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QUESTION NO: 1

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.

ANSWER: A

Explanation:

Historical information and the lessons-learned databasE. is correct because both sources provide evidence from completed or prior work about how stakeholder management was actually planned and performed. Historical information can include records from comparable projects, such as prior stakeholder engagement approaches, communication practices, issue logs, reports, and outcomes. It gives the project manager organizational context and practical examples that can be adapted to the current project. The lessons-learned database captures knowledge deliberately documented during and after projects, including what engagement strategies were effective, what stakeholder-related challenges occurred, how they were addressed, and recommendations for future teams. Reviewing these resources supports evidence-based tailoring of the stakeholder management plan rather than creating it solely from assumptions. This aligns with project-management good practice: reusable organizational knowledge should inform planning, promote continuous improvement, and help the team anticipate stakeholder expectations, influence, concerns, and engagement needs. PMI describes lessons learned as knowledge gained through experience that should be retained for use on future work; its standards resources also emphasize tailoring practices to the project context. See the PMI PMBOK® Guide and Standards and the PMI Lexicon of Project Management Terms.

QUESTION NO: 2

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

ANSWER: A

Explanation:

Identify Risks is correct because SWOT analysis is a structured technique for discovering conditions that could affect project objectives. It considers internal strengths and weaknesses, along with external opportunities and threats, so the project team can identify both positive risks (opportunities) and negative risks (threats). Examining these factors helps reveal potential sources of uncertainty across areas such as resources, technology, stakeholders, suppliers, organizational capability, and market conditions. The resulting observations can be documented as candidate risks and then entered into the risk register for further assessment and response planning. This use aligns with PMI's description of project risk as an uncertain event or condition that may have a positive or negative effect on one or more project objectives. The identification activity should be broad and proactive, drawing on available information and collaborative analysis to create a useful inventory of risks before prioritization takes place. PMI's risk-management guidance and terminology provide supporting context at PMI: Project Risk Management and PMI Lexicon of Project Management Terms.

QUESTION NO: 3

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

ANSWER: A

Explanation:

lead is correct because it represents intentionally overlapping activities that would otherwise be scheduled in sequence. In this example, selecting the paint and preparing the bedroom walls can proceed at the same time, rather than waiting for paint selection to finish before wall preparation starts. Beginning the subsequent work before the preceding work is fully complete reduces the overall duration of the painting effort. This is a schedule-compression technique: it can shorten the planned timeline when the overlapping work is practical and the team accepts any coordination or rework risk that may result. Project managers use leads when a logical relationship permits a successor activity to start earlier than its normal dependency point. The activity relationship is still planned and controlled; the work is simply brought forward to create overlap. PMI's glossary describes a lead as an acceleration of a successor activity, allowing it to begin before its predecessor has completed. The PMI scheduling practice guidance also discusses leads as a means of representing planned overlap among related activities. See the PMI Lexicon of Project Management Terms and PMI guidance on project scheduling.

QUESTION NO: 4

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

ANSWER: A

Explanation:

Transfer is the appropriate risk response because the project team is arranging for an external supplier to perform the high-risk development work. Risk transfer moves ownership of all or part of the exposure to a third party that is better positioned to manage it, usually through a contractual arrangement. In this situation, the organization recognizes that it lacks the specialized talent needed for that component and engages a vendor with the relevant capability. The outsourcing agreement can define deliverables, performance standards, acceptance criteria, responsibilities, warranties, service levels, and remedies if the supplier does not meet its commitments. These provisions allocate much of the delivery and capability risk to the supplier.

Transferring a risk does not mean the project manager can ignore the outsourced work. The project still needs active supplier management, clear requirements, monitoring, quality control, and contract administration. The organization may also retain related risks, such as integration, dependency, confidentiality, and vendor-performance risks. Nevertheless, the decision described is specifically a transfer response because responsibility for executing the risky portion is placed with an external party. PMI identifies transfer as a response strategy for threats in which ownership of the threat is shifted to a third party, commonly through contracts, insurance, warranties, or similar arrangements. See the Project Management Institute's risk management guidance and the PMBOK Guide overview.

QUESTION NO: 5

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.

ANSWER: B

Explanation:

The correct answer is **nominal group technique**. This is a structured group decision-making method that builds on brainstorming while preventing a few vocal participants from dominating the discussion. Participants first generate ideas independently, then share them with the group in an organized manner. After the ideas have been clarified and consolidated, each participant votes or assigns rankings to the ideas. The resulting scores identify the ideas the group considers most valuable, enabling the project team to prioritize them objectively.

In project management, this technique is particularly useful when a team must select requirements, identify and prioritize risks, choose solution alternatives, or establish improvement actions. Its combination of idea generation and ranked voting makes it well suited to situations where the team needs both broad participation and a defensible priority order. The Project Management Institute describes group decision-making techniques, including methods that use voting to reach or support decisions, in its project-management standards and resources. See the PMBOK Guide and Standards and the CDC overview of the nominal group technique.

QUESTION NO: 6

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)

ANSWER: C

Explanation:

finish-to-start (FS) is the most commonly used precedence relationship in the precedence diagramming method (PDM). It means that a successor activity cannot start until its predecessor activity has finished. This dependency mirrors the usual sequence of work in projects: for example, a team normally completes a design before beginning the construction or implementation that depends on that design. PDM is a scheduling-network technique used to show logical relationships among activities and to develop the project schedule. Although PDM supports several dependency types, finish-to-start is the standard relationship used for the majority of sequential project activities because it expresses a clear handoff from completed predecessor work to the next activity. The Project Management Institute describes finish-to-start as a logical relationship in which a successor activity cannot start until a predecessor activity has finished. Using this relationship lets the project manager model activity order, identify the critical path, and assess how changes or delays to predecessor work affect subsequent scheduled work. See the PMI PMBOK® Guide and Standards and PMI's project scheduling guidance for further scheduling-network context.

QUESTION NO: 7

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

ANSWER: A

Explanation:

The correct answer is **Project statement of work**. A project statement of work (SOW) is the narrative description of the products, services, or results that a project is expected to create and deliver. It establishes the project's high-level scope by describing the business need, product or service requirements, and the intended outcomes. This description gives the project team and key stakeholders a common starting point for understanding what the project is being initiated to accomplish.

In project-management practice, the SOW is commonly an input to project initiation, including development of the project charter. Its level of detail can vary according to the organization, the project life cycle, and whether the work is being performed internally or procured from an external supplier. Regardless of format, its essential role is to state the deliverable-oriented work and expected result in narrative form. PMI's glossary defines a statement of work as a narrative description of products, services, or results to be delivered by a project. See the PMI Lexicon of Project Management Terms and PMI's overview of statement-of-work elements.

QUESTION NO: 8

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.

ANSWER: B

Explanation:

there is no single way to manage a project. This reflects the core project-management principle of tailoring: project managers select, adapt, and apply methods, processes, tools, and artifacts according to the project's context. Relevant considerations include the project's size and complexity, industry, delivery approach, organizational environment, regulatory obligations, team capabilities, stakeholder needs, uncertainty, and risk profile. An approach that is effective for a small internal predictive project may not be suitable for a complex product initiative using adaptive or hybrid delivery. Experienced project managers therefore exercise professional judgment rather than treating a methodology as a fixed checklist. PMBOK guidance describes tailoring as the deliberate adaptation of the project-management approach and processes so they are fit for purpose and produce the intended value. GAQM APM study principles likewise emphasize applying sound project-management practices pragmatically to the circumstances of each individual project. This flexibility helps ensure that governance and planning remain sufficient without creating unnecessary administrative effort, while controls, communication, and delivery practices address the project's real needs. See the PMI PMBOK Guide overview and PMI's guidance on tailoring project management processes.

QUESTION NO: 9

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.

ANSWER: A

Explanation:

It provides the necessary information to determine if a project is worth the required investment. A business case is the documented justification for initiating or continuing a project, programme, or other proposed investment. It brings together the expected benefits, estimated costs, risks, assumptions, strategic alignment, and available options so decision-makers can assess whether the anticipated value justifies committing organizational resources. In practical terms, the business case supports an informed go/no-go decision and establishes the rationale against which the project's continuing viability can later be reviewed. It is not merely a financial document: although cost and return are important, the assessment can also include non-financial benefits, regulatory obligations, customer outcomes, and contribution to strategic objectives. Project-management guidance treats the business case as a key input to project authorization because it explains why the work should be undertaken and what value it is expected to deliver. See the Project Management Institute's discussion of business cases and the UK government's Green Book guidance on appraisal and business cases.

QUESTION NO: 10

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

ANSWER: B

Explanation:

Monitor and Control Risk is correct because risk reassessment is a recurring review activity used while the project is being executed and controlled. It involves revisiting identified risks, checking whether their probability, impact, urgency, and status have changed, and determining whether new risks have emerged or existing risks are no longer relevant. The project manager uses the results to keep risk information current and to decide whether planned responses remain suitable or need adjustment. This ongoing reassessment supports informed decisions throughout the project rather than treating risk analysis as a one-time exercise.

