Process Groups. These five Process Groups are:
- Initiating,
- Planning,
- Executing,
- Monitoring and Controlling, and
- Closing.

QUESTION 359
While preparing the project management plan on a weekly basis, the project manager indicates the intention to provide an issues report to the staff via e-mail. In which part of the plan will this type of information be included?

A. Communications management plan
B. Human resource plan
C. Quality management plan
D. Procurement management plan

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:
Explanation:
- **10.1.3.1 Communications Management Plan**

The communications management plan is a component of the project management plan that describes how project communications will be planned, structured, monitored, and controlled. The plan contains the following information:
・Stakeholder communication requirements;
・Information to be communicated, including language, format, content, and level of detail;
・Reason for the distribution of that information;
・Time frame and frequency for the distribution of required information and receipt of acknowledgment or response, if applicable; ・
Person responsible for communicating the information;
・Person responsible for authorizing release of confidentialrefining information;
・Person or groups who will receive the information;
Methods or technologies used to convey the information, such as memos, e-mail, and/or press releases;
・Resources allocated for communication activities, including time and budget;
・Escalation process identifying time frames and the management chain (names) for escalation of issues that cannot be resolved at a lower staff level; ・Method for updating and refining the communications management plan as the project progresses and develops; ・Glossary of common terminology;
・Flow charts of the information flow in the project, workflows with possible sequence of authorization, list of reports, and meeting plans, etc.; and ・
Communication constraints usually derived from a specific legislation or regulation, technology, and organizational policies, etc.

The communications management plan can also include guidelines and templates for project status meetings, project team meetings, e-meetings, and e-mail messages. The use of a project website and project management software can also be included if these are to be used in the project.

QUESTION 360
Which statement correctly describes the value of a business case?

A. It provides the necessary information to determine if a project is worth the required investment.
B. It provides for alternative dispute resolution procedures in event of contract default.
C. It offers one of several alternative scenarios which assist in performing qualitative risk analysis.
D. It is used to help a project manager understand the scope of commercial advantages.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
4.1.1.2 Business Case
The business case or similar document describes the necessary information from a business standpoint **to determine whether or not the project is worth the required investment.** It is commonly used for decision making by managers or executives above the project level. Typically, the business need and the costbenefit analysis are contained in the business case to justify and establish boundaries for the project, and such analysis is usually completed by a business

analyst using various stakeholder inputs. The sponsor should agree to the scope and limitations of the business case. The business case is created as a result of one or more of the following:

- Market demand (e.g., a car company authorizing a project to build more fuel-efficient cars in response to gasoline shortages),
- Organizational need (e.g., due to high overhead costs a company may combine staff functions and streamline processes to reduce costs.),
- Customer request (e.g., an electric utility authorizing a project to build a new substation to serve a new industrial park),
- Technological advance (e.g., an airline authorizing a new project to develop electronic tickets instead of paper tickets based on technological advances),
- Legal requirement (e.g., a paint manufacturer authorizing a project to establish guidelines for handling toxic materials),
- Ecological impacts (e.g., a company authorizing a project to lessen its environmental impact), or
- Social need (e.g., a nongovernmental organization in a developing country authorizing a project to provide potable water systems, latrines, and sanitation education to communities suffering from high rates of cholera).

Each of the examples in this list may contain elements of risk that should be addressed. In the case of multiphase projects, the business case may be periodically reviewed to ensure that the project is on track to deliver the business benefits. In the early stages of the project life cycle, periodic review of the business case by the sponsoring organization also helps to confirm that the project is still aligned with the business case. The project manager is responsible for ensuring that the project effectively and efficiently meets the goals of the organization and those requirements of a broad set of stakeholders, as defined in the business case.

QUESTION 361
Which type of dependency is contractually required or inherent in the nature of the work?

A. External
B. Lead
C. Discretionary
D. Mandatory

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
6.3.2.2 Dependency Determination
Dependencies may be characterized by the following attributes: mandatory or discretionary, internal or external, as described below. Dependency has four attributes, but two can be applicable at the same time in following ways: mandatory external dependencies, mandatory internal dependencies, discretionary external dependencies, or discretionary internal dependencies.

- **Mandatory dependencies.** Mandatory dependencies are those that are legally or contractually required or inherent in the nature of the work. Mandatory dependencies often involve physical limitations, such as on a construction project, where it is impossible to erect the superstructure until after the foundation has been built, or on an electronics project, where a prototype has to be built before it can be tested.

Mandatory dependencies are also sometimes referred to as hard logic or hard dependencies. Technical dependencies may not be mandatory. The project team determines which dependencies are mandatory during the process of sequencing the activities. Mandatory dependencies should not be confused with assigning schedule constraints in the scheduling tool.

· **Discretionary dependencies.** Discretionary dependencies are sometimes referred to as preferred logic, preferential logic, or soft logic. Discretionary dependencies are established based on knowledge of best practices within a particular application area or some unusual aspect of the project where a specific sequence is desired, even though there may be other acceptable sequences. Discretionary dependencies should be fully documented since they can create arbitrary total float values and can limit later scheduling options. When fast tracking techniques are employed, these discretionary dependencies should be reviewed and considered for modification or removal. The project team determines which dependencies are discretionary during the process of sequencing the activities.
· **External dependencies.** External dependencies involve a relationship between project activities and non-project activities. These dependencies are usually outside the project team's control. For example, the testing activity in a software project may be dependent on the delivery of hardware from an external source, or governmental environmental hearings may need to be held before site preparation can begin on a construction project. The project management team determines which dependencies are external during the process of sequencing the activities.
Internal dependencies. Internal dependencies involve a precedence relationship between project activities and are generally inside the project team's control. For example, if the team cannot test a machine until they assemble it, this is an internal mandatory dependency. The project management team determines which dependencies are internal during the process of sequencing the activities.

QUESTION 362
The contract in which the seller is reimbursed for all allowable costs for performing the contract work and then receives a fee based upon achieving certain performance objectives is called a:

A. Cost Plus Incentive Fee Contract (CPIF).
B. Cost Plus Fixed Fee Contract (CPFF).
C. Fixed Price Incentive Fee Contract (FPIF).
D. Time and Material Contract (T&M).

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 363
The process improvement plan details the steps for analyzing processes to identify activities which enhance their:

A. quality.
B. value.
C. technical performance.
D. status.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
8.1.3.2 Process Improvement Plan
The process improvement plan is a subsidiary or component of the project management plan (Section 4.2.3.1).
The process improvement plan details the steps for analyzing project management and product development processes to identify activities that enhance their value.
Areas to consider include:
- **Process boundaries.** Describe the purpose of the process, the start and end of the process, its inputs and outputs, the process owner, and the stakeholders of the process.

· **Process configuration.** Provides a graphic depiction of processes, with interfaces identified, used to facilitate analysis. · **Process metrics.** Along with control limits, allows analysis of process efficiency. · **Targets for improved performance.** Guide the process improvement activities.

QUESTION 364
The group technique that enhances brainstorming with a voting process used to rank the most useful ideas for prioritization is called the:

A. majority rule technique.
B. nominal group technique.
C. Delphi technique,
D. idea/mind mapping technique.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
5.2.2.4 Group Creativity Techniques
Several group activities can be organized to identify project and product requirements. Some of the group creativity techniques that can be used are:
· Brainstorming. A technique used to generate and collect multiple ideas related to project and product requirements. Although brainstorming by itself does not include voting or prioritization, it is often used with other group creativity techniques that do.
· Nominal group technique. A technique that enhances brainstorming with a voting process used to rank the most useful ideas for further brainstorming or for prioritization.
· Idea/mind mapping. A technique in which ideas created through individual brainstorming sessions are consolidated into a single map to reflect commonality and differences in understanding, and generate new ideas.
· Affinity diagram. A technique that allows large numbers of ideas to be classifed into groups for review and analysis.
· Multicriteria decision analysis. A technique that utilizes a decision matrix to provide a systematic analytical approach for establishing criteria, such as risk levels, uncertainty, and valuation, to evaluate and rank many ideas.

QUESTION 365
Which of the following can be used as an input for Define Scope?

A. Product analysis
B. Project charter
C. Scope baseline
D. Project scope statement

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Explanation:
4.1.3.1 Project Charter
The project charter is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. It documents the business needs, assumptions, constraints, the understanding of the customer's needs and high-level requirements, and the new product, service, or result that it is intended to satisfy, such as:
- Project purpose or justification,
- Measurable project objectives and related success criteria,
- High-level requirements,
- Assumptions and constraints,
- High-level project description and boundaries,
- High-level risks,
- Summary milestone schedule,
- Summary budget,
- Stakeholder list,
- Project approval requirements (i.e., what constitutes project success, who decides the project is successful, and who signs off on the project),
- Assigned project manager, responsibility, and authority level, and
- Name and authority of the sponsor or other person(s) authorizing the project charter.

Process: 5.3 Define Scope
Definition: The process of developing a detailed description of the project and product.
Key Benefit: The key benefit of this process is that it describes the product, service, or result boundaries by defining which of the requirements collected will be included in and excluded from the project scope.

Inputs
1. Scope management plan
2. **Project charter**
3. Requirements documentation
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Product analysis
3. Alternatives generation

4. Facilitated workshops

Outputs
1. Project scope statement
2. Project documents updates

QUESTION 366
Which of the following is an output of Close Procurements?

A. Accepted deliverables
B. Organizational process assets updates
C. Managing stakeholder expectations
D. Performance reports

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
12.4.3.2 Organizational Process Assets Updates
Elements of the organizational process assets that may be updated include, but are not limited to:
- **Procurement file.** A complete set of indexed contract documentation, including the closed contract, is prepared for inclusion with the final project fles.
- **Deliverable acceptance.** Documentation of formal acceptance of seller-provided deliverables may be required to be retained by the organization. The Close Procurement process ensures this documentation requirement is satisfed. Requirements for formal deliverable acceptance and how to address nonconforming deliverables are usually defined in the agreement.
- **Lessons learned documentation.** Lessons learned, what has been experienced, and process improvement recommendations, should be developed for the project fle to improve future procurements.

Process: 12.4 Close Procurements
Definition: The process of completing each project procurement.
Key Benefit: The key benefit of this process is that it documents agreements and related documentation for future reference.

Inputs
- Project management plan
- Procurement documents

Tools & Techniques ▪
Procurement audits
▪ Procurement negotiations
▪ Records management system

Outputs
▪ Closed procurements
▪ **Organizational process assets updates**

QUESTION 367
A Pareto chart is a specific type of:

A. control chart
B. histogram
C. cause-and-effect diagram
D. scatter diagram

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Pareto diagrams, exist as a special form of vertical bar chart and are used to identify the vital few sources that are responsible for causing most of a problem's effects. The categories shown on the horizontal axis exist as a valid probability distribution that accounts for 100% of the possible observations. The relative frequencies of each specified cause listed on the horizontal axis decrease in magnitude until the default source named "*other*" accounts for any non specified causes. Typically, the Pareto diagram will be organized into categories that measure either frequencies or consequences.

Histograms, are a special form of bar chart and are used to describe the central tendency, dispersion, and shape of a statistical distribution. Unlike the control chart, the histogram does not consider the influence of time on the variation that exists within a distribution.

QUESTION 368
A project manager needs to deliver the project 2 weeks before the planned date without changing the scope. Which of the following techniques may be applied to reevaluate the schedule?

A. What-if scenario analysis
B. Critical chain method
C. Schedule crashing

D. Resource leveling

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
6.6.2.7 Schedule Compression
Schedule compression techniques are used to shorten the schedule duration without reducing the project scope, in order to meet schedule constraints, imposed dates, or other schedule objectives. Schedule compression techniques include, but are not limited to:
・Crashing. A technique used to shorten the schedule duration for the least incremental cost by adding resources. Examples of crashing include approving overtime, bringing in additional resources, or paying to expedite delivery to activities on the critical path. Crashing works only for activities on the critical path where additional resources will shorten the activity's duration. Crashing does not always produce a viable alternative and may result in increased risk and/or cost.
・Fast tracking. A schedule compression technique in which activities or phases normally done in sequence are performed in parallel for at least a portion of their duration. An example is constructing the foundation for a building before completing all of the architectural drawings. Fast tracking may result in rework and increased risk. Fast tracking only works if activities can be overlapped to shorten the project duration.

QUESTION 369
An imposed date for completion of the project by the customer is an example of a project:

A. deliverable
B. assumption
C. constraint
D. exclusion

Correct Answer: C
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 370
Budgets reserved for unplanned changes to project scope and cost are:

A. Contingency reserves.
B. Management reserves.

C. Authorized budgets.
D. Cost baselines.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
6.5.2.6 Reserve Analysis
Definition: estimates may include contingency reserves, sometimes referred to as time reserves or buffers, into the project schedule to account for schedule uncertainty. Contingency reserves are the estimated duration within the schedule baseline, which is allocated for identified risks that are accepted and for which contingent or mitigation responses are developed. Contingency reserves are associated with the “known-unknowns,” which may be estimated to account for this unknown amount of rework.
As more precise information about the project becomes available, the contingency reserve may be used, reduced, or eliminated. Contingency should be clearly identified in schedule documentation.
[..]
Estimates may also be produced for the amount of management reserve of time for the project. **Management reserves are a specified amount of the project duration withheld for management control purposes and are reserved for unforeseen work that is within scope of the project. Management reserves are intended to address the “unknown-unknowns” that can affect a project.** Management reserve is not included in the schedule baseline, but it is part of the overall project duration requirements. Depending on contract terms, use of management reserves may require a change to the schedule baseline.

