



Certified Associate in Project Management (CAPM) Certification

PMI CA0-001

Version Demo

Total Demo Questions: 58

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Topic Break Down

Topic	No. of Questions
Topic 1, Project Management Fundamentals and Core Concepts	293
Topic 2, Predictive, Plan-Based Methodologies	272
Topic 3, Agile Frameworks/Methodologies	4
Topic 4, Business Analysis Frameworks	12
Total	581

QUESTION NO: 1

Which tool is used to develop technical details within the project management plan?

- A. Expert Judgment
- B. Project Management Methodology
- C. Project Management Information
- D. Project Selection Methods

ANSWER: A

Explanation:

Expert Judgment is correct because developing the project management plan requires informed input from people with specialized knowledge of the project's technical work, delivery approach, industry practices, organizational environment, and applicable standards. Subject-matter experts can help translate technical requirements, constraints, assumptions, and implementation considerations into practical planning detail. Their expertise supports the project manager in integrating the subsidiary plans and baselines into a coherent, realistic project management plan that is suitable for the specific project context.

PMI identifies expert judgment as a tool and technique for the Develop Project Management Plan process. This judgment may be provided by individuals or groups with expertise in areas such as technical project details, tailoring processes, estimating, resource management, risk, and stakeholder considerations. The project manager remains accountable for the integrated plan, while expert input improves the quality, feasibility, and completeness of its technical content. See PMI's [PMBOK® Guide and Standards](#) overview and PMI's [Project Management Standards](#) resources.

QUESTION NO: 2

Which of the following is conflict resolution technique?

- A. Compromise
- B. Smoothing
- C. Foimal
- D. Coercive

ANSWER: B

Explanation:

Smoothing is a recognized conflict-management technique in PMI project management guidance. It is also called accommodating: the project manager emphasizes areas of agreement, shared interests, and common goals while temporarily downplaying differences. This approach can be useful when preserving harmony and maintaining working relationships is especially important, or when the issue is less significant than the relationship and can be addressed later. In practice, smoothing may reduce immediate tension and help the team continue working constructively, although the project manager should ensure that substantive concerns are eventually handled through appropriate follow-up and decision-making processes. PMI describes conflict management as an important interpersonal and team skill for project leaders because conflict is a normal outcome of cross-functional work, differing priorities, and resource constraints. For CAPM exam purposes, identifying smoothing as a conflict-resolution technique aligns with the terminology commonly used in PMI-based project-management questions. See PMI's overview of project-management standards and resources at [PMI Standards and PMBOK Guide](#) and its discussion of interpersonal skills in project work at [PMI Learning Library](#).

QUESTION NO: 3

What is the expected activity cost for a project having a most likely cost of \$140, a best case scenario of \$115, and a worst case scenario of \$165?

- A. \$115
- B. \$138
- C. \$140
- D. \$165

ANSWER: C

Explanation:

The expected activity cost is **\$140**. PMI's three-point estimating approach uses an optimistic estimate, a most likely estimate, and a pessimistic estimate to develop an expected value. When applying the PERT weighted-average calculation, the most likely estimate receives four times the weight of each extreme estimate: $(\text{best case} + 4 \times \text{most likely} + \text{worst case}) \div 6$. Substituting the stated costs gives $(\$115 + 4 \times \$140 + \$165) \div 6$, or $\$840 \div 6$. The resulting expected cost is therefore \$140.

This result reflects that the best- and worst-case values are equally spaced around the most likely cost: each is \$25 away from \$140. Their effects balance one another in the weighted calculation, leaving \$140 as the expected value. Three-point estimating helps a project team account for uncertainty while retaining an estimate centered primarily on the most probable outcome. PMI defines estimating as developing an approximation based on available information and recognizes expected monetary value as a technique for analyzing uncertain outcomes. See the [PMI Lexicon of Project Management Terms](#) and PMI's overview of [three-point estimating](#).

QUESTION NO: 4

Which artifact links each requirement to its origin, related deliverables, and acceptance criteria throughout the project life cycle?

- A. Requirements traceability matrix
- B. Stakeholder engagement plan
- C. Work breakdown structure
- D. Milestone list

ANSWER: A

Explanation:

Requirements traceability matrix is correct because it tracks requirements from their source through development, verification, and acceptance. It helps the project team confirm that each approved requirement adds value and is addressed by the project work and deliverables.

The matrix can also record attributes such as ownership, priority, status, and verification method. Maintaining traceability supports scope control by helping the team evaluate the effect of proposed requirement changes. See PMI's [PMBOK® Guide and Standards](#).

QUESTION NO: 5

Which of the following is not part of project scope management?

- A. Verify Scope
- B. Collect Requirements
- C. Create WBS
- D. None of the above

ANSWER: A

Explanation:

Verify Scope is not the current PMI process name within project scope management. In PMI's current process terminology, the relevant process is *Validate Scope*. Validate Scope is the formal process of obtaining stakeholder acceptance of completed project deliverables. It involves reviewing verified deliverables with the customer or sponsor, documenting acceptance, and addressing any requested changes through the appropriate change-control approach.

The wording "Verify Scope" appeared in older PMI terminology, including earlier editions of the PMBOK® Guide. PMI renamed the process to "Validate Scope" to more clearly emphasize that the activity is focused on formal acceptance by stakeholders rather than merely checking that work meets specified requirements. For CAPM preparation, use the current process name and understand that scope validation connects completed deliverables to documented acceptance criteria and requirements.

PMI's standards and practice guides describe the current project management process terminology and the role of formal deliverable acceptance. See PMI's [Process Groups: A Practice Guide](#) and the [PMI Lexicon of Project Management Terms](#).

QUESTION NO: 6

What is the purpose of the WBS?

- A. To show which work elements have been assigned to organizational units.
- B. To ensure that all work within a project is identified and defined within a common framework.
- C. To show the organizational structure of a program.
- D. all of the above

ANSWER: B

Explanation:

The correct answer is **"To ensure that all work within a project is identified and defined within a common framework."** A work breakdown structure (WBS) is a hierarchical decomposition of the total scope of work that must be completed to deliver the project's required product, service, or result. Its purpose is to organize the project scope into manageable components, allowing the team to identify the complete work required and establish a shared structure for planning and control. The WBS supports development of key planning artifacts, including the schedule, cost estimates and budget, resource requirements, risk analysis, and assignments of responsibility. At its lowest levels, the WBS defines work packages that can be estimated, scheduled, monitored, and controlled. Because it represents the full project scope in an organized hierarchy, it helps create a common understanding among project stakeholders about what the project must deliver and the work needed to produce those deliverables. PMI identifies the WBS as a foundational scope-management tool and defines it as the hierarchical decomposition of the total scope of work carried out by the project team. See PMI's [Work Breakdown Structure basics](#) and the [PMBOK® Guide and Standards](#).

QUESTION NO: 7

What type of project structure is a hierarchically organized depiction of the resources by type?

- A. Organizational Breakdown Structure (OBS)
- B. Resource Breakdown Structure (RBS)
- C. Work Breakdown Structure (WBS)
- D. Project Breakdown Structure (PBS)

ANSWER: B

Explanation:

The correct answer is **Resource Breakdown Structure (RBS)**. PMI defines a resource breakdown structure as a hierarchical representation of project resources categorized by resource type. It can organize resources such as labor, materials, equipment, facilities, and supplies, then decompose them into increasingly detailed classifications. For example, labor may be grouped into internal staff and contractors, then further organized by role or specialty. This structure gives the project team a consistent framework for identifying, estimating, acquiring, and controlling the resources needed to perform the work.

In practice, the RBS supports resource planning by making resource requirements visible at an appropriate level of detail. It can also be used as a basis for aggregating resource costs, assigning responsibility for resource management, and producing resource-related reports. The defining characteristic in the question is that the hierarchy is organized *by resource type*, which is precisely the purpose of an RBS. PMI's glossary describes the RBS as a hierarchical representation of resources by category and type. See PMI's [PMBOK® Guide and Standards](#) page and the [PMI Lexicon of Project Management Terms](#) for PMI terminology.