In PMI terminology used in earlier PMBOK editions, this work is performed in the *Monitor and Control Risks* process; newer terminology calls the corresponding activity *Monitor Risks*. The purpose remains continuous tracking of identified risks, monitoring residual and secondary risks, identifying new risks, and evaluating the effectiveness of risk responses. Regular reassessment is particularly valuable at status reviews, phase transitions, after major changes, and when trigger conditions occur. PMI describes risk management as including monitoring risks and implementing risk responses throughout the project life cycle. See PMI's project risk management guidance and the PMBOK Guide and Standards information.

QUESTION NO: 11

Status of deliverables, implementation status for change requests, and forecasted estimates to complete are examples of:

A. Earned value management.

B. Enterprise environmental factors.

C. Organizational process assets.

D. Work performance information.

ANSWER: D

Explanation:

Work performance information. is correct because it is the analyzed and contextualized project data used to describe how the project is performing and to support decisions during monitoring and controlling. It commonly includes the current status of deliverables, progress in implementing approved change requests, and forecasts such as estimates to complete. These items turn raw observations and measurements into meaningful information about project health, progress, and expected future outcomes.

Project managers use work performance information to compare actual performance with the approved plan, identify trends or variances, communicate status to stakeholders, and determine whether corrective or preventive action is needed. For example, a forecasted estimate to complete provides management with an informed view of the expected remaining cost or effort, while deliverable and change-request status show whether planned work and authorized changes are being completed as expected. PMI describes work performance information as performance data analyzed in context and integrated across project areas. See PMI's overview of project performance measurement at PMI: Earned Value Project Management and the PMBOK Guide resources at PMI PMBOK Guide.

QUESTION NO: 12

How many Project Management Process Groups are there?

A. 3

B. 4

C. 5

D. 6

ANSWER: C

Explanation:

There are **5** Project Management Process Groups in the traditional PMI process-group framework: Initiating, Planning, Executing, Monitoring and Controlling, and Closing. These groups organize project-management activities according to the type of work being performed and provide a structured view of how a project is started, prepared, carried out, overseen, and formally completed. They are not necessarily strictly sequential; for example, monitoring and controlling occurs throughout the project while planning and execution may be revisited as the project progresses. Understanding the five groups is foundational for an Associate in Project Management because they establish the high-level lifecycle used to coordinate project work, manage changes, engage stakeholders, and close the project or phase appropriately. PMI's process-group model should also be distinguished from project life-cycle phases: process groups can be applied within a phase and may overlap based on the project's delivery approach. PMI describes the five Process Groups in its standard for process-based project management. See PMI: Process Groups and PMI Standards: Process Groups.

QUESTION NO: 13

The processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project has been undertaken to achieve are grouped within which Process Group?

A. Initiating

B. Planning

C. Executing

D. Monitoring and Controlling

ANSWER: B

Explanation:

Planning is correct because the Planning Process Group establishes the total scope of the project, develops and refines project objectives, and determines the actions needed to achieve those objectives. Planning converts the high-level intent identified early in the project into an integrated, actionable approach for delivering the required outcomes. Its work includes developing management plans and defining project baselines and supporting detail for areas such as scope, schedule, cost, resources, quality, risk, communications, procurement, and stakeholder engagement. These plans provide the approved basis for performing project work and for subsequently measuring, controlling, and managing change throughout the project life cycle. Planning is not necessarily a one-time event: project teams progressively elaborate plans as more information becomes available and may revisit planning when approved changes or emerging conditions require it. The wording in the question closely matches PMI's definition of the Planning Process Group: processes required to establish project scope, refine objectives, and define the course of action necessary to attain the objectives. See the PMI PMBOK® Guide and Standards and PMI's overview of project management process groups.

QUESTION NO: 14

A required input for Create WBS is a project:

A. quality plan.

B. schedule network.

C. management document updatE.

D. scope statement.

ANSWER: D

Explanation:

The correct answer is **scope statement.** In PMI's project scope management framework, Create WBS uses the project scope statement as a key input because it defines the project scope, major deliverables, assumptions, and constraints. The work breakdown structure then decomposes the approved project scope and deliverables into progressively smaller, manageable components known as work packages. This decomposition helps the project team organize all required work, establish a basis for planning and estimating, assign responsibility, and later measure and control scope performance. The scope statement is therefore essential: the WBS must represent the complete project scope, and the statement provides the detailed description needed to identify what must be broken down into deliverables and work packages. The resulting scope baseline consists of the project scope statement, the WBS, and the WBS dictionary. PMI describes the WBS as a hierarchical decomposition of the total scope of work to be carried out by the project team. See PMI's overview of the work breakdown structure and PMI's PMBOK Guide resources.

QUESTION NO: 15

Which type of elaboration allows a project management team to manage at a greater level of detail as the project evolves?

A. Cyclic

B. Progressive

C. Repetitive

D. Iterative

ANSWER: B

Explanation:

Progressive is correct because progressive elaboration is the project-management practice of continually developing and refining plans, estimates, requirements, and other project information as more reliable knowledge becomes available. A project team normally begins with high-level information during initiation and early planning, when uncertainty is greatest. As

the work proceeds, the team can define scope, activities, schedules, resources, risks, and control details more precisely. This supports management at an increasingly granular level without assuming that every detail can be accurately known at the start of the project.

The approach is especially useful where future conditions, technical details, stakeholder needs, or delivery constraints become clearer over time. Progressive elaboration does not mean that planning is postponed; rather, planning is performed initially at an appropriate level and then updated responsibly as information is learned. PMI describes project management as applying knowledge, skills, tools, and techniques throughout the project life cycle, with planning and management information tailored to the project context. See PMI's PMBOK® Guide and Standards and its overview of progressive elaboration in project management.

QUESTION NO: 16

Correlated and contextualized information on how closely the scope is being maintained relative to the scope baseline is contained within:

A. project documents updates.

B. project management plan updates.

C. change requests.

D. work performance information.

ANSWER: D

Explanation:

The correct answer is **work performance information.** In project scope control, raw observations and measurements—such as completed deliverables, requirements status, and variance measurements—are first captured as work performance data. Those data are then analyzed, correlated, and placed in context against the approved scope baseline. The resulting work performance information communicates the project's actual scope performance, including whether delivered work conforms to agreed requirements and whether scope variance or scope creep requires attention. This information gives the project manager and stakeholders a meaningful basis for decisions, reporting, and possible corrective action. It may subsequently be used to support change requests or updates to project documents and plans, but the correlated, contextualized assessment itself is work performance information. This distinction is consistent with PMI's project-management terminology: data are raw observations, information is data analyzed in context, and reports organize information for distribution. See PMI's overview of project scope management at PMI Project Scope Management and its glossary of project-management terms at PMI Lexicon of Project Management Terms.

QUESTION NO: 17

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

ANSWER: A

Explanation:

Organizational process assets is correct because these assets are the organization's accumulated procedures, records, templates, and institutional knowledge that support project work. For Close Project or Phase, closure guidelines specify how administrative and contractual closure should be performed, including required approvals, archive activities, and final

reporting. Historical information provides useful context from completed projects or phases, while the lessons learned knowledge base preserves knowledge that can improve future work and organizational practices. These resources are created, maintained, and reused by the organization rather than being developed solely for the current project's planning and control. The project manager uses them during closure to ensure the project or phase is completed consistently with established organizational requirements and that knowledge gained is retained for future initiatives. PMI describes organizational process assets as plans, processes, policies, procedures, and knowledge bases used by projects; its project-management standards also emphasize capturing and transferring lessons learned as part of responsible project closure. See PMI's discussion of organizational process assets and the PMBOK® Guide resources.

QUESTION NO: 18

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

ANSWER: A

Explanation:

Rolling wave planning is a tool and technique used in the Define Activities process. It is a form of progressive elaboration in which the project team plans near-term work in detail while retaining higher-level planning for work that will occur later. This is especially useful when the full scope of future work cannot yet be decomposed into reliably detailed activities, such as when requirements, interfaces, or technical information will be clarified as the project progresses. In Define Activities, the team uses rolling wave planning to develop the activity list and related detail for the next planning horizon, then elaborates later work into activities when sufficient information becomes available. This supports realistic scheduling without pretending that uncertain future work can be defined precisely at the outset. As planning moves forward, the team revisits and refines the later portions of the work, maintaining alignment with the work breakdown structure and the project management plan. PMI describes rolling wave planning as an iterative planning technique in its Rolling Wave Planning resource. The relationship between defining activities and subsequent schedule development is also covered in PMI's PMBOK® Guide standards information.

QUESTION NO: 19

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.

ANSWER: C

Explanation:

The correct answer is **training, document processes, and inspections.** Cost of conformance is the portion of cost of quality invested to ensure that deliverables meet defined requirements before they are accepted or released. It consists of prevention costs and appraisal costs. Training is a prevention activity because it builds the skills needed to perform work correctly and consistently. Documenting processes is also preventive: clear, controlled procedures and work instructions help teams follow an agreed method, reduce variation, and avoid defects. Inspections are appraisal activities because they evaluate the product, service, or process to verify conformance to quality requirements. Together, these activities represent

planned quality-related spending intended to prevent defects or identify them early. This distinction is important in project management because investing in conformance activities supports quality assurance and quality control, improves process capability, and reduces the likelihood that defects reach customers. The American Society for Quality describes prevention and appraisal as the two components of conformance costs in its cost-of-quality model: ASQ Cost of Quality. PMI's quality-management guidance likewise emphasizes planning, managing, and controlling quality through defined processes and verification activities: PMI Quality Management Principles and Practices.

