

Section and Knowledge Area Tests

These questions do not include the new exam type questions. These are all based on the 6th edition of the PMBOK and do not include many Agile questions. These questions will help you build your knowledge of processes and knowledge areas. This knowledge will be required on the new PMP exam.

2020

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Professional Responsibility Questions

1. You are assigned as the project manager to work a road improvement project in a foreign country for six months. At the end of an informal meet and greet, all five participants from your team were given exclusive gifts. You expressed reluctance to accept your gift and were told that it is a custom in their country to give exclusive gifts to business partners. What will be your best course of action?
 - a. Decline the gift as accepting it will be considered personal gain in your country
 - b. Decline the gift as accepting it will be considered a conflict of interest in your country
 - c. Accept the gift and inform your management so that your integrity will not be questioned later on
 - d. Accept the gift as you do not consider it to be a conflict of interest or integrity issue

2. You recently discovered one of your co-workers has been using PMP in her signature block when you know she isn't PMP certified. She knows a certification would help her immensely, but she never thought of actually taking the exam. What is your best course of action?
 - a. Report to your friend's boss
 - b. Confront your co-worker and tell her that you'll notify local authorities
 - c. Encourage your co-worker to get the PMP certification
 - d. Contact PMI and report the situation

3. Senior management is investigating the idea to open a branch office in a foreign county to outsource some key software maintenance functions. During the feasibility study, you found out that women are not allowed to work certain jobs, and the country's law also dictates that the salary of a woman should be 70 percent of that of a man's for the same job. This country has been on your radar and will be very open to new business. Opening an office should be very easy. Trained technical resources are available, and your company will see reduced costs for labor, equipment and raw materials. What is the best recommendation?
 - a. Ignore the local law and compensate the women you will be hiring equally
 - b. Consider not hiring any women to avoid conflicts
 - c. Negotiate with the officials and ask to be excused from laws discriminating against women
 - d. Consider not opening the branch office in this country

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4. Your business center has been working with several oil and gas companies for years and has built great working relationships with them. Two weeks ago you responded to a detailed proposal bid for a gas routing and chemical reduction process in which your company has no previous experience and lacks required expertise. Which of the following is TRUE regarding this situation?
 - a. It is a common practice to exaggerate expertise and experience when submitting a proposal for a bid
 - b. You have not violated the PMI code of ethics and professional conduct, but you have violated the procurement code
 - c. There is no violation in this situation
 - d. You have violated the PMI code of ethics and professional conduct

5. You are managing a project to change the layout of five golf holes on the local country club course. One of your friends who is a golf professional and owns two competing courses in the city has requested you let him see the planned course layout so he can provide his feedback. You know his feedback could be valuable and result in better attendance and revenue for the local golf course. What should you do in this situation?
 - a. Ask your friend to sign a nondisclosure agreement prior to letting him review the plans
 - b. Decline the request as the plans are considered proprietary because of some special features
 - c. Give him the plans since he is a golf professional and may provide valuable feedback
 - d. Make sure that your friend will provide you with the feedback and suggestions prior to giving him the new layout plans

6. Your company manufactures airbags for cars. After 2 million were sold and installed, an internal audit discovered that components of the airbags could cause fatal accidents when deployed. Your risk team says the probability of such accidents happening is very low and only 6 incidents have been reported for far. Recalling all of the airbags would be extremely expensive with an estimated cost of \$225 million. What should your company do FIRST?
 - a. Ensure the design is fixed in future airbags
 - b. Recall all existing airbags for repair
 - c. Do nothing since you have only a few accidents reported
 - d. Allocate more funding for contingency reserves to handle all financial issues for injuries or reputation issues due to defective airbags

7. You just got assigned as the new project manager replacing the existing manager six months into phase two of the project. A recent cost audit shows there is a \$60,000 payment, which can be disputed and most likely should not have taken place. Your project CPI is 1.3. What action is required?
 - a. Since this is a small amount compared to the total project value, it can be ignored
 - b. Since the project CPI is greater than 1, you do not have any problems with the cost of the project and can bury the costs in contingency and move on with the project
 - c. You should inform your manager and start further investigation
 - d. You must deny the payment