QUESTION NO: 8

What is risk tolerance?

- A. Ability to manage risks
- B. Willingness to accept varying degrees of risks
- C. Ability to mitigate risks
- D. Willingness to develop a risk management plan

ANSWER: B**Explanation:**

Risk tolerance is the degree of uncertainty, exposure, or potential impact that an organization or stakeholder is prepared to accept in pursuit of its objectives. Therefore, *Willingness to accept varying degrees of risks* is the correct answer. In project risk management, tolerance establishes practical boundaries for decisions: it helps determine when a risk exposure is acceptable, when escalation is needed, and how much response effort is appropriate. Tolerance can differ among stakeholders and may be expressed qualitatively, such as low or high tolerance, or quantitatively, such as an acceptable cost variance, schedule delay, or probability-impact threshold. The project manager uses these thresholds when evaluating risks and planning responses so that risk actions remain aligned with stakeholder expectations and organizational objectives. This concept is closely related to risk appetite, which describes the broader amount and type of risk an organization is willing to pursue or retain; risk tolerance applies that general stance to allowable variation or limits in a specific context. PMI's project risk management guidance emphasizes tailoring risk-management decisions to stakeholder and organizational risk thresholds. See PMI's [project risk management guidance](#) and the [PMBOK Guide and Standards](#) overview.

QUESTION NO: 9

Which estimating technique uses the actual cost or duration of a previous, similar project as the basis for estimating the current project?

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

ANSWER: A**Explanation:**

Analogous estimating is correct because it uses historical information from a similar activity or project to estimate the current work. It is often used early in the project when limited detailed information is available. The accuracy of the estimate depends on the similarity of the work and the expertise of the individuals making the comparison. Analogous estimating is generally less costly and less time-consuming than detailed estimating techniques. See PMI's [PMBOK® Guide and Standards](#) for estimating concepts and practices.

QUESTION NO: 10

Which of the following project document is best suited for tracking costs of resources?

- A. Work breakdown structure
- B. P'sk breakdown structure
- C. Organizational breakdown structure
- D. Resource breakdown structure

ANSWER: D

Explanation:

The Resource breakdown structure is best suited for tracking the costs associated with project resources. It is a hierarchical representation of resources identified and categorized by type, such as labor, materials, equipment, facilities, and supplies. By arranging resources into increasingly detailed categories, the project team can consistently estimate, assign, monitor, and report resource-related costs at the appropriate level of control.

This structure supports resource planning and cost management because each resource category can be linked to estimates, budget allocations, actual expenditures, and accounting or procurement records. For example, labor costs may be grouped by role or skill type, while equipment and material costs can be tracked in their respective resource categories. This makes it easier to consolidate resource cost data for forecasting and performance reporting throughout the project.

PMI defines a resource breakdown structure as a hierarchical representation of resources by category and type, which supports organizing and managing resource information. See PMI's [Project Management Lexicon](#) and its [PMBOK® Guide and Standards](#) resources.

QUESTION NO: 11

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

ANSWER: A

Explanation:

Analogous is correct because analogous estimating uses historical information from a previous, similar project as the starting point for an estimate of the current project. In cost estimating, that historical information can include the actual total cost, cost performance, duration, scope characteristics, and conditions encountered on the earlier effort. The project team then applies expert judgment to assess how comparable the prior project is and adjusts the historical cost as needed for differences such as size, complexity, technology, resources, location, market conditions, or risk.

This technique is especially useful early in a project, when detailed scope definition and work-package information may not yet be available. It generally produces a higher-level estimate more quickly than techniques requiring detailed

decomposition, making it valuable for preliminary budgeting, feasibility assessment, and early decision-making. The reliability of the result depends substantially on the degree of similarity between the historical project and the current one, as well as the quality of the available historical data and the estimator's judgment. PMI identifies analogous estimating as an estimating approach based on values from similar prior activities or projects. See PMI's [Project Management Lexicon](#) and its [PMBOK® Guide and Standards](#) resources.

QUESTION NO: 12

During what process is the quality policy determined?

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

ANSWER: C

Explanation:

Planning is correct because project quality is addressed before the work is performed, when the project team establishes how applicable quality requirements and standards will be met. In PMI's traditional process-based framework, this is accomplished through Plan Quality Management, a planning process that identifies quality requirements and standards for the project and its deliverables and documents how compliance will be demonstrated. The resulting quality management plan describes the quality activities, metrics, responsibilities, control methods, and continuous-improvement approach that will guide project delivery.

Strictly speaking, an organization's overarching quality policy is generally set by its management as part of the organization's quality-management system. For a project, the team uses that organizational policy and other applicable standards as inputs during planning, tailoring them into the project's quality-management approach. Therefore, among the process-group choices, Planning is the appropriate answer: it is the point at which the project's quality direction and planned means of meeting quality expectations are determined and documented. PMI describes planning as the work of defining and refining objectives and developing the course of action needed to attain them. See [PMI's PMBOK Guide and Standards](#) and [PMI's quality management resources](#).

QUESTION NO: 13

How many communication channels will be required in a project in which 10 individual are participating?

- A. 45
- B. 12
- C. 10
- D. 5

ANSWER: A

Explanation:

45 is correct. In project communications management, the number of potential communication channels is calculated using the formula $n(n - 1) / 2$, where n is the number of stakeholders or participants who could communicate with one another. With 10 participating individuals, the calculation is $10 \times (10 - 1) \div 2$, or $10 \times 9 \div 2 = 45$ communication channels. This represents the number of unique two-way relationships possible among the participants; each relationship is counted once rather than twice. Understanding this growth is important because communication complexity rises rapidly as people are added to a project. A project manager uses this awareness to plan appropriate communication methods, reporting structures, collaboration tools, and stakeholder-engagement approaches. PMI discusses communication requirements,

methods, and channels as central considerations in planning and managing project communications. See PMI's overview of [project communications management](#) and the [PMBOK® Guide and Standards](#) resources.

QUESTION NO: 14

In PMBOK, the seller is _____ to the project team.

- A. Internal
- B. External
- C. Outside
- D. Assigned

ANSWER: B

Explanation:

External is correct. In PMI procurement terminology, a seller is the provider, vendor, contractor, supplier, or service provider that supplies products, services, or results under an agreement. The seller is distinct from the project team performing work for the procuring organization; therefore, the seller has an external relationship to that team. This distinction is important because procurement management addresses how the project obtains goods or services from outside sources and manages the resulting contractual relationship. The project team identifies what is needed, participates in procurement activities as appropriate, and manages the contract and supplier relationship, while the seller is the party engaged to deliver the contracted scope. PMI's glossary identifies a seller as a provider of products, services, or results to an organization, and PMI procurement guidance frames this work around acquiring resources from external providers. See the [PMI Lexicon of Project Management Terms](#) and PMI's overview of [project procurement management](#).

QUESTION NO: 15

Which of the following are outputs of the Monitor and Control Project Work process?

- A. Requested changes, forecasts, recommended corrective actions
- B. Forecasts, resources plan, bottom up estimating
- C. Recommended corrective actions, cost baseline, forecasts
- D. Requested changes, recommended corrective actions, project constraints
- E. Work performance reports, change requests, project management plan updates, and project documents updates

ANSWER: E

Explanation:

Work performance reports, change requests, project management plan updates, and project documents updates are the outputs of the Monitor and Control Project Work process. This process compares actual project performance with the project management plan, evaluates trends and variances, assesses whether risks or issues require action, and communicates the resulting status information to stakeholders. Work performance reports consolidate analyzed performance information into reports that support project decisions. When monitoring identifies a need to modify a baseline, plan, document, deliverable, or other controlled item, the process produces change requests for review through integrated change control. The review may also identify needed updates to the project management plan, such as revised component plans or baselines, and to project documents, such as forecasts, issue logs, risk registers, or lessons learned registers. These outputs ensure that project performance is not merely observed, but is documented, communicated, and routed into the project's formal control system. PMI describes project work monitoring and controlling as tracking, reviewing, and reporting overall progress and performance, while identifying areas in which plan changes may be required. See [PMI's PMBOK Guide and Standards](#) and [PMI's CAPM certification information](#).