QUESTION NO: 20

In which Process Group are lessons learned documented?

A. Planning

B. Closing

C. Executing

D. Initiating

ANSWER: B

Explanation:

Closing is correct because the Close Project or Phase work formally completes the project or phase and captures organizational knowledge for future use. At this point, the project manager consolidates experience from across the work, including successful practices, issues encountered, causes of variances, stakeholder feedback, and recommendations that can improve later projects. The resulting lessons-learned information is retained as part of the project records and organizational process assets, so it can support better estimating, planning, risk management, and delivery in subsequent initiatives. This formal capture is especially important because the project team, suppliers, and stakeholders can confirm the final outcomes and provide a complete perspective before resources are released and contracts or administrative records are finalized. PMI describes lessons learned as knowledge gained during a project that should be made available to improve future performance; see PMI's Lessons Learned in Ongoing Project Management. The traditional PMI process-group model places formal project or phase closure activities in the Closing Process Group; PMI's standards and guides are available through the PMI Standards and Publications page.

QUESTION NO: 21

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

ANSWER: D

Explanation:

Networking is the deliberate process of building and maintaining professional relationships through formal and informal interactions with people in an organization, industry, or broader professional community. For an associate project manager, networking is valuable because projects rely on relationships beyond the immediate project team. These connections can help the project manager identify knowledgeable stakeholders, obtain informal insight into organizational priorities, locate subject-matter expertise, and develop support for project work. Networking may happen in planned settings, such as professional association events, workshops, and meetings, as well as through everyday conversations and collaboration across departments. The key characteristic is not simply that people communicate, but that the interactions establish, strengthen, or sustain a useful professional relationship network. This aligns with the Project Management Institute's emphasis on interpersonal and relationship skills as part of effective project leadership and stakeholder engagement. See

PMI's discussion of project-manager communication competencies and its overview of professional relationships and conduct.

QUESTION NO: 22

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

ANSWER: D

Explanation:

2,000 is the cost variance for Task 6. In earned value management, cost variance measures the difference between the value of work actually accomplished and the actual cost incurred to accomplish that work. The calculation is CV = EV − AC, where EV is earned value and AC is actual cost. Using the Task 6 values in the chart, earned value is 2,000 greater than actual cost; therefore, subtracting actual cost from earned value produces a positive cost variance of 2,000.

A positive CV indicates favorable cost performance: the task has accomplished more budgeted value than it has cost to date. This metric is expressed in the same monetary units as the chart, rather than as a percentage. Project managers use CV to identify whether completed work is costing more or less than planned and to support timely cost-control decisions. The Project Management Institute defines cost variance as earned value minus actual cost and notes that a positive result reflects favorable cost performance. See the PMI overview of earned value management and the PMI PMBOK Guide and Standards.

QUESTION NO: 23

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 in calculating the Cost Performance Index (CPI). In earned value management, EV means Earned Value: the budgeted value of work that has actually been completed at a particular point in time. CPI is calculated as Earned Value divided by Actual Cost: CPI = EV / AC. This ratio indicates cost efficiency for completed work. For example, if a project has earned $10,000 of budgeted value while spending $8,000, its CPI is 1.25. A CPI greater than 1.00 indicates that the project is obtaining more value from completed work than it is spending; a CPI of 1.00 indicates performance exactly in line with the budget; and a CPI below 1.00 signals cost inefficiency. Because EV is the numerator in this standard calculation, it is essential to determining CPI. This measure lets project managers assess current cost performance objectively by relating the authorized budget for completed work to the actual expenditure incurred to accomplish it. PMI identifies CPI as a core earned value measure used in project cost control and performance forecasting. See PMI's Earned Value Project Management overview and the PMBOK® Guide and Standards resources.

QUESTION NO: 24

Which document describes the necessary information to determine if a project is worth the required investment?

A. Cost baseline

B. Service level agreement

C. Memorandum of understanding

D. Business case

ANSWER: D

Explanation:

The correct answer is **Business case**. A business case provides the justification for initiating or continuing a project by consolidating the information decision-makers need to assess whether the expected value warrants the required investment. It normally describes the business need or opportunity, anticipated benefits, estimated costs, major risks, options or alternatives, assumptions, and the expected financial or strategic return. This allows sponsors and governance bodies to make an informed go/no-go or prioritization decision before committing significant organizational resources.

In project-management practice, the business case links the proposed work to organizational objectives and explains how success and benefits will be evaluated. It is therefore a key input to project authorization and benefits realization: project work should proceed because it is expected to deliver measurable value, not merely because a budget has been estimated. The UK Government's project-delivery guidance describes a business case as the rationale for an intervention, setting out the strategic, economic, commercial, financial, and management considerations. PMI likewise identifies the business case as a document used to determine whether a project is justified from a business perspective.

References: Project Management Institute: Business Case Development; UK Government Green Book.

QUESTION NO: 25

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

ANSWER: C

Explanation:

Perform Qualitative Risk Analysis is the correct process because it evaluates identified risks using their relative probability of occurring and their potential impact on project objectives. The purpose is to establish a priority ranking so that the project team can focus limited risk-management effort on the risks that matter most. A probability-and-impact matrix is a common tool used in this process: probability and impact ratings are combined to produce an overall risk score or category, such as high, medium, or low. The resulting prioritized risk list supports decisions about which risks require prompt response planning, further quantitative evaluation, escalation, or ongoing attention. This assessment is usually based on expert judgment and defined organizational scales, making it a fast, practical way to evaluate many risks consistently. This process is part of the project risk-management approach described in PMI's standards and terminology. See PMI's PMBOK Guide and Standards and the PMI Lexicon of Project Management Terms for the governing risk-management concepts.

QUESTION NO: 26

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

ANSWER: D

Explanation:

Transfer is a response strategy for a threat: a risk that could negatively affect a project objective such as cost, schedule, scope, quality, or performance. The project team arranges for a third party to assume ownership of the risk's financial consequences, responsibility for managing it, or both. Typical transfer mechanisms include insurance, warranties, performance bonds, fixed-price contracts, and outsourcing arrangements in which a supplier accepts defined responsibilities. The risk event itself may still occur, so transfer does not automatically eliminate the underlying uncertainty; rather, it assigns the agreed exposure and response obligations to another party. Effective transfer requires clear contractual terms identifying the risk, responsibilities, limits of liability, acceptance criteria, and escalation procedures. The project manager should also monitor the transferred risk and the third party's performance because the project remains accountable for achieving its objectives. This terminology aligns with standard project risk-management practice, which distinguishes threat responses from opportunity responses. See PMI's overview of project risk management and GAQM's Associate in Project Management certification information.

QUESTION NO: 27

The completion of the project scope is measured against the:

A. requirements documentation.

B. project scope statement.

C. project management plan.

D. work performance measurements.

ANSWER: C

Explanation:

project management plan. is correct because it provides the approved baseline and the integrated framework used to assess whether the project's authorized scope has been completed. In particular, the scope baseline within the plan defines the approved project scope statement, work breakdown structure, and work-breakdown-structure dictionary. These components establish the work and deliverables that the project team is committed to producing. During scope control, actual completion and accepted deliverables are compared with this approved baseline to determine whether the project is progressing as planned and whether changes must be managed through formal integrated change control. This distinction is important: project scope concerns the work required to deliver the project, whereas product scope concerns the features and characteristics of the resulting product, service, or result. PMI's project-management standards describe the project management plan as the central document for directing, monitoring, and controlling project work, including performance against approved baselines. See PMI's overview of standards at PMBOK® Guide and Standards and its terminology resource at PMI Lexicon of Project Management Terms.

QUESTION NO: 28

Which tool or technique is used in the Plan Scope Management process?

A. Document analysis

B. Observations

C. Product analysis

D. Expert judgment

ANSWER: D

Explanation:

Expert judgment is used in the Plan Scope Management process to develop the scope management plan. This plan establishes how project scope will be defined, validated, and controlled throughout the project, as well as how the work breakdown structure will be created and maintained. The project manager draws on people with specialized knowledge or practical experience in areas such as requirements management, scope definition, work-breakdown-structure development, configuration management, and the organization's project-management methods. Their input helps tailor the scope approach to the project's characteristics, complexity, delivery environment, and governance requirements. For example, an experienced subject-matter expert may advise how formally requirements should be documented or how scope changes should be evaluated and approved. PMI identifies expert judgment as a tool and technique for planning processes, including the development of management plans, because it enables informed decisions when the appropriate approach depends on organizational context and professional experience. This use aligns with PMI's description of project scope management as the processes required to ensure that the project includes all, and only, the work required for successful completion. See PMI's PMBOK® Guide and Standards and its overview of project management.