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8. Your project is near completion, when the customer informs you that he would like to see an additional feature in the project. You realize that this feature was discussed with the project sponsor in an earlier meeting and she categorically mentioned that she did not want this feature. What is the BEST course of action?
 - a. Add the feature because it will improve customer satisfaction
 - b. Add the feature because otherwise the project will not be accepted by the customer
 - c. Talk with the sponsor about the benefits of having this feature
 - d. Deny the customer request and ask him to open a change request

9. The WBS (Work Breakdown Structure) for your project is being created when two team members inform you of discrepancies with the Scope Statement. They say the scope is not properly defined. You agree with the assessment of the team members. What should you do?
 - a. Go ahead in creating the WBS because the scope statement has been approved
 - b. Recommend a new project to cover the gaps in the scope
 - c. Talk with the project sponsor and customer about the gaps in the scope statement
 - d. Include the tasks recommended by the team members in the WBS and your proactivity will be appreciated by the customer

10. Steve is a PMP and is managing a salt water conversion project for Danforth Water. The project will convert salt water to drinking water. The technology for this project is groundbreaking. Steve has just joined Danforth Water. At his prior company, Best Water, he acquired skills and knowledge in the water purification industry. Best Water's technology is patented. Can Steve use his knowledge and experience acquired in his previous employment?
 - a. No. This will violate patent regulation and hence the PMP code of conduct cannot allow it
 - b. Yes, knowledge cannot be patented. He can use knowledge and experience without violating any standards or regulations
 - c. No, even though the PMP code of conduct is not water purification product specific, Steve would be violating the code of conduct
 - d. No, this is illegal and, whether he is a PMP or not, the PMI code of conduct is binding for him

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11. Jeff is managing a very large road construction project. The contract states, it is mandatory that all the team members have more than 5 years of experience in the field of road construction. Winston is an excellent resource to have on your team, but he has only 4 years of experience. Winston's friend, Paul, a PMP who is on your team, suggests that he can arrange for a work experience certificate. Since Winston is technically very sound, even the customer will be happy to have him and the project will surely close successfully. Paul also feels that since Winston is a very good resource, the quality of work will improve so there is no harm in getting a work experience certificate. Jeff is a certified PMP, but is not a member of PMI now. What should he do?
- Jeff is not a member of PMI and the code of conduct is not binding; he can do what he feels is right
 - Jeff should report this to PMI and refuse to arrange for a work certificate. He is a PMP and is bound by a mandatory standard of responsibility
 - Jeff should call in legal authorities and report the issue as this is against PMI responsibility standards.
 - Jeff should refuse to arrange for a fraudulent certificate and report the issue to the customer and senior management as he is bound by aspirational code of conduct
12. As a practicing PMP, your responsibilities do NOT include which of the following?
- Respect the confidentiality of sensitive information
 - Satisfy the scope and objectives of your professional services
 - Provide accurate and truthful representations in the preparation of estimates regarding costs, services and expected results
 - Ensure that each project has a fully developed project charter in strict accordance with the PMBOK Guide
13. Your project for the new public water supply annex is nearly complete. Quality testing indicates low-level contaminants in the water, likely from project activities. You are told risk levels are below 1% and only children or elderly residents might be affected. As project manager, you should do which of the following?
- Inform the public that a detailed examination has been ordered to determine the extent to which the problem exists
 - Do nothing because there is extremely low risk for sickness except minor effects on small children and the elderly
 - Tell the public the problem is minimal, but that small children and the elderly should boil the water before drinking
 - Educate the public about the advances on water treatment technology and the industry efficiency and safety record