QUESTION NO: 16

How many communication channels exist in a team of 10 members?

- A. 45
- B. 10
- C. 30
- D. 20

ANSWER: A

Explanation:

45 is correct. In PMI project communications management, the number of potential communication channels is calculated using the formula $n(n - 1) / 2$, where n is the number of team members or stakeholders who may communicate with one another. With 10 members, the calculation is $10 \times 9 \div 2$, which equals 45 channels. This calculation represents the unique two-way relationships that could require communication management; each relationship is counted once, rather than counting the same connection in both directions. Understanding the rapid growth in channels is important for a project manager because communication complexity increases substantially as people are added to a project. The project manager uses this awareness when planning communications, identifying stakeholder communication needs, and selecting appropriate communication methods and technologies. PMI discusses the need to plan and manage project communications so that information is distributed effectively among stakeholders in its standards and certification resources. See PMI's [PMBOK® Guide and Standards](#) and the [CAPM® exam preparation resources](#).

QUESTION NO: 17

_____ is the best choice for buyer when the item is well defined.

- A. Cost plus incentive fee
- B. Fixed price
- C. Time and material
- D. None

ANSWER: B

Explanation:

Fixed price is the best choice for a buyer when the item, scope, specifications, and acceptance criteria are well defined. A fixed-price agreement establishes a set price for the specified deliverable or service, giving the buyer a high degree of cost certainty and making budget planning more reliable. Because the requirements can be described clearly before the agreement is awarded, the seller can estimate the work, resources, and costs needed to meet those requirements and commit to delivering the agreed result for the established price.

This contract approach also supports objective procurement management. The buyer can use the documented specifications, statement of work, and acceptance criteria to verify that the delivered item conforms to what was purchased. Changes that affect the agreed scope can be handled through formal change control, preserving clarity over price and deliverables. In PMI procurement practice, fixed-price arrangements are particularly appropriate when the scope is sufficiently stable and detailed, because the contract can allocate responsibility for completing the defined work at the agreed price. PMI's standards resources provide the governing project-management context for procurement and contract decisions; see the [PMBOK® Guide and Standards](#) and PMI's [Standards and Publications](#) pages.

QUESTION NO: 18

In what type of contract is the seller reimbursed for all allowable costs for performing the contract work and receives a predetermined fee based upon achieving certain performance objectives as set forth in the contract?

- A. Cost-plus-fixed-fee
- B. Cost-plus-incentive-fee
- C. Firm-fixed-price
- D. Fixed-price-incentive-fee

ANSWER: B

Explanation:

Cost-plus-incentive-fee is correct because it is a cost-reimbursable contract in which the buyer reimburses the seller for allowable costs incurred in performing the work and provides an incentive fee tied to agreed performance objectives. Those objectives, along with the method for calculating the fee, are established in the contract. The incentive mechanism aligns the seller's financial interest with the buyer's desired outcomes, such as controlling costs, meeting technical targets, or achieving schedule-related performance measures.

In PMI procurement management, cost-reimbursable agreements are appropriate when the precise scope or cost of the work cannot be estimated with sufficient certainty at contract award. A cost-plus-incentive-fee arrangement retains reimbursement of allowable costs while using a predetermined incentive formula to encourage performance against the contract's targets. The contract should clearly define the cost target, fee structure, performance measures, and sharing arrangement so that both parties can administer the incentive consistently. PMI describes procurement contract types within its standards resources at [PMI's PMBOK Guide and Standards](#). A detailed authoritative definition of cost-plus-incentive-fee contracts is also available in the [U.S. Federal Acquisition Regulation 16.405-1](#).

QUESTION NO: 19

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

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

ANSWER: B

Explanation:

8 is correct. In project communications management, the number of potential communication channels is calculated using the formula $n(n - 1) / 2$, where n is the number of stakeholders. This formula counts every unique two-way communication relationship once. With 28 potential channels, solve the equation $n(n - 1) / 2 = 28$. Multiplying both sides by 2 gives $n(n - 1) = 56$. Eight stakeholders produce $8 \times 7 = 56$, and dividing by 2 produces 28 communication channels. Therefore, the project has eight stakeholders. This calculation helps a project manager recognize how quickly communication complexity grows as stakeholders are added, supporting appropriate planning for communication methods, information distribution, and stakeholder engagement. PMI describes stakeholders as people, groups, or organizations that may affect, be affected by, or perceive themselves to be affected by a project decision, activity, or outcome; identifying them and planning engagement are core project-management activities. See PMI's [Project Management Lexicon](#) and [CAPM certification overview](#).

QUESTION NO: 20

Which of the following equations is used to calculate schedule variance?

- A. EV/PV

- B. PV/EV
- C. EV-PV
- D. PV-EV

ANSWER: C

Explanation:

EV – PV is the earned value management equation for schedule variance (SV). Earned value (EV) represents the budgeted value of work actually completed by the status date, while planned value (PV) represents the budgeted value of work that was planned to be completed by that date. Subtracting PV from EV measures the schedule performance difference in budgetary units. A positive result means that the project has completed more work than was planned at that point; a negative result means less work has been completed than planned; and zero means progress is aligned with the plan. Schedule variance is therefore a measure of schedule performance expressed in monetary or labor-value terms, rather than calendar days. PMI's earned value framework uses this formula together with schedule performance index, calculated as EV divided by PV, to assess schedule efficiency and forecast outcomes. See the [Project Management Institute overview of earned value management](#) and the [U.S. Acquisition.gov EVMS guidance](#).

QUESTION NO: 21

Which process group can be performed outside the project's scope of control?

- A. Planning
- B. Monitoring and Control
- C. Closing
- D. Initiating

ANSWER: D

Explanation:

Initiating is correct because it involves formally authorizing a project or phase and establishing its initial high-level direction. This authorization commonly originates from outside the project itself, such as from a sponsor, customer, portfolio-management function, governance body, or organizational leadership. Before authorization, there may not yet be a project manager with authority over the work or an established project environment within which to exercise project control. The resulting project charter gives the project manager authority to apply organizational resources to project activities and creates the formal link between the project and the organization's strategic objectives.

PMI describes initiating as the work used to define a new project or new phase by obtaining authorization to start it. Because the decision to authorize, fund, or prioritize the effort belongs to organizational governance and business decision-making, this process group can occur beyond the project's direct scope of control. Once the project is authorized, the project manager can lead and manage the project work within the boundaries established by the charter and other governing documents. See PMI's [Process Groups: A Practice Guide](#) and [PMBOK® Guide standards information](#).

QUESTION NO: 22

Which of the following statements best describes the influence of stakeholders and the cost of changes as project time advances?

- A. The influence of the stakeholders increases, the cost of changes increases.
- B. The influence of the stakeholders decreases, the cost of changes increases.
- C. The influence of the stakeholders increases, the cost of changes decreases.
- D. The influence of the stakeholders decreases, the cost of changes decreases.

ANSWER: B**Explanation:**

The influence of the stakeholders decreases, the cost of changes increases. This reflects a foundational project life cycle concept described by PMI. Early in a project, stakeholders can substantially influence the scope, requirements, design, and intended outcomes because relatively few decisions have been finalized and little work has been completed. Their ability to shape the project therefore declines as the project progresses, deliverables are produced, plans are baselined, and commitments are made.

Conversely, implementing a change usually becomes more expensive over time. A late change can affect completed work, approved plans, contracts, schedules, resources, testing, documentation, and operational readiness. It may require rework across multiple components rather than a simple adjustment to an initial concept. Project teams should consequently engage stakeholders early, clarify requirements, and use integrated change control to evaluate and manage requested changes throughout the project. This relationship supports proactive stakeholder engagement and disciplined planning while recognizing that change requests may still be necessary as new information emerges. PMI describes stakeholder influence, risk, uncertainty, and the cost of changes as patterns that vary across the project life cycle. See [PMI's PMBOK Guide and Standards](#) and [PMI's CAPM certification overview](#).