QUESTION NO: 29

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

ANSWER: C

Explanation:

Affinity diagram is correct because it is specifically designed to organize a large volume of ideas, observations, or data items into meaningful groups according to their natural relationships. After ideas have been generated, often during a collaborative session, participants sort related items together and assign a descriptive heading to each resulting group. This makes a complex, unstructured set of inputs easier to review, analyze, and use in identifying themes, issues, requirements, risks, or possible actions. In project management, affinity diagrams are particularly useful when a team needs to make sense of broad stakeholder input or a long list of potential causes, needs, and improvements. The technique supports shared understanding because the group can see how individual ideas connect to larger patterns before deciding what should be prioritized or investigated further. PMI describes affinity diagrams as a way to organize a large number of ideas into groups for review and analysis, including within its discussion of data-representation techniques. See PMI's PMBOK Guide and Standards. A practical quality-management description of grouping ideas into natural categories is also available from the American Society for Quality.

QUESTION NO: 30

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:

Analogous cost estimating relies on **Expert judgment**. This estimating method derives an anticipated cost for the current project by comparing it with the actual cost, duration, size, complexity, or other relevant characteristics of a completed, similar project. The essential work is therefore not a detailed mathematical build-up of every activity or resource; it is the informed assessment of how closely the earlier project resembles the proposed one and what adjustment is appropriate for the differences. Experienced project managers, subject-matter experts, or other knowledgeable estimators provide that judgment, using historical information and their understanding of the project context. Analogous estimates are especially useful early in a project, when detailed scope and cost data are limited and a rapid, high-level estimate is needed. Their reliability improves when the reference project is genuinely comparable and when the expert can account for meaningful differences in scale, technology, risk, location, and timing. PMI describes estimating as a core project-management practice within its standards framework, including the use of historical knowledge and professional expertise to support planning decisions. See the PMI PMBOK Guide and Standards and NASA's Cost Estimating Handbook resources for authoritative cost-estimating guidance.

QUESTION NO: 31

The following is a network diagram for a project.

What is the critical path for the project?

A. A-B-D-G

B. A-B-E-G

C. A-C-F-G

D. A-C-E-G

ANSWER: C

Explanation:

The critical path is **A-C-F-G**. In a network schedule, the critical path is the continuous sequence of dependent activities that establishes the project's earliest possible completion date. It is identified by calculating each feasible route through the network and selecting the route with the greatest total duration. The activities on that route have zero total float: delaying any one of them delays the project finish by the same amount, unless corrective action changes the schedule logic, durations, or resources.

Following the dependencies shown in the diagram, the route from the start activity through the activities represented by A, C, F, and G is the longest complete route to project completion. Consequently, its finish controls the planned project completion date. Project managers should monitor this sequence particularly closely, because it provides the clearest indication of whether the overall completion milestone remains achievable. This is the core application of the Critical Path Method: using forward and backward schedule calculations to determine the activities that directly drive the finish date. See Oracle's overview of critical-path scheduling and the Project Management Institute's Critical Path Method guidance.

QUESTION NO: 32

What type of reward can hurt team cohesiveness?

A. Sole-sum

B. Win-lose

C. Lose-win

D. Partial-sum

ANSWER: B

Explanation:

Win-lose is correct because this type of reward structure makes one person's success dependent on another person's failure or exclusion. When individual team members must compete for a limited reward, recognition, promotion, or other benefit, they may be less willing to share information, help colleagues, or prioritize collective project outcomes. This can create internal rivalry and reduce the trust, collaboration, and mutual support that characterize a cohesive project team.

Effective project leadership aligns recognition and rewards with desired team behaviors and project objectives. In particular, rewarding shared achievement encourages members to coordinate work, solve problems together, and take collective responsibility for results. The Project Management Institute describes project teams as groups that work interdependently toward a common objective; reward practices should therefore reinforce, rather than undermine, that interdependence. A win-lose approach instead emphasizes competition within the group, which can weaken the sense of common purpose needed for high-performing teamwork. See the PMI Lexicon of Project Management Terms and the PMI guidance on leading project teams.

QUESTION NO: 33

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

ANSWER: C

Explanation:

1.25 is the cost performance index for Task 2. Cost performance index is an earned-value-management measure calculated as earned value divided by actual cost: CPI = EV / AC. Using the Task 2 values shown in the chart, this calculation produces 1.25. The index expresses the value of work accomplished for each unit of cost actually spent. Thus, a CPI of 1.25 means that Task 2 has earned 1.25 units of budgeted value for every 1 unit of actual cost incurred at the reporting point.

CPI is a ratio rather than a currency amount, so no currency symbol or percentage conversion is needed in the answer. It is used to evaluate cost efficiency and is a core earned value metric for project cost control. The Project Management Institute's terminology defines cost performance index as a measure of cost efficiency based on earned value and actual cost; see the PMI Lexicon of Project Management Terms. Additional earned-value-management guidance and metric definitions are available from the U.S. Acquisition.gov Earned Value Management resource.

QUESTION NO: 34

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)

ANSWER: D

Explanation:

Finish-to-start (FS) is the appropriate logical relationship because the delivery of the required concrete materials must be completed before the concrete-pouring activity can begin. In a finish-to-start dependency, the predecessor activity's finish controls the successor activity's start. Here, "delivery of the concrete materials" is the predecessor and "pouring of concrete" is the successor. This relationship represents a common construction sequencing constraint: the crew needs the necessary material available at the work location before performing the pour. Project schedules use dependencies such as finish-to-start to model the order in which work can be executed, identify the effects of delays, and calculate feasible activity dates. If the delivery is delayed, the start of the pour will correspondingly move unless the schedule includes an intentional lead, an alternative supply arrangement, or other approved mitigation. The Project Management Institute describes finish-to-start as a logical relationship in which a successor activity cannot start until its predecessor activity has finished. See the PMI PMBOK Guide and Standards overview and the PMI resource on schedule network analysis for further context on dependency relationships and schedule logic.

QUESTION NO: 35

Which of the following consists of the detailed project scope statement and its associatedWBSand WBS dictionary?

A. Scope plan

B. Product scope

C. Scope management plan

D. Scope baseline

ANSWER: D

Explanation:

The correct answer is **Scope baseline**. In standard project-management practice, the scope baseline is the approved version of the project scope that provides the reference point for managing and controlling scope throughout the project. It consists of three integrated components: the detailed project scope statement, the work breakdown structure (WBS), and the WBS dictionary. The scope statement defines the project's deliverables, boundaries, assumptions, constraints, and acceptance criteria. The WBS decomposes the approved project scope into manageable deliverables and work packages. The WBS dictionary supplements that hierarchy with detailed information about WBS elements, such as descriptions, responsible parties, milestones, and acceptance requirements. Together, these artifacts establish a clear, structured, and approved representation of what the project is expected to deliver. The project team uses this baseline to evaluate requested changes, prevent uncontrolled scope expansion, and confirm whether completed work satisfies the agreed requirements. PMI describes the WBS as a hierarchical decomposition of the total scope of work and identifies it as a key scope-management tool. See PMI's overview of the work breakdown structure and PMI's PMBOK Guide resources.

QUESTION NO: 36

A projects 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

ANSWER: C

Explanation:

Project charter is correct because it formally authorizes the project and establishes its high-level business and management foundation. A charter identifies the project's purpose or business case, defines measurable objectives and associated success criteria, and records high-level planning information needed to establish initial direction and secure organizational commitment. This includes a summary milestone schedule and a summary budget, rather than detailed activity-level dates or cost estimates. By documenting these elements at authorization, the charter provides the project manager and stakeholders with a common understanding of why the project exists, what it is intended to achieve, and the broad constraints within which it will operate. The project charter is normally approved by the sponsor or an authorized initiator, giving the project manager the authority to apply organizational resources to project work. Detailed planning is developed later, but the charter provides the essential high-level reference for that planning and for evaluating whether the project delivers its intended value. PMI's description of the charter and its typical contents is available in the Project Management Institute's project charter guidance. See also the PMI PMBOK® Guide and Standards for the project-management framework.

QUESTION NO: 37

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

ANSWER: D

Explanation:

Scatter diagram is correct because it graphically displays the relationship between two variables: an independent variable, which may influence an outcome, and a dependent variable, which is the outcome being observed. Each paired observation is plotted as a point using its values on the horizontal and vertical axes. The resulting pattern helps a project team assess whether changes in one variable tend to be associated with changes in the other, as well as the apparent direction and strength of that association. For example, plotting the number of requirements changes against testing defects may reveal whether higher change volumes coincide with higher defect counts. In project quality management, this makes a scatter diagram useful for exploring potential relationships, investigating sources of variation, and deciding whether further analysis is warranted. It supports evidence-based quality investigation, but the visual association alone does not establish that one variable causes the other. PMI identifies scatter diagrams among the data-representation tools used in quality management, and ASQ describes their use in studying possible relationships between paired numerical data. See PMI's PMBOK Guide and Standards and ASQ's Scatter Diagram resource.