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14. You are contacted by PMI and asked to provide information regarding another project manager who has been reported to be involved in unethical activities. You are a PMP but do not have firsthand knowledge that would support the accusations, and the other project manager in question is a friend. You decide the best thing to do would be to not respond, and therefore neither confirm nor deny the accusations. Is this the right thing to do?
- Yes, it is safe to just ignore the request and stay out of it
 - No, it would be better to deny the charges against your friend to maintain the relationship
 - No, if you know something, you are required by PMI's Code of Ethics and Professional Conduct to cooperate
 - Yes, it is expected that project managers will support each other in the field
15. A project manager discovers poor software code that may cause program slow down. The code is supposed to be delivered today. The project manager knows the customer is not software savvy and would never notice the issue. The deliverable meets the contract requirements, but it does not meet the project manager's quality standard. What should the project manager do in this situation?
- Issue the deliverable and get formal acceptance from the customer
 - Note the problem in the lessons learned so future projects do not encounter the same problem
 - Discuss the issue with the customer
 - Inform the customer that the deliverable will be late
16. In the Middle East it is a grave insult to expose the soles of your feet or shoes. On a business trip to the Middle East what is the BEST advice for your team during their stay?
- Tell them about the culture, but since it isn't a US culture it doesn't matter that much
 - Make sure they understand the culture and keep their feet on the floor for all project meetings
 - Since it is hard to know all the cultures, just make sure they use their best judgment
 - Make sure they understand the culture and keep their feet on the floor while in meetings during their stay in the Middle East
17. Four intern students from another country are working on a project. Team building is a good way to build a sense of trust and belonging. A team building event is planned, but just before starting the event the four students refuse to participate, claiming the behavior involved is unacceptable in their country and they would be very uncomfortable participating. What should the project manager do?
- He should tell the students they need to become familiar with how things are done in this country and they must participate
 - He should excuse the students from participating and arrange to discuss with them alternative team-building activities they would be more comfortable with
 - He should report the students to their functional manager and request they be removed from the project since their attitude will have a negative impact on the project
 - He should tell the students they are excused from the activities and to not attend any team building activities in the future

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18. The monthly status report is due today and you are just finishing the report when you discover that several project team members are not reporting their actual project activity hours. This results in inaccurate if not misleading data. What is the MOST appropriate action to take?
- Discuss the impacts of these actions with team members
 - Delay the report and inform the team members' functional managers about their actions
 - Present the report as written and fix the issue going forward
 - Provide accurate and truthful representations in all project reports
19. You are working on an overseas assignment and submit a proposal to the cultural attaché in the region for the development and implementation of a technical training center. Two weeks later you are approached by a government "representative" ensuring you of a win and requesting a "reasonable" contribution to the political party currently in power in the country. What should you do in this situation?
- Refrain from knowingly engaging in professional misconduct
 - Make the contribution if you feel that local customs explicitly allow for such payments
 - Follow the laws and regulations governing this type of situation in your country
 - Negotiate with the representative for favorable consideration in other projects
20. You finally get a chance to manage an international project office overseas. This will be an interesting opportunity but you need to consider the cultural differences you will face and what adjustments you will need to make. After listing the pros and cons of the assignment there is one essential question which you must answer honestly before making the final decision. Which of the following is that question?
- How adaptable are they?
 - How adaptable am I?
 - How can I continue to build a practical knowledge base of cultural information that will serve me over the long term?
 - How can I continue to refine my skills and develop my level of cultural competence and adaptability?
21. You are working on a big project and have completed many deliverables. It has been almost a year since you started work. In the morning staff meeting the sponsor tells you that the client has run out of money to pay for the project. What is your FIRST action as the project manager?
- Stop work immediately
 - Cut back on resources assigned to the project
 - Reduce the scope of work and enter into administrative close
 - Redo the schedule to shift work to later in the project

