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Sections
1. Volume A
2. Volume B

3. Volume C
4. Volume D
5. Volume E

Exam A

QUESTION 1
Change requests are processed for review and disposition according to which process?

A. Control Quality
B. Control Scope
C. Monitor and Control Project Work
D. Perform Integrated Change Control

Correct Answer: D
Section: Volume A

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 2
The review of a sellers 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. Payment systems.
D. Procurement performance reviews.

Correct Answer: D
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
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 3
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 4
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 5
An output of the Develop Project Team process is:

A. Organizational process assets.

B. Enterprise environmental factors updates.

C. Project staff assignments.

D. Organizational charts and position descriptions.

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 6
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 7
Which item is an example of personnel assessment?

A. Resource calendar
B. Tight matrix
C. Team-building activity
D. Focus group

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 8

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

QUESTION 9
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 10
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 11
Which stakeholder classification model groups stakeholders based on their level of authority and their active involvement in the project?

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

Correct Answer: A
Section: Volume A

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 12
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 13
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.; ・
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 14
Which process in Project Time Management includes reserve analysis as a tool or technique?

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

Correct Answer: C
Section: Volume A

・

Explanation

Explanation/Reference:
Explanation:
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

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 15
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 benefit 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 16
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 17
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 18
When a backward pass is calculated from a schedule constraint that is later than the early finish date that has been calculated during a forward pass calculation, this causes which type of total float?

A. Negative
B. Zero
C. Positive
D. Free

Correct Answer: C

Section: Volume A

Explanation

Explanation/Reference:
QUESTION 19
A reward can only be effective if it is:

A. Given immediately after the project is completed.
B. Something that is tangible.
C. Formally given during project performance appraisals.
D. Satisfying a need valued by the individual.

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 20
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 21
Using values such as scope, cost, budget, and duration or measures of scale such as size, weight, and complexity from a previous similar project as the basis for estimating the same parameter or measurement for a current project describes which type of estimating?

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

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:

QUESTION 22
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 23
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 24
Which process involves defining, preparing, and coordinating all subsidiary plans and integrating them into a comprehensive plan?

A. Direct and Manage Project Work
B. Develop Project Management Plan
C. Plan Quality Management
D. Monitor and Control Project Work

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
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 25
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 26
A strengths, weaknesses, opportunities, and threats (SWOT) analysis is a tool or technique used in which process?

A. Identify Risks
B. Control Risks
C. Perform Quantitative Risk Analysis
D. Perform Qualitative Risk Analysis

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
11.2.2.6 SWOT Analysis
This technique examines the project from each of the strengths, weaknesses, opportunities, and threats (SWOT) perspectives to increase the breadth of identified risks by including internally generated risks. The technique starts with identification of strengths and weaknesses of the organization, focusing on either the project, organization, or the business area in general. SWOT analysis then identifies any opportunities for the project that arise from organizational strengths, and any threats arising from organizational weaknesses. The analysis also examines the degree to which organizational strengths offset threats, as well as identifying opportunities that may serve to overcome weaknesses.

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 27
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 28

Which input to Collect Requirements is used to identify stakeholders who can provide information on requirements?

A. Stakeholder register
B. Scope management plan
C. Stakeholder management plan
D. Project charter

Correct Answer: A
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: 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 29
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 30

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 repair—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 31
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 32
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 33
The ability to influence cost is greatest during which stages of the project?

A. Early
B. Middle
C. Late
D. Completion

Correct Answer: A
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 34
Which process involves developing an approximation of the monetary resources needed to complete project activities?

A. Estimate Costs
B. Control Costs
C. Determine Budget
D. Plan Cost Management
Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
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 35
Which tool or technique is used in the Develop Project Management Plan process?

A. Project management information system (PMIS)

B. Project charter

C. Quality assurance

D. Expert judgment

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: 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
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 36

Lessons learned are created and project resources are released in which Process Group?

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

Correct Answer: C
Section: Volume A
Explanation

Explanation/Reference:

QUESTION 37
When should quality planning be performed?

A. While developing the project charter
B. In parallel with the other planning processes
C. As part of a detailed risk analysis
D. As a separate step from the other planning processes

Correct Answer: B
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
Quality planning should be performed in parallel with the other planning processes. For example, proposed changes in the deliverables to meet identified quality standards may require cost or schedule adjustments and a detailed risk analysis of the impact to plans.
The quality planning techniques discussed here are those used most frequently on projects. There are many others that may be useful on certain projects or in some application areas.

QUESTION 38
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 39
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 40
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 41
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 42
The organization's perceived balance between risk taking and risk avoidance is reflected in the risk:

A. Responses
B. Appetite
C. Tolerance
D. Attitude

Correct Answer: A
Section: Volume A
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 43
An output of the Manage Stakeholder Engagement process is:

A. change requests
B. enterprise environmental factors
C. the stakeholder management plan
D. the change log

Correct Answer: A
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
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 skills3. Management skills

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

QUESTION 44
Which process numerically analyzes the effect of identified risks on overall project objectives?

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

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
Process: 11.4 Perform Quantitative Risk Analysis
Definition: The process of numerically analyzing the effect of identified risks on overall project objectives.

![VCEplus logo](https://vceplus.com/)
Key Benefit: The key benefit of this process is that it produces quantitative risk information to support decision making in order to reduce project uncertainty.

Inputs
1. Risk management plan
2. Cost management plan
3. Schedule management plan
4. Risk register
5. Enterprise environmental factors
6. Organizational process assets

Tools & Techniques
1. Data gathering and representation techniques
2. Quantitative risk analysis and modeling techniques
3. Expert judgment

Outputs
1. Project documents updates

QUESTION 45
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 46
Reserve analysis is a tool and technique used in which process?

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

Correct Answer: D
Section: Volume A
Explanation

Explanation/Reference:
Explanation:
11.6.2.5 Reserve Analysis

Throughout execution of the project, some risks may occur with positive or negative impacts on budget or schedule contingency reserves. Reserve analysis compares the amount of the contingency reserves remaining to the amount of risk remaining at any time in the project in order to determine if the remaining reserve is adequate.

Process: 11.6 Control Risks
Definition: The process of implementing risk response plans, tracking identified risks, monitoring residual risks, identifying new risks, and evaluating risk process effectiveness throughout the project.
Key Benefit: The key benefit of this process is that it improves efficiency of the risk approach throughout the project life cycle to continuously optimize risk responses.
Inputs
1. Project management plan
2. Risk register
3. Work performance data
4. Work performance reports

Tools & Techniques
1. Risk reassessment
2. Risk audits
3. Variance and trend analysis
4. Technical performance measurement
5. **Reserve analysis**
6. Meetings

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

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 47

Updates to organizational process assets such as procurement files, deliverable acceptances, and lessons learned documentation are typical outputs of which process?

A. Close Project or Phase
B. Conduct Procurements
C. Control Procurements
D. Close Procurements

Correct Answer: D
Section: Volume A
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
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 48
Risk categorization is a tool or technique used in which process?

A. Plan Risk Responses
B. Plan Risk Management
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 49
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 50
An input to Conduct Procurements is:

A. Independent estimates.
B. Selected sellers.
C. Seller proposals.
D. Resource calendars.

Correct Answer: C
Section: Volume A

Explanation

Explanation/Reference:
Explanation:
12.2.1.4 Seller Proposals
Seller proposals, prepared in response to a procurement document package, form the basic information that will be used by an evaluation body to select one or more successful bidders (sellers).

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 51
During which process does the project team receive bids and proposals?

A. Conduct Procurements
B. Plan Procurements
C. Estimate Costs
D. Control Budget

Correct Answer: A
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 52
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 53
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 54
The purpose of the Project Communications Management Knowledge Area is to:

A. Monitor and control communications throughout the entire project life cycle.
B. Maintain an optimal flow of information among all project participants.
C. Develop an appropriate approach for project communications.
D. Ensure timely and appropriate collection of project information.

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

Explanation:
10. Project Communications Management
Project Communications Management includes the processes that are required to **ensure timely and appropriate planning, collection**, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information.

QUESTION 55
Processes in the Initiating Process Group may be completed at the organizational level and be outside of the project's:

A. Level of control.

B. Communication channels.
C. Scope.
D. Strategic alignment.

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 56
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 57
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 58

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 59
Which quality tool may prove useful in understanding and estimating the cost of quality in a process?

A. Checksheets
B. Histograms
C. Flowcharts
D. Control charts

Correct Answer: C
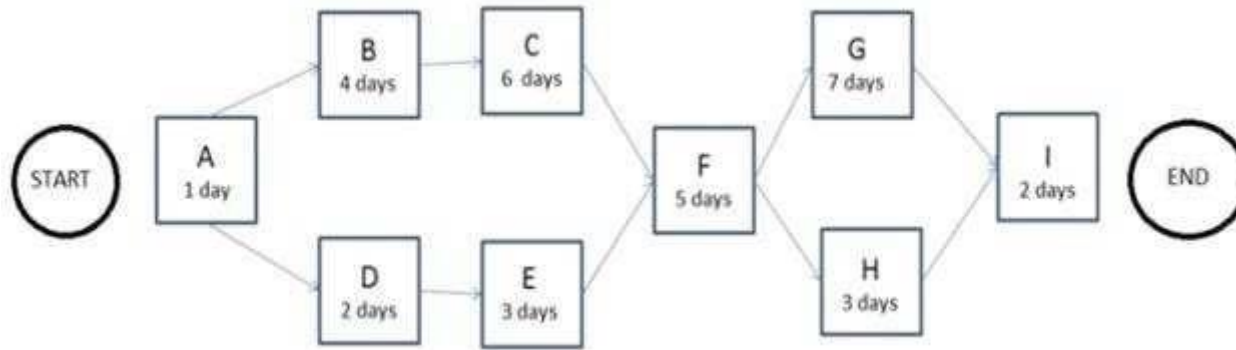**Section: Volume B**

Explanation

Explanation/Reference:

QUESTION 60
The following is a network diagram for a project.

The total float for the project is how many days?

A. 5
B. 9
C. 12
D. 14

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 61
The following is a network diagram for a project.
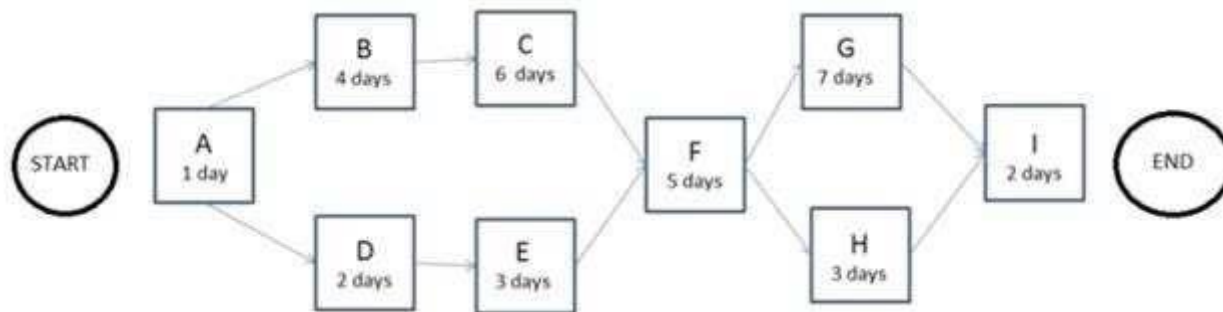
The free float for Activity E is how many days?

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

Correct Answer: C
Section: Volume B

Explanation
Explanation/Reference:

QUESTION 62
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 63
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 64
Which output of Project Cost Management consists of quantitative assessments of the probable costs required to complete project work?

A. Activity cost estimates
B. Earned value management
C. Cost management plan
D. Cost baseline

Correct Answer: A
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.

QUESTION 65
While processes in the Planning Process Group seek to collect feedback and define project documents to guide project work, organizational procedures dictate when the project planning:

A. ends.
B. begins.
C. delays.
D. deviates.

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 66
A stakeholder expresses a need not known to the project manager. The project manager most likely missed a step in which stakeholder management process?

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

Correct Answer: A

Section: Volume B

Explanation

Explanation/Reference:
Explanation:
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
1. Stakeholder management plan
2. Project documents updates

QUESTION 67
Skills necessary for project management such as motivating to provide encouragement; listening actively; persuading a team to perform an action; and summarizing, recapping, and identifying next steps are known as:
A. organizational skills

B. technical skills

C. communication skills

D. hard skills

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:

Negotiation, influencing and problem-solving skills are all important for a project manager to possess; however, good communication skills are the most important skills a project manager.