QUESTION NO: 23

Stakeholder analysis identifies what information and relates it to the purpose of the project?

- A. Requirements, influence, and functional department
- B. Interest, requirements, and functional role
- C. Requirements, expectations, and influence
- D. Interest, expectations, and influence

ANSWER: D**Explanation:**

Interest, expectations, and influence is correct because stakeholder analysis is the systematic process of gathering and assessing information about people, groups, or organizations that may affect, be affected by, or perceive themselves as affected by a project. The analysis establishes each stakeholder's interest in the project, their expectations of outcomes and engagement, and their potential influence over project decisions, resources, acceptance, or results. Relating these factors to the project's purpose enables the project manager and team to tailor stakeholder engagement, communication, and management approaches appropriately.

In CAPM terminology, this assessment supports effective stakeholder engagement throughout the project life cycle. Understanding interest helps identify why a stakeholder cares about the project; understanding expectations helps clarify the outcomes or interactions they anticipate; and understanding influence helps determine the level of attention, communication, and engagement strategy needed. These details are commonly documented and maintained in stakeholder-related project artifacts, such as the stakeholder register and stakeholder engagement assessment information. PMI describes stakeholders and their relevance to project work in its [stakeholder analysis guidance](#) and provides foundational project-management standards through the [PMBOK® Guide resources](#).

QUESTION NO: 24

Which type of network diagram is also referred to activity-on-arrow (AOA) diagrams?

- A. Precedence Diagramming Method (PDM)
- B. Gant Chart Diagram (GCD)
- C. Dependency Diagramming Method (DDM)
- D. Arrow Diagramming Method (ADM)

ANSWER: D

Explanation:

Arrow Diagramming Method (ADM) is the network-diagramming technique also called activity-on-arrow (AOA). In ADM, each project activity is represented by an arrow, while nodes or circles represent events—points marking the start or completion of one or more activities. The arrows are arranged to show the logical sequence and dependencies needed to perform the work. ADM may use dummy activities, usually depicted with dashed arrows, to represent dependency logic without consuming duration or resources. Understanding this terminology is useful for interpreting legacy schedule network diagrams and for CAPM exam questions that distinguish activity-on-arrow from activity-on-node representations. PMI's current scheduling guidance primarily uses the precedence diagramming method for most schedule network diagrams, but ADM remains a recognized technique and the established name for the AOA convention. PMI describes schedule network diagrams and their use in representing the logical relationships among schedule activities in its [PMBOK® Guide and Standards](#) resources. A concise comparison of activity-on-arrow and activity-on-node conventions is also available in [ProjectManagement.com's discussion of the Precedence Diagramming Method](#).

QUESTION NO: 25

The product scope description is used to:

- A. Gain stakeholders' support for the project.
- B. Document the characteristics of the product.
- C. Describe the project in great detail.
- D. Formally authorize the project.

ANSWER: B

Explanation:

The correct answer is **“Document the characteristics of the product.”** The product scope description progressively elaborates the characteristics of the product, service, or result that the project is intended to create. It translates the high-level product information in the project charter into a clearer description that can be used as scope planning proceeds. Depending on the project's delivery approach and available information, it may describe features, functions, technical requirements, specifications, performance characteristics, or other attributes needed for the intended deliverable.

This description is important because it establishes a shared understanding of what the project's output is expected to be. It provides a product-focused foundation for defining detailed requirements and subsequently developing the project scope statement, work breakdown structure, and acceptance criteria. PMI describes project scope as the work required to deliver a product, service, or result with specified features and functions; the product scope description supports that work by documenting those expected features and characteristics. See PMI's overview of scope management in the [PMBOK® Guide and Standards](#) and its [project scope management](#) guidance.

QUESTION NO: 26

What is the name of a graphic display of project team members and their reporting relationships?

- A. Role dependencies chart
- B. Reporting flow diagram
- C. Project organization chart
- D. Project team structure diagram

ANSWER: C

Explanation:

Project organization chart is correct because it is the standard project-management term for a graphical representation of project team members and their reporting relationships. It shows how the project is organized, including who reports to whom, the relative positions or roles of team members, and the formal lines of authority or communication that apply within the project. This visualization helps the project manager and stakeholders understand the project's governance and staffing structure, especially where team members may be drawn from multiple functional departments or external organizations.

PMI identifies organizational charts and position descriptions as tools used to document project roles and responsibilities. A project organization chart is especially useful for clarifying reporting relationships, which supports accountability and makes it easier for team members to understand the appropriate escalation and decision-making paths. The chart may be tailored to the project's needs, ranging from a simple hierarchy to a more detailed view showing interfaces among internal and external participants. See PMI's overview of organizational structures at [PMI: Organizational Structures in Project Management](#) and the [PMBOK® Guide and Standards](#) resource page.

QUESTION NO: 27

In which of the following organizational structures does the project manager have full authority on a project?

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

ANSWER: D

Explanation:

Projectized is correct because this structure organizes most of the organization's work around projects. The project manager is assigned primary responsibility for the project and has full authority over key project decisions, including directing project resources, managing the budget, establishing priorities, and coordinating work across the project team. Team members are typically dedicated to the project and report directly to the project manager for the duration of their assignments. This clear authority and reporting relationship enables rapid decision-making and strong accountability for achieving the project objectives.

PMI describes organizational structures as influencing the project manager's authority, resource availability, and control over the project. In a projectized environment, the project manager's authority is high to nearly total, which makes it the appropriate structure when full authority is required. The project manager also has direct access to resources and is responsible for integrating the work needed to deliver the project's intended outcomes. See PMI's overview of organizational structures at [PMI: Organizational Structures in Project Management](#) and the [PMBOK® Guide and PMI Standards](#).

QUESTION NO: 28

What involves determining what quantities are to be used to perform project activities.

- A. Resource planning
- B. Estimate Costs
- C. Determine Budget
- D. Control Costs

ANSWER: A

Explanation:

Resource planning is correct because it establishes the resources needed to carry out project work, including the type and quantity of people, equipment, materials, and supplies required for planned activities. In the terminology used by earlier editions of PMI's *A Guide to the Project Management Body of Knowledge*, resource planning determines what resources are

needed and in what quantities before those resources are acquired, assigned, and managed. This planning gives the project team a practical basis for staffing, procurement, scheduling, and cost estimation.

In current PMI terminology, this concept is closely represented by estimating activity resources: identifying the kinds and quantities of resources required to perform each activity. The resulting resource requirements help the project manager assess availability, develop realistic duration estimates, coordinate resource assignments, and create a feasible project plan. Resource planning therefore focuses directly on answering the question of which resources—and how much of each—will be used to perform the project's activities. PMI's standards and resources describe project resource management as the work of identifying, acquiring, and managing the resources necessary for successful delivery. See PMI's [PMBOK Guide and Standards](#) and its overview of [project resource management](#).

QUESTION NO: 29

What is a tool to improve team performance?

- A. Staffing plan
- B. External feedback
- C. Performance reports
- D. Co-Location

ANSWER: D

Explanation:

Co-Location is a tool used to improve team performance because it places project team members in the same physical location for all or a substantial portion of the project. Working together in close proximity makes informal communication easier, speeds up issue resolution, increases day-to-day collaboration, and helps team members build stronger working relationships. These effects are especially valuable when the project requires frequent coordination among people with interdependent work.

In PMI's project-management guidance, co-location is identified as a technique for developing the project team. It may involve establishing a shared project room or "war room," where team members can work together and access common project information. The objective is not merely to share office space; it is to create an environment that supports collaboration, knowledge exchange, and collective ownership of project outcomes. By improving interaction and reducing communication barriers, co-location can strengthen team capability and overall performance. PMI's standards and resources are available through the [PMI Standards and PMBOK® Guide page](#) and the [PMI Learning Library](#).

QUESTION NO: 30

You are creating your WBS and keep decomposing tasks into smaller units. How can you tell when you are done?

- A. Keep decomposing tasks until you reach an amount of work that is small enough to reliably estimate required resources and duration.
- B. Keep decomposing work until you reach a predetermined number of hierarchy levels to keep the WBS balanced.
- C. Keep decomposing tasks until you reach an amount of work that can be accomplished in one DAY.
- D. Keep decomposing tasks until you reach an amount of work that can be accomplished in one WEEK.