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22. Negotiations in different cultures involve mutual interdependence between the parties and MUST be conducted in an atmosphere of which of the following?
- Understanding their culture with mutual trust and cooperation
 - Uncertainty and caution while getting to understand the culture
 - Giving gifts and focusing on getting what YOU want
 - Focusing on your personal agenda while learning their culture
23. While working abroad you are accused by one of your team members of behaving in an ethnocentric manner. You are being accused of which of the following?
- Focusing on the personality traits of others
 - Using stereotypes to evaluate other members of the team
 - Believing in the inherent superiority and naturalness of your own culture
 - Having trouble adjusting to the culture
24. You finally get to work on a big project. The sponsor's approved cost estimate is \$3,000,000. As you complete your detailed estimations you realize the project will be \$300,000 less than estimated. Based on your cost plus percentage of cost contract, this will lower your bonus by \$3000. In this situation, what should you do?
- Invoice the full \$3,000,000 as originally estimated and approved
 - Add tasks to increase the actual project cost
 - Communicate to the project sponsor your detailed cost estimates
 - Inform the end users that additional functionality can be added to utilize the entire budget
25. You are a project manager for a company which specializes in designer lighting fixtures. Your company has prepared a standard WBS and has established a rigid integrated change control system. On your last project one of your company's biggest customers requested that a different type of wiring be used. This constituted a scope change; however, the new wiring reduced cost and improved the efficiency of the lights by 15%. At the end of your last project you realized that the continued use of the new wiring would lead to improvements in the quality and cost of the fixtures. Your next step should be to:
- Adjust the cost baseline to reflect the reduction in cost
 - Pass the calculated savings onto the customer
 - Create a new methodology and mandate that it be followed
 - Document the lessons learned and share them within the company

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Professional Responsibility Answers

1. C: You should accept the gift because if you decline it can severely affect your relationship with the customer. You should also immediately inform your management so that your integrity will not be questioned later on. PMP Workbook, pages 7-8
2. D: You are obligated to report any PMI Code of Ethics and professional conduct violation to PMI. PMP Workbook, pages 7-8
3. D: One of the mandatory standards in the PMI Code of Ethics and professional conduct is fairness. Fairness includes making decisions impartially and objectively and avoiding favoritism and discrimination against others. As a project manager you need to make sure that there will be no discrimination against others based on, but not limited to, gender, race, age, disability, nationality, or sexual orientation. You also need to make opportunities equally available to all qualified candidates. Your best course of action will be to recommend not opening the branch office in this country. PMP Workbook, pages 7-8
4. D: You have violated the PMI Code of Ethics and professional conduct. As a project manager, you should be honest about the experience and expertise of your organization. PMP Workbook, pages 7-8
5. B: You should decline the request as the new hole designs are considered proprietary by your client, the local golf course. PMP Workbook, pages 7-8
6. B: Recalling the installed airbags is the ethical and right choice. Since there is a probability of fatal accidents, it is ethical to recall the airbags for repair in spite of the high cost involved. B and C are unethical choices; they want us to do nothing until accidents happen. Choice D, allocating funding for financial issues and injuries should definitely be done but it will not solve the immediate problem of having several injury-causing airbags in automobiles. Fixing the problem should be done after the recall. PMP Workbook, pages 7-8
7. C: As the new Project Manager, you are supposed to deal with any issues or unethical practices and should not ignore them. Choices A and B ask you to ignore the issue and are not recommended. Choice D is harsh and without knowing all the details, you should not deny the payment. An administrative claim would need to be filed as the second step. PMP Workbook, pages 7-8
8. D: is the best available option. Choices A and B are not the best answer, because adding this requirement will impact your project deliverables and this requirement was not in the initial scope of work. Choice C assumes that you have some information about the benefits of the feature which the sponsor is not aware of, which may not be true. PMP Workbook, pages 7-8
9. C: WBS is created after the Scope Statement is created and approved. Because the project sponsor and customer are involved in creating the scope statement, they should be informed of the gaps in it so that they can address the issues. Choice A does not solve the identified problem but just avoids it. Choice B is a drastic measure and should be taken only if the changes can be accommodated within the same project. Choice D (i.e. adding more tasks without approval from the project sponsor) is

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gold-plating; it may increase the cost and schedule and is not recommended by PMI. For Professional Responsibility questions, please note that the Project Manager should always try to solve the problem. PMP Workbook, pages 7-8