QUESTION 371
Cost variance (CV) is equal to earned value:

A. Minus actual cost [EV - AC].
B. Minus planned value [EV - PV].C. Divided by actual cost [EV/AC].
D. Divided by planned value [EV/PV].

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
CV = EV - AC
CPI = EV / AC

SV = EV - PV
SPI = EV / PV

QUESTION 372
Decomposition, rolling wave planning, and templates are all tools and techniques for which of the following?

A. Define Activities
B. Estimate Activity Durations
C. Develop Schedule
D. Sequence Activities

Correct Answer: A
Section: Volume E
Explanation
Explanation/Reference:
Explanation:

5.4.2.1 Decomposition
Decomposition is a technique used for dividing and subdividing the project scope and project deliverables into smaller, more manageable parts. The work package is the work defined at the lowest level of the WBS for which cost and duration can be estimated and managed. The level of decomposition is often guided by the degree of control needed to effectively manage the project. The level of detail for work packages will vary with the size and complexity of the project.
Decomposition of the total project work into work packages generally involves the following activities:
・Identifying and analyzing the deliverables and related work;
・Structuring and organizing the WBS;
・Decomposing the upper WBS levels into lower-level detailed components;
・Developing and assigning identification codes to the WBS components; and ・
Verifying that the degree of decomposition of the deliverables is appropriate.

6.2.2.2 Rolling Wave Planning
Rolling wave planning is an iterative planning technique in which the work to be accomplished in the near term is planned in detail, while the work in the future is planned at a higher level. It is a form of progressive elaboration.
Therefore, work can exist at various levels of detail depending on where it is in the project life cycle. During early strategic planning, when information is less defined, work packages may be decomposed to the known level of detail. As more is known about the upcoming events in the near term, work packages can be decomposed into activities.

Process: 6.2 Define Activities
Definition: The process of identifying and documenting the specific actions to be performed to produce the project deliverables.

Key Benefit: The key benefit of this process is to break down work packages into activities that provide a basis for estimating, scheduling, executing, monitoring, and controlling the project work.

Inputs
1. Schedule management plan
2. Scope baseline
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. **Decomposition**
2. **Rolling wave planning**
3. Expert judgment

Outputs
1. Activity list
2. Activity attributes
3. Milestone list

QUESTION 373
In the Initiating Process Group, at what point does the project become officially authorized?

A. When the project charter is signed
B. When all the stakeholders agree on the scope of the project
C. When the project manager is appointed
D. When the necessary finance or funding is obtained

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
3.3 Initiating Process Group
The Initiating Process Group consists of those processes performed to define a new project or a new phase of an existing project by obtaining authorization to start the project or phase. Within the Initiating processes, the initial scope is defined and initial financial resources are committed. Internal and external stakeholders

who will interact and influence the overall outcome of the project are identified. If not already assigned, the project manager will be selected. This information is captured in the project charter and stakeholder register.
When the project charter is approved, the project becomes officially authorized.

Process: 4.1. Develop Project Charter
Definition: The process of developing a document that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities.
Key Benefit: The key benefit of this process is a well-defined project start and project boundaries, creation of a formal record of the project, and a direct way for senior management to formally accept and commit to the project.

Inputs
1. Project statement of work
2. Business case
3. Agreements
4. Enterprise environmental factors
5. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Facilitation techniques

Outputs
1. Project charter

QUESTION 374
In which of the following types of organizations is resource availability moderate to high?

A. Weak matrix
B. Balanced matrix
C. Strong matrix
D. Projectized

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 375
In which process group is the scope first defined?

A. Initiating
B. Planning
C. Executing
D. Controlling

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 376
On what is project baseline development established?

A. Approved product requirements
B. Estimated project cost and schedule
C. Actual project cost and schedule
D. Revised project cost and schedule

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Explanation:

6.6.3.1 Schedule Baseline
A schedule baseline is the approved version of a schedule model that can be changed only through formal change control procedures and is used as a basis for comparison to actual results. It is accepted and approved by the appropriate stakeholders as the schedule baseline with baseline start dates and baseline finish dates. During monitoring and controlling, the approved baseline dates are compared to the actual start and finish dates to determine whether variances have occurred. The schedule baseline is a component of the project management plan.

7.3.3.1 Cost Baseline

The cost baseline is the approved version of the time-phased project budget, excluding any management reserves, which can only be changed through formal change control procedures and is used as a basis for comparison to actual results. It is developed as a summation of the approved budgets for the different schedule activities.

4.2.3.1 Project Management Plan
The project management plan is the document that describes how the project will be executed, monitored, and controlled. It integrates and consolidates all of the subsidiary plans and baselines from the planning processes.
Project baselines include, but are not limited to: ·
Scope baseline (Section 5.4.3.1),
· **Schedule baseline (Section 6.6.3.1)**, and ·
Cost baseline (Section 7.3.3.1).

QUESTION 377
One of the fundamental tenets of modern quality management states that quality is:

A. planned, designed, and built in.
B. planned, designed, and inspected in.
C. built in, created, and reviewed.
D. built in, created, and standardized.

Correct Answer: A
Section: Volume E
Explanation
Explanation/Reference:

QUESTION 378
Outputs from constituent processes might be used as:

A. Inputs to other processes.
B. Proof of process completion.
C. Identification of project tasks.
D. Indicators to eliminate project redundancies.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 379
Overlooking negative stakeholders can result in a/an:

A. decreased likelihood of conflicting interests between stakeholders.
B. decreased likelihood of the projects progress being impeded
C. increased likelihood of project failure.
D. increased likelihood of project success.

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 380
Project Management Process Groups are linked by:

A. the outputs they produce
B. discrete or one-time events
C. the project management plan D. common tools and techniques

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 381
Project management processes are:

A. Static; they must not change across different projects.
B. Applied globally and across all industry groups.
C. Discrete elements with well-defined interfaces.
D. Project phases, applied as required in different projects.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 382
Projects are authorized by which of the following individuals?

A. Project managers
B. Stakeholders
C. Functional managers
D. Sponsors

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
QUESTION 383
Quality and credibility of the qualitative risk analysis process requires that different levels of the risk's probabilities and impacts be defined is the definition of what?

A. Risk breakdown structure (RBS)
B. Risk probability and impact
C. Qualitative risk analysisD. Risk response planning

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 384
Schedule milestones and a predefined budget are examples of:

A. Project constraints.
B. Requirements documentation.
C. Organizational process assets.
D. Activity cost estimates.

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 385
Soft logic is also known as what type of dependency?

A. External
B. Discretionary
C. Mandatory
D. Internal
Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
6.3.2.2 Dependency Determination
Dependencies may be characterized by the following attributes: mandatory or discretionary, internal or external, as described below. Dependency has four attributes, but two can be applicable at the same time in following ways: mandatory external dependencies, mandatory internal dependencies, discretionary external dependencies, or discretionary internal dependencies.

- Mandatory dependencies. Mandatory dependencies are those that are legally or contractually required or inherent in the nature of the work. Mandatory dependencies often involve physical limitations, such as on a construction project, where it is impossible to erect the superstructure until after the foundation has been built, or on an electronics project, where a prototype has to be built before it can be tested. Mandatory dependencies are also sometimes referred to as hard logic or hard dependencies. Technical dependencies may not be mandatory. The project team determines which dependencies are mandatory during the process of sequencing the activities. Mandatory dependencies should not be confused with assigning schedule constraints in the scheduling tool.
- Discretionary dependencies. Discretionary dependencies are sometimes referred to as preferred logic, preferential logic, or soft logic. Discretionary dependencies are established based on knowledge of best practices within a particular application area or some unusual aspect of the project where a specific sequence is desired, even though there may be other acceptable sequences. Discretionary dependencies should be fully documented since they can create arbitrary total float values and can limit later scheduling options. When fast tracking techniques are employed, these discretionary dependencies should be reviewed and considered for Explanation:

4.1.2.1 Expert Judgment

Expert judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including:

- Other units within the organization,
- Consultants,
- Stakeholders, including customers or sponsors,
- Professional and technical associations,
- Industry groups,
- Subject matter experts (SME), and
- Project management office (PMO).

Process: 4.2. Develop Project Management Plan

Definition: The process of defining, preparing, and coordinating all subsidiary plans and integrating them into a comprehensive project management plan. The project's integrated baselines and subsidiary plans may be included within the project management plan. **Key Benefit:** The key benefit of this process is a central document that defines the basis of all project work.

Inputs

1. Project charter
2. Outputs from other processes
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques

5. **Expert judgment**
6. Facilitation techniques

Outputs

7. Project management plan

4.2.3.1 Project Management Plan

The project management plan is the document that describes how the project will be executed, monitored, and controlled. It integrates and consolidates all of the subsidiary plans and baselines from the planning processes.

Project baselines include, but are not limited to:

- Scope baseline (Section 5.4.3.1),
- Schedule baseline (Section 6.6.3.1), and
- Cost baseline (Section 7.3.3.1).

Subsidiary plans include, but are not limited to:

- Scope management plan (Section 5.1.3.1),
- Requirements management plan (Section 5.1.3.2),
- Schedule management plan (Section 6.1.3.1),
- Cost management plan (Section 7.1.3.1),
- Quality management plan (Section 8.1.3.1),
- Process improvement plan (Section 8.1.3.2),
- Human resource management plan (Section 9.1.3.1),
- Communications management plan (Section 10.1.3.1),
- Risk management plan (Section 11.1.3.1),
- Procurement management plan (Section 12.1.3.1), and
- Stakeholder management plan (Section 13.2.3.1).

Among other things, the project management plan may also include the following:

- Life cycle selected for the project and the processes that will be applied to each phase;
- Details of the tailoring decisions specified by the project management team as follows:
  - ○ Project management processes selected by the project management team,
  - ○ Level of implementation for each selected process,
  - ○ Descriptions of the tools and techniques to be used for accomplishing those processes, and
  - ○ Description of how the selected processes will be used to manage the specific project, including the dependencies and interactions among those processes and the essential inputs and outputs.
- Description of how work will be executed to accomplish the project objectives;
- Change management plan that documents how changes will be monitored and controlled;
- Configuration management plan that documents how Configuration management will be performed;
- Description of how the integrity of the project baselines will be maintained;
- Requirements and techniques for communication among stakeholders; and
- Key management reviews for content, the extent of, and timing to address, open issues and pending decisions.

The project management plan may be either summary level or detailed, and may be composed of one or more subsidiary plans. Each of the subsidiary plans is detailed to the extent required by the specific project. Once the project management plan is baselined, it may only be changed when a change request is generated and approved through the Perform Integrated Change Control process. modification or removal. The project team determines which dependencies are discretionary during the process of sequencing the activities.

- External dependencies. External dependencies involve a relationship between project activities and non-project activities. These dependencies are usually outside the project team's control. For example, the testing activity in a software project may be dependent on the delivery of hardware from an external source, or governmental environmental hearings may need to be held before site preparation can begin on a construction project. The project management team determines which dependencies are external during the process of sequencing the activities.
- Internal dependencies. Internal dependencies involve a precedence relationship between project activities and are generally inside the project team's control. For example, if the team cannot test a machine until they assemble it, this is an internal mandatory dependency. The project management team determines which dependencies are internal during the process of sequencing the activities.

QUESTION 386
The cost of nonconformance in a project includes:

A. testing
B. rework
C. inspections
D. training

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 387
The cost performance baseline is typically displayed in the form of:

A. An S-curve.
B. A normal curve.
C. A U-curve.
D. A positive slope line.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 388
The Process Group that involves coordinating people and resources, as well as integrating and performing the activities of the project in accordance with the project management plan is known as:

A. Initiating.
B. Planning.
C. Executing.
D. Monitoring and Controlling.

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 389
The process of developing a detailed description of the project and product is known as:

A. Create WBS.
B. Verify Scope.
C. Collect Requirements.
D. Define Scope.

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 5.3 Define Scope
Definition: The process of developing a detailed description of the project and product.
Key Benefit: The key benefit of this process is that it describes the product, service, or result boundaries by defining which of the requirements collected will be included in and excluded from the project scope.

Inputs

1. Scope management plan
2. Project charter
3. Requirements documentation
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Product analysis
3. Alternatives generation
4. Facilitated workshops

Outputs
1. Project scope statement
2. Project documents updates

QUESTION 390
The project charter is an input to which process?

A. Develop Project Charter
B. Develop Project Management Plan
C. Monitor and Control Project Work
D. Perform Integrated Change Control

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:

4.2.1.1 Project Charter
Described in Section 4.1.3.1. The size of the project charter varies depending on the complexity of the project and the information known at the time of its creation. At a minimum, the project charter should define the high-level boundaries of the project. The project team uses the project charter as the starting point for initial planning throughout the Initiating Process Group.