ANSWER: A

Explanation:

Keep decomposing tasks until you reach an amount of work that is small enough to reliably estimate required resources and duration. A work breakdown structure (WBS) is a hierarchical decomposition of the project scope into progressively smaller, more manageable components. Decomposition is complete when the resulting work package is at a level where the project team can plan, estimate, assign, monitor, and control the work with sufficient confidence. The appropriate level of detail is

therefore driven by the project's planning and control needs, including the ability to develop credible duration and resource estimates, rather than by an arbitrary calendar unit or a fixed number of WBS levels.

PMI describes the WBS as a deliverable-oriented hierarchical decomposition of the work to be executed by the project team. Its lowest-level components, work packages, provide the basis for estimating and managing project work. The practical level of decomposition can vary among projects depending on complexity, uncertainty, risk, and the organization's estimating capability. Further detail is useful only until estimates and accountability are reliable enough to support planning. See PMI's overview of the [work breakdown structure](#) and the [PMBOK® Guide standards resources](#).

QUESTION NO: 31

What is the lowest level in a work breakdown structure?

- A. Project task
- B. Work package
- C. sow
- D. None

ANSWER: B

Explanation:

A work package is the lowest level of a work breakdown structure (WBS). The WBS is a hierarchical decomposition of the total project scope into progressively smaller, more manageable components. At its lowest level, a work package defines a discrete portion of the project work that can be planned, estimated, assigned, monitored, and controlled. It provides a practical control point for determining the resources, cost, duration, and accountability associated with delivering a defined piece of scope.

Work packages are important because they connect the project's scope decomposition to detailed planning activities. Project teams can use them as the basis for developing schedules, estimating budgets, assigning responsibility, and measuring performance. A work package may be decomposed further into activities for scheduling purposes, but activities are not themselves a lower WBS level; they are derived from the work package during activity definition. PMI identifies the work package as the lowest level of the WBS, making *Work package* the correct answer. See PMI's overview of the [work breakdown structure and scope baseline](#) and the [PMBOK® Guide and Standards](#).

QUESTION NO: 32

Which communication method is most appropriate when project team members need to exchange information in real time and reach a decision quickly?

- A. Interactive communication
- B. Push communication
- C. Pull communication
- D. Informal communication

ANSWER: A

Explanation:

Interactive communication is correct because it involves a multidirectional exchange of information among two or more participants. Meetings, phone calls, video conferences, and instant messaging discussions are examples of interactive communication. This method is especially effective when immediate feedback, clarification, collaboration, or decision-making is needed. Push communication distributes information without requiring immediate response, while pull communication makes information available for recipients to access when needed. See PMI's [PMBOK® Guide and Standards](#) for project communications management guidance.

QUESTION NO: 33

In which type of organization does a project manager have a moderate-to-high resource availability?

- A. Functional
- B. Weak
- C. Balanced
- D. Strong

ANSWER: D

Explanation:

Strong is correct because, in a strong matrix organizational structure, the project manager has moderate to high availability of organizational resources. A strong matrix is designed to give the project manager substantial authority and influence over project work, including access to people, budgets, and other resources needed to deliver the project. Team members may still report administratively through functional departments, but the project manager has a much more prominent role in directing and coordinating their project activities.

PMI's organizational-structure comparisons associate strong matrix environments with a moderate-to-high level of resource availability to the project manager. This level of access supports stronger project control and enables the project manager to more effectively coordinate cross-functional work, manage priorities, and respond to project needs. The exact availability can vary by organization, but the defining PMI classification is moderate to high. See PMI's overview of organizational structures in the [Project Management Institute library](#) and the PMI [PMBOK Guide and Standards](#) resources.

QUESTION NO: 34

In the precedence diagramming method, which of the following is a logical relationship for the activities?

- A. Finish-to-start
- B. Applying leads and lags
- C. Activity-on-node
- D. Dependency determination

ANSWER: A

Explanation:

Finish-to-start is correct because it is one of the logical relationships used in the precedence diagramming method (PDM) to establish the sequencing of schedule activities. Under a finish-to-start relationship, the successor activity cannot start until the predecessor activity has finished. For example, a project team generally cannot begin testing a completed software feature until development of that feature is finished. This relationship communicates the scheduling constraint between the two activities and enables the project manager to construct the network diagram, determine the sequence of work, and develop the schedule model.

PDM represents activities as nodes and uses logical relationships to show how their timing is connected. PMI recognizes four dependency relationship types in this method: finish-to-start, finish-to-finish, start-to-start, and start-to-finish. Finish-to-start is the most commonly used relationship in project schedules. Once the relationship is defined, a lead or lag may be applied if needed to adjust the timing, but the finish-to-start relationship itself is the underlying logical connection. See PMI's [PMBOK® Guide and Standards](#) and the PMI [schedule network analysis overview](#).

QUESTION NO: 35

You are project manager of a project and as part of the team acquisition process; you hire a new employee and assigns him to your project team. According to Maslow's hierarchy of needs, what needs level he most likely is at?

- A. Social need
- B. Physical need
- C. Safety and security
- D. Security

ANSWER: A

Explanation:

Social need is correct because a person who has just joined a project team will commonly be focused on belonging, acceptance, relationships, and becoming part of the group. In Maslow's hierarchy, social needs—also called belongingness and love needs—include friendship, affiliation, connection with colleagues, and acceptance by a team. A project manager can help meet this need by properly introducing the new employee, clarifying the team's shared purpose, involving the employee in team activities and decisions, encouraging respectful collaboration, and creating opportunities to build working relationships.

In the project environment, satisfying belongingness needs supports team development and can improve communication, trust, engagement, and cooperation. This aligns with the broader PMI emphasis on building collaborative teams and fostering an effective team environment. Maslow's model is commonly used as a motivational framework: once basic employment conditions are in place, integration into a new team naturally brings interpersonal acceptance and affiliation to the foreground. See the [overview of Maslow's hierarchy of needs](#) and PMI's [guidance on leading high-performance project teams](#).

QUESTION NO: 36

If you are project manager for a Project and will need as many inputs to the initiation phase as possible. Of the following, which is the best source of information for your project?

- A. Historical information
- B. WBS
- C. Business plans
- D. RBS

ANSWER: A

Explanation:

Historical information is the best source because it provides practical organizational knowledge from prior projects and operations that can be applied during project initiation. In PMI terminology, this type of knowledge is commonly available through organizational process assets, which can include lessons learned registers or repositories, historical project records, templates, policies, procedures, and information about outcomes from comparable work. Reviewing these materials helps the project manager understand past assumptions, estimates, risks, stakeholder issues, constraints, approval practices, and successful approaches before the new project is fully defined.

During initiation, the project manager needs credible context to support development of the project charter and early stakeholder understanding. Historical information supplies evidence rather than relying solely on new, untested assumptions. It can also reveal patterns that improve early decisions about the project's feasibility, high-level scope, resources, governance, and risks. PMI describes organizational process assets as plans, processes, policies, procedures, and knowledge bases that may be used as inputs to project work, while lessons learned capture knowledge that can improve future projects. These sources make historical information especially valuable at the start of a project. See PMI's [discussion of organizational process assets](#) and its [guidance on lessons learned](#).

QUESTION NO: 37

Information should be communicated to _____.

- A. Everyone in the communication plan
- B. Everyone on the team
- C. Sponsor
- D. Team lead

ANSWER: A

Explanation:

Everyone in the communication plan is correct because project communications are planned around the information needs of identified stakeholders, not simply around project-team membership or organizational rank. The communications management plan establishes the approach for creating, collecting, distributing, storing, retrieving, and managing project information. It identifies what information is needed, who needs it, when it is required, the format or method to use, and the responsible person or group. During project work, the project manager applies that plan so that the intended recipients receive relevant information in a timely and appropriate manner. This supports stakeholder engagement, informed decision-making, coordinated work, and effective monitoring and control. "Everyone" in this context means every person or group designated as a recipient by the communication plan, with communications tailored to their documented needs and responsibilities. PMI describes project communications management as the processes that ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, monitoring, and disposition of project information. See [PMI's PMBOK Guide and Standards](#) and [PMI guidance on communications management plans](#).