QUESTION 68
Which tools or techniques are used during the Close Project or Phase process?

A. Reserve analysis and expert judgment
B. Facilitation techniques and meetings
C. Expert judgment and analytical techniques
D. Performance reviews and meetings

Correct Answer: C
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).

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 69
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 70
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 71

The zero duration of milestones in project planning occurs because milestones:

A. Are unpredictable and challenge the Plan Schedule Management process.
B. Occur at random times in the project plans.
C. Represent a moment in time such as a significant project point or event.
D. Represent both significant and insignificant points in the project and are difficult to anticipate.

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 72

Which type of graphic is displayed below?
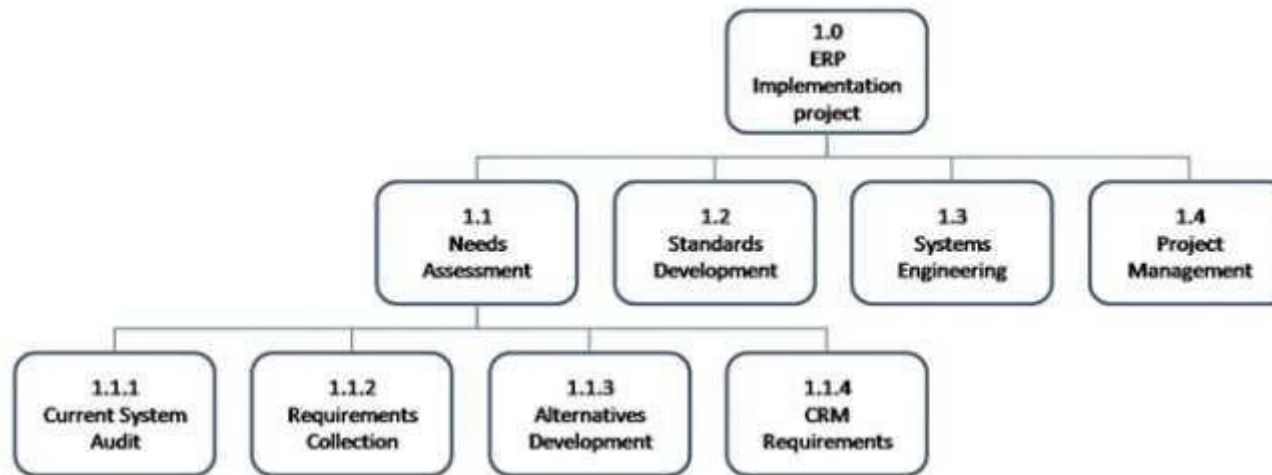
A. Work breakdown structure
B. Context diagram
C. Control chart
D. Pareto diagram

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 73
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 74
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 75
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 76
The following is a network diagram for a project.
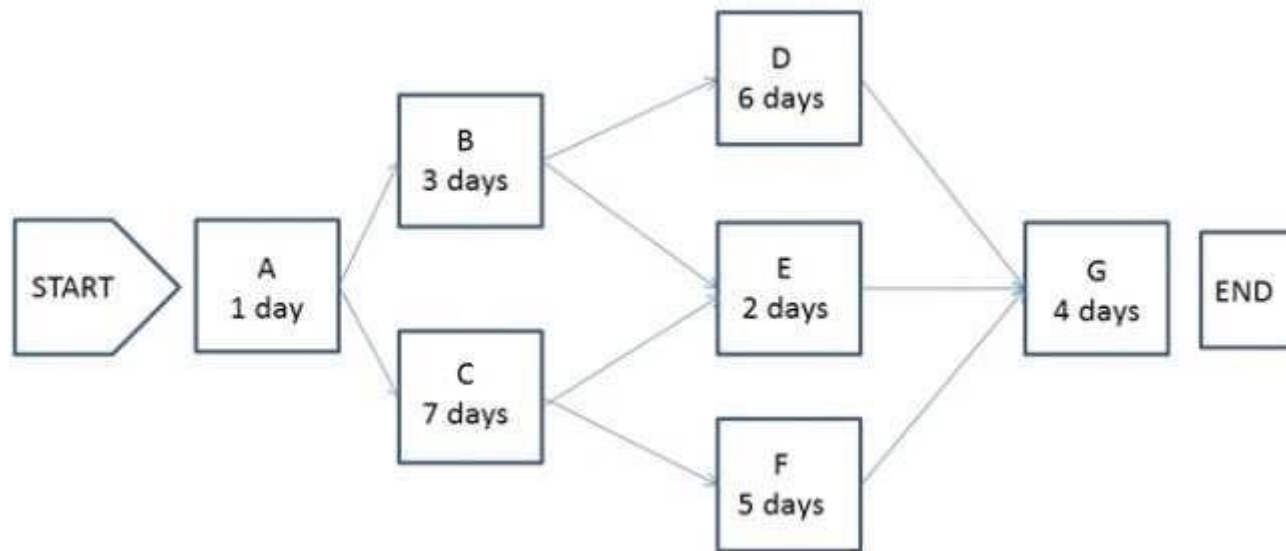
The shortest non-critical path for the project is how many days in duration?

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

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 77
The following is a network diagram for a project.
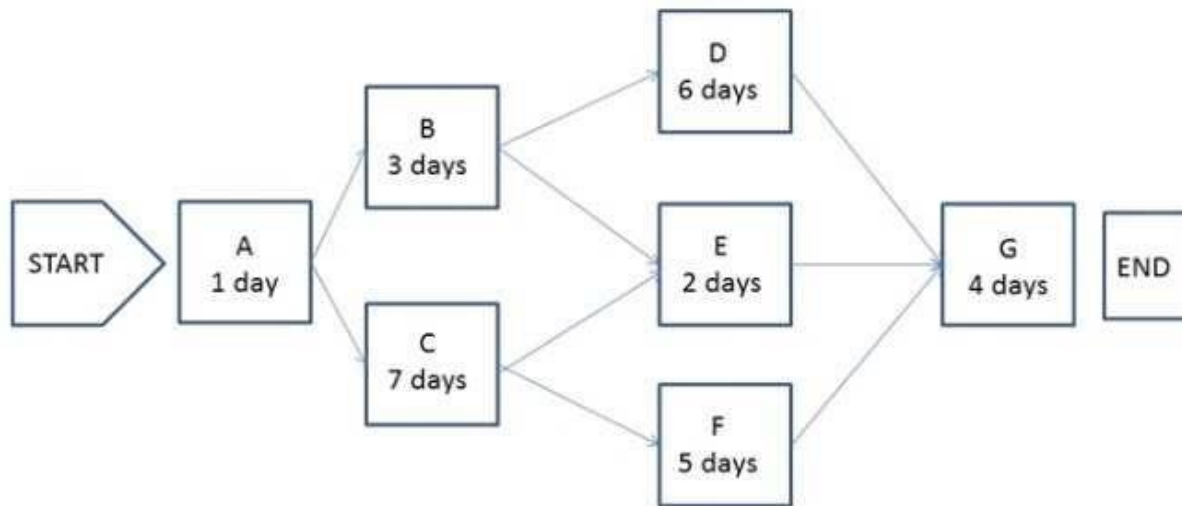
The critical path for the project is how many days in duration?

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

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 78
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 79
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 80
A graphic display of project team members and their reporting relationships is known as a:

A. Resource calendar.
B. Project organization chart.
C. Resource breakdown structure (RBS).
D. Responsibility assignment matrix (RAM).

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
Project organization charts. A project organization chart is a graphic display of project team members and their reporting relationships. It can be formal or informal, highly detailed or broadly framed, based on the needs of the project. For example, the project organization chart for a 3,000-person disaster response team will have greater detail than a project organization chart for an internal, twenty-person project.

QUESTION 81
Which item is a cost of conformance?

A. Training
B. Liabilities
C. Lost business
D. Scrap

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 82
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 83
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 84
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 85
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 86
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 87
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 repair—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 88
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 89
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 90
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 91
Plan Communications Management develops an approach and plan for project communications based on stakeholders' needs and requirements and:

A. Available organizational assets

B. Project staff assignments
C. Interpersonal skills
D. Enterprise environmental factors

Correct Answer: A
Section: Volume B

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 92
Perform Integrated Change Control is the process of:

A. Reviewing, approving, and managing all change requests
B. Facilitating change management, manuals, or automation tools
C. Comparing actual results with planned results in order to expand or change a project
D. Documenting changes according to the change control system by the change control board

Correct Answer: A
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 93
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 94
Which action is included in the Control Costs process?

A. Identify how the project costs will be planned, structured, and controlled
B. Determine policies, objectives, and responsibilities to satisfy stakeholder needs
C. Develop an approximation of the monetary resources needed to complete project activities
D. Monitor cost performance to isolate and understand variances from the approved cost baseline

Correct Answer: D
Section: Volume B
Explanation

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: 7.4 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 95
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 96
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 97
The risk response strategy in which the project team acts to reduce the probability of occurrence or impact of a risk is known as:

A. exploit
B. avoid
C. mitigate
D. share

Correct Answer: C
Section: Volume B

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 98
Which process is conducted from project inception through completion and is ultimately the responsibility of the project manager?

A. Control Quality
B. Monitor and Control Project Work
C. Control Scope
D. Perform Integrated Change Control
Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:

Process: 4.5 Perform Integrated Change Control
Definition: 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 99
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 100
An element of the modern quality management approach used to achieve compatibility with the International Organization for Standardization (ISO) is known as:

A. Forecasting,
B. Brainstorming.
C. Historical databases.
D. Cost of quality.

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
Cost of quality (COQ). Cost of quality refers to the total cost of the conformance work and the nonconformance work that should be done as a compensatory effort because, on the first attempt to perform that work, the potential exists that some portion of the required work effort may be done or has been done incorrectly. The costs for quality work may be incurred throughout the deliverable's life cycle.
For example, decisions made by the project team can impact the operational costs associated with using a completed deliverable. Post-project quality costs may be incurred because of product returns, warranty claims, and recall campaigns. Therefore, because of the temporary nature of projects and the potential benefits that may be derived from reducing the post-project cost of quality, sponsoring organizations may choose to invest in product quality improvement. These investments generally are made in the areas of conformance work that act to prevent defects or act to mitigate the costs of defects by inspecting out nonconforming units.

QUESTION 101
Which items are components of a project management plan?

A. Change management plan, process improvement plan, and scope management plan
B. Agreements, procurement management plan, and work performance information
C. Schedule management plan, project schedule, and resource calendars
D. Scope baseline, project statement of work, and requirements traceability matrix

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 102
Which project document is updated in the Control Stakeholder Engagement process?

A. Project reports
B. Issue log
C. Lessons learned documentation
D. Work performance information

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
13.4.1.2 Issue Log
Described in Section 13.3.3.1. The issue log is updated as new issues are identified and current issues are resolved.
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.

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 103
A project manager should communicate to stakeholders about resolved project issues by updating the:

A. project records
B. project reports
C. stakeholder notifications
D. stakeholder register

Correct Answer: C
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
10.2.3.4 Organizational Process Assets Updates
The organizational process assets, which may be updated include, but are not limited to:

・**Stakeholder notifications.** Information may be provided to stakeholders about resolved issues, approved changes, and general project status.

・**Project reports.** Formal and informal project reports describe project status and include lessons learned, issue logs, project closure reports, and outputs from other Knowledge Areas (Sections 4-13).
・**Project presentations.** The project team provides information formally or informally to any or all of the project stakeholders. The information and presentation method should be relevant to the needs of the audience.
・**Project records.** Project records may include correspondence, memos, meeting minutes, and other documents describing the project. This information should, to the extent possible and appropriate, be maintained in an organized manner. Project team members can also maintain records in a project notebook or register, which could be physical or electronic.
・**Feedback from stakeholders.** Information received from stakeholders concerning project operations is distributed and used to modify or improve future performance of the project.

· **Lessons learned documentation.** Documentation includes the causes of issues, reasoning behind the corrective action chosen, and other types of lessons learned about communications management. Lessons learned need to be documented and distributed so that it becomes part of the historical database for both the project and the performing organization.

QUESTION 104

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 105
Progressively elaborating high-level information into detailed plans is performed by the:

A. project management office
B. portfolio manager
C. program manager
D. project manager

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 106
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 107
The chart below is an example of a:

ID	Requirements Description	Project Objectives	WBS Deliverables	Product Design	Product Development	Test Cases
001						
002						
003						

A. Responsibility assignment matrix (RAM)
B. Work breakdown structure (WBS)
C. RACI chart
D. Requirements traceability matrix

Correct Answer: D
Section: Volume B
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 108
Which Perform Quality Assurance tool or technique is used to identify a problem, discover the underlying causes that lead to it, and develop preventative actions?