4.1.3.1 Project Charter
The project charter is the document issued by the project initiator or sponsor that formally authorizes the existence of a project and provides the project manager with the authority to apply organizational resources to project activities. It documents the business needs, assumptions, constraints, the understanding of the customer's needs and high-level requirements, and the new product, service, or result that it is intended to satisfy, such as:
- Project purpose or justification,
- Measurable project objectives and related success criteria,
- High-level requirements,
- Assumptions and constraints,
- High-level project description and boundaries,
- High-level risks,
- Summary milestone schedule,
- Summary budget,
- Stakeholder list,
- Project approval requirements (i.e., what constitutes project success, who decides the project is successful, and who signs off on the project),
- Assigned project manager, responsibility, and authority level, and
- Name and authority of the sponsor or other person(s) authorizing the project charter.

Process: 4.2. Develop Project Management Plan
Definition: The process of defining, preparing, and coordinating all subsidiary plans and integrating them into a comprehensive project management plan. The project's integrated baselines and subsidiary plans may be included within the project management plan. **Key Benefit:** The key benefit of this process is a central document that defines the basis of all project work.

Inputs
1. **Project charter**
2. Outputs from other processes
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Facilitation techniques

Outputs

1. Project management plan

4.2.3.1 Project Management Plan

The project management plan is the document that describes how the project will be executed, monitored, and controlled. It integrates and consolidates all of the subsidiary plans and baselines from the planning processes.

Project baselines include, but are not limited to:

- Scope baseline (Section 5.4.3.1),
- Schedule baseline (Section 6.6.3.1), and
- Cost baseline (Section 7.3.3.1).

Subsidiary plans include, but are not limited to:

- Scope management plan (Section 5.1.3.1),
- Requirements management plan (Section 5.1.3.2),
- Schedule management plan (Section 6.1.3.1),
- Cost management plan (Section 7.1.3.1),
- Quality management plan (Section 8.1.3.1),
- Process improvement plan (Section 8.1.3.2),
- Human resource management plan (Section 9.1.3.1),
- Communications management plan (Section 10.1.3.1),
- Risk management plan (Section 11.1.3.1),
- Procurement management plan (Section 12.1.3.1), and
- Stakeholder management plan (Section 13.2.3.1).

Among other things, the project management plan may also include the following:

- Life cycle selected for the project and the processes that will be applied to each phase;
- Details of the tailoring decisions specified by the project management team as follows:
  - ○ Project management processes selected by the project management team,
  - ○ Level of implementation for each selected process,
  - ○ Descriptions of the tools and techniques to be used for accomplishing those processes, and
  - ○ Description of how the selected processes will be used to manage the specific project, including the dependencies and interactions among those processes and the essential inputs and outputs.
- Description of how work will be executed to accomplish the project objectives;
- Change management plan that documents how changes will be monitored and controlled;
- Configuration management plan that documents how Configuration management will be performed;
- Description of how the integrity of the project baselines will be maintained;
- Requirements and techniques for communication among stakeholders; and
- Key management reviews for content, the extent of, and timing to address, open issues and pending decisions.

The project management plan may be either summary level or detailed, and may be composed of one or more subsidiary plans. Each of the subsidiary plans is detailed to the extent required by the specific project. Once the project management plan is baselined, it may only be changed when a change request is generated and approved through the Perform Integrated Change Control process.

QUESTION 391
The project governance approach should be described in the:

A. change control plan
B. project scope
C. statement of work
D. project management plan

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
4.2.3.1 Project Management Plan
The project management plan is the document that describes how the project will be executed, monitored, and controlled. It integrates and consolidates all of the subsidiary plans and baselines from the planning processes.
Project baselines include, but are not limited to:
・Scope baseline (Section 5.4.3.1),
・Schedule baseline (Section 6.6.3.1), and ・
Cost baseline (Section 7.3.3.1).

Subsidiary plans include, but are not limited to:
・Scope management plan (Section 5.1.3.1),
・Requirements management plan (Section 5.1.3.2),
・Schedule management plan (Section 6.1.3.1), ・
Cost management plan (Section 7.1.3.1),
・Quality management plan (Section 8.1.3.1),
・Process improvement plan (Section 8.1.3.2),
・Human resource management plan (Section 9.1.3.1),
・Communications management plan (Section 10.1.3.1),
・Risk management plan (Section 11.1.3.1),
・Procurement management plan (Section 12.1.3.1), and ・
Stakeholder management plan (Section 13.2.3.1).

Among other things, the project management plan may also include the following: ・Life cycle selected for the project and the processes that will be applied to each phase; ・Details of the tailoring decisions specified by the project management team as follows:
○ Project management processes selected by the project management team,
○ Level of implementation for each selected process,
○ Descriptions of the tools and techniques to be used for accomplishing those processes, and
○ Description of how the selected processes will be used to manage the specific project, including the dependencies and interactions among those processes and the essential inputs and outputs.
・Description of how work will be executed to accomplish the project objectives;
・Change management plan that documents how changes will be monitored and controlled;
・Configuration management plan that documents how Configuration management will be performed;
・Description of how the integrity of the project baselines will be maintained;
・Requirements and techniques for communication among stakeholders; and
・Key management reviews for content, the extent of, and timing to address, open issues and pending decisions.

The project management plan may be either summary level or detailed, and may be composed of one or more subsidiary plans. Each of the subsidiary plans is detailed to the extent required by the specific project. Once the project management plan is baselined, it may only be changed when a change request is generated and approved through the Perform Integrated Change Control process.

QUESTION 392
Using the following data, what is the Schedule Performance Index (SPI)?
EV= $500 PV= $750 AC= $1000 BAC= $1200

A. 0.67
B. 1.5
C. 0.75
D. 0.5

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
SPI = EV / PV

QUESTION 393
Verification of project deliverables occurs during which process?

A. Develop preliminary project scope statement
B. Close Project or Phase
C. Develop project charter
D. Create WBS

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 4.6. Close Project or Phase
Definition: The process of finalizing all activities across all of the Project Management Process Groups to formally complete the phase or project.
Key Benefit: The key benefit of this process is that it provides lessons learned, the formal ending of project work, and the release of organization resources to pursue new endeavors.

Inputs
1. Project management plan
2. Accepted deliverables
3. Organizational process assets

Tools & Techniques
1. Expert judgment
2. Analytical techniques
3. Meetings

Outputs
1. Final product, service, or result transition
2. Organizational process assets updates

QUESTION 394
What are the key components of the communication model?

A. Encode, message and feedback-message, medium, noise, and decode
B. Encode, messaging technology, medium, noise, and decode
C. Sender, message and feedback-message, medium, noise, and translate
D. Receiver, message and feedback-message, medium, noise, and decode

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 395
What is Project Portfolio Management?

A. Management of a project by dividing the project into more manageable sub- projects.
B. Management of a project by utilizing a portfolio of general management skills, such as planning, organizing, staffing, executing and controlling.
C. Management of all projects undertaken by a company.
D. Management of a collection of projects that are grouped together to facilitate effective management and meet strategic business objectives.

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
1.4.2 Portfolio Management
A portfolio refers to projects, programs, subportfolios, and operations managed as a group to achieve strategic objectives. The projects or programs of the portfolio may not necessarily be interdependent or directly related. For example, an infrastructure firm that has the strategic objective of “maximizing the return on its investments” may put together a portfolio that includes a mix of projects in oil and gas, power, water, roads, rail, and airports. From this mix, the firm may choose to manage related projects as one program. All of the power projects may be grouped together as a power program. Similarly, all of the water projects may be grouped together as a water program.
Thus, the power program and the water program become integral components of the enterprise portfolio of the infrastructure firm.

QUESTION 396
What is the critical chain method?

A. A technique to calculate the theoretical early start and finish dates and late start and finish dates
B. A schedule network analysis technique that modifies the project schedule to account for limited resources
C. A schedule compression technique that analyzes cost and schedule trade-offs to determine how to obtain the greatest amount of compression for the least incremental cost

D. A technique to estimate project duration when there is a limited amount of detailed information about the project

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
6.6.2.3 Critical Chain Method
The critical chain method (CCM) is a schedule method that allows the project team to place buffers on any project schedule path to account for limited resources and project uncertainties. It is developed from the critical path method approach and considers the effects of resource allocation, resource optimization, resource leveling, and activity duration uncertainty on the critical path determined using the critical path method. To do so, the critical chain method introduces the concept of buffers and buffer management. The critical chain method uses activities with durations that do not include safety margins, logical relationships, and resource availability with statistically determined buffers composed of the aggregated safety margins of activities at specified points on the project schedule path to account for limited resources and project uncertainties. The resource-constrained critical path is known as the critical chain.

QUESTION 397
What is the lowest level in the Work Breakdown Structure called?

A. Work Packages
B. Activities
C. Schedules
D. Tasks
Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 398
What is the minimum a project schedule must include?

A. Variance analysis
B. A planned start date and a planned finish date for each schedule activity
C. A critical path diagram

D. Critical chain analysis

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 399
What is the tool and technique used to request seller responses?

A. Procurement documents
B. Expert judgment
C. Bidder conferences
D. Contract types

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
12.2.2.1 Bidder Conferences
Bidder conferences (sometimes called contractor conferences, vendor conferences, and pre-bid conferences) are meetings between the buyer and all prospective sellers prior to submittal of a bid or proposal.
They are used to ensure that all prospective sellers have a clear and common understanding of the procurement requirements, and that no bidders receive preferential treatment.
To be fair, buyers should take great care to ensure that all prospective sellers hear every question from any individual prospective seller and every answer from the buyer.
Typically fairness is addressed by techniques such as collecting questions from bidders or arranging field visits in advance of the bidder conference. Responses to questions can be incorporated into the procurement documents as amendments.

QUESTION 400
What process determines which risks might affect the project?

A. Qualitative risk analysis

B. Identify Risks
C. Plan Risk Management
D. Quantitative risk analysis

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 11.2 Identify Risks
Definition: The process of **determining which risks may affect the project** and documenting their characteristics.
Key Benefit: The key benefit of this process is the documentation of existing risks and the knowledge and ability it provides to the project team to anticipate events.

Inputs
1. Risk management plan
2. Cost management plan
3. Schedule management plan
4. Quality management plan
5. Human resource management plan
6. Scope baseline
7. Activity cost estimates
8. Activity duration estimates
9. Stakeholder register
10. Project documents
11. Procurement documents
12. Enterprise environmental factors
13. Organizational process assets

Tools & Techniques
1. Documentation reviews
2. Information gathering techniques
3. Checklist analysis
4. Assumptions analysis
5. Diagramming techniques
6. SWOT analysis

7. Expert judgment

Outputs
1. Risk register

11.2.3.1 Risk Register
The primary output from Identify Risks is the initial entry into the risk register. The risk register is a document in which the results of risk analysis and risk response planning are recorded. It contains the outcomes of the other risk management processes as they are conducted, resulting in an increase in the level and type of information contained in the risk register over time. The preparation of the risk register begins in the Identify Risks process with the following information, and then becomes available to other project management and risk management processes:
・**List of identified risks.** The identified risks are described in as much detail as is reasonable. A structure for describing risks using risk statements may be applied, for example, EVENT may occur causing IMPACT, or If CAUSE exists, EVENT may occur leading to EFFECT. In addition to the list of identified risks, the root causes of those risks may become more evident. These are the fundamental conditions or events that may give rise to one or more identified risks. They should be recorded and used to support future risk identification for this and other projects.
・**List of potential responses.** Potential responses to a risk may sometimes be identified during the Identify Risks process. These responses, if identified in this process, should be used as inputs to the Plan Risk Responses process.

QUESTION 401
What scope definition technique is used to generate different approaches to execute and perform the work of the project?

A. Build vs. buy
B. Expert judgment
C. Alternatives identification
D. Product analysis

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 402
When a control chart is used to monitor performance of a process, which of the following will be set by the project manager and the appropriate stakeholders to reflect the point(s) at which corrective action will be taken to prevent exceeding the specification limits?
A. Upper and lower control limits
B. Upper and lower specification limits
C. Process mean

D. Data points

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 403
Which Activity Duration Estimating technique incorporates additional timing for contingency purposes?

A. Analogous Estimating
B. Expert Judgment
C. Optimistic Estimates
D. Reserve Analysis

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
6.5.2.6 Reserve Analysis
Duration estimates may include contingency reserves, sometimes referred to as time reserves or buffers, into the project schedule to account for schedule uncertainty. Contingency reserves are the estimated duration within the schedule baseline, which is allocated for identified risks that are accepted and for which contingent or mitigation responses are developed. Contingency reserves are associated with the “known-unknowns,” which may be estimated to account for this unknown amount of rework.
As more precise information about the project becomes available, the contingency reserve may be used, reduced, or eliminated. Contingency should be clearly identified in schedule documentation.
[..]
Estimates may also be produced for the amount of management reserve of time for the project. Management reserves are a specified amount of the project duration withheld for management control purposes and are reserved for unforeseen work that is within scope of the project. Management reserves are intended to address the “unknown-unknowns” that can affect a project. Management reserve is not included in the schedule baseline, but it is part of the overall project duration requirements. Depending on contract terms, use of management reserves may require a change to the schedule baseline.
QUESTION 404
Which is a tool used in monitoring and controlling project work?

A. Work performance information
B. Project management information system (PMIS)
C. Activity duration estimates
D. Scheduled network analysis

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 405
Which is the document that presents a hierarchical project organization?