QUESTION NO: 38

Which of the following is an example of schedule compression?

A. Activity sequencing

B. Resource leveling

C. Lead and lag adjusting

D. Crashing

ANSWER: D

Explanation:

Crashing is a schedule-compression technique used to shorten the project duration without changing the project scope. It involves adding resources to activities on the critical path, such as assigning additional qualified people, authorizing overtime, or using extra equipment, in order to reduce those activities' durations. Because only work on the critical path

directly affects the planned project finish date, the project manager evaluates which critical-path activities can be shortened and selects actions that achieve the needed time reduction with an acceptable increase in cost and risk. Crashing is therefore commonly used when a project must meet an earlier required completion date and the organization is willing to make a cost-versus-time trade-off. The Project Management Institute identifies crashing, along with fast tracking, as a schedule-compression method. Effective use requires analysis of available resources, cost, feasibility, and the resulting critical path after each change, since accelerating one activity can alter the network's critical path. See the Project Management Institute discussion of fast tracking and crashing and the PMI PMBOK Guide overview.

QUESTION NO: 39

In Plan Risk Management, which of the management plans determines who will be available to share information on various risks and responses at different times and locations?

A. Schedule

B. Quality

C. Communications

D. Cost

ANSWER: C

Explanation:

Communications is correct because the communications management plan defines the project's approach for providing, collecting, storing, retrieving, and communicating information. In the context of Plan Risk Management, it helps establish the communication requirements for risk-related information, including the stakeholders who need to participate, the information they require, the timing and frequency of communications, and the methods or locations through which information will be shared. Risk management depends on timely collaboration: risk owners, response owners, project team members, sponsors, and other stakeholders must be able to exchange information about identified risks, planned responses, triggers, status, and escalation needs. The communications management plan therefore provides the practical framework for determining who is available to share risk and response information at particular times and locations. This supports effective risk governance and ensures relevant parties receive actionable information in a usable format. PMI identifies the communications management plan as a key project-management-plan component and describes project communications management as ensuring the timely and appropriate planning, creation, distribution, storage, retrieval, management, monitoring, and disposition of project information. See PMI's PMBOK Guide overview and PMI's guidance on project communications management.

QUESTION NO: 40

An example of a group decision-ma king technique is:

A. Nominal group techniquE.

B. Majority.

C. Affinity diagram.

D. Multi-criteria decision analysis.

ANSWER: B

Explanation:

Majority. is a group decision-making technique because the decision is made by selecting the alternative supported by more than half of the members participating in the decision. It provides a clear, repeatable way to reach a decision when a project team or stakeholder group cannot obtain universal agreement. In project management, group decision-making techniques are used to evaluate alternatives and choose an outcome collectively; majority is one of the recognized voting approaches used for this purpose. The approach is particularly useful when the project needs a timely decision, the decision authority

permits voting, and the group has defined who is eligible to vote. The project manager should establish the voting rule in advance, such as whether a simple majority of those present is sufficient or whether a majority of all eligible members is required. This helps ensure that the resulting decision is transparent, documented, and accepted as a valid group outcome. PMI's standards describe decision-making as an important project-management activity and recognize voting-based approaches, including majority, for making collective choices. See PMI's standards and guides overview and the PMI Lexicon of Project Management Terms.

QUESTION NO: 41

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

ANSWER: B

Explanation:

Resource leveling is a resource-optimization technique used while developing a project schedule. After activity durations, logical relationships, and resource requirements have been considered, the project team may find that individual people, equipment, or materials are assigned beyond their available capacity during particular periods. Resource leveling adjusts activity start and finish dates to resolve those overallocations and create a schedule that is feasible with the available resources. Because activities may be delayed to match resource availability, resource leveling can change the critical path and may extend the project's planned completion date. It is therefore directly relevant to the Develop Schedule process, whose purpose is to produce an approved, workable schedule model rather than merely a list of activities or estimates. The technique helps the project manager balance schedule demands against real resource constraints and communicate achievable dates to stakeholders. PMI describes resource leveling as a scheduling approach that addresses resource constraints and is applied when producing a viable schedule. See PMI's discussion of resource leveling and project schedules and its overview of the PMBOK® Guide and project-management standards.

QUESTION NO: 42

The Monitoring and Controlling Process Group includes processes that:

A. Establish the scope, objectives, and course of action of a project,

B. Define a new project or a new phase of an existing project.

C. Track, review, and regulate the progress and performance of a project.

D. Complete the work defined in the project management plan.

ANSWER: C

Explanation:

Track, review, and regulate the progress and performance of a project. is correct because the Monitoring and Controlling Process Group is concerned with measuring project performance against the project management plan, identifying variances, assessing their effects, and taking appropriate corrective or preventive action. This ongoing work gives the project team and stakeholders timely visibility into whether scope, schedule, cost, quality, resources, risks, and other project elements remain aligned with approved baselines and objectives. It also includes controlling changes through an established change-control process, so that proposed adjustments are evaluated and approved before they are incorporated into project work. Monitoring and controlling occurs throughout the project life cycle; it is not a one-time activity. Effective use of performance information, forecasts, status reporting, and change control enables the project manager to maintain governance and guide the project toward its intended outcomes. PMI describes monitoring and controlling as tracking,

reviewing, and reporting progress, as well as managing changes to performance baselines and plans. See PMI's overview of project management process groups at PMI: Project Management Process Groups and the PMBOK® Guide and Standards.

QUESTION NO: 43

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

ANSWER: B

Explanation:

Resource leveling is the appropriate technique when the critical path method (CPM) schedule has been calculated but resource availability creates a practical constraint. CPM initially determines activity dates and the critical path primarily from logical activity relationships and duration estimates. Resource leveling then adjusts activity start and finish dates to resolve resource overallocations or to comply with fixed limits on the availability of people, equipment, materials, or other resources. This adjustment can change the critical path and commonly extends the overall project duration because work may need to be delayed until the required resource becomes available. In schedule network analysis, resource leveling is especially relevant where resource demand exceeds available capacity during particular periods and the schedule must become achievable rather than merely logically sequenced. The Project Management Institute describes resource leveling as a technique that adjusts start and finish dates based on resource constraints, noting that it may affect the critical path. This makes it the correct follow-on analysis technique when resource availability is critical after CPM calculations. See the PMBOK Guide and Standards overview and PMI's resource leveling scheduling article for further context.

QUESTION NO: 44

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$S000

B. US$9500

C. US$10,000

D. US$12,500

ANSWER: D

Explanation:

US$12,500 is the earned value because the Cost Performance Index (CPI) is calculated as earned value divided by actual cost: CPI = EV ÷ AC. Actual cost is the amount spent for work performed, which is US$10,000 in this case. Rearranging the formula gives EV = CPI × AC. Therefore, EV = 1.25 × US$10,000 = US$12,500. Earned value represents the budgeted value of the work actually completed, rather than the amount paid for that work. A CPI of 1.25 means that for every dollar of actual cost incurred, the project has earned US$1.25 of budgeted work value. This indicates favorable cost performance at the reported point in time: the completed work is valued above the cost incurred to perform it. This use of CPI, EV, and AC follows standard earned value management practice, in which these measures provide an objective view of project cost efficiency. See the Project Management Institute's earned value management overview and NASA's Earned Value Management reference.

QUESTION NO: 45

Which Process Group and Knowledge Area include the Sequence Activities process?

A. Executing Process Group and Project Time Management

B. Executing Process Group and Project Cost Management

C. Planning Process Group and Project Time Management

D. Planning Process Group and Project Cost Management

ANSWER: C

Explanation:

Planning Process Group and Project Time Management is correct under the PMBOK framework that uses the Knowledge Area name “Project Time Management.” Sequence Activities is a planning process used to identify and document logical relationships among project activities. Its output is a network diagram or comparable representation of activity dependencies, which provides the foundation for later schedule-development work. Because defining the order and dependencies of work is performed before the work is carried out, the process belongs to the Planning Process Group rather than the Executing Process Group. In the terminology of newer PMBOK editions, Project Time Management has been renamed Project Schedule Management, while the underlying purpose remains the same: organizing activities and their relationships so that a viable project schedule can be developed and managed. PMI’s standards resources describe the evolution of PMBOK terminology and the continuing importance of schedule planning and dependency management. See the PMBOK® Guide and Standards page and PMI’s project schedule management overview for related guidance.

QUESTION NO: 46

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.

ANSWER: B

Explanation:

It requires recipients to access communication content at their own discretion. Pull communication makes information available in a location or system where intended users retrieve it when they need it, rather than having it sent directly to each recipient. Typical channels include project portals, shared document repositories, intranet sites, knowledge bases, and e-learning systems. This approach is particularly useful when a project must make substantial volumes of information available to a broad audience, because stakeholders can locate and review the material relevant to them on demand. Effective pull communication requires the project team to organize, maintain, and make information accessible, while recipients retain responsibility for accessing it. The PMI communication model identifies pull communication as a method used for very large volumes of information or very large audiences, with recipients accessing the content at their convenience. This characterization therefore precisely captures the defining feature of pull communication: recipient-initiated access. See PMI’s overview of project communication and stakeholder information distribution concepts at PMI: Effective Communication for Better Project Management and the project communication methods discussion at ProjectManagement.com: Communications Management.