10. B: Knowledge cannot be patented. He can use knowledge and experience without violating any standards or regulations. Using acquired knowledge is not illegal. Sharing specific information that was covered under non-disclosure would be illegal. PMP Workbook, pages 7-8
11. B: Jeff should report this to PMI and refuse to arrange for a work certificate. He is a PMP and is bound by a mandatory standard of responsibility. Not being a PMI member does nothing to change Jeff's obligations as a PMP. Reporting this to anyone other than PMI is not required. PMP Workbook, pages 7-8
12. D: The PMBOK Guide is a recommended standard. PMPs are not bound to strictly adhere to any recommendation in the PMBOK Guide. PMP Workbook, pages 7-8
13. A: Informing the public is the ethical and professional action to take. Choices B and C are both unethical and may result in legal actions as well as loss of reputation for the company. Choice D can also be done but is not the best response. PMP Workbook, pages 7-8
14. C: Ignoring the request from PMI and lying for the project manager do not support PMI's request for information and are unethical actions. PMI's Code of Ethics and Professional Conduct requires PMP-certified project managers to report unethical behavior and violations of the code. They are also obligated to cooperate with PMI in collecting information even if they don't have firsthand information. PMP Workbook, pages 7-8
15. C: Be open and honest and tell the customer about the issue. Delivering the poorly written code is unethical. Noting the issue in lessons learned does not solve the problem. Informing the customer that the deliverable will be late would be the second step in this issue. Although the deliverable meets the contractual requirements, it is best to bring the problem to the customer's attention.
16. B: Understanding and following local cultural norms is important to good project management and is part of the PMI Code of Ethics. Choice B is better than Choice D because keeping your feet to the floor for all meetings will respect the culture while in the Middle East and may also help for meetings in your country with Middle Eastern attendees. PMP Workbook, pages 7-8
17. B: The best answer is to excuse them from playing, and discuss alternative activities for the whole team with which they would be more comfortable. This demonstrates respect for cultural differences. Insisting that the team members participate forces them to do something that is unacceptable in their culture. Requesting their removal from the project penalizes the team members for expressing their cultural preferences, which is not a valid reason to remove them. Excluding them from all future team building does not show respect for their culture and would have a negative impact on the project. PMP Workbook, pages 7-8
18. D: The project manager's responsibility is to provide truthful project information. The report could be delayed to get accurate information. He or she should then discuss the impacts of their actions with the team members. If that does not work, the next step is to report the team members'

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behavior to their functional managers. In the meantime, the project manager must report the status as accurately as possible. PMP Workbook, pages 7-8

19. A: Refrain from knowingly engaging in professional misconduct. The misconduct is paying a bribe. The PMI Code of Ethics and Professional Conduct prohibits taking or paying bribes. Choices B, C, and D all have unethical components and do not comply with the PMI code. Choice B says you “feel” local customs allow payments. Unless you know this or it was stated in the answer, it makes this choice incorrect. PMP Workbook, pages 7-8
20. B: The focus needs to be on your own adaptability. Choices A and C focus on the new culture and their being adaptable. That isn’t the right approach. Choice D has some of the right elements but isn’t the best answer. Simply, how adaptable are you? Doing Business Internationally: The Guide to Cross-Cultural Success, page 32-35
21. C: The project manager has a professional responsibility to provide the customer with the value of the work performed. Reducing the scope of work to the work performed and starting administrative closure is the right answer. Stopping work will occur but after you reduce the scope and start administrative actions. Reducing resources or shifting work doesn’t solve the lack of funding issues. PMP Workbook, pages 7-8
22. A: Understand other cultures and creating an atmosphere of mutual trust and consideration are critical to good negotiations. Choices B, C and D all focus on one side and do not meet the win-win mantra of good negotiations. The Cultural Dimension of International Business, pages 35-37, or Doing Business Internationally: The Guide to Cross-Cultural Success, pages 169-170
23. C: Ethnocentrism is judging another culture solely by the values and standards of one's own culture. Reference: Glossary, Doing Business Internationally, Second Edition: The Guide To Cross-Cultural Success
24. C: The ethical choice is to report the detailed estimates and be prepared to take a lower bonus. Adding tasks, suggesting additional tasks, and just charging the original amount are all unethical. PMI Code of Ethics and Professional Conduct, sections 5.2 and 5.3
25. D: It is important for the project manager to contribute to the project management knowledge base by sharing lessons learned and best practices. Each or all of the other choices could result from applying published lessons learned. PMP Role Delineation Study, page 59