A. WBS
B. CPI
C. OBS
D. BOM

Correct Answer: C
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 406
Which of following could be organizational process assets?

A. Historical information
B. Industry standards
C. Organization infrastructure
D. Marketplace conditions
Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
2.1.4 Organizational Process Assets
Organizational process assets are the plans, processes, policies, procedures, and knowledge bases specific to and used by the performing organization. They include any artifact, practice, or knowledge from any or all of the organizations involved in the project that can be used to perform or govern the project. The process assets also include the organization's knowledge bases such as lessons learned and **historical information**. Organizational process assets may include completed schedules, risk data, and earned value data. Organizational process assets are inputs to most planning processes. Throughout the project, the project team members may update and add to the organizational process assets as necessary. Organizational process assets may be grouped into two categories: (1) processes and procedures, and (2) corporate knowledge base.

QUESTION 407
Which of the following are documented directions to perform an activity that can reduce the probability of negative consequences associated with project risks?

A. Recommended corrective actions
B. Recommended preventive actions
C. Risk audits
D. Risk reassessments

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
11.6.3.2 Change Requests
Implementing contingency plans or workarounds sometimes results in a change request. Change requests are prepared and submitted to the Perform Integrated Change Control process (Section 4.5). Change requests can include recommended corrective and preventive actions as well.
・**Recommended corrective actions.** These are activities that realign the performance of the project work with the project management plan. They include contingency plans and workarounds. The latter are responses that were not initially planned, but are required to deal with emerging risks that were previously unidentified or accepted passively.
・**Recommended preventive actions.** These are activities that ensure that future performance of the project work is aligned with the project management plan.

QUESTION 408
Which of the following are the components of the scope baseline?

A. Project charter, project scope statement, and work breakdown structure (WBS)

B. Project charter, project management plan, and plan procurement
C. Project scope statement, work breakdown structure (WBS), and WBS dictionary
D. Project management plan, plan procurement, and contract administration

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
5.4.3.1 Scope Baseline
The scope baseline is the approved version of a scope statement, work breakdown structure (WBS), and its associated WBS dictionary, that can be changed only through formal change control procedures and is used as a basis for comparison. It is a component of the project management plan. Components of the scope baseline include:
· **Project scope statement.** The project scope statement includes the description of the project scope, major deliverables, assumptions, and constraints.
· **WBS.** The WBS is a hierarchical decomposition of the total scope of work to be carried out by the project team to accomplish the project objectives and create the required deliverables. Each descending level of the WBS represents an increasingly detailed definition of the project work. The WBS is finalized by assigning each work package to a control account and establishing a unique identifier for that work package from a code of accounts. These identifiers provide a structure for hierarchical summation of costs, schedule, and resource information. A control account is a management control point where scope, budget, actual cost, and schedule are integrated and compared to the earned value for performance measurement. Control accounts are placed at selected management points in the WBS. Each control account may include one or more work packages, but each of the work packages should be associated with only one control account. A control account may include one or more planning packages. A planning package is a work breakdown structure component below the control account with known work content but without detailed schedule activities.
· **WBS dictionary.** The WBS dictionary is a document that provides detailed deliverable, activity, and scheduling information about each component in the WBS. The WBS dictionary is a document that supports the WBS. Information in the WBS dictionary may include, but is not limited to: ▪ Code of account identifier,
▪ Description of work,
▪ Assumptions and constraints,
▪ Responsible organization,
▪ Schedule milestones,
▪ Associated schedule activities, ▪
Resources required,
▪ Cost estimates,
▪ Quality requirements,
▪ Acceptance criteria, ▪
Technical references, and ▪
Agreement information.

QUESTION 409
Which of the following correctly lists the configuration management activities included in the Integrated Change Control process?
A. Configuration definition, configuration status accounting, configuration monitoring and control
B. Configuration identification, configuration status accounting, configuration verification and audit
C. Configuration identification, configuration status reporting, configuration verification and audit
D. Configuration definition, configuration status reporting, configuration monitoring and Control

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Configuration control is focused on the specification of both the deliverables and the processes; while change control is focused on identifying, documenting, and approving or rejecting changes to the project documents, deliverables, or baselines.
Some of the configuration management activities included in the Perform Integrated Change Control process are as follows:

· **Configuration identification.** Identification and selection of a configuration item to provide the basis for which the product configuration is defined and verified, products and documents are labeled, changes are managed, and accountability is maintained.
· **Configuration status accounting.** Information is recorded and reported as to when appropriate data about the configuration item should be provided. This information includes a listing of approved configuration identification, status of proposed changes to the configuration, and the implementation status of approved changes.

· **Configuration verification and audit.** Configuration verification and configuration audits ensure the composition of a project's configuration items is correct and that corresponding changes are registered, assessed, approved, tracked, and correctly implemented. This ensures the functional requirements defined in the configuration documentation have been met.

QUESTION 410
Which of the following is a component of three-point estimates?

A. Probabilistic
B. Most likely
C. Expected
D. Anticipated

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
QUESTION 411
Which of the following is a schematic display of the project's schedule activities and the logical relationships among them?

A. Gantt chart
B. Project schedule network diagram
C. Project milestone list
D. Activity list

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 412
Which of the following is a tool and technique used in all processes within Project Integration Management?

A. Records management system B.
Expert judgment
C. Project management software
D. Issue log

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Explanation:
4.1.2.1 Expert Judgment
Expert judgment is often used to assess the inputs used to develop the project charter. Expert judgment is applied to all technical and management details during this process. Such expertise is provided by any group or individual with specialized knowledge or training and is available from many sources, including:
- Other units within the organization,
- Consultants,

- Stakeholders, including customers or sponsors,
- Professional and technical associations,
- Industry groups,
- Subject matter experts (SME), and
- Project management office (PMO).

QUESTION 413
Which of the following is an example of a risk symptom?

A. Failure to meet intermediate milestones
B. Force of nature, such as a flood
C. Risk threshold target
D. Crashing, front loading, or fast tracking

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 414
Which of the following is an example of a technique used in quantitative risk analysis?

A. Sensitivity analysis
B. Probability and impact matrix
C. Risk data quality assessment
D. Risk categorization

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 415
Which of the following is an example of contract administration?

A. Negotiating the contract
B. Authorizing contractor work
C. Developing the statement of work
D. Establishing evaluation criteria

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 416
Which of the following is an example of push communication?

A. Intranet sites
B. Video conferencing
C. Knowledge repositories
D. Press releases

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
10.1.2.4 Communication Methods
There are several communication methods that are used to share information among project stakeholders.
These methods are broadly classifed as follows:
- **Interactive communication.** Between two or more parties performing a multidirectional exchange of information. It is the most effcient way to ensure a common understanding by all participants on specified topics, and includes meetings, phone calls, instant messaging, video conferencing, etc.
- **Push communication.** Sent to specific recipients who need to receive the information. This ensures that the information is distributed but does not ensure that it actually reached or was understood by the intended audience. Push communications include letters, memos, reports, emails, faxes, voice mails, blogs, press releases, etc.
- **Pull communication.** Used for very large volumes of information, or for very large audiences, and requires the recipients to access the communication content at their own discretion. These methods include intranet sites, e-learning, lessons learned databases, knowledge repositories, etc.

The choices of communication methods that are used for a project may need to be discussed and agreed upon by the project stakeholders based on communication requirements; cost and time constraints; and familiarity and availability of the required tools and resources that may be applicable to the communications process.

QUESTION 417
Which of the following is an input into the Develop Project Team process?

A. Enterprise environmental factors
B. Organizational process assets
C. Project staff assignments
D. Performance reports

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
9.3 Develop Project Team
Definition: The process of improving competencies, team member interaction, and overall team environment to enhance project performance.
Key Benefit: The key benefit of this process is that it results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.

Inputs
1. Human resource management plan
2. **Project staff assignments**
3. Resource calendars

Tools & Techniques
1. Interpersonal skills
2. Training
3. Team-building activities
4. Ground rules
5. Colocation
6. Recognition and rewards
7. Personnel assessment tools

Outputs
1. Team performance assessments
2. Enterprise environmental factors updates

QUESTION 418
Which of the following is an input to the Plan Risk Responses process?

A. Risk urgency assessment
B. Organizational process assets
C. Risk register
D. Schedule management plan
Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
11.2.3.1 Risk Register
The primary output from Identify Risks is the initial entry into the risk register. The risk register is a document in which the results of risk analysis and risk response planning are recorded. It contains the outcomes of the other risk management processes as they are conducted, resulting in an increase in the level and type of information contained in the risk register over time. The preparation of the risk register begins in the Identify Risks process with the following information, and then becomes available to other project management and risk management processes:
- **List of identified risks.** The identified risks are described in as much detail as is reasonable. A structure for describing risks using risk statements may be applied, for example, EVENT may occur causing IMPACT, or If CAUSE exists, EVENT may occur leading to EFFECT. In addition to the list of identified risks, the root causes of those risks may become more evident. These are the fundamental conditions or events that may give rise to one or more identified risks. They should be recorded and used to support future risk identification for this and other projects.
- **List of potential responses.** Potential responses to a risk may sometimes be identified during the Identify Risks process. These responses, if identified in this process, should be used as inputs to the Plan Risk Responses process.

Process: 11.5 Plan Risk Responses
Definition: The process of developing options and actions to enhance opportunities and to reduce threats to project objectives.
Key Benefit: The key benefit of this process is that it addresses the risks by their priority, inserting resources and activities into the budget, schedule and project management plan as needed.

Inputs
1. Risk management plan
2. **Risk register**

Tools & Techniques
1. Strategies for negative risks or threats
2. Strategies for positive risks or opportunities
3. Contingent response strategies
4. Expert judgment

Outputs
1. Project management plan updates
2. Project documents updates

QUESTION 419
Which of the following is the process of identifying the specific actions to be performed to produce the project deliverables?
A. Estimate Activity Durations
B. Sequence Activities
C. Define Activities
D. Activity Attributes

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Process: 6.2 Define Activities
Definition: The process of identifying and documenting the specific actions to be performed to produce the project deliverables.
Key Benefit: The key benefit of this process is to break down work packages into activities that provide a basis for estimating, scheduling, executing, monitoring, and controlling the project work.

Inputs
1. Schedule management plan
2. Scope baseline
3. Enterprise environmental factors
4. Organizational process assets

Tools & Techniques
1. Decomposition

2. Rolling wave planning
3. Expert judgment

Outputs
1. Activity list
2. Activity attributes
3. Milestone list

QUESTION 420
Which of the following methods is a project selection technique?

A. Flowcharting
B. Earned value
C. Cost-benefit analysis
D. Pareto analysis
Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
8.1.2.1 Cost-Benefit Analysis
The primary benefits of meeting quality requirements include less rework, higher productivity, lower costs, increased stakeholder satisfaction, and increased profitability. A cost-benefit analysis for each quality activity compares the cost of the quality step to the expected benefit.

QUESTION 421
Which of the following methods of performance review examines project performance over time to determine if performance is improving or deteriorating?

A. Earned value performance
B. Trend analysis
C. Cost-benefit analysis
D. Variance analysis

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 422
Which of the following tools and techniques is used in the Develop Project Team process?

A. Acquisitions
B. Organizational theories
C. Team-building activities
D. Virtual teams

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
9.3.2.3 Team-Building Activities
Team-building activities can vary from a 5-minute agenda item in a status review meeting to an off-site, professionally facilitated experience designed to improve interpersonal relationships. The objective of team-building activities is to help individual team members work together effectively. Team-building strategies are particularly valuable when team members operate from remote locations without the beneft of face-to-face contact. Informal communication and activities can help in building trust and establishing good working relationships.
As an ongoing process, team building is crucial to project success. While team building is essential during the initial stages of a project, it is a never-ending process. Changes in a project environment are inevitable, and to manage them effectively, a continued or a renewed team-building effort should be applied. The project manager should continually monitor team functionality and performance to determine if any actions are needed to prevent or correct various team problems. One of the models used to describe team development is the Tuckman ladder (Tuckman, 1965; Tuckman & Jensen, 1977), which includes fve stages of development that teams may go through. Although it's common for these stages to occur in order, it's not uncommon for a team to get stuck in a particular stage or slip to an earlier stage. Projects with team members who worked together in the past may skip a stage.
- **Forming.** This phase is where the team meets and learns about the project and their formal roles and responsibilities. Team members tend to be independent and not as open in this phase.
- **Storming.** During this phase, the team begins to address the project work, technical decisions, and the project management approach. If team members are not collaborative and open to differing ideas and perspectives, the environment can become counterproductive.
- **Norming.** In the norming phase, team members begin to work together and adjust their work habits and behaviors to support the team. The team learns to trust each other.
- **Performing.** Teams that reach the performing stage function as a well-organized unit. They are interdependent and work through issues smoothly and effectively.
- **Adjourning.** In the adjourning phase, the team completes the work and moves on from the project. This typically occurs when staff is released from the project as deliverables are completed or as part of carrying out the Close Project or Phase process (Section 4.6). The duration of a particular stage depends upon team

dynamics, team size, and team leadership. Project managers should have a good understanding of team dynamics in order to move their team members through all stages in an effective manner.