A. Inspection
B. Quality audits
C. Design of experiments
D. Root cause analysis

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
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.

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 109
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, web-based 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 110
In which phase of team building activities do team members begin to work together and adjust their work habits and behavior to support the team?

A. Performing
B. Storming

C. Norming

D. Forming

Correct Answer: C
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
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.

QUESTION 111
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 112
Which is an enterprise environmental factor?

A. Marketplace conditions
B. Policies and procedures
C. Project files from previous projects
D. Lessons learned from previous projects

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:
QUESTION 113
Project Stakeholder Management focuses on:

A. project staff assignments
B. project team acquisition
C. managing conflicting interests
D. communication methods

Correct Answer: C
Section: Volume B

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 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
The purpose of developing a project scope management plan is to:

A. Manage the timely completion of the project.
B. Ensure that the project includes all of the work required.

C. Make sure the project will satisfy the needs for which it was begun.

D. Reduce the risk of negative events in the project.

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 116
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 117

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 cost performance index (CPI) for Task 2?

A. 0.8
B. 1
C. 1.25
D. 1.8

Correct Answer: C
Section: Volume B

Explanation
Explanation/Reference:

QUESTION 118
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 variance (SV) for Task 8?

A. -2,000
B. -1,000
C. 1,000
D. 2,000

Correct Answer: B
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 119
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 cost variance (CV) for Task 6?

A. -2,000
B. 0
C. 1,000
D. 2,000

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 120

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 121
One of the key benefits of the Plan Human Resource Management process is that it:

A. outlines team selection guidelines and team member responsibilities.
B. establishes project roles and responsibilities.
C. improves teamwork, interpersonal skills, and competencies.
D. provides an accurate appraisal of team member performance.

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
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 122
Which Define Activities tool or technique is used for dividing and subdividing the project scope and project deliverables into smaller, more manageable parts?

A. Decomposition
B. Inspection
C. Project analysis
D. Document analysis

Correct Answer: A
Section: Volume B
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.

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 123
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 124
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 125
In the Define Activities process, the schedule management plan is used to:

A. Capture the lessons learned from other projects for comparison.
B. Contain the standard activity list.
C. Document and support the project change requests.
D. Prescribe the level of detail needed to manage the work.

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
6.1.3.1 Schedule Management Plan
A component of the project management plan that establishes the criteria and the activities for developing, monitoring, and controlling the schedule. The schedule management plan may be formal or informal, highly detailed or broadly framed, based upon the needs of the project, and includes appropriate control thresholds. For example, the schedule management plan can establish the following:
‧**Project schedule model development.** The scheduling methodology and the scheduling tool to be used in the development of the project schedule model are specified.
‧**Level of accuracy.** The acceptable range used in determining realistic activity duration estimates is specified and may include an amount for contingencies.
‧**Units of measure.** Each unit used in measurements (such as staff hours, staff days, or weeks for time measures, or meters, liters, tons, kilometers, or cubic yards for quantity measures) is defined for each of the resources.
‧**Organizational procedures links.** The WBS (Section 5.4) provides the framework for the schedule management plan, allowing for consistency with the estimates and resulting schedules.

· **Project schedule model maintenance.** The process used to update the status and record progress of the project in the schedule model during the execution of the project is defined.

· **Control thresholds.** Variance thresholds for monitoring schedule performance may be specified to indicate an agreed-upon amount of variation to be allowed before some action needs to be taken. Thresholds are typically expressed as percentage deviations from the parameters established in the baseline plan.

· **Rules of performance measurement.** Earned value management (EVM) rules or other physical measurement rules of performance measurement are set. For example, the schedule management plan may specify:

○○ Rules for establishing percent complete,

○○ Control accounts at which management of progress and schedule will be measured,

○○ Earned value measurement techniques (e.g., baselines, fixed-formula, percent complete, etc.) to be employed (for more specific information, refer to the *Practice Standard for Earned Value Management*) [9],

○○ Schedule performance measurements such as schedule variance (SV) and schedule performance index (SPI) used to assess the magnitude of variation to the original schedule baseline.

· **Reporting formats.** The formats and frequency for the various schedule reports are defined.

· **Process descriptions.** Descriptions of each of the schedule management processes are documented.

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
1. Scope baseline
2. Enterprise environmental factors
3. 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 126
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 127
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, web-based 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 128
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 129
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 130
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 131
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 132

The cost baseline and project funding requirements are outputs of which process in Project Cost Management?

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

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
7.3.3.1 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 133
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 134
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 135
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 136
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 137
A project team member agrees to change a project deliverable after a conversation with an external stakeholder. It is later discovered that the change has had an adverse effect on another deliverable. This could have been avoided if the project team had implemented:

A. Quality assurance.
B. A stakeholder management plan.
C. Project team building.
D. Integrated change control.

Correct Answer: D
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 138
The process of defining how the project scope will be validated and controlled is known as:

A. Define Scope.
B. Develop Project Management Plan.
C. Plan Scope Management.
D. Plan Quality Management.

Correct Answer: C
Section: Volume B
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
1. Scope management plan
2. Requirements management plan

QUESTION 139
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 140
The methodology that combines scope, schedule, and resource measurements to assess project performance and progress is known as:

A. Earned value management.

B. Forecasting.
C. Critical chain methodology.
D. Critical path methodology.

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
7.4.2.1 Earned Value Management
Earned value management (EVM) is a methodology that combines scope, schedule, and resource measurements to assess project performance and progress. It is a commonly used method of performance measurement for projects. It integrates the scope baseline with the cost baseline, along with the schedule baseline, to form the performance measurement baseline, which helps the project management team assess and measure project performance and progress. It is a project management technique that requires the formation of an integrated baseline against which performance can be measured for the duration of the project.

QUESTION 141
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 142
A special type of bar chart used in sensitivity analysis for comparing the relative importance of the variables is called a:

A. triangular distribution
B. tornado diagram
C. beta distribution
D. fishbone diagram

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:
Explanation:
11.4.2.2 Quantitative Risk Analysis and Modeling Techniques page 337
Commonly used techniques use both event-oriented and project-oriented analysis approaches, including:

• **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 figure, each uncertainty contains a horizontal bar and is ordered vertically to show uncertainties with a decreasing spread from the base values.

QUESTION 143
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 144
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 145
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 146
In a typical project, project managers spend most of their time:

A. Estimating

B. Scheduling
C. Controlling
D. Communicating

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
QUESTION 147
An issue log is an input to which Project Human Resource Management process?

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

Correct Answer: A
Section: Volume B

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.

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 148
The component of the risk management plan that documents how risk activities will be recorded is called:

A. tracking
B. scoping
C. timing
D. defining

Correct Answer: A
Section: Volume B

Explanation

Explanation/Reference:

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
Which basic quality tool explains a change in the dependent variable in relationship to a change observed in the corresponding independent variable?

A. Cause-and-effect diagram
B. Histogram
C. Control chart
D. Scatter diagram

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
• *Scatter diagrams*, plot ordered pairs (X, Y) and are sometimes called correlation charts because they seek to explain a change in the dependent variable, Y, in relationship to a change observed in the corresponding independent variable, X. The direction of correlation may be proportional (positive correlation), inverse (negative correlation), or a pattern of correlation may not exist (zero correlation). If correlation can be established, a regression line can be calculated and used to estimate how a change to the independent variable will influence the value of the dependent variable.
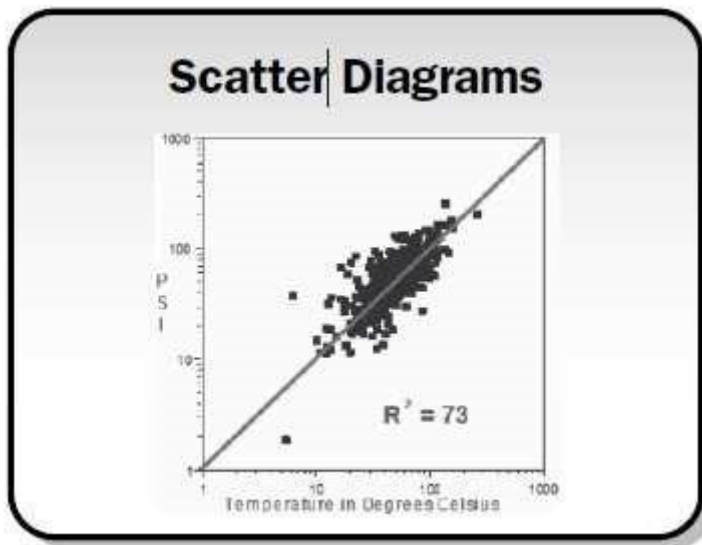
QUESTION 151
High-level project risks are included in which document?

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 152
The scope management plan and scope baseline are contained in:

A. organizational process assets
B. a requirements traceability matrix
C. the project charter
D. the project management plan

Correct Answer: D
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 153
Projects that share common outcomes, collective capability, knowledge, or skills are often grouped into a:

A. portfolio
B. program
C. selection
D. sub portfolio

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 154
A project requires a component with well-understood specifications. Performance targets are established at the outset, and the final contract price is determined after completion of all work based on the seller's performance. The most appropriate agreement with the supplier is:

A. Cost Plus Incentive Fee (CPIF).
B. Fixed Price Incentive Fee (FPIF).
C. Cost Plus Award Fee (CPAF).
D. Fixed Price with Economic Price Adjustment (FP-EPA).

Correct Answer: B
Section: Volume B
Explanation
Explanation/Reference:
Explanation:
12.1.1.9 Organizational Process Assets
Described in Section 2.1.4. The various types of contractual agreements used by the organization also influence decisions for the Plan Procurement Management process. The organizational process assets that influence the Plan Procurement Management process include, but are not limited to:
• Formal procurement policies, procedures, and guidelines. Most organizations have formal procurement policies and buying organizations. When such procurement support is not available, the project team should supply both the resources and the expertise to perform such procurement activities.
• Management systems that are considered in developing the procurement management plan and selecting the contractual relationships to be used.
• An established multi-tier supplier system of prequalified sellers based on prior experience.
All legal contractual relationships generally fall into one of two broad families: either fixed-price or cost reimbursable. Also, there is a third hybrid type commonly in use called the time and materials contract. The more popular contract types in use are discussed below as discrete types, but in practice it is not unusual to combine one or more types into a single procurement.
• **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.
○○ *Firm Fixed Price Contracts (FFP)*. The most commonly used contract type is the FFP. It is favored by most buying organizations because the price for goods is set at the outset and not subject to change unless the scope of work changes. Any cost increase due to adverse performance is the responsibility of the seller, who is obligated to complete the effort. Under the FFP contract, the buyer should precisely specify the product or services to be procured, and any changes to the procurement specification can increase the costs to the buyer.
○○ *Fixed Price Incentive Fee Contracts (FPIF)*. This fixed-price arrangement gives the buyer and seller some flexibility in that it allows for deviation from performance, with financial incentives tied to achieving agreed upon metrics. Typically such financial incentives are related to cost, schedule, or technical performance of the seller. Performance targets are established at the outset, and the final contract price is determined after completion of all work based on the

seller's performance. Under FPIF contracts, a price ceiling is set, and all costs above the price ceiling are the responsibility of the seller, who is obligated to complete the work.

○○ *Fixed Price with Economic Price Adjustment Contracts (FP-EPA)*. This contract type is used whenever the seller's performance period spans a considerable period of years, as is desired with many long-term relationships. It is a fixed-price contract, but with a special provision allowing for pre defined final adjustments to the contract price due to changed conditions, such as inflation changes, or cost increases (or decreases) for specific commodities. The EPA clause needs to relate to some reliable financial index, which is used to precisely adjust the final price.

The FP-EPA contract is intended to protect both buyer and seller from external conditions beyond their control.

• **Cost-reimbursable contracts.** This category of contract involves payments (cost reimbursements) to the seller for all legitimate actual costs incurred for completed work, plus a fee representing seller profit.

Cost-reimbursable contracts may also include financial incentive clauses whenever the seller exceeds, or falls below, defined objectives such as costs, schedule, or technical performance targets. Three of the more common types of cost-reimbursable contracts in use are Cost Plus Fixed Fee (CPFF), Cost Plus Incentive Fee (CPIF), and Cost Plus Award Fee (CPAF).

A cost-reimbursable contract provides the project flexibility to redirect a seller whenever the scope of work cannot be precisely defined at the start and needs to be altered, or when high risks may exist in the effort.