QUESTION NO: 47

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

ANSWER: A

Explanation:

Bottom-up estimating is correct because it develops an estimate by breaking an activity's work into smaller, more detailed components that can be assessed with greater confidence. The estimates for those lower-level pieces are then aggregated to produce the estimate for the overall activity. This is especially useful when an activity is too broad, uncertain, or complex for a credible estimate at its current level of definition. Decomposition exposes the individual work elements, their effort, durations, resource needs, and assumptions, allowing subject-matter knowledge to be applied where it is most meaningful. As planning information becomes more detailed, the resulting estimate is generally more accurate, although preparing it can require additional time and effort. This approach supports progressive elaboration: the project team refines planning estimates as the scope and work become better understood. PMI identifies bottom-up estimating as an estimating technique in which detailed estimates are produced for lower-level components and rolled up into a total estimate. See PMI's discussion of estimating techniques at Project Management Institute: Estimating Techniques in Project Management and its overview of schedule-estimation practices at Project Management Institute: Project Schedule Estimating Best Practices.

QUESTION NO: 48

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

ANSWER: B

Explanation:

Inspection and audits is correct because Control Procurements is the project-management process used to monitor procurement relationships, assess seller performance, manage changes to procurement agreements, and close contracts when appropriate. During project execution, the buyer may inspect procured work products or audit the supplier's processes, records, quality practices, and contractual performance. These activities provide objective evidence that the goods, services, or results delivered by the seller conform to the requirements, specifications, quality standards, and other acceptance criteria stated in the contract.

Inspections can involve examining a physical deliverable, reviewing test results, witnessing tests, or validating completion against agreed acceptance criteria. Audits are broader, structured reviews that can confirm compliance with contractual obligations and applicable organizational or regulatory requirements. Findings from either activity can support acceptance decisions, corrective action, claims administration, or formal change control. This use aligns with established project procurement practice: procurement control focuses on ensuring that both parties meet their contractual commitments throughout performance, rather than waiting until final closure. PMI discusses procurement control and contract administration in its Control Procurement for Project Success article, and procurement-management concepts are also covered in PMI's PMBOK® Guide and Standards.

QUESTION NO: 49

During which process would stakeholders provide formal acceptance of the completed project scope?

A. Perform Quality Control

B. Verify Scope

C. Control Scope

D. Develop Schedule

ANSWER: B

Explanation:

Verify Scope is the process in which the customer, sponsor, or other authorized stakeholders formally review and accept completed project deliverables. The project team presents deliverables that have already been completed and checked against applicable quality requirements, while stakeholders compare them with the documented scope, requirements, and acceptance criteria. Formal acceptance is typically recorded through signed approval documentation or another documented acceptance record. This process is important because it establishes that the completed scope has been accepted by the appropriate authority and provides a clear basis for closing phases, releasing deliverables, or proceeding with subsequent work. In more recent PMI terminology, this activity is called *Validate Scope*; older PMBOK editions use the name *Verify Scope*. The underlying purpose remains stakeholder acceptance of completed deliverables. PMI's description of scope validation emphasizes formalizing acceptance of completed project deliverables, as summarized in its scope-validation guidance. The relationship between requirements, acceptance criteria, and stakeholder approval is also consistent with the PMBOK Guide and PMI standards.

QUESTION NO: 50

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.

ANSWER: B

Explanation:

The correct answer is **"complete project work."** Activity cost estimating determines the likely monetary resources needed to perform the activities that make up the project's scope. These estimates can include direct and indirect costs, such as labor, materials, equipment, facilities, services, contingency reserves, and other resources necessary to carry out planned work. The estimates are developed at the activity level, using the available scope, schedule, resource, risk, and market information, and are then aggregated to support development of the project budget and cost baseline.

This wording aligns with the standard project-management definition: activity cost estimates are quantitative assessments of the probable costs required to complete project work. The purpose is not merely to perform arithmetic or create planning documents; it is to establish a realistic forecast of the funds required for executing the defined work. The level of estimate accuracy generally improves as the project is progressively elaborated and more detailed information becomes available. See the PMI PMBOK® Guide and Standards overview and PMI's guidance on project cost estimating.

QUESTION NO: 51

An output of the Perform Integrated Change Control process is:

A. Deliverables.

B. Validated changes.

C. The change loG.

D. The requirements traceability matrix.

ANSWER: C

Explanation:

The change loG. is the correct answer because Perform Integrated Change Control is the process used to review change requests, determine their disposition, and manage approved changes across the project in a coordinated manner. A key result of this process is maintaining the change log as the authoritative record of submitted change requests and their current status, such as approved, rejected, deferred, or implemented. Project stakeholders and the project team use this record to understand what changes have been considered, the decisions made through the formal change-control process, and the history of those decisions. Keeping the change log current supports governance, traceability, communication, and alignment between the project's approved baselines and authorized work. Integrated change control does not merely assess an individual request; it ensures that approved changes are documented and controlled in relation to scope, schedule, cost, resources, risk, quality, and other project components. This is consistent with PMI's treatment of integrated change control and project-management terminology in the PMBOK® Guide and Standards and the PMI Lexicon of Project Management Terms.

QUESTION NO: 52

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

ANSWER: D

Explanation:

The **Stakeholder management plan** is the correct input because it documents the strategies and approaches for effectively managing stakeholder engagement throughout the project. It identifies the desired level of involvement for stakeholders and sets out actions for obtaining or maintaining their support, reducing resistance, and addressing their expectations and concerns. The project manager uses this plan during Manage Stakeholder Engagement to determine how interactions should be tailored for particular individuals or groups, including the appropriate methods, timing, and level of engagement. This makes it a practical guide for actively working with stakeholders rather than merely identifying them or collecting information about their views. In more recent PMI terminology, this artifact is commonly called the stakeholder engagement plan; the underlying purpose remains the same: defining strategies for promoting productive stakeholder involvement. PMI's standards describe stakeholder engagement as the work of collaborating with stakeholders to address needs and expectations and foster appropriate involvement in project decisions and activities. See PMI's guidance on stakeholder management strategies and its PMBOK® Guide overview.

QUESTION NO: 53

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

ANSWER: D

Explanation:

Perform Integrated Change Control is correct because it is the formal project integration process used throughout the full project life cycle to review change requests, make and communicate change decisions, and manage the resulting updates to project deliverables, documents, and the project management plan. It starts as soon as the project is initiated because changes can affect objectives, scope, schedule, cost, quality, resources, risks, and stakeholder expectations at any point before completion.

The project manager has ultimate accountability for ensuring that proposed changes are evaluated in an integrated manner rather than being handled independently by individual team members or functional areas. This means assessing the overall effect of each requested change, coordinating with the appropriate decision-makers or change control board when governance requires it, maintaining the integrity of approved baselines, and ensuring approved changes are implemented and recorded. Consistent integrated change control protects the project's alignment with its approved objectives while allowing necessary, authorized adaptation. PMI identifies project integration management and change control as core project-management practices; see the PMI Standards and Publications page and PMI's Project Management Lexicon.

QUESTION NO: 54

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:

After it has been analyzed by the critical path method is correct because resource leveling is a schedule-optimization technique applied after the network schedule has been developed and its critical path has been identified. Critical path analysis establishes the logical sequence of activities, their early and late dates, and the float available on noncritical work. The project manager can then use that information to delay or split activities within available float where possible to resolve resource overallocations without immediately affecting the planned completion date. If resource limits still affect critical or near-critical work, leveling can extend activity durations or move dates, so the critical path and completion date must be recalculated after the adjustment. This makes resource leveling an iterative process: analyze the schedule, identify resource conflicts, level the resources, and reassess the resulting schedule. PMI describes resource leveling as an optimization technique in which start and finish dates are adjusted based on resource constraints, potentially changing the critical path. See the PMI PMBOK Guide and Standards and NASA's Schedule Management Handbook for scheduling and critical-path management guidance.

QUESTION NO: 55

Which of the following Project Communication Management processes uses performance reports as an input?

A. Manage Stakeholder Expectations

B. Report Performance

C. Distribute Information

D. Plan Communications

ANSWER: C

Explanation:

Distribute Information is correct because, in the Project Communication Management framework reflected in the terminology used by this question, performance reports are a defined input to this process. Performance reports consolidate information such as project status, progress against the plan, forecasts, and relevant measurements. The project team uses that information when distributing project communications so that stakeholders receive timely, accurate, and appropriately formatted updates. This supports informed decisions, maintains stakeholder awareness, and ensures that communication is based on current project performance rather than informal or unverified status information.

The process name and input/output structure are associated with earlier editions of PMI's PMBOK framework, which used "Distribute Information." In later PMI terminology, the related process is generally called "Manage Communications," while the core practice remains the same: communicate useful project information to the relevant stakeholders through planned channels. PMI's standards resources describe project management as the application of structured processes and practices, including effective communication and reporting. See the PMBOK® Guide and Standards and PMI's guidance on effective communication in project management.