9.3 Develop Project Team
Definition: The process of improving competencies, team member interaction, and overall team environment to enhance project performance.
Key Benefit: The key benefit of this process is that it results in improved teamwork, enhanced people skills and competencies, motivated employees, reduced staff turnover rates, and improved overall project performance.
Inputs
1. Human resource management plan
2. Project staff assignments
3. Resource calendars

Tools & Techniques
1. Interpersonal skills
2. Training
3. **Team-building activities**
4. Ground rules
5. Colocation
6. Recognition and rewards
7. Personnel assessment tools

Outputs
1. Team performance assessments
2. Enterprise environmental factors updates

QUESTION 423
Which of the following tools and techniques is used to estimate cost?

A. Budget forecast
B. Variance analysis
C. Activity cost estimate
D. Three-point estimate

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Three-Point Estimate. A technique used to estimate cost or duration by applying an average of optimistic, pessimistic, and most likely estimates when there is uncertainty with the individual activity estimates.

QUESTION 424
Which of the following tools will be used to produce performance reports that provide information to stakeholders about project cost, schedule progress, and performance?

A. Communications methods
B. Reporting systems
C. Forecasting methods
D. Variance analysis

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Reporting Systems. Facilities, processes, and procedures used to generate or consolidate reports from one or more information management systems and facilitate report distribution to the project stakeholders.

QUESTION 425
Which of the Project Time Management processes analyzes activity sequencing, durations, resource requirements, and schedule constraints?
A. Estimate Activity Durations
B. Control Schedule
C. Sequence Activities
D. Develop Schedule

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:

Process: 6.6 Develop Schedule
Definition: The process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule model.
Key Benefit: The key benefit of this process is that by entering schedule activities, durations, resources, resource availabilities, and logical relationships into the scheduling tool, it generates a schedule model with planned dates for completing project activities.

Inputs
1. Schedule management plan
2. Activity list
3. Activity attributes
4. Project schedule network diagrams
5. Activity resource requirements
6. Resource calendars
7. Activity duration estimates
8. Project scope statement
9. Risk register
10. Project staff assignments
11. Resource breakdown structure
12. Enterprise environmental factors
13. Organizational process assets

Tools & Techniques
1. Schedule network analysis
2. Critical path method
3. Critical chain method
4. Resource optimization techniques
5. Modeling techniques
6. Leads and lags
7. Schedule compression
8. .Scheduling tool

Outputs
1. Schedule baseline
2. .Project schedule
3. Schedule data
4. Project calendars
5. Project management plan updates
6. Project documents updates

QUESTION 426
Which process group contains the processes performed to finalize all activities?

A. Planning Process Group
B. Executing Process Group
C. Monitoring and Controlling Process Group
D. Closing Process Group

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
• Closing Process Group. Those processes performed to finalize all activities across all Process Groups to formally close the project or phase.

QUESTION 427
Which schedule development technique modifies the project schedule to account for limited resources?

A. Human resource planning
B. Fast tracking
C. Critical chain method
D. Rolling wave planning

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
6.6.2.3 Critical Chain Method
The critical chain method (CCM) is a schedule method that allows the project team to place buffers on any project schedule path to account for **limited resources** and project uncertainties. It is developed from the critical path method approach and considers the effects of resource allocation, resource optimization, resource leveling, and activity duration uncertainty on the critical path determined using the critical path method. To do so, the critical chain method introduces the concept of buffers and buffer management. The critical chain method uses activities with durations that do not include safety margins, logical relationships, and resource

availability with statistically determined buffers composed of the aggregated safety margins of activities at specified points on the project schedule path to account for limited resources and project uncertainties. The resource-constrained critical path is known as the critical chain.

QUESTION 428
Which stakeholder communicates with higher levels of management to gather organizational support and promote project benefits?

A. Portfolio manager
B. Project sponsor
C. Project manager
D. Project management office

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Explanation:
Sponsor. A sponsor is the person or group who provides resources and support for the project and is accountable for enabling success. The sponsor may be external or internal to the project manager's organization. From initial conception through project closure, the sponsor promotes the project. **This includes serving as spokesperson to higher levels of management to gather support throughout the organization and promoting the benefits the project brings**. The sponsor leads the project through the initiating processes until formally authorized, and plays a significant role in the development of the initial scope and charter. For issues that are beyond the control of the project manager, the sponsor serves as an escalation path. The sponsor may also be involved in other important issues such as authorizing changes in scope, phase-end reviews, and go/no-go decisions when risks are particularly high. The sponsor also ensures a smooth transfer of the project's deliverables into the business of the requesting organization after project closure.

QUESTION 429
Which standard examines an enterprise's project management process capabilities?

A. PMBOK Guide
B. The Standard for Program Management.
C. Organizational Project Management Maturity Model "OPM3"
D. The Standard for Portfolio Management

Correct Answer: C
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 430
Who is responsible for developing the project management plan and all related component plans?

A. Project team
B. Portfolio manager
C. Project manager
D. Project management office

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
4.2.3.1 Project Management Plan
The project management plan is the document that describes how the project will be executed, monitored, and controlled. It integrates and consolidates all of the subsidiary plans and baselines from the planning processes.
Project baselines include, but are not limited to:
・Scope baseline (Section 5.4.3.1),
・Schedule baseline (Section 6.6.3.1), and ・
Cost baseline (Section 7.3.3.1).

Subsidiary plans include, but are not limited to:
・Scope management plan (Section 5.1.3.1),
・Requirements management plan (Section 5.1.3.2),
・Schedule management plan (Section 6.1.3.1), ・
Cost management plan (Section 7.1.3.1),
・Quality management plan (Section 8.1.3.1),
・Process improvement plan (Section 8.1.3.2),
・Human resource management plan (Section 9.1.3.1),
・Communications management plan (Section 10.1.3.1),
・Risk management plan (Section 11.1.3.1),
・Procurement management plan (Section 12.1.3.1), and ・
Stakeholder management plan (Section 13.2.3.1).
Among other things, the project management plan may also include the following:
・Life cycle selected for the project and the processes that will be applied to each phase;
・Details of the tailoring decisions specified by the project management team as follows:

○ Project management processes selected by the project management team,
○ Level of implementation for each selected process,
○ Descriptions of the tools and techniques to be used for accomplishing those processes, and
○ Description of how the selected processes will be used to manage the specific project, including the dependencies and interactions among those processes and the essential inputs and outputs.
- Description of how work will be executed to accomplish the project objectives;
- Change management plan that documents how changes will be monitored and controlled;
- Configuration management plan that documents how Configuration management will be performed;
- Description of how the integrity of the project baselines will be maintained;
- Requirements and techniques for communication among stakeholders; and
- Key management reviews for content, the extent of, and timing to address, open issues and pending decisions.

The project management plan may be either summary level or detailed, and may be composed of one or more subsidiary plans. Each of the subsidiary plans is detailed to the extent required by the specific project. Once the project management plan is baselined, it may only be changed when a change request is generated and approved through the Perform Integrated Change Control process.

QUESTION 431
Who MUST know when a risk event occurs so that a response can be implemented?

A. Customers
B. Project sponsors
C. Project management team
D. Insurance claims department.

Correct Answer: C
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 432
Within a matrix organization, dual reporting of team members is a risk for project success. Who is responsible for managing this dual reporting relationship factor?

A. Functional manager
B. Project manager
C. Functional manager supported by the project manager
D. Project management office

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 433
Within project integration management, the statement of work (SOW) references which aspects of the project?

A. Strategic plan, business need, and product scope description
B. Contract, enterprise environmental factors, and organizational process assets
C. Business plan, project management plan, and project schedule
D. Product lifecycle, business objective, and management strategy

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
4.1.1.1 Project Statement of Work Page 67

The project statement of work (SOW) is a narrative description of products, services, or results to be delivered by a project. For internal projects, the project initiator or sponsor provides the statement of work based on business needs, product, or service requirements. For external projects, the statement of work can be received from the customer as part of a bid document, (e.g., a request for proposal, request for information, or request for bid) or as part of a contract. The SOW references the following:

- **Business need**. An organization's business need may be based on a market demand, technological advance, legal requirement, government regulation, or environmental consideration. Typically, the business need and the cost-benefit analysis are contained in the business case to justify the project.

- **Product scope description**. The product scope description documents the characteristics of the product, service, or results that the project will be undertaken to create. The description should also document the relationship between the products, services, or results being created and the business need that the project will address.

- **Strategic plan**. The strategic plan documents the organization's strategic vision, goals, and objectives and may contain a high-level mission statement. All projects should be aligned with their organization's strategic plan. Strategic plan alignment ensures that each project contributes to the overall objectives of the organization.

QUESTION 434
The review of a seller's progress toward achieving the goals of scope and quality within cost and schedule compared to the contract is known as:
A. Work performance information.
B. Inspections and audits.
C. A contract change control system.
D. Procurement performance reviews.

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 435
Which statement summarizes the role of the change control board?

A. The change control board is responsible for presenting the change for approval
B. The change control board will analyze the change impact in terms of cost and schedule
C. The change control board is responsible for managing the change management and configuration management systems
D. The change control board is responsible for reviewing and approving changes to the project

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://blog.masterofproject.com/change-control-board/

QUESTION 436
A contractor has provided hands-on training to a team member on new equipment that has been purchased as part of the project. The team member has acquired key insight and experience on the new equipment.

What is this an example of?

A. Explicit knowledge
B. Formal education
C. Tacit knowledge
D. Lessons learned

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 437
Which action should the project manager take after the team finishes executing the scope?

A. Verify the deliverables to ensure that they are correct and meet the customer's satisfaction
B. Accept all the deliverables and deliver them to the customer for final acceptance
C. Conduct a joint session with the customer, change the deliverables, and then request approval
D. Check that all change requests were implemented and release deliverables to the customer

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 438
The project manager needs to manage a critical issue immediately, and this requires action from the upper management of a specific stakeholder group. Which plan should the project manager consult?

A. Risk management plan
B. Communications management plan
C. Change management plan
D. Stakeholder engagement plan

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectmanagementdocs.com/template/project-planning/communications-management-plan/#axzz5lB7MU0m5

QUESTION 439
How can a project manager maintain the engagement of stakeholders in a project with a high degree of change?

A. Monitor project stakeholder relationships using engaging strategies and plans
B. Send all project documents to stakeholders each time they are modified
C. Schedule monthly meetings with the stakeholders, including team members
D. Engage only with the project sponsors

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://study.com/academy/lesson/maintaining-stakeholder-relationships-during-project-execution.html

QUESTION 440
If a project manager effectively manages project knowledge, a key benefit is that:

A. all stakeholders have access to the same information
B. the project team is able to understand the project status
C. project stakeholders have a clear picture of the project
D. new knowledge is added to organizational process assets

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

Reference: https://mymanagementguide.com/project-knowledge-management-the-importance-of-managing-project-knowledge/

QUESTION 441
Which project documents can determine the budget?

A. Procurement documents, contracts, requirements documentation, and basis of estimates
B. Basis of estimates, cost estimates, project schedule, and risk register
C. Business case, project charter, statement of work, and cost estimates
D. Scope baseline, resource management plan, activity list, and assumption log

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://project-management-knowledge.com/definitions/d/determine-budget/

QUESTION 442
Which conflict resolution technique is based on bringing some degree of satisfaction to all parties?

A. Smooth/Accommodate
B. Collaborate/Problem Solve
C. Compromise/Reconcile
D. Withdraw/Avoid

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: http://projectmanagementhacks.com/conflict-management-techniques-pmbok/

QUESTION 443
What are the four management processes included in the Project Cost Management (PCM) method?

A. Plan Cost Management, Estimate Costs, Determine Budget, Control Costs

B. Control Costs, Project Cost Management, Determine Budget, Estimate Costs
C. Estimate Activities, Control Costs, Project Cost Management, Determine Budget
D. Control Quality, Project Cost Management, Estimate Costs, Determine Budget

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/project-cost-management-according-to-the-pmbok/

QUESTION 444
Given the following information:
- Activity A takes one week.
- Activity B takes three weeks.
- Activity C takes two weeks.
- Activity D takes five weeks.
- Activity A starts at the same time as Activity B.
- Activity C follows Activity B and Activity A.
- Activity D follows Activity C.

How long will it take to complete the project?

A. 8 weeks
B. 9 weeks
C. 10 weeks
D. 11 weeks

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 445

The project team is using their current information, abilities, and experience to achieve project objectives; the team is also developing new experiences, and the project manager is ensuring that the team is documenting new learnings in order to contribute to organizational knowledge.

In which process is the project team and project manager involved?

A. Direct and manage project work
B. Manage project knowledge
C. Develop team
D. Manage team

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 446
Two members of the team are having a conflict. The project manager decides that, in this case, the best solution is to bring some degree of satisfaction to all parties in order to temporarily or partially resolve the problem.

Which technique should the project manager use?

A. Withdraw/Avoid
B. Smooth/Accommodate
C. Compromise/Reconcile
D. Collaborate/Problem Solve

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 447
Which is the order of steps in the Procurement Management process?