○○ *Cost Plus Fixed Fee Contracts (CPFF).* The seller is reimbursed for all allowable costs for performing the contract work, and receives a fixed-fee payment calculated as a percentage of the initial estimated project costs. A fee is paid only for completed work and does not change due to seller performance. Fee amounts do not change unless the project scope changes.

○○ *Cost Plus Incentive Fee Contracts (CPIF).* The seller is reimbursed for all allowable costs for performing the contract work and receives a predetermined incentive fee based upon achieving certain performance objectives as set forth in the contract. In CPIF contracts, if the final costs are less or greater than the original estimated costs, then both the buyer and seller share costs from the departures based upon a prenegotiated cost-sharing formula, for example, an 80/20 split over/under target costs based on the actual performance of the seller.

○○ *Cost Plus Award Fee Contracts (CPAF)*. The seller is reimbursed for all legitimate costs, but the majority of the fee is earned only based on the satisfaction of certain broad subjective performance criteria defined and incorporated into the contract. The determination of fee is based solely on the subjective determination of seller performance by the buyer, and is generally not subject to appeals.

• **Time and Material Contracts (T&M).** Time and material contracts are a hybrid type of contractual arrangement that contain aspects of both cost-reimbursable 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

QUESTION 155
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 156
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 157
When the business objectives of an organization change, project goals need to be:

A. realigned.
B. performed.
C. improved.
D. controlled.

Correct Answer: A
Section: Volume B
Explanation

Explanation/Reference:

QUESTION 158
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 159
A project manager who communicates to the project team though email is using which type of communication?
A. Formal
B. Informal
C. Horizontal
D. Unofficial

Correct Answer: B
Section: Volume B

Explanation

Explanation/Reference:

QUESTION 160

An input to the Perform Integrated Change Control process is:

A. expert judgment
B. seller proposals
C. the project charter
D. the project management plan

Correct Answer: D
Section: Volume B
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.

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 161
Which tool or technique is required in order to determine the project budget?

A. Cost of quality
B. Historical relationships
C. Project management software
D. Forecasting

Correct Answer: B
Section: Volume B
Explanation

Explanation/Reference:
Explanation:
7.3.2.4 Historical Relationships
Any historical relationships that result in parametric estimates or analogous estimates involve the use of project characteristics (parameters) to develop mathematical models to predict total project costs. Such models may be simple (e.g., residential home construction is based on a certain cost per square foot of space) or complex (e.g., one model of software development costing uses multiple separate adjustment factors, each of which has numerous points within it). Both the cost and accuracy of analogous and parametric models can vary widely. They are most likely to be reliable when: ·Historical information used to develop the model is accurate,
·Parameters used in the model are readily quantifable, and
·Models are scalable, such that they work for large projects, small projects, and phases of a project.

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 162
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 163
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 164
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 165
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 166
Managing ongoing production of goods and services to ensure business continues efficiently describes which type of management?

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

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 167
Which type of manager is assigned by the performing organization to lead the team that is responsible for achieving the project objectives?

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

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 168
The approaches, tools, and data sources that will be used to perform risk management on a project are determined by the:

A. Methodology
B. Risk category
C. Risk attitude
D. Assumption analysis

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Correct Answer: A
Section: Volume C

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 clarifies 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 169
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 170
Outputs of the Control Communications process include:

A. expert judgment and change requests

B. work performance information and change requests

C. project management plan updates and work performance information

D. issue logs and organizational process assets updates

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 171
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 172
The individual or group that provides resources and support for a project and is accountable for success is the:

A. sponsor
B. customer
C. business partners
D. functional managers
Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 173
A measure of cost performance that is required to be achieved with the remaining resources in order to meet a specified management goal and is expressed as the ratio of the cost needed for finishing the outstanding work to the remaining budget is known as the:

A. budget at completion (BAC)
B. earned value management (EVM)
C. to-complete performance index
D. cost performance index

Correct Answer: C
Section: Volume C
Explanation

Explanation/Reference:

Explanation:
TCPI = (BAC – EV)/(BAC – AC)

QUESTION 174
A collection of projects managed as a group to achieve strategic objectives is referred to as a:

A. plan
B. process
C. program
D. portfolio

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
1.2.1. The Relationships among Portfolios, Programs, and Projects
The relationship among portfolios, programs, and projects is such that a portfolio refers to a collection of projects, programs, subportfolios, and operations managed as a group to achieve strategic objectives. Programs are grouped within a portfolio and are comprised of subprograms, projects, or other work that are managed in a coordinated fashion in support of the portfolio. Individual projects that are either within or outside of a program are still considered part of a portfolio. Although the projects or programs within the portfolio may not necessarily be interdependent or directly related, they are linked to the organization's strategic plan by means of the organization's portfolio.

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 175
Sharing good practices introduced or implemented in similar projects in the organization and/or industry is an example of:

A. quality audits
B. process analysis
C. statistical sampling

D. benchmarking

Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
8.2.2.2 Quality Audits
A quality audit is a structured, independent process to determine if project activities comply with organizational and project policies, processes, and procedures.
The objectives of a quality audit may include:
‧ Identify all good and best practices being implemented;
‧ Identify all nonconformity, gaps, and shortcomings;
‧ **Share good practices introduced or implemented in similar projects in the organization and/or industry;**
‧ Proactively offer assistance in a positive manner to improve implementation of processes to help the team raise productivity; and ‧
Highlight contributions of each audit in the lessons learned repository of the organization.

The subsequent effort to correct any defciencies should result in a reduced cost of quality and an increase in sponsor or customer acceptance of the project's product. Quality audits may be scheduled or random, and may be conducted by internal or external auditors.
Quality audits can confirm the implementation of approved change requests including updates, corrective actions, defect repairs, and preventive actions.
8.2.2.3 Process Analysis
Process analysis follows the steps outlined in the process improvement plan to identify needed improvements.
This analysis also examines problems experienced, constraints experienced, and non-value-added activities identified during process operation. Process analysis includes root cause analysis—a specific technique used to identify a problem, discover the underlying causes that lead to it, and develop preventive actions.

QUESTION 176
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 177
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 178
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 179
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 180
Which document includes the project scope, major deliverables, assumptions, and constraints?

A.   Project charter
B.   Project scope statement C. Scope management plan

D. Project document updates

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
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.

QUESTION 181
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 182
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 183

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 184
The project manager notes that stakeholders are aware of the project and potential impacts and are actively engaged in ensuring that the project is a success.
The engagement level of the stakeholders should be classified as:

A. Supportive
B. Leading
C. Neutral
D. Resistant

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 185
Which of the following is a narrative description of products, services, or results to be delivered by a project?

A. Project statement of work
B. Business case
C. Accepted deliverable
D. Work performance information

Correct Answer: A
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-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 186
A project manager seeking insight on previous stakeholder management plans and their effectiveness should evaluate:

A. Historical information and the lessons-learned database.
B. Historical information and the stakeholder register.
C. Organizational process assets and the lessons-learned database.
D. Project documents and historical information.

Correct Answer: A
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.

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.

QUESTION 187
Projects are undertaken by an organization to support the:

A. Product performance.
B. Budget process.
C. Collective capabilities.
D. Organizational strategy.

Correct Answer: D
Section: Volume C
Explanation

Explanation/Reference:

QUESTION 188
What is the probability of occurrence if the risk rating is 0.56 and the impact if the risk does occur is very high (0.80)?

A. 0.45
B. 0.56
C. 0.70
D. 1.36

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 189
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 190
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 191

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 192
Which technique should a project manager use in a situation in which a collaborative approach to conflict management is not possible?

A. Coaching
B. Avoidance
C. Consensus
D. Influencing

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 193
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 194
The links between the processes in the Process Groups are often:

A.   Intuitive
B.   Iterative
C.   MeasuredD. Monitored

Correct Answer: B
Section: Volume C
Explanation

Explanation/Reference:

QUESTION 195
The scope of a project cannot be defined without some basic understanding of how to create the specified:

A. objectives

B. schedule
C. product
D. approach

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 196
The creation of an internet site to engage stakeholders on a project is an example of which type of communication?

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

Correct Answer: B
Section: Volume C

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 197
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 198
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 199

An output of Control Schedule is:

A. A project schedule network diagram

B. A schedule management plan

C. Schedule data

D. Schedule forecasts

Correct Answer: D
Section: Volume C

Explanation

Explanation/Reference:
Explanation:

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 200

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 201
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 202
Most experienced project managers know that:

A. every project requires the use of all processes in the PMBOK® Guide.
B. there is no single way to manage a project.
C. project management techniques are risk free.
D. there is only one way to manage projects successfully.

Correct Answer: B
Section: Volume C
Explanation

Explanation/Reference:

QUESTION 203
What is an objective of the Develop Project Team process?

A. Feelings of trust and improved cohesiveness
B. Ground rules for interaction
C. Enhanced resource availability
D. Functional managers becoming more involved

Correct Answer: A
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.

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 204
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 205
Which technique is used in Perform Quantitative Risk Analysis?

A. Sensitivity analysis
B. Probability and impact matrix
C. Risk data quality assessment
D. Risk categorization

Correct Answer: A
Section: Volume C
Explanation

Explanation/Reference:

QUESTION 206
Which illustrates the connection between work that needs to be done and its project team members?

A. Work breakdown structure (WBS)
B. Network diagrams
C. Staffing management plan
D. Responsibility assignment matrix (RAM)
Correct Answer: D

Section: Volume C

Explanation

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

QUESTION 207
Which tools or techniques will a project manager use for Develop Project Team?

A. Negotiation
B. Roles and responsibilities
C. Recognition and rewards
D. Prizing and promoting

Correct Answer: C
Section: Volume C
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 208
Which of the following is an input to Direct and Manage Project Execution?

A. Requested changes
B. Approved change requests
C. Work performance information
D. Implemented defect repair

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 209
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 210
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 211
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 212
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 213
When is a Salience Model used?

A. In a work breakdown structure (WBS)
B. During quality assurance
C. In stakeholder analysis
D. During quality control (QC)

Correct Answer: C
Section: Volume C
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 214
Which of the following is contained within the communications management plan?

A. An organizational chart
B. Glossary of common terminology
C. Organizational process assets
D. Enterprise environmental factors

Correct Answer: B
Section: Volume C

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 215
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 216
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 217
Which schedule network analysis 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 C

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 218
Which of the following is an output of the Monitor and Control Project Work process?

A. Change requests
B. Performance reports
C. Organizational process assets
D. Project management plan
Correct Answer: A
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Process: 4.4. Monitor and Control Project Work
Definition: Monitor and Control Project Work is the process of tracking, reviewing, and reporting the progress to meet the performance objectives defined in the project management plan.
Key Benefit: The key benefit of this process is that it allows stakeholders to understand the current state of the project, the steps taken, and budget, schedule, and scope forecasts.

Inputs
1. Project management plan
2. Schedule forecasts
3. Cost forecasts
4. Validated changes
5. Work performance information
6. Enterprise environmental factors

7. Organizational process assets

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

Outputs
1. **Change requests**
2. Work performance reports
3. Project management plan updates
4. Project documents updates

QUESTION 219
Which of the following statements correctly characterizes pull communication?

A. It includes letters, memos, reports, emails, and faxes.
B. It requires recipients to access communication content at their own discretion.
C. It is the most efficient way to ensure a common understanding among all participants.
D. It is primarily used when the volume of information to be transferred is minimal.
Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 220
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 221
Which Knowledge Area is concerned with the processes required to ensure timely and appropriate generation, collection, distribution, storage, retrieval, and ultimate disposition of project information?

A. Project Integration Management
B. Project Communications Management
C. Project Information Management System (PIMS)
D. Project Scope Management

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 222
Which of the following tools or techniques is used for Estimate Activity Durations?

A. Critical path method
B. Rolling wave planning
C. Precedence diagramming method
D. Parametric estimating

Correct Answer: D
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 223
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 224
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 225
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 226
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 227
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 228
What is a hierarchically organized depiction of the identified project risks arranged by risk category?

A. Risk register
B. Risk breakdown structure (RBS)
C. Risk management plan
D. Risk category

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 229
Which tool or technique of Plan Quality involves comparing actual or planned practices to those of other projects to generate ideas for improvement and provide a basis by which to measure performance?

A. Histogram
B. Quality audits
C. Benchmarking
D. Performance measurement analysis

Correct Answer: C
Section: Volume C
Explanation

Explanation/Reference:

Explanation:
5.2.2.9 Benchmarking
Benchmarking involves comparing actual or planned practices, such as processes and operations, to those of comparable organizations to identify best practices, generate ideas for improvement, and provide a basis for measuring performance. The organizations compared during benchmarking can be internal or external.