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Framework Questions

1. Your business organization is responsible for updating the accounts payable system. You are responsible for managing both the individual product releases and the coordination of multiple releases. Which of the following best describes your role?
 - a. Program manager
 - b. Project manager
 - c. Functional manager
 - d. Operations manager

2. You have reached the end of the design phase of your project. You decide to call a "phase end review" for obtaining authorization to close the design phase and initiate the next phase (i.e., execution phase) of your project. Your manager disagrees with your suggestion. He wants a "kill point" to formally end the design phase of the project. In this context, you should:
 - a. Disagree with your manager because you know that phase end reviews should be used at the end of each phase of the project
 - b. Agree with your manager since a kill point is a phase-end review
 - c. Escalate this issue to the project sponsor
 - d. Take advice from a senior project manager about what should actually be done at the end of each phase of the project

3. You are working in the Project Management Office (PMO) of your organization. Your job responsibility is to:
 - a. Manage the operational activities in the company
 - b. Manage human resource and risk management issues for individual projects
 - c. Provide support functions to project managers in the form of training, providing software, standardizing policies, etc.
 - d. Provide subject matter expertise in the functional areas of the project

4. Every business may have its own type of organizational structure. Some are functional, some are projectized and some are some sort of matrix. Your boss tells you that you have a weak matrix organization. Which of the following best describes it?
 - a. Performance levels for the project manager including applying the project management knowledge and personal behaviors of the project manager including displaying a good attitude and leadership
 - b. An organization that has a blend of functional and projectized characteristics
 - c. It maintains many of the characteristics of a functional organization, but the project manager role is more of a coordinator or expeditor than that of a true project manager
 - d. An organization that will have difficulties achieving the project objectives

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5. Today's projects need to be supported by both the business and the project management operations. The PMBOK embraces this process as project governance. Which of the following best describes it?
 - a. Provides a comprehensive, consistent method of controlling the project and ensuring success while aligning stakeholders' needs and objectives
 - b. Recognizes the need for a project manager, but does not provide the project manager with the full authority over the project and project funding
 - c. A project manager is identified and assigned as early in the project as is feasible, preferably while the project charter is being developed and always prior to the start of planning
 - d. An organization that has a blend of functional and projectized characteristics

6. Projects are done because they support business cases and the strategic objectives of the company. Which of the following are the best lists of considerations that typically authorize a project?
 - a. Reduces uncertainty, eliminates options for reducing the schedule, cost effective
 - b. Is cost effective, can be completed in under one year, in high demand
 - c. Has a signed project charter, key stakeholders, a sponsor and most of the requirements
 - d. Market demand, strategic opportunity / business need, customer request, technological advancement, legal requirements or social needs.

7. Projects can be designed to run with a selected phase relationship and then suddenly change to a different type of relationship. If you start your project with the idea of no "multitasking" and then move to "multitasking", the phase relationships would be which of the following pairs?
 - a. Iterative, then Multitasking Relationship
 - b. Sequential and then Overlapping Relations
 - c. Agile, then an Iterative Relationship
 - d. Overlapping and then a Multi-phase Relationship

8. The project is critical to your organization. It may be the most important project this year and you are a team member. You realize the project life cycle is predictive, where cost, schedule, and scope are determined early in the project, prior to starting project work to produce the deliverables. This type of project life cycle is also known as which of the following?
 - a. Change-driven project life cycle
 - b. Adaptive project life cycle
 - c. Preferred project life cycle
 - d. Plan-driven project life cycle