A. Identifying and planning procurement requirements, obtaining quotes or proposals, negotiating with vendors, contracting with selected vendors, and controlling procurements.
B. Identifying and planning procurement requirements, negotiating with vendors, contracting with selected vendors, obtaining quotes or proposals, and controlling procurements.
C. Controlling procurements, identifying and planning procurement requirements, obtaining quotes or proposals, negotiating with vendors, and contracting with selected vendors.
D. Obtaining quotes or proposals, identifying and planning procurement requirements, negotiating with vendors, contracting with selected vendors, and controlling procurements.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/project-procurement-management-according-to-the-pmbok/

QUESTION 448
After defining activities in project schedule management, which processes should a project manager follow?
A. Sequence Activities and Estimate Activity Durations
B. Estimate Activity Durations and Control Schedule
C. Develop Schedule and Control Schedule
D. Review Activities and Develop Schedule

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/steps-in-project-scheduling/

QUESTION 449
The project manager and the project team are having a meeting with the purpose of identifying risks. Which tools and techniques might help in this process?

A. Prompt lists and data analysis
B. Reports and representations of uncertainty
C. Data analysis and risk audits

D. Interpersonal and team skills and project management information system

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 450
How is the Project Scope Management process different in agile and adaptive projects than in traditional projects?

A. Less time spent on defining scope early on
B. More time spent on defining scope early on
C. Less time spent on scope management process
D. Project scope management is the same in all projects

Correct Answer: A
Section: Volume E
Explanation
Explanation/Reference:

QUESTION 451
The project manager is explaining to others the essential business aspects of the project. To which skill category does this ability belong?

A. Technical project management skills
B. Time management skills
C. Strategic and business management skills
D. Leadership skills

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

Reference: https://www.projectsmart.co.uk/the-role-of-the-project-manager.php

QUESTION 452
Which are the most important competencies required for a project manager?

A. Leadership, bilingualism, experience, and technical knowledge
B. PMP certification, experience, technical knowledge, and post-graduate education
C. Leadership, strategic and business management, project management knowledge, and technical knowledge
D. Communication skills, project management knowledge, PMP certification, and availability to travel

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 453
According to the PMI Talent Triangle, leadership skills relate to the ability to:

A. understand the high-level overview of the organization
B. tailor traditional and agile tools for the project
C. work with stakeholders to develop an appropriate project delivery
D. guide, motivate, and direct a team to reach project goals

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.pmi.org/certifications/maintain/earn-pdus/plan-development-talent-triangle

QUESTION 454
In Project Resource Management, which process uses recognition and rewards as a tool and technique?

A. Control Resources

B. Develop Team
C. Manage Team
D. Monitor Team

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 455
The project manager is distributing project communications, collecting and storing project information, and retrieving documents when required. In which process is the project manager involved?

A. Monitor Communications
B. Plan Communications Management
C. Manage Communications
D. Manage Stakeholder Engagement

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=2ahUKEwityYzPzNThAhUH6qQKHR77AboQFjADegQIARAC&url=https%3A%2F%2Fpeople.eecs.ku.edu%2F~hossein%2F811%2FLectures%2Fchapter-10.pptx&usg=AOvVaw0B7ldXssetUgjbMWGxmkXp

QUESTION 456
A new project manager wishes to recommend creating a project management office to senior management. Which statement would the project manager use to describe the importance of creating the project management office?

A. It will give the project manager independence to make decisions without other departmental input.
B. It integrates organizational data and information to ensure that strategic objectives are fulfilled.
C. The project management office can execute administrative tasks.
D. The project management office can coordinate projects.

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.theprojectgroup.com/blog/en/why-a-pmo-is-important/

QUESTION 457
In which project cost management process is work performance data an output?

A. Plan Cost Management
B. Estimate Costs
C. Determine Budget
D. Control Costs

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Work performance data is an output of the following processes:
• Direct and Manage Project Work

Work Performance Information Work performance information is used in the Monitoring and Controlling processes to analyze information such as the status of deliverables, the status of change requests, and forecasts such as estimate to complete (i.e., the work performance data).

Work performance information is an input of the following processes:
• Monitor and Control Project Work
Work performance information is an output of the following processes:
• Validate Scope
• Control Scope
• Control Schedule
• Control Costs
• Control Quality
• Control Communications
• Control Risks

• Control Procurements
• Control Stakeholder Engagement

QUESTION 458
Why is tailoring required in a project?

A. Because a one-size-fits-all approach avoids complications and saves time
B. Because every project is unique and not every tool, technique, input, or output identified in the PMBOK Guide is required
C. Because tailoring allows us to identify the techniques, procedures, and system practices used by those in the project
D. Project managers should apply every process in the PMBOK Guide to the project, so tailoring is not required

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 459
A project manager is working on an estimate. The project team is estimating each work package and then finding the total of all the work packages.

Which technique is using the project manager?

A. Three-point estimating
B. Parametric estimating
C. Bottom-up estimating
D. Data analysis

Correct Answer: B
Section: Volume E
Explanation
Explanation/Reference:

QUESTION 460
What are the project management processes associated with project quality management?

A. Plan Quality Management, Manage Quality, and Control Quality
B. Plan Quality Management, Manage Quality, and Cost of Quality
C. Manage Quality, Customer Satisfaction, and Control Quality
D. Customer Satisfaction, Control Quality, and Continuous Improvement

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectmanager.com/blog/project-quality-management-quick-guide

QUESTION 461
A project manager is working on the communications management plan. Which of these documents are inputs to consider?

A. Stakeholder engagement plan and organizational process assets
B. Project schedule and stakeholder register
C. Quality management plan and risk register
D. Basis of estimates and scope baseline

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 462
A project manager needs to demonstrate that the project meets quality standards and success criteria. For that reason, the project manager is defining the quality objectives of the project, the quality tools that will be used, and quality metrics for the project deliverables.

Which process is the project manager executing?
A. Manage Quality
B. Plan Quality Management
C. Control Quality
D. Plan Scope Management

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectmanager.com/blog/project-quality-management-quick-guide

QUESTION 463
The project manager is dividing the project scope into smaller pieces, and repeating this process until no more subdivisions are required. At this point the project manager is able to estimate costs and activities for each element.

What are these elements called?

A. Project activities
B. Work packages
C. Planning packages
D. Project deliverables

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Reference: http://www.free-management-ebooks.com/faqpm/scope-06.htm

QUESTION 464
Which two processes should be used to influence costs in the early stages of a project?

A. Estimate Costs and Determine Budget
B. Plan Cost Management and Estimate Activity Durations
C. Control Quality and Control Costs
D. Plan Stakeholder Engagement and Plan Communications Management

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 465
A project manager is working in an environment where requirements are not very clear and may change during the project. In addition, the project has several stakeholders and is technically complex.

Which strategies should the project manager take into account for risk management in this environment?

A. Occasionally identify, evaluate, and classify risks
B. Review requirements and cross-functional project teams
C. Include contingency reserves and update the project management plan frequently
D. Frequently review incremental work products and update the requirements for proper prioritization

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 466
When managing costs in an agile environment, what should a project manager consider?

A. Lightweight estimation methods can be used as changes arise
B. Agile environments make cost aggregation more difficult
C. Agile environments make projects costlier and uncertain
D. Detailed cost calculations benefit from frequent changes

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
QUESTION 467
A project stakeholder is requesting changes to the project plan. Which process group addresses this?

A. Initiating
B. Planning
C. Executing
D. Monitoring and Controlling

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://4squareviews.com/2018/10/19/6th-edition-pmbok-guide-process-13-3-manage-stakeholder-engagement-outputs/

QUESTION 468
Which is the main benefit of managing and tailoring strategies in the Stakeholder Engagement process?

A. Increased support and minimized resistance from stakeholders
B. Increased performance of the project team
C. Maintenance of stakeholder satisfaction because costs and scope are under control
D. Updated project documents, as requested by stakeholders

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 469
A project manager can choose from several techniques to resolve conflicts between team members. Which technique can result in a win-win situation?
A. Collaborate/Problem Solve
B. Compromise/Reconcile
C. Smooth/Accommodate
D. Withdraw/Avoid

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://4squareviews.com/2013/06/26/5th-edition-pmbok-guide-chapter-9-conflict-resolution/

QUESTION 470
Which is the correct hierarchy in a project environment, from most to least inclusive?

A. Projects, portfolios, then programs
B. Portfolios, programs, then projects
C. Portfolios, projects, then programs
D. Projects, programs, then portfolios

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.ims-web.com/blog/the-difference-between-projects-programs-and-portfolios

QUESTION 471
Company A's accountant sends notification about a change in the company's tax classification. Why would a project have to be initiated?

A. To change business and technological strategies
B. To improve processes and services
C. To meet regulatory and legal requirements
D. To satisfy stakeholder requests

Correct Answer: C
Section: Volume E
Explanation
Explanation/Reference:

QUESTION 472
During which process of Project Cost Management does a project manager produce the cost baseline?

A. Estimate Costs
B. Control Schedule
C. Determine Budget
D. Develop Project Charter

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://mymanagementguide.com/guidelines/project-management/cost-management/determining-project-budget/#proc

QUESTION 473
With regard to a project manager's sphere of influence in a project, which of the following does the project manager influence most directly?

A. Suppliers
B. Customers
C. Governing bodies
D. Project team

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 474
Which is a major component of an agreement?

A. Change request handling
B. Risk register templates
C. Lessons learned register
D. Procurement management plan

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 475
Which of the following is an output of the Perform Integrated Change Control process?

A. Cost-benefit analysis
B. Updated project charter
C. Approved change request
D. Multicriteria decision analysis

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 476
A project using the agile/adaptive approach has reached the Project Integration Management phase. What is the project manager's key responsibility during this phase?

A. Defining the scope of the project
B. Building a collaborative environment

C. Creating a detailed project management plan
D. Directing the delivery of the project

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.project-management-prepcast.com/project-integration-management-overview-part-2

QUESTION 477
Which of the following conditions should the project manager consider when working on the scheduling for an adaptive environment?

A. Defining, sequencing, estimating activity durations, and developing a schedule model are so tightly linked that they are viewed as a single process.
B. The detailed project schedule should remain flexible throughout the project to accommodate newly gained knowledge.
C. An iterative scheduling and on-demand, pull-based scheduling will be required.
D. To address the full delivery schedule, a range of techniques may be needed and then need to be adapted.

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:
Reference: http://www.free-management-ebooks.com/faqpm/schedule-01.htm

QUESTION 478
In an adaptive project environment, which action helps the project manager ensure that the team is comfortable with changes?

A. Having control over the planning and delivery of the products without delegating decisions
B. Giving access to information to the team and frequent team checkpoints
C. Selecting different team members to take the project manager role during reviews with stakeholders
D. Asking the control change board to approve changes before notifying the team

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 479
Which tasks should a project manager accomplish in order to manage project scope correctly?

A. Define, Validate, and Control Scope; Control Schedule; Control Costs and Manage Stakeholder Engagement.
B. Collect Requirements, Define Scope, Create WBS, Develop Schedule, and Manage Stakeholder Engagement.
C. Plan Scope Management; Collect Requirements; Define, Validate, and Control Scope; and Create WBS.
D. Define, Validate, and Control Scope; Control Costs; Manage Stakeholder Engagement; and keep budget under control.
Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 480
What should the project manager use to evaluate the politics and power structure among stakeholders inside and outside of the organization?

A. Expert judgment
B. Interpersonal skills
C. Team agreements
D. Communication skills

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 481
Which is an example of leveraging evolving trends and emerging practices in Project Integration Management?

A. Hybrid methodologies
B. Risk register updates

C. Outsourced project resources
D. Reliance on lessons learned documents

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.project-management-prepcast.com/project-integration-management-overview-part-2

QUESTION 482
Which is the best way for a project manager to ensure efficient and frequent communication with management and stakeholders in an agile/adaptive environment?

A. Post project artifacts in a transparent fashion and engage stakeholders on a regular basis.
B. Make surveys among the stakeholders and meet with the team once a month.
C. Create a social network and post news there.
D. Create personalized emails for each stakeholder, asking for requests and reviewing objectives with them periodically.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation
Open, frequent, and informal communication is the cornerstone of agile managed projects. The best form of communication is face to face conversations. Agile teams working in a collocated space that supports communication is ideal. Planning communications management that hinders or places boundaries on those conversations is counterproductive. A project manager needs to encourage more communication, not less. A project manager also needs to support the capturing and flow of communication between stakeholders. Scheduling more communication checkpoints, such as daily standup meetings, increases the communication exchanges. And, when possible, posting and distributing information to the team aids communication flow - whether in physical locations, digitized, or both. Withholding conversations or enforcing extended quiet times is the antithesis of good communication flow.

QUESTION 483
Due to today's competitive global market, organizations require more than technical project management skills. Which of the following skills can support long-range strategic objectives that contribute to the bottom line?

A. Planning and risk management skills

B. Communication and time management skills
C. Business intelligence and leadership skills
D. Strategic and business management skills

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.pmi.org/-/media/pmi/documents/public/pdf/learning/thought-leadership/pulse/pulse-of-the-profession-2018.pdf

QUESTION 484
What is the difference between iterative scheduling and on-demand scheduling practices?
A. Iterative scheduling is based on adaptive cycles; on-demand scheduling is based on the theory of constraints.
B. Iterative scheduling is based on the theory of constraints; on-demand scheduling is based on adaptive cycles.
C. Iterative scheduling is usually used in Kanban system.
D. There are no relevant differences between these scheduling practices.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 485
A project manager is reviewing the change requests for project documents, deliverables, and the project plan. In which project management process does this review belong?