QUESTION 230
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 231
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 232
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 233
The Human Resource Management processes are:

A. Develop Human Resource Plan, Acquire Project Team, Develop Project Team, and Manage Project Team.
B. Acquire Project Team, Manage Project Team, Manage Stakeholder Expectations, and Develop Project Team.
C. Acquire Project Team, Develop Human Resource Plan, Conflict Management, and Manage Project Team.
D. Develop Project Team, Manage Project Team, Estimate Activity Resources, and Acquire Project Team.

Correct Answer: A
Section: Volume C
Explanation

Explanation/Reference:

QUESTION 234
What are the formal and informal policies, procedures, and guidelines that could impact how the project's scope is managed?

A. Organizational process assets
B. Enterprise environmental factors
C. Project management processes
D. Project scope management plan

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.

QUESTION 235

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 236

When does Monitor and Control Risks occur?

A. At project initiation
B. During work performance analysis
C. Throughout the life of the project
D. At project milestones

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:
QUESTION 237
Conflict should be best addressed in which manner?

A. Early, in private, using a direct, collaborative approach
B. Early, in public, using an indirect, collaborative approach
C. Early, in private, using an indirect, cooperative approach
D. As late as possible, in public, using a direct, confrontational approach

Correct Answer: A
Section: Volume C
Explanation

Explanation/Reference:

QUESTION 238
The project management processes presented in the PMBOK Guide® should:

A. always be applied uniformly.
B. be selected as appropriate by the sponsor.
C. be selected as appropriate by the project team.
D. be applied based on ISO guidelines.

Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 239
Which type of contract is most commonly used by buying organizations because the price for goods is set at the outset and is not subject to change unless the scope of work changes?

A. Fixed Price with Economic Price Adjustments Contract (FP-EPA)
B. Cost-Reimbursable Contract (CR)
C. Firm-Fixed -Price Contract (FFP)
D. Fixed-Price-Incentive-Fee Contract (FPIF)
Correct Answer: C
Section: Volume C

Explanation

Explanation/Reference:
Explanation:
Firm Fixed Price Contracts (FFP). The most commonly used contract type is the FFP. It is favored by most buying organizations because the price for goods is set at the outset and not subject to change unless the scope of work changes. Any cost increase due to adverse performance is the responsibility of the seller, who is obligated to complete the effort. Under the FFP contract, the buyer should precisely specify the product or services to be procured, and any changes to the procurement specification can increase the costs to the buyer.

QUESTION 240
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 241
What is the definition of Direct and Manage Project Execution?

A. Integrating all planned activities
B. Performing the activities included in the plan
C. Developing and maintaining the plan
D. Execution of deliverables

Correct Answer: B
Section: Volume C

Explanation

Explanation/Reference:

QUESTION 242
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 243
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 244
Which tool and technique is used in Conduct Procurements?

A. Teaming agreements
B. Expert judgment
C. Bidder conferences
D. Contract types

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 245
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 246
What is a deliverable-oriented, hierarchical decomposition of the work to be executed to accomplish the project objectives and create the required deliverables?

A. Organizational breakdown structure (OBS)
B. Work performance information
C. Work package
D. Work breakdown structure (WBS)
Correct Answer: D
Section: Volume D

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 247
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 248
Which of the following is an output of the Distribute Information process?

A. Project calendar
B. Communications management plan
C. Organizational process assets updates
D. Project document updates
Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 249
In the Develop Project Team process, which of the following is identified as a critical factor for a project's success?

A. Team meetings
B. Subcontracting teams
C. Virtual teams
D. Teamwork

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. 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 250
The project scope statement and resource calendars are inputs to which Project Time Management process?

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

Correct Answer: C

Section: Volume D

Explanation

Explanation/Reference:
Explanation:
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: 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 schedule3. Schedule data
4. Project calendars
5. Project management plan updates
6. Project documents updates

QUESTION 251
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 252
Which of the following is an input to the Direct and Manage Project Execution process?

A. Approved change requests
B. Approved contract documentation
C. Work performance information
D. Rejected change requests

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 253
Which of the following factors is lowest at the start of the project?

A. Cost of changes
B. Stakeholder influences
C. Risk
D. Uncertainty

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 254
In which domain of project management would a Pareto chart provide useful information?

A. Project Scope Management
B. Project Time Management
C. Project Communications Management
D. Project Quality Management

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
QUESTION 255
Ensuring that both parties meet contractual obligations and that their own legal rights are protected is a function of:

A. Conduct Procurements.
B. Close Procurements.

C. Administer Procurements,

D. Plan Procurements.

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 256
In which process might a project manager use risk reassessment as a tool and technique?

A. Perform Qualitative Risk Analysis

B. Monitor and Control Risk

C. Monitor and Control Project Work

D. Plan Risk Responses

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 257
A purchase order for a specified item to be delivered by a specified date for a specified price is the simplest form of what type of contract?

A. Cost-reimbursable

B. Time and material

C. Fixed price or lump-sum

D. Cost-plus-fixed-fee
Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
• **Units of measure.** Each unit used in measurements (such as staff hours, staff days, weeks for time measures; or meters, liters, tons, kilometers, or cubic yards for quantity measures; or **lump sum** in currency form) is defined for each of the resources.

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 258
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 259
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 260
Which process occurs within the Monitoring and Controlling Process Group?

A. Control Costs
B. Plan Quality
C. Perform Quantitative Risk Analysis
D. Determine Budget

Correct Answer: A
Section: Volume D

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

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 261
Which of the following processes audits the quality requirements and the results from quality control measures to ensure appropriate quality standards and operational definitions are used?

A. Perform Quality Control
B. Quality Metrics
C. Perform Quality Assurance
D. Plan Quality

Correct Answer: C
Section: Volume D

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 262
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 263

Which Perform Quality Control tool graphically represents how various elements of a system interrelate?

A. Control chart

B. Flowchart

C. Run chart

D. Pareto chart

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 264

Which type of analysis is used as a general management technique within the Plan Procurements process?

A. Risk assessment analysis

B. Make or buy analysis

C. Contract value analysis

D. Cost impact analysis

Correct Answer: B

Section: Volume D

Explanation

Explanation/Reference:

QUESTION 265
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 266
Define Activities and Estimate Activity Resources are processes in which project management Knowledge Area?

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

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 267
Which is a communication method used in the Report Performance process?

A. Expert judgment

B. Project management methodology
C. Stakeholder analysis
D. Status review meetings

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 268
Prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact takes place in which process?

A. Monitor and Control Risks
B. Plan Risk Management
C. Perform Qualitative Risk Analysis
D. Perform Quantitative Risk Analysis

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 269
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 270
Which of the following documents allows the project manager to assess risks that may require near term action?

A. Probability and impact matrix
B. Contingency analysis report
C. Risk urgency assessment
D. Rolling wave plan

Correct Answer: C
Section: Volume D
Explanation

Explanation/Reference:

Explanation:
11.3.2.5 Risk Urgency Assessment
Risks requiring near-term responses may be considered more urgent to address. Indicators of priority may include probability of detecting the risk, time to affect a risk response, symptoms and warning signs, and the risk rating. In some qualitative analyses, the assessment of risk urgency is combined with the risk ranking that is determined from the probability and impact matrix to give a final risk severity rating.

QUESTION 271
Which activity involves ensuring that the composition of a projects configuration items is correct?

A. Configuration Identification
B. Configuration Status Accounting
C. Configuration Verification and Audit
D. Configuration Quality Assurance

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
·**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 272
Change requests, project management plan updates, project document updates, and organizational process assets updates are all outputs of which project management process?

A. Plan Risk Responses
B. Manage Stakeholder Expectations
C. Define Scope
D. Report Performance

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 273
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 274
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 275
Which technique helps to determine the risks that have the most potential impact on a project?

A. Cost risk simulation analysis
B. Expected monetary value analysis
C. Modeling and simulation
D. Sensitivity analysis

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
11.4.2.2 Quantitative Risk Analysis and Modeling Techniques
Commonly used techniques use both event-oriented and project-oriented analysis approaches, including:

• 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.

QUESTION 276
Labor, materials, equipment, and supplies are examples of:

A. Resource attributes.
B. Resource types.
C. Resource categories.
D. Resource breakdown structures (RBS).

Correct Answer: C
Section: Volume D
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 277
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 278
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 279
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 280

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 281
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 282
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 repair**—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
Which provides the basic framework for managing a project?

A. Project life cycle
B. Work breakdown structure (WBS)
C. Enterprise environmental factors
D. Project initiation

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Project Life Cycle. The series of phases that a project passes through from its initiation to its closure.

QUESTION 284
A tool and technique used during the Perform Qualitative Risk Analysis process is:

A. risk data quality assessment.
B. variance and trend analysis.
C. data gathering and representation techniques.
D. risk audits.

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

Explanation:
11.3.2.3 Risk Data Quality Assessment
Risk data quality assessment is a technique to evaluate the degree to which the data about risks is useful for risk management. It involves examining the degree to which the risk is understood and the accuracy, quality, reliability, and integrity of the data about the risk.
The use of low-quality risk data may lead to a qualitative risk analysis of little use to the project. If data quality is unacceptable, it may be necessary to gather better data. Often, the collection of information about risks is diffcult, and consumes more time and resources than originally planned.

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 285
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 286

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 287
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 288
The purpose of inspection in Perform Quality Control is to keep errors:

A. in line with a measured degree of conformity.
B. out of the hands of the customer.
C. in a specified range of acceptable results.
D. out of the process.

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 289
An input to the Perform Quantitative Risk Analysis process is the:

A. quality management plan.
B. project management plan.
C. communications management plan.
D. schedule management plan.

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
6.1.3.1 Schedule Management Plan
A component of the project management plan that establishes the criteria and the activities for developing, monitoring, and controlling the schedule. The schedule management plan may be formal or informal, highly detailed or broadly framed, based upon the needs of the project, and includes appropriate control thresholds. For example, the schedule management plan can establish the following:
·**Project schedule model development.** The scheduling methodology and the scheduling tool to be used in the development of the project schedule model are specified.
·**Level of accuracy.** The acceptable range used in determining realistic activity duration estimates is specified and may include an amount for contingencies.
·**Units of measure.** Each unit used in measurements (such as staff hours, staff days, or weeks for time measures, or meters, liters, tons, kilometers, or cubic yards for quantity measures) is defined for each of the resources.
·**Organizational procedures links.** The WBS (Section 5.4) provides the framework for the schedule management plan, allowing for consistency with the estimates and resulting schedules.
·**Project schedule model maintenance.** The process used to update the status and record progress of the project in the schedule model during the execution of the project is defined.
·**Control thresholds.** Variance thresholds for monitoring schedule performance may be specified to indicate an agreed-upon amount of variation to be allowed before some action needs to be taken. Thresholds are typically expressed as percentage deviations from the parameters established in the baseline plan.
·**Rules of performance measurement.** Earned value management (EVM) rules or other physical measurement rules of performance measurement are set. For example, the schedule management plan may specify:
○○ Rules for establishing percent complete,
○○ Control accounts at which management of progress and schedule will be measured,
○○ Earned value measurement techniques (e.g., baselines, fixed-formula, percent complete, etc.) to be employed (for more specific information, refer to the *Practice Standard for Earned Value Management*) [9],
○○ Schedule performance measurements such as schedule variance (SV) and schedule performance index (SPI) used to assess the magnitude of variation to the original schedule baseline.
·**Reporting formats.** The formats and frequency for the various schedule reports are defined.
·**Process descriptions.** Descriptions of each of the schedule management processes are documented.

Process: 11.4 Perform Quantitative Risk Analysis
Definition: The process of numerically analyzing the effect of identified risks on overall project objectives.
Key Benefit: The key benefit of this process is that it produces quantitative risk information to support decision making in order to reduce project uncertainty.

Inputs
1. Risk management plan
2. Cost management plan
3. Schedule management plan
4. Risk register
5. Enterprise environmental factors
6. Organizational process assets

Tools & Techniques
1. Data gathering and representation techniques
2. Quantitative risk analysis and modeling techniques
3. Expert judgment

Outputs
1. Project documents updates

QUESTION 290
When large or complex projects are separated into distinct phases or subprojects, all of the Process Groups would normally be:

A. divided among each of the phases or subprojects.
B. repeated for each of the phases or subprojects.
C. linked to specific phases or subprojects.
D. integrated for specific phases or subprojects.