QUESTION NO: 56

Which of the following is a tool or technique used in the Determine Budget process?

A. Variance analysis

B. Three-point estimating

C. Bottom-up estimating

D. Historical relationships

ANSWER: D

Explanation:

Historical relationships is a tool and technique used in the Determine Budget process. Determine Budget consolidates the cost estimates for individual activities or work packages into an authorized, time-phased cost baseline. Historical relationships use information from comparable past projects, such as cost per unit, cost per square foot, or cost as a proportion of a broader program, to help validate, aggregate, or derive budget-level cost information. This is particularly useful when the project team has reliable organizational historical data and needs to assess whether the developing budget is realistic in relation to similar prior work.

The resulting project budget includes the cost baseline and, where applicable, management reserves. The cost baseline provides the approved basis for funding, monitoring, and controlling project costs throughout the project life cycle. PMI describes project cost management as the processes for planning, estimating, budgeting, financing, funding, managing, and controlling costs so that the project can be completed within the approved budget. See PMI's PMBOK Guide and Standards and its project cost management guidance.

QUESTION NO: 57

Which tool or technique is used in the Develop Project Management Plan process?

A. Pareto diagram

B. Performance reporting

C. SWOT analysis

D. Expert judgment

ANSWER: D

Explanation:

Expert judgment is used in the Develop Project Management Plan process to make informed decisions about the project's planning approach and to integrate the subsidiary management plans into one coherent project management plan. The project manager draws on the knowledge of individuals or groups with specialized experience in areas such as project tailoring, technical disciplines, organizational governance, estimating, risk, scheduling, and stakeholder management. This input helps ensure that the resulting plan is realistic, appropriately tailored to the project's context, and aligned with organizational policies and strategic objectives.

Developing the project management plan is primarily an integration activity: it defines how the project will be executed, monitored and controlled, and closed. Because projects vary substantially in complexity, life cycle, delivery approach, and regulatory environment, experienced practitioners and subject-matter experts provide essential insight into selecting processes, defining controls, and balancing constraints. PMI identifies expert judgment as a key tool and technique for this integration-focused planning work. See PMI's overview of project management standards at PMI PMBOK® Guide and Standards and its resource on planning practices at PMI Project Planning resources.

QUESTION NO: 58

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

ANSWER: A

Explanation:

Methodology is correct because the project's risk-management methodology establishes the defined approach for conducting risk-management work. It specifies how the team will identify risks, analyze their probability and impact, plan and implement responses, monitor risks, and document results. It also identifies the techniques, tools, templates, information sources, and organizational practices that should be used, while allowing the approach to be tailored to the project's size, complexity, and context.

In standard project-management practice, methodology is documented as part of the risk management plan. This planning work creates a consistent and repeatable basis for risk decisions throughout the project, including the use of risk registers, probability-and-impact assessments, escalation procedures, reporting formats, and relevant data sources. Establishing the methodology early ensures that risk activities are performed systematically rather than ad hoc, and that stakeholders understand how risk information will be gathered, assessed, communicated, and controlled.

This aligns with PMI's description of project risk management as the process of planning, identifying, analyzing, responding to, and monitoring project risks. See PMI's project risk management overview and the PMBOK® Guide and Standards.

QUESTION NO: 59

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

ANSWER: C

Explanation:

Configuration Verification and Audit is the activity that confirms a project's configuration items have the correct composition. It provides an independent, systematic check that the actual item—including its components, interfaces, documentation, approved changes, and recorded version—matches the established configuration requirements and baseline. In practical project work, this means verifying that the item delivered or maintained is the item that was authorized, and that its constituent parts are complete, compatible, and accurately represented in configuration records. Physical configuration audits particularly address whether the as-built composition and characteristics of a configuration item conform to its approved configuration documentation. Functional verification may also be performed to confirm that the configured item satisfies its specified requirements. These verification and audit activities preserve baseline integrity, support acceptance decisions, and give project stakeholders confidence that the product or deliverable has not accumulated unapproved or undocumented differences. NASA's configuration-management guidance describes audits as confirming that configuration-item requirements and configuration documentation have been met, while the U.S. Department of Defense configuration-management standard identifies configuration verification and audit as a core discipline for establishing and maintaining configuration integrity. See NASA Configuration Management and MIL-STD-3046 Configuration Management.

QUESTION NO: 60

Which technique is utilized in the Control Schedule process?

A. Performance measure

B. Baseline schedule

C. Schedule network analysis

D. Variance analysis

ANSWER: D

Explanation:

Variance analysis is utilized in the Control Schedule process to assess the difference between actual schedule performance and the approved schedule baseline. The project manager examines deviations in planned versus actual start and finish dates, durations, milestone completion, and progress for individual activities or work packages. This analysis helps determine the size, cause, and likely effect of schedule deviations on the planned project completion date. It provides the factual basis for deciding whether corrective action, preventive action, a change request, or other schedule-control action is needed. Schedule control is not merely reporting that an activity is late; it involves evaluating the variance, understanding its impact on remaining work, and managing approved changes to maintain a realistic, controlled schedule. PMI describes variance analysis as a schedule-control technique used to compare baseline and actual performance and identify whether corrective measures are necessary. See PMI's overview of project schedule management at Project Schedule Management and the U.S. Government Accountability Office's scheduling guidance at GAO Schedule Assessment Guide.

QUESTION NO: 61

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.

ANSWER: A

Explanation:

Define Activities. is correct because it is the schedule-management process that takes the work packages established in the work breakdown structure and identifies the specific, schedulable actions required to create the project deliverables. Its primary purpose is to decompose planned work into activities that can be estimated, sequenced, assigned, monitored, and

controlled. The resulting activity list provides the detailed foundation for later schedule work, including determining relationships between activities, estimating durations, and developing the project schedule.

This distinction is important in practical project planning: deliverables describe what the project must produce, while activities describe the work that people must perform to produce those deliverables. For example, a deliverable such as an approved design may require activities such as drafting the design, conducting a review, addressing comments, and obtaining approval. Defining those actions makes the scope of planned work operational and supports reliable scheduling and accountability. PMI describes activity definition within project schedule management and explains that activities represent the work needed to complete work packages. See PMI's guidance on work breakdown structures and schedule development and its PMBOK® Guide resources.

QUESTION NO: 62

Which input will be used when tasked with developing the human resource plan?

A. Project management plan

B. Activity resource requirements

C. Resource calendar

D. Project staff assignments

ANSWER: B

Explanation:

Activity resource requirements is the correct input because it identifies the types and quantities of people needed to perform each scheduled project activity. Developing the human resource plan requires the project manager to translate this activity-level demand into an organized approach for obtaining, assigning, managing, and eventually releasing project team members. These requirements provide a practical basis for defining needed roles, responsibilities, reporting relationships, staffing levels, and the timing of personnel acquisition. For example, knowing that design work needs two engineers during a particular period and testing needs specialist support later helps shape the project's staffing-management approach. In the terminology used in editions of PMI guidance that contain the Develop Human Resource Plan process, activity resource requirements are expressly identified as an input to that planning work. This is consistent with the broader PMI principle that resource planning begins by determining what resources are required for the planned activities before those resources can be assigned and managed. PMI's resource-management guidance and terminology can be reviewed through the PMBOK Guide and Standards page and the PMI resource management planning overview.

QUESTION NO: 63

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

ANSWER: A

Explanation:

Plan Procurement Management is the correct process because it determines the project's procurement approach, including whether particular project needs should be satisfied internally or by obtaining products, services, or results from outside the organization. This process evaluates the make-or-buy decision: the project team considers whether the organization has the capability, capacity, cost advantage, timing, and expertise to perform the work itself, or whether an

external seller can provide the required outcome more effectively. The resulting procurement management plan documents how procurements will be planned and managed, while related procurement documents can define what is needed from potential sellers. This decision is important because external procurement can affect the project's budget, schedule, risk exposure, contract strategy, and stakeholder responsibilities. PMI's project procurement management guidance describes planning procurement management as the process of documenting project procurement decisions, specifying the approach, and identifying potential sellers. See the PMI PMBOK Guide and Standards and PMI's overview of project procurement management and contracting approaches.

QUESTION NO: 64

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

ANSWER: C

Explanation:

Analogous estimating is correct because it uses historical information from a completed, similar project to estimate a current project. The estimator compares characteristics such as scope, cost, budget, duration, size, weight, or complexity and applies professional judgment to adjust the prior project's values for meaningful differences in the new work. For example, the actual duration of a prior facility renovation may be used as the starting point for estimating a current renovation with a comparable scale and technical profile. This approach is especially useful early in a project, when detailed requirements and work-package information may not yet be available. It provides a relatively fast, high-level estimate by relying on the similarity of projects and the quality of available historical data. Its reliability improves when the reference project is genuinely comparable and the adjustments for differences are well understood. The Project Management Institute describes analogous estimating as using values or attributes from a previous similar project as the basis for estimating the same parameter or measure for a current project. See the PMI PMBOK® Guide and Standards and the PMI overview of project cost-estimating techniques.