A. Monitor and Control Project Work
B. Direct and Manage Project Work
C. Close Project or Phase
D. Perform Integrated Change Control

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.brighthubpm.com/project-planning/1675-looking-at-project-monitor-and-control/

QUESTION 486
Once the make-or-buy analysis is completed, which document defines the project delivery method?

A. Procurement statement of work (SOW)
B. Procurement strategy
C. Terms of reference
D. Change request

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Reference: https://opentextbc.ca/projectmanagement/chapter/chapter-13-procurement-management-project-management/

QUESTION 487
Which factors should be considered for cross-cultural communication?

A. Background, personality, and communications management plan
B. Personality, background, and escalation process
C. Sponsor relationship, personality, and background
D. Current emotional state, personality, and background

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 488
Which of the following tasks is related to the Perform Qualitative Risk Analysis process?

A. Identify the project risks and assign a probability of occurrence
B. Perform a sensitivity analysis to determine which risk has the most potential for impacting the project
C. Analyze the effect of identified project risks as numerical data
D. Prioritize each protect risk and assign the probability of occurrence and impact for each one

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://pmbasics101.com/how-to-perform-qualitative-risk-analysis/

QUESTION 489
A junior team member has been promoted to the position of project manager. The first task to execute is the Quality Management Plan.

Which tools and techniques will help the project manager to complete this task?
A. Benchmarking, design of experiments, and cost-benefit analysis
B. Quality audits, process analysis, and meetings
C. Inspection, brainstorming, and quality audits
D. Networking, brainstorming, and negotiation

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://d1wl9nui6miy8.cloudfront.net/media/965849/wp-tools-and-techniques-useful-in-quality-planning.pdf

QUESTION 490
The project manager has the following information about the estimated duration for an activity: ▪
Most likely [*tM*] – 15 days
▪ Pessimistic [*tP*] – 20 days ▪
Optimistic [*tO*] – 10 days

What is the estimated duration of this activity, according to the triangular distribution technique?

A. 10 days
B. 15 days
C. 12.5 days
D. 5 days

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 491
Which of the following documents are created as part of Project Integration Management?

A. Project charter and project management plan
B. Communications management plan and scope management plan
C. Quality management plan and risk management plan
D. Project scope statement and communications management plan

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 492
Which group of inputs will a project manager use during the Monitor Stakeholder Engagement process?

A. Project charter, business documents, and project management plan
B. Agreements, scope baseline, and project management plan
C. Project charter, business case, and project management plan
D. Work performance data, enterprise environmental factors, and project management plan

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.greycampus.com/opencampus/project-management-professional/monitor-stakeholder-engagement

QUESTION 493
What are the two most common contract types used in a project?

A. Cost plus award fee (CPAF) contract and fixed price contract
B. Fixed price contract and cost-reimbursable contract
C. Cost-reimbursable contract and time and material (T&M) contract
D. Time and material (T&M) contract and cost plus award fee (CPAF) contract

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://pmstudycircle.com/2013/12/types-of-procurement-contracts-used-in-project-management/

QUESTION 494
In a preliminary meeting for a project, team members decide to execute the project with agile methodology. A finance team member wants to know how project cost will be determined at this early stage.

How will the project team determine project cost?

A. Use a lightweight cost estimation due to the nature of agile projects
B. Use a detailed cost estimation for agile projects
C. Retrieve a budget from a previous project and create a baseline for this project based on it
D. Use a detailed work breakdown structure (WBS) to get cost estimation

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 495
A project manager needs to request outside support for a statement of work (SOW) that is not precise. Which kind of contract does the project manager need to create?

A. Time and material (T&M)
B. Cost plus fixed fee (CPFF)
C. Fixed price
D. Cost plus award fee (CPAF)

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
T&M contracts are often used for staff augmentation, acquisition of experts and any outside support when a precise statement of work is not quickly prescribed.

QUESTION 496
Which set of tools and techniques is useful for estimating activity durations for the project schedule?

A. Brainstorming, Monte Carlo Simulation, analogous estimation
B. Three-point estimation, resources leveling, iteration burndown chart
C. Milestone charts, parametric estimation, schedule baseline
D. Parametric estimation, three-point estimation, analogous estimation

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.simplilearn.com/estimating-activity-duration-article

QUESTION 497
To which knowledge area does the Collect Requirements process belong?

A. Quality Management

B. Scope Management
C. Cost Management
D. Integration Management

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.oreilly.com/library/view/a-guide-to/9781935589679/sub5.2.xhtml

QUESTION 498
The project manager released a report. A few stakeholders express the view that the report should not have been directed to them.

Which of the 5Cs of written communications does the project manager need to address?

A. Correct grammar and spelling
B. Concise expression and elimination of excess words
C. Clear purpose and expression directed to the needs of the reader
D. Coherent logical flow of ideas

Correct Answer: C
Section: Volume E
Explanation
Explanation/Reference:

QUESTION 499
In order to detect quality issues earlier in the project life cycle, the project manager is using an agile/adaptive environment. What is the main difference between waterfall and agile/adaptive development approaches for Project Quality Management?

A. The frequency of the quality and review steps
B. The number of deliverables
C. The duration of each of the quality and review steps
D. The tools used in the quality and review steps

Correct Answer: C

Section: Volume E

Explanation

Explanation/Reference:

QUESTION 500
Which set of competencies should a project manager have?

A. Leadership, strategic and business management, and technical project management
B. Expertise in the industry, leadership and business management, and bilingual skills
C. Technical project management, expertise in every role, and PMP certification
D. Expertise in every detail on project activities, PMP certification, and leadership

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 501
Which format can a network diagram take?

A. Flow chart
B. Control chart
C. Affinity diagram
D. Cause-and-effect diagram

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 502
Which tool should a project manager consider to deal with multiple sources of risk?

A. An updated risk register
B. Risk breakdown structure
C. Issue log
D. Stakeholder register

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.pmi.org/learning/library/risk-breakdown-structure-understand-risks-1042

QUESTION 503
Which is the appropriate tool to identify the possible correlation between two elements in a process?

A. Scatter diagram
B. Cause-and-effect diagram
C. Histogram
D. Control charts

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.pmi.org/learning/library/quality-project-management-tools-7177

QUESTION 504
Which components of the project can be updated as a result of managing stakeholder engagement?

A. Project management plan, project documents, and change requests
B. Project management plan, communication plan, and work performance information
C. Risk and communication plans

D. No components of the project can be updated after a stakeholder engagement plan has been completed

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:
Reference: https://4squareviews.com/2018/10/19/6th-edition-pmbok-guide-process-13-3-manage-stakeholder-engagement-outputs/

QUESTION 505
Which of the following lists represents the outputs of the Monitor Communications process?

A. Project communications, project management plan updates, project documents updates, and organizational process assets updates
B. Work performance information, change requests, project management plan updates, and project documents updates
C. Communications management plan, project management plan updates, work performance report, and project documents update
D. Stakeholder engagement plan, change requests, project management plan updates, and project documents updates

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://4squareviews.com/2018/07/08/6th-edition-pmbok-guide-process-10-3-monitor-communications-outputs/

QUESTION 506
Which statement about accepted deliverables is correct?

A. Project deliverables are completed and checked for correctness through the Control Quality process
B. Project deliverables meet the acceptance criteria and are formally signed off and approved by the customer or sponsor
C. Project deliverables meet the acceptance criteria and have been checked through the Control Quality process
D. Projects deliverables are registered as a result of all work packages that are checked and delivered and which meet the acceptance criteria

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 507
Which of the following set of items belongs to the communications management plan?

A. Escalation processes and meeting management
B. Project schedule and glossary of common terminology
C. Escalation processes and stakeholder communication requirements
D. Interactive communication model and information to be communicated

Correct Answer: D
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 508
Which knowledge area includes the processes to identify, define, and unify the various project management processes?

A. Project Integration Management
B. Project Communications Management
C. Project Quality Management
D. Project Risk Management

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: http://cemsolutions.org/knowledge-areas-of-project-management/

QUESTION 509
Which task will a project manager undertake while conducting Project Resource Management?

A. Identify the different aspects of the team to manage and control physical resources efficiently
B. Procure equipment, materials, facilities, and infrastructure for the project
C. Train the team members in project skill sets
D. Define the roles and responsibilities of each team member

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/project-resource-management-according-to-the-pmbok/

QUESTION 510
Under which circumstances should multiple projects be grouped in a program?

A. When they are needed to accomplish a set of goals and objectives for an organization
B. When they have the same project manager and the same organizational unit
C. When they have the same scope, budget, and schedule
D. When they are from the same unit of the organization

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 511
How should a project manager plan communications for a project which has uncertain requirements?

A. Include stakeholders in project meetings and reviews, use frequent checkpoints, and co-locate team members only.
B. Invite customers to sprint planning and retrospective meetings, update the team quickly and on a daily basis, and use official communication channels.
C. Adopt social networking to engage stakeholders, issue frequent and short messages, and use informal communication channels.
D. Adopt a strong change control board process, establish focal points for main subjects, and promote formal and transparent communication. **Correct**

Answer: D

Section: Volume E

Explanation

Explanation/Reference:

QUESTION 512
Which is a list of organizational systems that may have an impact on a project?

A. Internal policies, company procedures, and organizational resources
B. Company culture, purchasing system, and project management information system
C. Organizational structure, governance framework, and management elements
D. Organizational process assets, enterprise environmental factors, and corporate knowledge

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.greycampus.com/opencampus/project-management-professional/organizational-structure

QUESTION 513
What are the inputs of the Estimate Costs process?

A. Project management plan, work performance data, enterprise environmental factors, and organizational process assets
B. Project management plan, project documents, enterprise environmental factors, and organizational process assets
C. Cost baseline, enterprise environmental factors, benefits management plan, and organizational process assets
D. Project management plan, enterprise environmental factors, basis of estimates, and organizational process assets

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://4squareviews.com/2018/05/16/6th-edition-pmbok-guide-process-7-2-estimate-costs-inputs/

QUESTION 514
When project requirements are documented in user stories then prioritized and refined just prior to construction, which approach is being used for scheduling?
A. Iterative scheduling with backlog

B. On-demand scheduling
C. Life cycle scheduling with backlog
D. Defining iterative activities

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 515
For which kind of quantitative risk analysis chart can a tornado diagram represent values?

A. Sensitivity analysis
B. Monte Carlo analysis
C. Expected monetary value analysis
D. Decision tree analysis

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://project-management-knowledge.com/definitions/t/tornado-diagram/

QUESTION 516
A project manager is preparing to meet with three crucial project stakeholders on a new project. Which tools and techniques can the project manager use to capture stakeholder interest?

A. Review stakeholder register and meeting
B. Data analysis and communication skills
C. Data gathering and data analysis
D. Communication skills and cultural awareness

Correct Answer: D
Section: Volume E

QUESTION 517
A team was hired to develop a next generation drone. The team created a prototype and sent it to the customer for testing. The feedback was used to refine the requirements.

What technique is the team using?

A. Early requirements gathering
B. Feedback analysis
C. Progressive elaboration
D. Requirements documentation

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Reference: https://project-management-knowledge.com/definitions/p/8-prototypes/

QUESTION 518
Responsible, accountable, consult and inform (RACI) is an example of which of the following?

A. Text-oriented format
B. Resource management plan
C. Organization chart
D. Responsibility assignment matrix (RAM)

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://thedigitalprojectmanager.com/raci-chart-made-simple/

QUESTION 519
In which of the Risk Management processes is the project charter used as an input?
A. Plan Risk Responses
B. Implement Risk Responses

Explanation

Explanation/Reference:
C. Plan Risk Management
D. Perform Quantitative Risk Responses

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/project-risk-management-according-to-the-pmbok/

QUESTION 520
Which of the following must be included in the risk register when the project manager completes the Identify Risks process?

A. List of identified risks, potential risk owners, list of potential risk response
B. List of identified risks, list of causes, list of risk categories
C. Short risk titles, list of potential risk owners, list of impacts on objectives
D. List of activities affected, list of potential risk responses, list of causes

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 521
What are the objectives of initiation processes?

A. Initiation processes are performed in order to develop the project charter and identify stakeholders.
B. Initiation processes are performed in order to obtain budget approval for a project or phase and approve scope with customers.
C. Initiation processes are performed to identify business objectives for a project or phase and identify stakeholders' goals.
D. Initiation processes are performed to map initial requirements for a project or phase and prioritize them with stakeholders.

Correct Answer: C
Section: Volume E

Reference: https://smallbusiness.chron.com/initiating-process-project-management-36001.html

QUESTION 522
A construction project is underway, and during the progress review the painter complained that the task could not be started because the mason has not finished the plastering job. What kind of relationship between the tasks impacted the painting work?

A. Finish-to-Finish (FF)
B. Start-to-Finish (SF)
C. Finish-to-Start (FS)
D. Start-to-Start (SS)

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://en.wikipedia.org/wiki/Dependency_(project_management)

QUESTION 523
A project manager has just completed several brainstorming sessions and has gathered the data to show commonality and differences in one single place. What technique was followed?