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 291
A project has a current cost performance index (CPI) of 1.25. To date, US$10,000 have been spent on performing the project work. What is the earned value of the work completed to date?

A. US$5000
B. US$9500
C. US$10,000
D. US$12,500

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
CPI = EV / AC

US$12,500/US$10,000 = 1.25
QUESTION 292
Which of the following characteristics are found in a functional organizational structure?

A. Little or no project manager authority, little or no resource availability, and the functional manager controls the project budget
B. Limited project manager authority, limited resource availability, and a part-time project manager's role
C. Low to moderate project manager authority, low to moderate resource availability, and a full-time project manager's role
D. High to almost total project manager authority, high to almost total resource availability, and full-time project management administrative staff

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 293
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 294
Which process should be conducted from the project inception through completion?

A. Monitor and Control Project Work
B. Perform Quality Control
C. Perform Integrated Change Control
D. Monitor and Control Risks

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 295
Which piece of information is part of the WBS Dictionary?

A. Responsible organization
B. Change requests

C. Validated deliverables

D. Organizational process assets

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 296
When calculating the cost of quality (COQ) for a product or service, money spent for cost of conformance would include the areas of:

A. training, testing, and warranty work.

B. equipment, rework, and scrap.

C. training, document processes, and inspections.

D. inspections, rework, and warranty work.

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 297
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 298
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

![VCEplus logo](VCEplus.com)

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 299
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 300
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 301
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 302
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 303
Which of the following strategic considerations often results in project authorization?

A. Customer requests and/or issue resolution
B. Stakeholder expectations and/or strategic opportunity (business need)
C. Technological advancement and/or senior executive request
D. Market demand and/or legal requirements

Correct Answer: D
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 304
In which Process Group are lessons learned documented?

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

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 305
Tools and techniques used for Plan Communications include the communication:

A. requirements analysis, communication technology, communication models, and communication methods.
B. methods, stakeholder register, communication technology, and communication models.
C. requirements, communication technology, communication requirements analysis, and communication methods.
D. management plan, communication technology, communication models, and communication requirements analysis.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 306
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 307
Which of the following is a conflict resolution technique that emphasizes areas of agreement rather than areas of difference?

A. Compromising

B. Collaborating
C. Smoothing
D. Problem Solving

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
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.

QUESTION 308
A tool or technique in Perform Quality Control that a project manager would use is:

A. quality audits.
B. process analysis.
C. benchmarking.
D. inspection.

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 309
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 310
Change request status updates are an output of which process?

A. Perform Integrated Change Control
B. Direct and Manage Project Execution
C. Close Project or Phase
D. Monitor and Control Project Work

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 311
As the project progresses, which of the following is routinely collected from the project activities?

A. Communication management activities
B. Change requests
C. Configuration verification and audit
D. Work performance information

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
QUESTION 312
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 313
The risk management team of a software project has decided that due to the lack of adequate talent in the company, development of a specific part of the system is under high risk, so the team has decided to outsource it. This is an example of which risk response?

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

Correct Answer: A
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 314
Which type of agreement is legal, contractual, and between two or more entities to form a partnership, joint venture, or some other arrangement as defined by the parties?

A. Teaming
B. Collective bargaining
C. Sharing
D. Working

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 315
The process of aggregating the estimated costs of individual activities or work packages to establish an authorized cost baseline is:

A. Determine Budget.
B. Baseline Budget.
C. Control Costs.
D. Estimate Costs.

Correct Answer: A
Section: Volume D

Explanation

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 316
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 317
The definition of operations is a/an:

A. organizational function performing the temporary execution of activities that produce the same product or provide repetitive service.
B. temporary endeavor undertaken to create a unique product, service, or result.
C. organization that provides oversight for an administrative area.
D. organizational function performing the ongoing execution of activities that produce the same product or provide repetitive service.

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 318
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 319
Which type of estimating is used to improve the accuracy of an activity's duration?

A. Analogous
B. Parametric
C. Three-point
D. What-if scenario analysis

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 320
The Project Management Process Group in which performance is observed and measured regularly from project initiation through completion is:

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

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 321
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 322
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 323
Which of the following is a tool and technique used in the Develop Schedule process?

A. Three-point estimates
B. Resource leveling
C. Precedence diagramming method
D. Bottom-up estimating

Correct Answer: B
Section: Volume D
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 324
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 325
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 326
The progressive detailing of the project management plan is called:

A. expert judgment.
B. rolling wave planning.
C. work performance information.
D. specification.

Correct Answer: B
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.

 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 327
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 328
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
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 329
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 330
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 331
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 332
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 333
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 334
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 335
Which tool or technique is used in Close Procurements?

A. Contract plan
B. Procurement plan
C. Closure process
D. Procurement audits

Correct Answer: D
Section: Volume D
Explanation

Explanation/Reference:
Explanation:
12.4.2.1 Procurement Audits
A procurement audit is a structured review of the procurement process originating from the Plan Procurement Management process through Control Procurements. The objective of a procurement audit is to identify successes and failures that warrant recognition in the preparation or administration of other procurement contracts on the project, or on other projects within the performing organization.

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 336
Which of the following is an output of Direct and Manage Project Execution?

A. Project management plan
B. Change request status updates
C. Organizational process assets updates
D. Work performance information

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 337
Which of the following is an input to Develop Human Resource Plan?

A. Team performance assessment
B. Roles and responsibilities

C. Staffing management plan

D. Enterprise environmental factors

Correct Answer: D
Section: Volume D

Explanation

Explanation/Reference:
QUESTION 338
Which of the following outputs from the Control Schedule process aids in the communication of schedule variance (SV), schedule performance index (SPI), or any performance status to stakeholders?

A. Performance organizations

B. Schedule baselines

C. Work performance measurements

D. Change requests

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 339
Testing falls into which of the following categories of cost of quality?

A. Internal failure costs

B. Prevention costs

C. Appraisal costs

D. External failure costs

Correct Answer: C
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Cost of Quality. (COQ) A method of determining the costs incurred to ensure quality. **Prevention and appraisal costs (cost of conformance) include costs for quality planning, quality control (QC), and quality assurance to ensure compliance to requirements** (i.e., training, QC systems, etc.). Failure costs (cost of nonconformance) include costs to rework products, components, or processes that are non-compliant, costs of warranty work and waste, and loss of reputation.

QUESTION 340
Another name for an Ishikawa diagram is:
A. cause and effect diagram.
B. control chart.
C. flowchart.
D. histogram.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 341
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 342
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 343
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 344
A project has an EV of 100 workdays, an AC of 120 workdays, and a PV of 80 workdays. What should be the concern?

A. There is a cost underrun.
B. There is a cost overrun.
C. The project may not meet the deadline.
D. The project is 20 days behind schedule.

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
Earned Value (EV) = 100

Actual Cost (AC) = 120
Planned Value (PV) = 80

QUESTION 345
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 346
What does a CPI value greater than 1.0 indicate?

A. Cost right at the estimated value
B. Cost under the estimated value
C. Cost right at the actual value
D. Cost over the estimated value

Correct Answer: B
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
CPI = EV / AC

QUESTION 347
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 348
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 349
Which technique is commonly used for the Perform Quantitative Risk Analysis process?

A. Brainstorming
B. Strategies for opportunities
C. Decision tree analysis
D. Risk data quality assessment
Correct Answer: C
Section: Volume D

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.

Process: 11.4 Perform Quantitative Risk Analysis
Definition: The process of numerically analyzing the effect of identified risks on overall project objectives.
Key Benefit: The key benefit of this process is that it produces quantitative risk information to support decision making in order to reduce project uncertainty.

Inputs
▪ Risk management plan
▪ Cost management plan
▪ Schedule management plan
▪ Risk register
▪ Enterprise environmental factors
▪ Organizational process assets

Tools & Techniques

▪ Data gathering and representation techniques
▪ Quantitative risk analysis and modeling techniques ▪
Expert judgment

Outputs

1. Project documents updates

QUESTION 350
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 351
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 352

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 353
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 354
What is the most accurate rough order of magnitude (ROM)?

A. In the Initiation phase, the estimate is in the range of +/- 50%.
B. In the Planning phase, the estimate is in the range of +/- 50%.
C. In the Monitoring and Controlling phase, the estimate is in the range of +/- 15%.
D. In the Closing phase, the estimate is in the range of +/- 15%.

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:
Explanation:
A rough order of magnitude (ROM) estimate is the least accurate estimate. A Guide to the Project Management Body of Knowledge (The PMBOK® Guide), 5th Edition gives the guidelines that ROMs are -50% to +50% accurate, the PMBOK Guide 5th Edition gives the guidelines that ROMs are -25% to +75% accurate, or potentially even larger. It should be noted that stated percentages are not the main takeaway are not likely specifically tested on; it is more the concept and idea that ROMs are a rough estimate, are used early in the project when info is limited, and are hence the least accurate.

QUESTION 355
Project contracts generally fall into which of the following three broad categories?

A. Fixed-price, cost reimbursable, time and materials
B. Make-or-buy, margin analysis, fixed-price
C. Time and materials, fixed-price, margin analysis
D. Make-or-buy, lump-sum, cost-plus-incentive

Correct Answer: A
Section: Volume D

Explanation

Explanation/Reference:

QUESTION 356
Which of the following events would result in a baseline update?

A. A project is behind schedule and the project manager wants the baseline to reflect estimated actual completion.
B. A customer has approved a change request broadening the project scope and increasing the budget.
C. One of the risks identified in the risk management plan occurs, resulting in a schedule delay.
D. One of the key project team resources has left the team and no replacement is available.

Correct Answer: B
Section: Volume D
Explanation

Explanation/Reference:
Explanation:
5.6.3.3 Project Management Plan Updates
Project management plan updates may include, but are not limited to:
•   **Scope Baseline Updates.** If the approved change requests have an effect on the project scope, then the scope statement, the WBS, and the WBS dictionary are revised and reissued to reflect the approved changes through Perform Integrated Change Control process.
•   **Other Baseline Updates.** If the approved change requests have an effect on the project besides the project scope, then the corresponding cost baseline and schedule baselines are revised and reissued to reflect the approved changes.

QUESTION 357
Which of the following schedule network analysis techniques is applied when a critical path method calculation has been completed and resources availability is critical?
A. Applying calendars
B. Resource leveling
C. Resource planning
D. Resource conflict management

Correct Answer: B
Section: Volume D

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 358
"Tailoring" is defined as the:

A. effort of addressing each process to determine which are appropriate and their appropriate degree of rigor.
B. act of creating a project team with the specialized skills required to produce a required product or service.
C. action taken to bring a defective or nonconforming component into compliance with requirements or specifications.
D. adjustment of the respective influences of time, cost, and quality in order to most efficiently achieve scope.

Correct Answer: A
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 359
Which is an input to the Verify Scope process?

A. Performance report
B. Work breakdown structure (WBS)
C. Requested changes
D. Project management plan

Correct Answer: D
Section: Volume D
Explanation

Explanation/Reference:

QUESTION 360
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 361
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 362
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 363
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 364

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 365
Which statement is true about the project management body of knowledge?

A. Recognized by every project manager
B. Constantly evolving
C. The sum of all knowledge related to project management
D. A sum of knowledge that should be applied on every project

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 366
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 367
Which of the following is a project constraint?

A. Twenty-five percent staff turnover is expected.
B. The technology to be used is cutting-edge.
C. Project leadership may change due to volatile political environment.
D. The product is needed in 250 days.

Correct Answer: D
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 368
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 369
The project budget is set at $150,000. The project duration is planned to be one year. At the completion of Week 16 of the project, the following information is collected: Actual cost = $50,000, Plan cost = $45,000, Earned value = $40,000. What is the cost performance index?

A. 0.8
B. 0.89
C. 1.13
D. 1.25

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
CPI = EV / AC

QUESTION 370
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 371
What happens to a stakeholder's project influence over time?

A. Increases
B. Decreases
C. Stays the same
D. Has no bearing

Correct Answer: B
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 372
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 373

Which process requires implementation of approved changes?

A. Direct and Manage Project Execution

B. Monitor and Control Project Work

C. Perform Integrated Change Control

D. Close Project or Phase

Correct Answer: A

Section: Volume E

Explanation

Explanation/Reference:

QUESTION 374

Which quality control technique illustrates the 80/20 principle?

A. Ishikawa diagram

B. Control chart

C. Run chart

D. Pareto chart

Correct Answer: D

Section: Volume E

Explanation

Explanation/Reference:

QUESTION 375
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 376
The process of identifying specific actions to be performed to produce project deliverables is:

A. Define Activities.
B. Create WBS.
C. Define Scope.
D. Develop Schedule.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 377
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 378
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 379
Expected monetary value (EMV) is computed by which equation?