QUESTION NO: 65

A project manager estimates an activity duration by using historical information from a previous, similar project. Which estimating technique is being used?

A. Bottom-up estimating

B. Three-point estimating

C. Analogous estimating

D. Parametric estimating

ANSWER: C

Explanation:

Analogous estimating is correct because it uses the actual duration, cost, size, or other measure from a similar previous project as the basis for estimating a current activity or project. The estimate is adjusted as necessary for known differences in complexity, scale, technology, or delivery conditions.

Analogous estimating is generally faster and less costly than detailed estimating, but it can be less accurate when the prior work is not sufficiently comparable. Parametric estimating uses a statistical relationship between historical data and other variables, while three-point estimating uses optimistic, most likely, and pessimistic estimates. See PMI's PMBOK® Guide and Standards for estimating practices.

QUESTION NO: 66

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

ANSWER: C

Explanation:

Positive is correct. In the critical path method, the forward pass determines the earliest dates at which activities and the overall schedule can finish, based on the network logic and durations. The backward pass starts from a required completion date, schedule constraint, or imposed project finish date and calculates the latest dates that will still meet that finish point. When that imposed finish point is later than the early finish produced by the forward pass, there is available time between the calculated earliest completion and the required completion. This available time is total float.

Total float is commonly calculated as the difference between late and early dates for an activity, such as late finish minus early finish. Because the late date resulting from the later constraint is greater than the early date, the result is greater than zero: positive total float. At the project level, it indicates that the network can complete earlier than the required date while preserving the defined logical relationships. This is a fundamental outcome of forward- and backward-pass calculations used in schedule network analysis. See the PMI PMBOK Guide and Standards and the ProjectManagement.com definition of total float.

QUESTION NO: 67

Who is responsible for initiating a project?

A. Project sponsor

B. Project manager

C. Program manager

D. Project management office (PMO)

ANSWER: A

Explanation:

The **Project sponsor** is responsible for initiating a project. The sponsor is the individual or group that recognizes a business need, opportunity, or problem and provides the organizational authority to begin the work. A key initiation activity is authorizing the project through approval of the project charter or an equivalent authorization document. This establishes the project's purpose, high-level objectives, expected benefits, initial funding or resource commitment, and the authority of the project manager to apply organizational resources to project activities.

In established project-management practice, the sponsor also champions the project at an executive level, supports alignment with organizational strategy, and helps secure ongoing commitment from key stakeholders. Although the sponsor may delegate preparation of supporting materials, the formal decision and authority to launch the project rests with the sponsor or another authorized initiating authority. PMI describes the sponsor as the person or group that provides resources

and support for the project and is accountable for enabling success. See the PMBOK® Guide overview and PMI's guidance on project sponsor roles and responsibilities.

QUESTION NO: 68

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.

ANSWER: B

Explanation:

Sequence Activities is the project schedule-management process used to identify and document logical relationships among project activities. It determines how activities connect—for example, whether one activity must finish before another can start, whether activities can occur in parallel, or whether a lead or lag is required. The primary output is a project schedule network diagram, which visually represents these dependencies and provides a foundation for realistic schedule development. Establishing the relationships is essential because activity durations alone do not show the order in which work can be performed or reveal the project's critical path. Once the activity sequence and dependencies have been documented, the project team can use that information, along with duration estimates and resource requirements, to create the project schedule. This terminology is consistent with PMI's schedule-management practice, in which sequencing activities follows defining the activities and precedes developing the schedule. See PMI's overview of project scheduling concepts at PMI: Project Scheduling Techniques and the schedule network-diagram definition in the PMBOK® Guide.

QUESTION NO: 69

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

ANSWER: C

Explanation:

product is correct because project scope describes the work required to deliver a defined product, service, or result, together with the features and functions that the deliverable must possess. Before the project team can establish meaningful scope boundaries, requirements, deliverables, acceptance criteria, and exclusions, it needs a basic understanding of the product being created and the way it can be produced. That understanding enables the team to identify the work necessary to transform requirements into the intended deliverable, rather than describing work in isolation from its intended outcome.

In project-management practice, scope is closely connected to product scope: product scope concerns the characteristics and functions of the deliverable, while project scope encompasses the work performed to provide it. A preliminary understanding of how the specified product will be created therefore provides the foundation for defining deliverables and decomposing the required work into manageable scope elements. This supports a clear scope baseline and helps ensure that planning remains focused on producing the intended result. PMI's overview of project scope management and its discussion of scope concepts provide useful context: PMI: Project Scope Management and PMI PMBOK Guide and Standards.

QUESTION NO: 70

Which reserve is included in the cost baseline to address identified risks?

A. Management reserve

B. Contingency reserve

C. Procurement reserve

D. Schedule buffer

ANSWER: B

Explanation:

Contingency reserve is correct because it is budget allocated for known risks, or "known-unknowns," that have been identified and analyzed. The amount may be established for a particular activity, work package, or the project as a whole, and it is included in the cost baseline. If a planned risk response is needed, the associated contingency reserve can be used under the project's established control procedures. Management reserve, by contrast, is intended for unforeseen work within project scope and is not included in the cost baseline. PMI discusses contingency reserves as part of risk and cost management planning. See PMI PMBOK® Guide and Standards.

QUESTION NO: 71

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

ANSWER: D

Explanation:

The **project manager** progressively elaborates high-level information into detailed plans throughout the project life cycle. Progressive elaboration is the iterative refinement of project plans and supporting details as more reliable information becomes available. At initiation, the project manager may work from broad objectives, assumptions, milestones, and an initial scope. As planning and execution proceed, the project manager coordinates the team and stakeholders to develop increasingly detailed scope definitions, requirements, work breakdown structures, schedules, budgets, risk responses, resource plans, and control baselines.

This is a core project-management responsibility because the project manager integrates the work across knowledge areas, manages changes to the plans, and ensures that planning remains aligned with the approved project objectives. Detail should be added at an appropriate time: near-term work can be planned in depth while future work remains at a higher level until uncertainty is reduced. This approach is often reflected in rolling-wave planning, where planning is continually refined rather than completed once at the beginning. PMI describes progressive elaboration as continually improving and detailing a plan as more detailed and specific information becomes available. See the PMI discussion of progressive elaboration and the PMI PMBOK® Guide overview.

QUESTION NO: 72

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

ANSWER: A

Explanation:

Project life cycle provides the basic framework for managing a project because it organizes the work into a logical series of phases from the project's beginning through its completion. Each phase establishes a structured way to define objectives, plan the work, perform and monitor activities, control changes, and formally close the effort. The life cycle gives the project manager and stakeholders an overall management structure, including phase boundaries, expected deliverables, reviews, governance decisions, and appropriate allocation of resources. Its specific phases and level of detail can be tailored to predictive, iterative, incremental, agile, or hybrid approaches, but its core purpose remains the same: providing an end-to-end framework for directing the project. PMI describes a project life cycle as the series of phases a project passes through from its start to its completion, and notes that phases support the management and control of project work. This makes the project life cycle the foundational structure within which detailed planning tools and project activities are applied. See the Project Management Institute's overview of the project life cycle and the PMBOK® Guide and Standards.

QUESTION NO: 73

Funding limit reconciliation is a tool and technique used in which process?

A. Control Costs

B. Determine Budget

C. Estimate Costs

D. Control Budget

ANSWER: B

Explanation:

Determine Budget is correct because funding limit reconciliation is performed while developing the authorized project budget and associated funding requirements. The technique compares planned expenditure against the realistic limits on funds available during particular periods. Where projected spending exceeds an established funding limit, the project team may need to adjust the timing of work, reschedule activities, or smooth expenditures so that the cost baseline and funding requirements can be supported by the organization's funding constraints. This work is part of forming a feasible, time-phased budget rather than merely estimating individual activity costs or monitoring performance after the budget has been approved. The resulting budget information supports requests for project funding and establishes when funds must be available across the project life cycle. PMI identifies budget development as a core project cost-management activity, in which cost estimates are aggregated and reconciled with funding constraints to produce an actionable financial plan. See PMI's overview of the PMBOK Guide and Standards and its project cost-management guidance for the relationship between cost planning, budgeting, and funding needs.

QUESTION NO: 74

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.

ANSWER: B

Explanation:

valuE. is correct because a process improvement plan is intended to examine project-management and product-development processes systematically, identify sources of waste or inefficiency, and implement changes that deliver greater value. In project management, process improvement is not merely an informal commitment to work better; the plan documents how processes will be analyzed, which activities will be reviewed, how improvements will be selected, and how the resulting changes will be implemented and measured. The central purpose is to ensure that process activities contribute meaningfully to the project's intended outcomes and stakeholder benefits. Activities that do not add sufficient value can be modified, streamlined, automated, or removed, while valuable activities can be strengthened and standardized. This focus helps teams improve the effectiveness and efficiency of their work while maintaining alignment with project objectives. PMI's foundational standards describe the importance of tailoring and continuously improving the approaches used to deliver value in projects; see the PMBOK® Guide and Standards. Further context on PMI's value-delivery focus is available through its project management overview.