QUESTION NO: 38

In which process might you use risk reassessment as a tool and technique?

- A. Qualitative risk analysis
- B. Risk monitoring and control
- C. Monitor and control project work
- D. Risk response planning

ANSWER: B

Explanation:

Risk monitoring and control is correct because risk reassessment is used while risks are being monitored throughout the project. A reassessment involves reviewing the current project risk landscape: checking whether previously identified risks remain relevant, determining whether their probability or impact has changed, identifying newly emerging risks, and retiring risks that are no longer applicable. This ongoing review helps ensure that the risk register and planned responses continue to reflect actual project conditions rather than assumptions made earlier in the work.

In current PMI terminology, this activity is associated with the Monitor Risks process. Earlier editions of PMI standards used the process name Control Risks, often described in training materials as risk monitoring and control. Regardless of the edition-specific label, the essential purpose is the same: track identified risks, monitor residual and secondary risks, identify new risks, and evaluate whether risk-management activities remain effective. The reassessment results can lead to updates to risk information, response actions, assumptions, issues, and other project-management plans. PMI describes risk management concepts and the ongoing nature of risk work in its [PMBOK® Guide and Standards](#) resources and its [project risk management guidance](#).

QUESTION NO: 39

Which type of network diagram is also referred to Activity-on-Node (AON) diagrams?

- A. Precedence Diagramming Method (PDM)
- B. Gantt Chart Diagram (GCD)
- C. Dependency Diagramming Method (DDM)
- D. Arrow Diagramming Method (ADM)

ANSWER: A

Explanation:

Precedence Diagramming Method (PDM) is the correct answer because it represents project activities as nodes, typically boxes or rectangles, and uses connecting arrows to show the logical relationships between those activities. This representation is therefore known as an Activity-on-Node network diagram. PDM is the network-diagramming method used to develop a schedule model by showing how activities are sequenced and related, including finish-to-start, finish-to-finish, start-to-start, and start-to-finish relationships. These relationships enable the project team to analyze dependencies, determine feasible activity sequencing, and support schedule development and critical-path analysis.

PMI identifies PDM as a standard technique for displaying activities and their dependencies in project schedule network diagrams. In practical scheduling tools, the activity node commonly contains information such as the activity name, identifier, duration, and early or late schedule dates. This makes the method useful for planning, communicating, and controlling the work needed to deliver the project. PMI's standards resources discuss schedule-network concepts within the broader project scheduling framework; see the [PMBOK® Guide and Standards](#) and PMI's [discussion of precedence diagramming](#).

QUESTION NO: 40

You are the project manager of a project and budgeted money to provide cash awards to team members that exceed expectations. A project team member that is motivated by the chance to earn cash reward can most accurately be explained by which theory

- A. Hierarchy of needs
- B. Expectancy theory
- C. Achievement theory
- D. All of the above

ANSWER: B

Explanation:

Expectancy theory is correct because it describes motivation as a rational connection between effort, performance, and a valued outcome. In this situation, the team member believes that putting forth extra effort can lead to exceeding expectations and that this performance will result in a cash award. Because the award is personally desirable, it has positive value to the individual and can increase motivation to perform at a higher level.

More specifically, the scenario demonstrates the core expectancy-theory relationship: the individual expects effort to improve performance, expects strong performance to be recognized with the promised reward, and values that reward. A project manager can apply this principle by making performance expectations measurable, ensuring that rewards are actually linked to those expectations, and communicating the reward criteria clearly. The incentive budget supports the promised outcome, helping make the performance-to-reward connection credible. PMI emphasizes that project leaders should motivate and enable team members through appropriate leadership and team-management practices. See PMI's [PMBOK® Guide and Standards](#) and OpenStax's overview of [process theories of motivation](#).

QUESTION NO: 41

What is the function of a Project Management Office (PMO)?

- A.** To focus on the coordinated planning, prioritization, and execution of projects and subprojects that are tied to the parent organizations' or the client's overall business objectives.
- B.** To coordinate and manage the procurement of projects relevant to the parent organization's business objectives and to administer the project charters accordingly. **C.** To administer performance reviews for the project manager and the project team members and to handle any personnel and payroll issues.
- C.** To focus on the specified project objectives and to manage the scope, schedule, cost, and quality of the work packages.

ANSWER: A

Explanation:

To focus on the coordinated planning, prioritization, and execution of projects and subprojects that are tied to the parent organizations' or the client's overall business objectives is correct because a Project Management Office provides an organizational mechanism for coordinating project work in support of strategic objectives. A PMO commonly establishes consistent governance, methods, tools, reporting practices, and resource-management approaches across the projects it supports or manages. This coordinated oversight helps decision makers evaluate priorities, allocate resources to the most valuable initiatives, and maintain alignment between project activity and the organization's intended business outcomes.

PMI describes a PMO as an organizational structure that standardizes project-related governance processes and facilitates the sharing of resources, methodologies, tools, and techniques. Depending on its authority and organizational design, a PMO may be supportive, controlling, or directive, and it can provide broad coordination across multiple projects rather than managing only the detailed work of one individual project. The emphasis on coordinated planning and prioritization in relation to organizational objectives therefore captures the PMO's strategic, cross-project function. See PMI's [Project Management Lexicon](#) and its overview of [the strategic role of the PMO](#).

QUESTION NO: 42

Which risk response is most likely to involve contingency reserves?

- A.** Acceptance
- B.** Share
- C.** Mitigate
- D.** Transfer

ANSWER: A

Explanation:

Acceptance is correct because it is the risk response used when the project team decides not to take proactive action to change a particular threat's probability or impact. PMI distinguishes passive acceptance, in which the team simply acknowledges the risk, from active acceptance, in which the team establishes a contingency plan and may set aside contingency reserves of money, time, or resources. Those reserves are intended to address the effects if the identified risk occurs, rather than to fund routine project work. The amount of contingency reserve is normally derived from risk analysis and is managed as part of the project's approved baselines and risk-management approach. This makes acceptance especially appropriate where a response is not cost-effective, feasible, or warranted, but the team still needs a defined means of responding to potential consequences. PMI's discussion of project risk management describes acceptance as a response strategy and recognizes contingency reserves as funding or time allocated for known risks. See PMI's [guidance on contingency reserve management](#) and the [PMBOK Guide and PMI standards resources](#).

QUESTION NO: 43

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

ANSWER: B

Explanation:

Risk breakdown structure (RBS) is correct because it is a hierarchical representation of project risks organized according to categories and subcategories. It provides a structured framework for identifying where risks may originate, such as technical, external, organizational, commercial, or project-management sources. The hierarchy enables the project team to examine risk exposure systematically and consistently, rather than treating risks as an unstructured list. During risk identification, an RBS can act as a prompt to help the team consider potential sources of uncertainty across all relevant areas of the project. It can also support later analysis and reporting by allowing risks to be grouped and summarized by category, which helps reveal areas with concentrated exposure and guides risk-response attention. PMI describes a risk breakdown structure as a hierarchical representation of potential sources of risk, and it is commonly used as part of project risk-management planning and identification activities. See PMI's overview of project risk management at [PMI Project Risk Management resources](#) and the PMI Lexicon entry for [risk breakdown structure](#).

QUESTION NO: 44

Which document formally authorizes a project?

- A. The project charter
- B. Project scope statement
- C. The project contract
- D. Project closing document

ANSWER: A

Explanation:

The project charter formally authorizes a project. In PMI terminology, it is issued by the project sponsor or initiating entity and establishes that the project exists as an approved organizational undertaking. Its approval gives the project manager authority to apply organizational resources to project activities. This is a key distinction: the charter is created during project initiation, before detailed planning products are developed, so it provides the high-level basis for moving forward with the work.