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9. Most projects are worked in a functional or matrix type organization. These can sometimes cause obstacles or constraints. Which one of the following creates a temporary framework around their projects to achieve strategic goals and to minimize the impact, constraints, and obstacles of the established organizational structure?
- Project-based organization (PBO)
 - Organizational hierarchy
 - Composite structure
 - Functional organization
10. You are a key team member on a project to develop new applications for smart phones. Because of the unknowns on this project, you take the approach of defining and developing the product by incremental steps and continually reviewing and adjusting processes, assumptions, requirements, and decisions throughout the project life cycle as the project progresses. You are engaged in which of the following?
- Project selection
 - Monitoring & Controlling
 - Progressive elaboration
 - Decomposition
11. You are working on several projects; one of them is a software modification project. In most cases operations work is taking the priority and you have little authority to assign resources. You report to a functional manager and can make limited decisions. Today you cannot seem to get resources for a critical task. Your role can best be described as which of the following?
- Subject Matter Expert
 - Team Lead
 - Expediter
 - Coordinator
12. Many businesses or companies may assign new inexperienced project managers to manage smaller or even medium difficulty projects. If you are assigned such a project and are working in a matrix organization, how would you describe the communications?
- Simple
 - Open and accurate
 - Complex
 - Hard to automate
13. Many project managers struggle with the difference between a standard and a regulation. Which of the following is the best description of both?
- Posted Speed limits and work hours are from eight a.m. to five p.m.
 - The city building codes and gun permit laws
 - Computer disposal methods and methods for software coding
 - Posted speed limits and federal regulations

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14. You are new to the organization and are trying to determine advantages and disadvantages of the types of organizational structures. You know about Matrix, Functional and Projectized organizations. Which of the following best describes a composite organization?
- Could have expeditors and coordinators but the project manager has very little power
 - Just like a project-based organization with a staff of project managers
 - Involves all of the other structures, some matrix, some projectized
 - Stronger than a balanced matrix but weaker than a strong matrix organization
15. A project manager in a Fortune 500 company is managing his second project. The two projects started about a month apart. The first project is fairly easy. The second one seems to be getting more complicated each day. The project manager may need help. He recently heard that there was another project in the company last year that is similar to his second project. What should he do?
- Contact the other project manager and ask for assistance
 - Obtain historical records and guidance from the project management office (PMO)
 - Wait to see if the project is impacted by the growth in scope
 - Make sure the scope of the project is agreed to by all the stakeholders
16. You are the project manager of a small printing company and have been assigned to a project that will launch a new advertising campaign. Storyboarding, the first phase of your project, has come to an end. What is the most important thing to get done before beginning the next phase?
- Confirm that the phase has reached its objectives, and have its deliverables formally accepted
 - Verify that the resources are available for the next phase
 - Check the project's progress compared to its baselines
 - Recommend corrective action to bring the project results in line with project expectations
17. Operations and projects are often done to support each other but they have different characteristics. Your boss asks you to describe the key elements of a project. Your answer would talk about all but which of the following characteristics?
- It is temporary and has a definite beginning and end
 - It produces a service, result or deliverable
 - It has interrelated activities and may be progressively elaborated
 - It uses resources, has constraints and it repeats itself every month
18. A framework for keeping an organization focused on its overall strategy is:
- Organizational project management
 - The PMBOK Guide
 - Project governance
 - Portfolio management