A. Collective decision making
B. Multicriteria decision analysis
C. Mind mapping
D. Affinity diagram

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://mosaicprojects.com.au/WhitePapers/WP1068_Data_Gathering.pdf

QUESTION 524
Which of these is true of a project schedule?

Explanation

Explanation/Reference:
A. Project Schedule Management processes are discrete and don't overlap
B. Project schedules should typically allow for flexibility during the project
C. Project schedules must always contain milestone lists and activity attributes
D. Project schedules which are iterative can extend longer than four weeks

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 525
The primary purpose of the stakeholder register is to:

A. Record stakeholder issues on the project
B. Maintain lessons learned earlier in the project
C. Maintain a list of all project stakeholders
D. Document change requests and their status

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://pmstudycircle.com/2012/06/stakeholder-register-project-management/

QUESTION 526
Work performance information is an input to which of the following processes?

A. Direct and Manage Project Work
B. Monitor and Control Project Work
C. Control Scope
D. Validate Scope

Correct Answer: B
Section: Volume E
Reference: https://pmstudycircle.com/2013/10/work-performance-data-wpd-and-work-performance-information-wpi/

QUESTION 527
Why is tailoring in a project necessary?

A. Requirements keep changing
B. An artifact must be produced
C. A tool or technique is required
D. Each project is unique

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.greycampus.com/opencampus/project-management-professional/project-lifecycle-and-tailoring

QUESTION 528
The project team is brainstorming on approaches to deliver the upcoming product launch for which the project has been chartered. The project manager is laying out hybrid, adaptive, iterative methods. What is the team trying to address?

A. Co-location
B. Life-cycle
C. Diversity
D. Management

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://blog.iil.com/project-management-life-cycles-explained-based-on-the-pmbok-guide-sixth-edition/

QUESTION 529

Explanation

Explanation/Reference:
What can the project manager find among the factors that could lead a project to be tailored?
A. Company culture
B. Return on investment
C. Earned Value
D. Schedule Performance Index

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 530
What is the order of the stages of project team development?

A. Forming, Storming, Norming, Performing, and Adjourning
B. Storming, Forming, Norming, Performing, and Adjourning
C. Adjourning, Forming, Storming, Norming, and Performing
D. Forming, Storming, Performing, Norming, and Adjourning

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://project-management.com/the-five-stages-of-project-team-development/

QUESTION 531
Project managers play a key role in performing integration on a project. What are the three different levels of integration?

A. Process, cognitive, and context
B. Complexity, understand, and change
C. Interact, insight, and leadership
D. Communication, knowledge, and value

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:
Reference: https://4squareviews.com/2017/10/28/6th-edition-pmbok-guide-the-pmi-talent-triangle/

QUESTION 532
Using the following information and assuming that the project team will work a standard 40-hour work week:

Activity A has a duration of 10 days.
Activity B has a duration of 10 days and its predecessor is Activity A.
Activity C has a duration of 15 days and its predecessor is Activity A.
Activity D has a duration of 10 days and its predecessor is Activity B and C.
Activity E has a duration of 10 days and its predecessor is Activity D. Activity F has a duration of 15 days and its predecessor is Activity D.

What is the critical path of the project?

A. ABDE
B. ACDF
C. ABDF
D. ACDE

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 533
The document that guides project execution, monitoring and control, and closure is called:

A. The project charter
B. The project management plan
C. The integration plan
D. The execution plan

Correct Answer: B
Section: Volume E

Explanation
Explanation/Reference:
Reference: https://projectmanagementacademy.net/articles/five-traditional-process-groups/

QUESTION 534
What charts and figures should project managers use during the Perform Quantitative Risk Analysis process?

A. Tornado diagrams and influence diagrams
B. Detectability bubble charts and probability and impact matrix
C. Hierarchical charts and burndown charts
D. Flow charts and responsible, accountable, consult, and inform (RACI) charts

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 535
At the beginning of an iteration, the team will work to determine how many of the highest-priority items on the backlog list can be delivered within the next iteration. Which of the following activities is done first?

A. Create Work Breakdown Structure (WBS)
B. Create Scope Baseline
C. Collect Requirements
D. Define Scope

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 536

A project manager is launching an information system to provide a lessons learned database. This action is necessary for recipients to access content at their own discretion. Which communication method is described?

A. Push communication
B. Pull communication
C. Interactive communication
D. Stakeholder communication

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 537
A project report completed an earned value (EV) of US $45 for work with an actual cost (AC) of US $40. What is the cost performance index (CPI)?

A. 0.88
B. 1.12
C. 0.58
D. 1.58

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 538
A project manager is writing a document that obligates the seller to provide the specified products, services, or results, and obligates the buyer to compensate the seller. This document represents a legal relationship that is subject to remedy in the courts.

Which document is described?

A. General terms
B. Contract agreement
C. Change request
D. Statement of work

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Reference: http://www.forum.izenbridge.com/viewtopic.php?t=1603

QUESTION 539
A firm contracted an event management company to conduct the annual sales day event. The agreement that the event management company will charge the firm for the actuals and receive 8% of the total cost. What type of contract is this?

A. Time and material (T&M)
B. Fixed price incentive fee (FPIF)
C. Cost plus fixed fee (CPFF)
D. Cost plus award fee (CPAF)

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 540
What organizational asset can influence the Plan Risk Management process?

A. Corporate policies and procedures for social media, ethics, and security
B. Organizational risk policy
C. Stakeholder register templates and instructions
D. Organizational communication requirements

Correct Answer: B

Section: Volume E

Explanation

Explanation/Reference:

QUESTION 541
What is the role of project management in terms of organizational strategy?
A. Project management aligns initiatives, prioritizes work, and provides resources
B. Project management provides the strategic vision for an organization to achieve its goals
C. Project management enabled the achievement of organizational goals and objectives
D. Project management harmonizes components and controls interdependencies to realize specific benefits

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 542
In a large organization, with projects of different types and sizes, what kind of approach or method would be best to use?

A. Predictive
B. Adaptive
C. A mix
D. Agile

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 543

A functional manager is delegating a key project to a project team without a project manager. Which communication method will be most effective?

A. Interactive
B. Push
C. Verbal
D. Oral

Correct Answer: A
Section: Volume E
Explanation
Explanation/Reference:

QUESTION 544
A project manager is monitoring and recording results of executing the quality management activities to assess performance and ensure the project outputs are complete, correct, and meet customer expectations. Which output is the project manager using?

A. Approved change requests
B. Verified deliverables
C. Lessons learned
D. Work performance data

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 545
What is the purpose of tailoring in project management?

A. To select an appropriate team and its competencies for the project
B. To select appropriate processes, tools & methodology for the project
C. To ensure agile practices are embedded into project phases
D. To let management know the project management will be done efficiency

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 546
During the execution phase of a project a defect is found. The project manager takes responsibility and with the correct documentation, begins the task necessary to repair the defect. What process was applied?

A. Change request
B. Risk response
C. Risk management plan
D. Lessons learned

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 547
The Agile principle “welcome changing requirements, even late in development” relates to which agile manifesto?

A. Working software over comprehensive documentation

B. Individuals and interactions over processes and tools
C. Customer collaboration over contract negotiation
D. Responding to change over following a plan

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 548
Which conflict resolution technique produces the most lasting results?

A. Withdraw/avoid
B. Smooth/accommodate
C. Compromise/reconcile
D. Collaborate/problem solve

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://pmstudycircle.com/2012/01/best-conflict-resolution-technique/

QUESTION 549
In agile projects while performing scope management, what is the definition of requirements?

A. Metrics
B. Sprint
C. Charter
D. Backlog

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 550
Which of the following are processes associated with Project Cost Management?

A. Develop Costs, Estimate Costs, Determine Budget, Control Costs
B. Develop Budget, Determine Budget, Determine Risks, Control Costs
C. Plan Cost Management, Estimate Costs, Determine Budget, Control Costs
D. Plan Budget Management, Determine Budget, Create Cost Accounts, Control Costs

Correct Answer: C **Section: Volume E**

Explanation

Explanation/Reference:
Reference: https://blog.masterofproject.com/cost-management/

QUESTION 551
Directing another person to get from one to another using a known set of expected behaviors are the ability to lead a team and inspire them to do their jobs well is related to?

A. Influence and challenge
B. Innovation and administration
C. Leadership and management
D. Engagement and guidance

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 552

A project manager has to share a status report with a new stakeholder and is trying to determine the level of detail to include in the report. Which document best details the information the project manager needs to make this decision?

A. Organizational process assets
B. Change management plan
C. Communications management plan
D. Resource management plan

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 553
A project manager called for a team meeting to estimate the project effort. During the session, the team went on to identify all the deliverables and analyzed the related work. Each of the analyzed deliverables were estimated.

Which estimation method did the team use?
A. Rolling wave planning
B. Expert judgment
C. Decomposition
D. Data analysis

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 554
A project manager uses their networking skills to build agreement with a difficult stakeholder. What level of influence did the project manager apply?

A. Project level

B. Organizational level
C. Industry level
D. Influential level

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 555
Which of the following describes the similarities of the process groups and project life cycle?

A. The life cycle involves three project management process groups
B. Both provide a basic framework to manage the project
C. Each project must have a life cycle and all processes in the five process groups
D. The project life cycle is managed by executing the processes within the five process groups

Correct Answer: B
Section: Volume E
Explanation
Explanation/Reference:

QUESTION 556
A project team is discussing an upcoming planned product launch of a highly visible technologically advanced artificial intelligence tool. The team is debating the aspect of iterative and hybrid approaches. Which aspect of tailoring would this best represent?

A. Life cycle approaches
B. Resource availability
C. Project dimensions
D. Technology support

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 557
Due to today's competitive global market, organizations require more than technical management skills. Which of the following skills can support long-range strategic objectives that contribute to the bottom line?

A. Planning and risk management skills
B. Communication and time management skills
C. Business intelligence and leadership skills
D. Strategic and business management skills

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 558
Which of the following are components of the technical project management skill?
A. Ability to explain business aspects of the project, business strategy, goals and objectives, and business value
B. Ability to deal with people, to be collaborative, and to apply persuasion and negotiation
C. Ability to focus on relationships with people, inspire trust, and implement decisions and actions that support the business strategy
D. Ability to plan and prioritize, gather the right artifacts available for each project, and focus on critical success factors

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 559

A construction project team has just had an inevitable delay due to a natural calamity. What should the project manager do next?

A. Use expert judgment
B. Use organizational process assets
C. Consult the project management plan
D. Consult the risk register

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 560
Analyzing activity sequences, durations, resource requirements, and schedule constraints for project and monitoring and controlling relates to which process?

A. Develop Schedule
B. Control Schedule
C. Estimate Activity Durations
D. Define Activities

Correct Answer: A
Section: Volume E
Explanation
Explanation/Reference:
Reference: http://www.mypmps.net/en/mypmps/knowledgeareas/time/schedule-development.html

QUESTION 561
Stakeholder identification and engagement should begin during what phrase of the project?

A. After the project management is completed
B. After the stakeholder engagement plan is completed
C. As soon as the project charter has been approved
D. After the communications management plan is completed

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://pmstudycircle.com/2012/06/identify-stakeholders-project-management/

QUESTION 562
Which of the following is an example of tacit knowledge?

A. Risk register
B. Project requirements
C. Expert judgment
D. Make-or-buy analysis

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.pmi.org/learning/library/uncovering-tacit-knowledge-projects-7378

QUESTION 563
During which knowledge area stage would a project manager close all contracts appropriately and then close the phase?

A. Project Integration Management
B. Project Scope Management
C. Project Procurement Management
D. Project Resource Management

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 564
What tool should a project manager use to efficiently manage project resources?

A. List of project resources
B. Resource breakdown structure
C. Resources detailed in the project scope
D. Resource requirements

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 565
Which of the following best correspond to the organizational process assets (OPAs) that affect the project?

A. Policies and lessons learned from other projects
B. Information technology software and employee capability
C. Resource availability and employee capability
D. Marketplace conditions and legal restrictions

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
QUESTION 566
In an adaptive or agile life cycle, how are the customer and sponsor involved in the project scope management activities?

A. Involvement is needed only during project initiation
B. Minimal involvement of stakeholders is sufficient
C. They should be continuously engaged
D. They should be involved only during phase or deliverable reviews

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 567
Make-or-buy analysis is a tool and technique of which process?

A. Conduct Procurements
B. Plan Procurement Management
C. Analyze Procurements
D. Control Procurements

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:
Reference: https://4squareviews.com/2018/10/02/6th-edition-pmbok-guide-process-12-1-plan-procurement-management-tools-and-techniques-1/

QUESTION 568
Project reporting is a tool that is most closely associated with which process?

A. Communicate Plan
B. Manage Communications
C. Report Performance
D. Control Communications
Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.greycampus.com/opencampus/project-management-professional/communication-methods

QUESTION 569
A project manager is performing a specific process and has a list of accepted deliverables. One of the stakeholders points out that they have just reviewed the verified deliverables, and come up with the list of accepted deliverables. Which process is being referred to?

A. Control Quality
B. Validate Scope
C. Validate Quality
D. Control Scope

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:
Reference: https://pmstudycircle.com/2012/10/validated-deliverables-versus-accepted-deliverables/