A project charter typically records the business need, intended benefits, high-level requirements, objectives, major risks, key stakeholders, milestone summary, budget information, and the project manager's assigned authority. By documenting these elements at a high level and obtaining the appropriate authorization, the organization aligns the project with its strategic objectives and creates a common understanding of why the work is being undertaken. PMI identifies the project charter as the document that formally authorizes the existence of a project and provides the project manager with authority. See PMI's [PMI Lexicon of Project Management Terms](#) and the [CAPM certification overview](#).

QUESTION NO: 45

What is the lowest level in the WBS at which the cost and activity durations for the work can be reliably estimated and managed?

- A. Work product
- B. Work package
- C. Project deliverable

D. Scope baseline

ANSWER: B

Explanation:

Work package is correct because it is the lowest level of the work breakdown structure at which project work is defined sufficiently for reliable estimating, planning, monitoring, and control. A work package represents a discrete portion of the project scope that can be assigned to a responsible owner or control account and decomposed further, when needed, into schedule activities. Its clearly bounded scope enables the project team to estimate the resources required, determine associated costs, establish expected durations, and measure performance against the approved scope and cost baselines.

Using work packages gives the project manager an appropriate management level: the work is detailed enough to support practical estimates and accountability without creating unnecessary administrative complexity. Estimates developed for individual work packages can be aggregated upward to establish estimates for higher-level components and for the overall project. This relationship also supports cost control, schedule control, and earned value management where those practices are used. PMI describes the work breakdown structure as a hierarchical decomposition of project scope and identifies work packages as the lowest level used for estimating and managing work. See PMI's [PMBOK® Guide and Standards](#) and its [standards library](#).

QUESTION NO: 46

In which phase you define the final deliverable?

- A. Closing
- B. Execution
- C. Planning
- D. Initiation

ANSWER: C

Explanation:

Planning is correct because the project team progressively defines and documents the work and deliverables needed to meet the project's objectives during planning. In particular, scope planning produces the project scope statement and scope baseline, which describe the project deliverables in sufficient detail and establish how those deliverables will be accepted. The final deliverable is therefore identified and clarified before the work is performed, so that the team, sponsor, and stakeholders share a common understanding of the intended product, service, or result and its acceptance criteria.

Planning also connects the defined deliverables to the work breakdown structure, schedule, resources, quality requirements, and procurement needs. This creates the basis for executing the project and later validating that the completed result satisfies the approved scope. The final deliverable may be formally accepted and transitioned during project closing, but closing concerns completing administrative and contractual activities after the deliverable has been produced and accepted; it is not the phase in which its scope is initially defined. PMI's standards describe planning as the work of establishing scope and the approach for delivering project outcomes. See PMI's [PMBOK® Guide and Standards](#) and [PMI's scope management guidance](#).

QUESTION NO: 47

In the three-point estimating technique, if the most likely estimate for an activity to complete is 100 days, the optimistic estimate is 60 days, and the pessimistic estimate is 200 days, what is the expected duration in which the activity will be completed?

- A. 90 days
- B. 100 days

C. 110 days

D. 660 days

ANSWER: C

Explanation:

110 days is the expected duration when three-point estimating is performed using the beta distribution, commonly called PERT estimating. This technique accounts for uncertainty by combining the optimistic estimate, most likely estimate, and pessimistic estimate, while giving the most likely value greater influence. The expected-duration formula is $(\text{Optimistic} + 4 \times \text{Most Likely} + \text{Pessimistic}) \div 6$. Substituting the given values produces $(60 + 4 \times 100 + 200) \div 6$, or $660 \div 6$. The resulting expected duration is 110 days.

This weighted calculation is useful because an activity estimate should reflect both favorable and adverse possibilities rather than treating every possible outcome as equally probable. The fourfold weighting of the most likely estimate represents the assumption that the most likely outcome has the greatest influence on the expected result. PMI identifies three-point estimating as an estimating technique that uses optimistic, most likely, and pessimistic values to develop an expected estimate. See PMI's [Practice Standard for Project Estimating](#) and the [PMI Lexicon of Project Management Terms](#).

QUESTION NO: 48

Your project has a budget of \$240,000 and is expect to last for 1 year, with the work and budget spread evenly across all months. The project is now in the fourth month, the work is on schedule, but you have spent \$120,000 of the project budget. What is your COST

Variance percentage in this case?

A. -50%

B. 50%

C. 40%

D. 20%

ANSWER: A

Explanation:

-50% is correct. In earned value management, cost variance (CV) is calculated as earned value (EV) minus actual cost (AC), and cost variance percentage is calculated as CV divided by EV, multiplied by 100. Because the work and budget are distributed evenly over 12 months, the planned budget through the end of month four is $\$240,000 \times 4/12 = \$80,000$. The project is on schedule, so the earned value is also \$80,000: it has completed the amount of work that was planned by this point. Actual cost is \$120,000. Therefore, CV is $\$80,000 - \$120,000 = -\$40,000$. Dividing this variance by EV gives $-\$40,000 / \$80,000 = -0.50$, or -50%. The negative percentage indicates that the project has spent more than the value of the work accomplished at this reporting point. This use of EV and AC follows PMI's earned value management terminology and performance-measurement approach. See the [PMI Lexicon of Project Management Terms](#) and PMI's overview of [earned value project management](#).

QUESTION NO: 49

A Risk Register is a part of the _____.

A. Project Scope Statement

B. Project Management plan

C. Project Scheduling plan

D. Project Charter

ANSWER: E

Explanation:

Project documents is correct. In PMI's project-management framework, the risk register is a project document used to record identified risks and their characteristics. It is initially created during risk identification and is progressively elaborated throughout the project as the team analyzes risks, plans responses, implements those responses, and monitors outcomes. Typical entries include a risk description, category, probability, impact, owners, response actions, triggers, and current status. Because it is an operational record that is continually updated as project information changes, the risk register belongs with the project documents. It supports risk-related decision-making and communication across the project life cycle, while maintaining a traceable record of individual uncertainties and their planned treatment. PMI distinguishes these working project records from the integrated project management plan and its subsidiary plans. PMI's standards and guidance describe risk management as a continuing discipline that relies on documented risk information, including the risk register. See PMI's [Standards and Publications](#) page and its [risk management guidance](#) for further context on managing and documenting project risks.

QUESTION NO: 50

Which is one of the determining factors used to calculate CPI?

- A. EV
- B. SPI
- C. PV
- D. ETC

ANSWER: A

Explanation:

EV is a determining factor used to calculate the Cost Performance Index (CPI). In earned value management, CPI measures cost efficiency for work performed and is calculated as earned value divided by actual cost: $CPI = EV / AC$. Earned value represents the budgeted value of the work that has actually been completed as of the status date. It therefore provides the performance-value component required to assess whether the project is obtaining an appropriate amount of completed work for the money spent. A CPI of 1.00 indicates that cost performance is exactly in line with the approved budget for completed work. A value greater than 1.00 indicates favorable cost efficiency, while a value below 1.00 indicates that the project is spending more than planned for the value of work accomplished. PMI identifies CPI as an earned value metric for evaluating project cost performance, and its formula explicitly uses EV together with actual cost. See PMI's [PMI Lexicon of Project Management Terms](#) and the [PMI Standards and Publications](#) page for PMI's earned value management terminology and standards resources.

QUESTION NO: 51

Perform quality assurance belongs to which of the following process groups?

- A. Planning
- B. Executing
- C. Monitoring and Control
- D. Closing

ANSWER: B

Explanation:

“Executing” is correct. In the process-based framework used in the PMBOK® Guide—Sixth Edition, Perform Quality Assurance is an Executing process within the Project Quality Management knowledge area. Its purpose is to audit quality requirements and the results obtained from quality-control measurements, ensuring that appropriate quality standards, operational definitions, and procedures are being used. This work is proactive and process-oriented: the project team applies and improves the processes that will enable deliverables to meet their specified quality requirements while project work is being carried out.