A. Value of each possible outcome multiplied by probability of occurrence
B. Value of each possible outcome multiplied by probability of non-occurrence
C. Multiplying the value of each possible outcome by the probability of occurrence and adding the products together
D. Multiplying the value of each possible outcome by the probability of non-occurrence and adding the products together **Correct Answer:** C

Section: Volume E

Explanation

Explanation/Reference:
Explanation:
EMV = Probability * Impact in currency
Expected Monetary Value (EMV) Analysis. A statistical technique that calculates the average outcome when the future includes scenarios that may or may not happen. A common use of this technique is within decision tree analysis.

QUESTION 380
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 381
Projects are separated into phases or subprojects; these phases include:

A. feasibility study, concept development, design, and prototype.
B. initiate, plan, execute, and monitor.
C. Develop Charter, Define Activities, Manage Stakeholder Expectations, and Report Performance.
D. Identify Stakeholders, develop concept, build, and test.

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 382
Which type of diagram includes groups of information and shows relationships between factors, causes, and objectives?
A. Affinity
B. Scatter
C. Fishbone
D. Matrix

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
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 383
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 384
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 385
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 386
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 387
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 388

Risk exists the moment that a project is:

A. planned.
B. conceived.
C. chartered.
D. executed.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 389
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 390
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 391
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 392
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 393
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 394
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 395

One of the objectives of a quality audit is to:

A. highlight the need for root cause analysis.

B. share the process documentation among stakeholders.

C. offer assistance with non-value-added activities.

D. identify all of the gaps or shortcomings.

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 396
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;

ꞏMethods or technologies used to convey the information, such as memos, e-mail, and/or press releases; ꞏ
Resources allocated for communication activities, including time and budget;
ꞏEscalation process identifying time frames and the management chain (names) for escalation of issues that cannot be resolved at a lower staff
level; ꞏMethod for updating and refining the communications management plan as the project progresses and develops; ꞏGlossary of common
terminology;
ꞏFlow charts of the information flow in the project, workflows with possible sequence of authorization, list of reports, and meeting plans, etc.; and ꞏ
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 397
Which tool or technique can a project manager use to select in advance a team member who will be crucial to the task?

A. Acquisition
B. Negotiation
C. Virtual team
D. Pre-assignment

Correct Answer: D
Section: Volume E

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 398
Which of the following is a group decision-making technique?

A. Brainstorming
B. Focus groups
C. Affinity diagram
D. Plurality

Correct Answer: D
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 399
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 400
Which of the following includes how requirements activities will be planned, tracked, and reported?
A. Configuration management plan
B. Scope baseline
C. Requirements management plan
D. Schedule baseline

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
5.1.3.2 Requirements Management Plan
The requirements management plan is a component of the project management plan that describes how requirements will be analyzed, documented, and managed. The phase-to-phase relationship, described in Section 2.4.2.1, strongly influences how requirements are managed. The project manager chooses the most effective relationship for the project and documents this approach in the requirements management plan. Many of the requirements management plan components are based on that relationship.
Components of the requirements management plan can include, but are not limited to:
•   How requirements activities will be planned, tracked, and reported;
•   Configuration management activities such as: how changes to the product will be initiated, how impacts will be analyzed, how they will be traced, tracked, and reported, as well as the authorization levels required to approve these changes;
•   Requirements prioritization process;
•   Product metrics that will be used and the rationale for using them; and
•   Traceability structure to reflect which requirement attributes will be captured on the traceability matrix.

QUESTION 401
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 402
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 403
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 404
When cost variance is negative and schedule variance is positive, the project is:

A. under budget and behind schedule.
B. over budget and ahead of schedule.
C. on schedule.
D. complete; all planned values have been earned.

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

QUESTION 405
Which of the following is an estimating technique that uses the values of parameters from previous similar projects for estimating the same parameter or measure for a current project?

A. Reserve analysis
B. Three-point estimating
C. Parametric estimating
D. Analogous estimating

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
7.2.2.2 Analogous Estimating
Analogous cost estimating uses the values such as scope, cost, budget, and duration or measures of scale such as size, weight, and complexity from a previous, similar project as the basis for estimating the same parameter or measurement for a current project. When estimating costs, this technique relies on the actual cost of previous, similar projects as the basis for estimating the cost of the current project. It is a gross value estimating approach, sometimes adjusted for known differences in project complexity.
Analogous cost estimating is frequently used to estimate a value when there is a limited amount of detailed information about the project, for example, in the early phases of a project. Analogous cost estimating uses historical information and expert judgment

QUESTION 406
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 407
At which stage of team development do members begin to work together, adjust work habits, and trust each other?

A. Forming

B. Storming

C. Norming

D. Performing

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 408
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 409
A process is defined as:
A. A set of interrelated actions and activities performed to achieve a certain objective.
B. A set of guidelines that explains how to carry out a particular task.
C. The inputs for a task and the tools and techniques required to carry out the task.
D. A collection of logically related project activities, usually culminating in the completion of a major deliverable.

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
PROJECT MANAGEMENT PROCESSES
Project management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. This application of knowledge requires the effective management of the project management processes.
A process is a set of interrelated actions and activities performed to create a pre-specified product, service, or result. Each process is characterized by its inputs, the tools and techniques that can be applied, and the resulting outputs. As explained in Section 2, the project manager needs to consider organizational process assets and enterprise environmental factors. These should be taken into account for every process, even if they are not explicitly listed as inputs in the process specification. Organizational process assets provide guidelines and criteria for tailoring the organization's processes to the specific needs of the project. Enterprise environmental factors may constrain the project management options.

QUESTION 410
A project can be defined as a:

A. Temporary endeavor undertaken to create a unique product, service, or result
B. Temporary endeavor that produces repetitive outputs
C. Permanent endeavor undertaken to create a unique product, service, or result
D. Permanent endeavor that produces repetitive outputs

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
1.2 What is a Project?
A project is a temporary endeavor undertaken to create a unique product, service, or result. The temporary nature of projects indicates that a project has a definite beginning and end. The end is reached when the project's objectives have been achieved or when the project is terminated because its objectives will not or cannot be met, or when the need for the project no longer exists. A project may also be terminated if the client (customer, sponsor, or champion) wishes to terminate the project. Temporary does not necessarily mean the duration of the project is short. It refers to the project's engagement and its longevity. Temporary does not typically apply to the product, service, or result created by the project; most projects are undertaken to create a lasting outcome. For example, a project to build a national monument will create a result expected to last for centuries. Projects can also have social, economic, and environmental impacts that far outlive the projects themselves.

QUESTION 411
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 412
A risk may be graded into different priorities by which process?

A. Risk monitoring and controlling
B. Risk response planning
C. Qualitative risk analysis
D. Quantitative risk analysis

Correct Answer: C
Section: Volume E
Explanation
Explanation/Reference:
Explanation:
"Qualitative Risk Analysis assesses the priority of identified risks using their probability of occurring, the corresponding impact [...] as well as other factors such as the time frame and risk tolerance [...]."

QUESTION 413
Activities on the critical path have which type of float?

A. Zero free float
B. Zero or negative float
C. Negative and positive float
D. Zero or positive float

Correct Answer: B
Section: Volume E

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 414
An associate who calculates fees daily to support the department is doing which of the following?

A. Phase work
B. Project work
C. Lifecycle work
D. Operations work

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 415
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 416
An input required to develop a preliminary project scope statement is:

A. Organizational Structure
B. Organizational Process Assets
C. Organizational Matrix
D. Organizational Breakdown Structures

Correct Answer: B
Section: Volume E

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.

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.

QUESTION 417

An output of the Manage Project Team process is:

A. project management plan updates
B. project staff assignments updates
C. team performance assessments
D. resource calendar updates

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
9.2.3.3 Project Management Plan Updates
Elements of the project management plan that may be updated include, but are not limited to, the human resource management plan. For example, the person assigned to a predefined role may not fulfll all staffing requirements outlined in the human resource management plan. When gaps occur, the project management plan needs to be updated to change the team structure, roles, or responsibilities.

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 418
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 419
Cost aggregation is typically performed by aggregating work packages in accordance with the:

A. Program evaluation and review technique (PERT).

B. Cost of quality (COQ).
C. Rough order of magnitude (ROM).
D. Work breakdown structure (WBS).

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
7.3.2.1 Cost Aggregation
Cost estimates are aggregated by work packages in accordance with the WBS. The work package cost estimates are then aggregated for the higher component levels of the WBS (such as control accounts) and ultimately for the entire project.

QUESTION 420
Cost of quality (COQ) refers to total cost of/to:

A. All efforts related to quality.
B. Product inspection activities.
C. Maintain plan quality.
D. Perform quality control.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
QUESTION 421
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 422
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 423
Design of experiments (DOE) should be used during which of the following processes?

A. Perform Quality Assurance
B. Total Quality Management
C. Perform Quality Control
D. Plan Quality Management
Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
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

8.1.2.5 Design of Experiments
Design of experiments (DOE) is a statistical method for identifying which factors may influence specific variables of a product or process under development or in production. DOE may be used during the Plan Quality Management process to determine the number and type of tests and their impact on cost of quality.
 DOE also plays a role in optimizing products or processes. DOE is used to reduce the sensitivity of product performance to sources of variations caused by environmental or manufacturing differences. One important aspect of this technique is that it provides a statistical framework for systematically changing all of the

important factors, rather than changing the factors one at a time. Analysis of the experimental data should provide the optimal conditions for the product or process, highlight the factors that influence the results, and reveal the presence of interactions and synergy among the factors. For example, automotive designers use this technique to determine which combination of suspension and tires will produce the most desirable ride characteristics at a reasonable cost.

QUESTION 424
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 425
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 426
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 427
Inputs to the Define Activities process include:
A. Project scope statement, resource calendars, and work performance information.
B. Scope baseline, enterprise environmental factors, and organizational process assets.
C. Project scope statement, approved change requests, and WBS dictionary.
D. Scope baseline, enterprise environmental factors, and activity duration estimates.

Correct Answer: B
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

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: 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 428
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 429
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 430
Organizational process assets can be divided into which of the following two categories?

A. Project files and corporate knowledge base
B. Templates, and processes and procedures
C. Standards, and processes and procedures
D. Corporate knowledge base and processes and procedures

Correct Answer: D
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 431
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 432
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 433
PMBOI Guide is a standard that describes:

A. product-oriented processes.
B. project management processes.
C. product-oriented and project management processes.
D. program management and project management processes.

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 434
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 435
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 436
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 437
Projects can intersect with an organization's operations at various points during the product life cycle such as:

A. When there is an operations shutdown (i.e. a strike).
B. When developing new products, upgrading products, or expanding outputs.
C. When a project transitions from a temporary to a permanent status.
D. When the project manager is promoted to operations manager.
Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
1.5.1 Operations and Project Management
Changes in business operations may be the focus of a dedicated project—especially if there are substantial changes to business operations as a result of a new product or service delivery. Ongoing operations are outside of the scope of a project; however, there are intersecting points where the two areas cross.
Projects can intersect with operations at various points during the product life cycle, such as:

▪ At each closeout phase;
▪ **When developing a new product, upgrading a product, or expanding outputs;**
▪ While improving operations or the product development process; or ▪ Until the end
of the product life cycle.
At each point, deliverables and knowledge are transferred between the project and operations for implementation of the delivered work. This implementation occurs through a transfer of project resources to operations toward the end of the project, or through a transfer of operational resources to the project at the start. Operations are ongoing endeavors that produce repetitive outputs, with resources assigned to do basically the same set of tasks according to the standards institutionalized in a product life cycle. Unlike the ongoing nature of operations, projects are temporary endeavors.

QUESTION 438
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 439
Which is an input to the Scope Verification Process?

A. Performance report
B. Work breakdown structure
C. Requested changes
D. Project scope statement

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
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

QUESTION 440
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 441
Which knowledge area employs the processes required to ensure timely and appropriate generation, collection, distribution, storage, retrieval, and ultimate disposition of project information?

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

Correct Answer: C
Section: Volume E
Explanation
Explanation/Reference:
Explanation:
PROJECT COMMUNICATIONS MANAGEMENT
Project Communications Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information. Project managers spend most of their time communicating with team members and other project stakeholders, whether they are internal (at all organizational levels) or external to the organization. Effective communication creates a bridge between diverse stakeholders who may have different cultural and organizational backgrounds, different levels of expertise, and different perspectives and interests, which impact or have an influence upon the project execution or outcome.