Quality assurance therefore supports the delivery of project work by evaluating whether the project’s quality-management approach is effective and by identifying opportunities for improvement. Typical outputs include quality reports, test and evaluation documents, change requests, and updates to project-management-plan components and project documents. PMI’s current standards emphasize tailoring and a principles-based approach, but understanding the traditional process-group mapping remains important for CAPM questions that use the term “Perform Quality Assurance.” PMI identifies Executing as the process group used to complete the work defined in the project management plan. See PMI’s [PMBOK® Guide and Standards](#) and its overview of [project management process groups](#).

QUESTION NO: 52

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

ANSWER: C**Explanation:**

Resource leveling is applied after the schedule model has been analyzed using the critical path method. Critical path analysis first establishes the logical sequence of activities, calculates early and late dates, and identifies the amount of float available in the schedule. That analysis gives the project team a baseline understanding of the schedule’s driving path and flexibility before resource limits are addressed.

Resource leveling is then used when assigned resources are overallocated or are available only at limited times. The technique adjusts activity start and finish dates to resolve those resource conflicts. Because the adjustment may consume float, it can change the critical path and may extend the overall project duration. Applying leveling after critical path analysis enables the project manager to assess these schedule impacts deliberately and update the schedule model based on realistic resource availability. PMI identifies resource leveling as a resource optimization technique used in schedule development and control; see [PMI’s PMBOK Guide and Standards](#). Additional PMI scheduling guidance is available through the [PMI Standards](#) library.

QUESTION NO: 53

The Project Management Body of Knowledge (PMBOK Guide) should be considered as a:

- A. guide to project management processes, tools and techniques.
- B. methodology for managing projects.
- C. guide for project, portfolio and program management.
- D. standard for project, portfolio and program management.

ANSWER: A**Explanation:**

The PMBOK Guide should be considered a guide to project management processes, tools and techniques. PMI presents it as a foundational reference that organizes and describes the broadly recognized knowledge, principles, practices, and approaches that can support effective project management. It provides a common professional vocabulary and a structured body of guidance that project practitioners can tailor to the specific project, organization, delivery approach, industry, and environment.

Importantly, the guide is intended to inform professional judgment rather than prescribe one mandatory, end-to-end way of managing every project. Project managers select and adapt appropriate processes, models, methods, tools, and techniques based on the work and its context. This is consistent with PMI's description of the PMBOK Guide as a global standard and resource for project management practice, including predictive, adaptive, and hybrid approaches. The current guide emphasizes principles and performance domains, while PMI's associated process guidance continues to help practitioners understand commonly used project management practices. See PMI's [PMBOK Guide and Standards](#) page and its [Standards](#) overview for the guide's purpose and scope.

QUESTION NO: 54

Which process occurs within the Monitoring and Controlling Process Group?

- A. Cost Control
- B. Quality Planning
- C. Quantitative Risk Analysis
- D. Cost Budgeting

ANSWER: A

Explanation:

Cost Control is correct. In PMI's traditional process-group framework, this work is performed in the Monitoring and Controlling Process Group because it involves tracking project cost performance against the approved cost baseline, identifying variances, forecasting the expected final cost, and recommending or implementing appropriate corrective action through the project's change-control approach. The purpose is not merely to record expenditures; it is to keep the project's financial performance aligned with the authorized plan while the work is underway. In more recent PMI terminology, the process is called "Control Costs," but it represents the same essential management activity: monitoring the status of the project to update costs and managing changes to the cost baseline. Cost data, earned value results where applicable, forecasts, and approved changes help the project manager understand whether funding and spending remain on track and whether action is needed to meet the approved budget. PMI describes process groups as a way to organize project-management activities, including monitoring and controlling work throughout the project life cycle. See PMI's [Process Groups resources](#) and the [PMI Standards and Publications](#) page.

QUESTION NO: 55

Analogous Cost Estimating relies on which of the following techniques?

- A. Expert Judgment
- B. Project Management Software
- C. Vendor Bid Analysis
- D. Reserve Analysis

ANSWER: A

Explanation:

Expert Judgment is correct because analogous cost estimating develops an estimate by comparing the current project with the actual cost, duration, size, complexity, or other measurable characteristics of a previous, similar project. The value of that

comparison depends on knowledgeable practitioners who can determine whether the historical project is genuinely comparable and can make appropriate adjustments for meaningful differences, such as scope, technology, location, market conditions, inflation, scale, and risk. This application of professional expertise is expert judgment.

PMI describes analogous estimating as a technique that uses values or attributes from prior similar projects as the basis for estimating the same parameter or measure for the current project. It is commonly used when limited detailed information is available, particularly early in planning, because it can produce a high-level estimate relatively quickly. The estimate's reliability is strongest when historical projects are similar in fact and the experts making the comparison understand the context and assumptions behind the historical data. PMI's standards and terminology resources provide the relevant project-management foundation: [PMI Standards and Publications](#) and the [PMI Lexicon of Project Management Terms](#).

QUESTION NO: 56

What are the inputs for Initiation process?

- A. Product description and Strategic plan
- B. Selection criteria
- C. Historical information
- D. All of the above

ANSWER: D

Explanation:

All of the above is correct because the question reflects the initiation-process input set used in earlier PMI PMBOK® Guide process-based material. Product description supplies the characteristics of the product or service that the project is intended to create. The strategic plan establishes the organizational direction and business context that support authorization of the work. Selection criteria provide the basis for assessing whether a proposed project should be pursued, while historical information provides lessons, records, and prior-project knowledge that can improve the initiation decision. Together, these inputs enable informed project selection and support the development and authorization of the project at the beginning of its life cycle.

In current PMI terminology, initiating work is commonly associated with developing the project charter and identifying stakeholders, with the business documents and organizational context providing important decision-making inputs. PMI's standards evolve across editions, so CAPM learners should recognize both the current principles-based framing and the terminology used by the specific study source or question bank. See PMI's [PMBOK® Guide and Standards](#) and [CAPM certification overview](#).

QUESTION NO: 57

What is Project Portfolio Management?

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

ANSWER: C

Explanation:

Management of a collection of projects that are grouped together to facilitate effective management and meet strategic business objectives is correct because portfolio management is the centralized management of a set of organizational components selected to achieve strategy. In PMI terminology, a portfolio may include projects, programs, subsidiary

portfolios, and operations. Its components are grouped because they support common strategic goals, resource decisions, investment priorities, and value delivery—not necessarily because the work is directly dependent or related. Portfolio management therefore operates at an organizational decision-making level: leaders assess whether proposed and ongoing work aligns with strategic objectives, prioritize investments, allocate constrained funding and resources, monitor aggregate performance, and adjust the portfolio as business conditions or strategy change. This focus distinguishes portfolio management from managing one project's day-to-day work. The statement accurately captures the key ideas of grouping project work for coordinated oversight and using that oversight to pursue strategic business objectives. PMI's portfolio-management standard describes how organizations manage portfolios to achieve strategic objectives and optimize value from their investments. See PMI's [Portfolio Management standard overview](#) and its [overview of project management and organizational value delivery](#).

QUESTION NO: 58

You are managing a project that will implement a new Insurance software package. Two project team members have difficulty working together. They come to you, for help resolving the issues. You immediately set up a meeting that includes the functional manager. After the meeting you and the functional manager discuss the issues and agree on a solution. What type of organizational structure you are working in?

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

ANSWER: B

Explanation:

Balanced matrix is correct because this structure distributes authority between the project manager and the functional manager. The scenario shows the project manager actively handling a project-related team conflict by convening a meeting, while the functional manager remains involved in resolving the matter and jointly agreeing on the outcome. This shared participation reflects a balanced division of responsibility rather than authority residing predominantly with only one manager.

In a balanced matrix, project managers coordinate project work and are accountable for integrating activities across the project, while functional managers retain meaningful authority over personnel, technical expertise, and departmental responsibilities. Team members commonly have a dual reporting relationship, so concerns involving working relationships, resource management, or functional responsibilities may appropriately require coordination between both management roles. The joint discussion and mutual agreement described are therefore practical evidence of balanced authority. PMI recognizes organizational structure as an important enterprise environmental factor that affects project authority, resource availability, communications, and decision-making. See PMI's discussion of [matrix organizational structures](#) and its overview of [project management](#).