QUESTION 442
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 443
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 444
Which of the following are examples of interactive communication?

A. Intranet sites
B. Voice mails
C. Video conferences
D. Press releases

Correct Answer: C

Section: Volume E

Explanation

Explanation/Reference:

QUESTION 445
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 446
Which of the following buffers protects the target finish date from slippage along the critical chain?

A. Critical buffer
B. Project buffer
C. Duration buffer
D. Feeding buffer

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. 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.
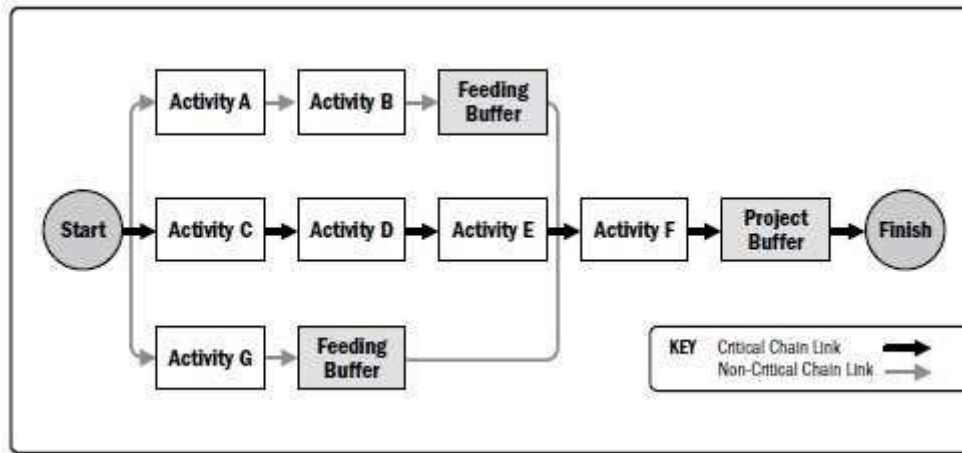
Figure 6-19. Example of Critical Chain Method

QUESTION 447
Which of the following correctly describes when organizations and stakeholders are willing to accept varying degrees of risk?
A. Risk analysis
B. Risk tolerance
C. Risk management
D. Risk attitude

Correct Answer: B
Section: Volume E

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 448
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 449
Which of the following is a complete set of indexed contract documentation, including the closed contract?

A. Procurement package
B. Negotiated settlements
C. Procurement file
D. Procurement management plan

Correct Answer: C
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.

QUESTION 450
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 451
Which of the following is a means of reaching a group decision in which everyone agrees on a single course of action?

A. Dictatorship
B. Majority
C. Plurality
D. Unanimity

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 452
Which of the following is a schedule network analysis technique that takes limited resources into account?

A. Network reserve analysis
B. Critical chain method
C. Lead and lag adjustment
D. Critical path method

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 453
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 454
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 455

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 456
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 457
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 458
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 459
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 460
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 461
Which of the following is an output of the Plan Quality process?

A. Project document update
B. Control chart
C. Cost performance baseline
D. Organizational process asset update

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 462
Which of the following is the correct network diagram for the table?

Activity Duration	Days	Predecessor
A	5	
B	2	
C	4	A
D	2	B,C
E	5	D

A. Begin-A-C-D-E-End-B-D
B. Begin-A-B-C-D-E-End
C. Begin-A-B-D-E-End A-C-D
D. Begin-A-C-D-E-End-B-C

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 463
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 464
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

![VCEplus.com logo](https://vceplus.com/)
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 465
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 466
Which of the following processes are within the Initiating Process Group?

A. Develop Project Management Plan and Identify Stakeholders
B. Develop Project Management Plan and Plan Communications
C. Develop Project Charter and Identify Stakeholders
D. Develop Project Charter and Develop Project Scope Statement

Correct Answer: C
Section: Volume E

Explanation

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

QUESTION 467

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 benefit 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 468
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 469

Which type of team can be defined as a group of people with a shared goal who fulfill their roles although spending little or no time meeting face to face?

A. Co-location team
B. Virtual team
C. Departmental team
D. Consultant team

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
QUESTION 470
Who is responsible for determining which processes from the Process Groups will be employed and who will be performing them?

A. Project sponsor and project manager
B. Project sponsor and functional manager
C. Project manager and project team
D. Project team and functional manager

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 471
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 472
Who is responsible for reviewing change requests and approving or rejecting the change requests?

A. Change control board
B. Project manager
C. Project management office
D. Project sponsor

Correct Answer: A
Section: Volume E
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 473
Which are the competing constraints that a project manager should address when tailoring a project?

A. Cost, scope, schedule
B. Sponsorship, risk, quality
C. Schedule, sponsorship, scope
D. Resources, quality, communication

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
Tailoring is necessary because each project is unique; not every process, tool, technique, input, or output identified in the PMBoK® Guide is required on every project. Tailoring should address the competing constraints of scope, schedule, cost, resources, quality, and risk. In addition, consideration of whether the customer of the project is internal or external to the organization may affect project management tailoring decisions. Sound project management methodologies

take into account the unique nature of projects and allow tailoring, to some extent, by the project manager. However, the tailoring that is included in the methodology may still require additional tailoring for a given project. And that brings us to the end of Tailoring.n

QUESTION 474
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 475
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

QUESTION 476
Which of the following set of elements is part of an effective communications management plan?

A. Escalation processes, person responsible for communicating the information, glossary of common terminology, methods or technologies used to convey the information.
B. Phone book directory, stakeholder communication requirements, project charter, glossary of common terminology.
C. Organizational chart, escalation processes, person responsible for communicating the information, project management plan, glossary of common terminology.
D. Glossary of common terminology, constraints derived from specific legislation and regulation, person responsible for communicating information, project management plan, resource management plan.

Correct Answer: A
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 477
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 478
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 479
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 480
Which is an example of analogous estimating?

A. Estimates are created by individuals or groups with specialized knowledge
B. Estimates are created by using information about resources of previous similar projects
C. Estimates are created by analyzing data
D. Estimates are created at the task level and aggregated upwards

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/analogous-estimating/

QUESTION 481
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 482
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 483
In a project using agile methodology, who may perform the quality control activities?

A. A group of quality experts at specific times during the project
B. The project manager only
C. All team members throughout the project life cycle
D. Selected stakeholders at specific times during the project

Correct Answer: D
Section: Volume E
Explanation

Explanation/Reference:

QUESTION 484
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 485

A project manager is considering whether or not to procure a new vendor. What can the project manager use to determine a make-or-buy decision?

A. Data analysis
B. Interpersonal skills
C. Bidder conferences
D. Bid documents

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://project-management-knowledge.com/definitions/m/make-buy-analysis/

QUESTION 486

Which tools and techniques should a project manager use to monitor risks?

A. Expert judgment, data analysis, and interpersonal and team skills
B. Data analysis, audits, and meetings
C. Expert judgment, audits, and decision making
D. Meetings, data gathering, and expert judgment

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 487

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 488
Which of the following is a category of organizational process assets?

A. Government standards
B. Organizational culture
C. Employee capabilities
D. Organizational knowledge bases

Correct Answer: D
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://medium.com/@yasmine.trainings24x7/what-is-organizational-process-assets-in-pmbok-5th-edition-ea66a5db9779

QUESTION 489
Which is an example of an internal enterprise environmental factor?
A. Market share brand recognition
B. Factory location
C. Local government regulation
D. Industry research

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://pmstudycircle.com/2012/01/enterprise-environmental-factors-organizational-process-assets/

QUESTION 490
Which document can help a project manager to leverage historical project information?

A. Lessons learned register
B. Schedule baseline
C. Work performance data
D. Deliverable acceptance forms

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.workbreakdownstructure.com/work-breakdown-structure-according-to-pmbok.php

QUESTION 491
In an agile and adaptive project, which scope management entity involves stakeholder engagement?

A. Collect Requirements
B. Create work breakdown structure (WBS)
C. Plan Scope Management
D. Scope Baseline

Correct Answer: A
Section: Volume E

Explanation
Explanation/Reference:

QUESTION 492
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 493
Which are required to create the schedule management plan?

A. Scope baseline, work breakdown structure (WBS), estimated costs, and milestone list

B. Resource management plan, organizational process assets, activity list, and business case

C. Enterprise environmental factors, organizational process assets, project charter, and project management plan

D. Activity list, project statement of work, project charter, and communications management plan

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/project-schedule-management-according-to-the-pmbok/

QUESTION 494
Which of the following are outputs from the process of creating a work breakdown structure (WBS)?

A. Project scope statement and accepted deliverables

B. Scope baseline and project documents update
C. Accepted deliverables and enterprise environmental factors
D. Scope baseline and work performance information

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://4squareviews.com/2018/04/13/6th-edition-pmbok-guide-process-5-4-create-wbs-outputs/

QUESTION 495
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 496
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 497
What can increase the complexity of the Manage Stakeholder Engagement process?

A. The project must be of high quality
B. The stakeholders are from different countries
C. The project must comply with strict local government regulations
D. The project has a tight budget and timeline

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 498
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 499

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 500
Perform Quantitative Risk Analysis focuses on:

A. compiling a list of known risks and preparing responses to them
B. assessing the probability of occurrence and impact for every risk in the risk register
C. evaluating the contingency and management reserves required for the project

D. analyzing numerically the impact of individual risks on the overall project's time and cost objectives

Correct Answer: D
Section: Volume E
Explanation
Explanation/Reference:
Reference: https://project-management-knowledge.com/definitions/p/perform-quantitative-risk-analysis/

QUESTION 501
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 502
What should a project manager do to prepare a risk management plan in a project with a lot of technical uncertainty?

A. Get expert judgment
B. Count on personal experience
C. Ask project sponsors
D. Delay the project until technical uncertainty is clarified

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 503

The project manager is creating the communications management plan. Which group of inputs is required to begin?

A. Work performance reports, change requests, and risk register
B. Work performance data, project documents, and stakeholder engagement plan
C. Project charter, project management plan, and project documents
D. Work performance data, stakeholder register, and team management plan

Correct Answer: C
Section: Volume E
Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/project-communications-management-according-to-the-pmbok/

QUESTION 504

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 505

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 506
Which of the following are inputs for the Plan Quality Management processes?

A. Quality metrics, project documents, and financial performance
B. Quality management plan, project documents, and quality metrics
C. Project management plan, project documents, and organizational process assets
D. Project management plan, quality metrics, and project documents

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.projectengineer.net/project-quality-management-according-to-the-pmbok/

QUESTION 507
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 508

When developing the project schedule, a project manager uses decomposition and rolling wave planning techniques in this process:

A. Develop Schedule
B. Define Activities
C. Define Scope
D. Collect Requirements

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Explanation:
In agile projects, DECOMPOSITION is Tool and technique of define activities, create WBS. You have subdivided the work package into smaller manageable components of schedule activities which is decomposition. Decomposition was used to create WBS process, if u further decompose WBS package you get schedule of activities.

Rolling Wave Planning is one of the techniques in the 'Define Activities' process under Project Time Management.

QUESTION 509

Which set of activities should a project manager use as part of the Develop Team process?

A. Training and establishing ground rules
B. Networking activities and estimating team resources
C. Conflict management activities and tracking team performance
D. Recruit new team members and training

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 510
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 511
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 512
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 513
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 514
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 515
The features and functions that characterize a result, product, or service can refer to:

A. project scope
B. product scope
C. service scope
D. product breakdown structure
Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.memrise.com/course/352178/pmbok-5-project-management-exam-study/27/

QUESTION 516
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 517
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 518
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 519
If you established a contingency reserve including time, money, and resources, how are you handling risk?

A. Accepting
B. Transferring
C. Avoiding
D. Mitigating

Correct Answer: A
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 520
What is the purpose of the project management process groups?

A. To define a new project
B. To track and monitor processes easily
C. To logically group processes to achieve specific project objectives
D. To link specific process inputs and outputs

Correct Answer: C
Section: Volume E

Explanation

Explanation/Reference:
Reference: https://www.workfront.com/blog/project-management-process-groups

QUESTION 521
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

QUESTION 522
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 523
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 524

Which of the following can a project manager use to represent defined team member roles in a group of tasks?

A. Work breakdown structure (WBS)
B. Responsibility assignment matrix (RAM)
C. Organizational breakdown structure (OBS)
D. Resource breakdown structure (RBS)

Correct Answer: B
Section: Volume E

Explanation

Explanation/Reference:

QUESTION 525
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