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19. Which of the following BEST describes the major constraints on a project?
- Scope, number of resources, cost savings and metrics
 - Scope, cost, and time
 - Scope, time, cost, quality, risk, resources, and customer satisfaction
 - Time, cost, and number of changes
20. Project managers have a tremendous responsibility. They are tasked with working projects, perhaps several at the same time, and completing them on time, on budget and within scope. In order to be an effective project manager the PMBOK lists competencies and skills expected. Which of the following best describes these competencies and skills?
- Persistence, thick skin, with leadership, communications and decision-making skills
 - Trust-building, coaching, and influencing as well as a complete understanding of the PMBOK
 - Knowledge, performance and personal competencies along with a balance of ethical, interpersonal and conceptual skills
 - Political tact and diplomacy, negotiation skills, attention to detail and ethical deception
21. Companies usually organize their work into programs and projects. Sometimes they even have portfolios. Which of the following best describes the differences between a project, program, and portfolio?
- A project is a temporary endeavor with a beginning and an end, a program may include other non-project work, and a portfolio is all the projects in a given department or division
 - A project is a lengthy endeavor with a beginning and an end, a program combines two or more unrelated projects, and a portfolio combines two or more programs
 - A project is a temporary endeavor with a beginning and an end, a program is a group of related projects, and a portfolio is a group of projects and programs related to a specific strategic objective
 - A project is a contracted endeavor with a beginning and end, a portfolio is a group of projects with more open-ended completion dates, and a program combines two or more portfolios
22. Two of the key inputs for most of the PMBOK process steps are OPA and EEF. Enterprise environmental factors (EEF) are usually considered the company's morale and culture. Organizational Process Assets (OPA) have many elements. Which of the following is NOT an organizational process asset?
- Organizational policies, procedures, and guidelines for areas such as safety, ethics, risk, finance, change control, reporting, and others
 - Existing facilities and infrastructure
 - Templates for common project documents such as WBS, network diagram, SOW and contracts
 - Historical information and past lessons learned

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23. Lessons learned are usually started at the beginning of the project. They help capture both the positive and negatives of the entire project. Lessons learned are used for and BEST completed by:
- Historical records for future projects completed by the project manager
 - A planning record for the current project completed by the team
 - Informing the team about the project management plan completed by the sponsor
 - Historical records for future projects completed by project stakeholders
24. A project life cycle is a representation of the generally sequential and sometimes overlapping project phases that a project typically goes through. Regardless of which phase relationship, project life cycles have several characteristics. Which of the following does NOT describe project life cycle characteristics?
- Cost and staffing start low, increase toward the end, and drop rapidly near closing
 - Project risk is highest at the beginning of the project and reduces as the project approaches its end
 - Stakeholder influence is lowest at the start and increases as the project proceeds
 - Cost of changes is low in the beginning but extremely high later in the project
25. Project Management Offices are structures that provide project-related governance using various techniques and methods. Which are the three types the PMO can take and their levels of control?
- Controlling or moderate control, supportive or low control, and directive or high control
 - Controlling or high control, supportive or low control, and directive or moderate control
 - Administrative or limited control, supportive or low control, and directive or high control
 - Supportive or low control, directive or moderate control, and legal or regulatory control

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Framework Answers and Explanations

1. A: A program is defined as a group of related projects, subprograms, and program activities managed in a coordinated way to obtain benefits not available from managing them individually. Programs may include elements of related work outside the scope of the discrete projects in the program. Reference: PMBOK® Guide - Fifth Edition, page 9
2. B: A phase end represents a natural point to reassess the activities underway and to change or terminate the project if necessary. This point may be referred to as a stage gate, milestone, phase review, phase gate, or kill point. Kill point is another term for phase end review. PMBOK® Guide - Fifth Edition, page 41
3. C: A Project Management Office (PMO) is a management structure that standardizes the project-related governance processes and facilitates the sharing of resources, methodologies, tools, and techniques. The responsibilities of a PMO can range from providing project management support functions to actually being responsible for the direct management of one or more projects. Reference: PMBOK® Guide - Fifth Edition, page 10
4. C: The weak matrix is much like a functional organization. The project manager would have very little power and may actually be a coordinator or expeditor. The weak matrix may have some staff assigned to work a project. Answer A lists characteristics of a project manager and answer B includes projectized which supports a pure project-based organization. Answer D may be true but the use of the word “will” makes this a bad choice. PMBOK® Guide - Fifth Edition, section 2.1.3, page 23
5. A: Project governance is the alignment of projects with stakeholders’ needs or objectives to enable organizations to consistently manage projects and maximize the value of project outcomes. Governance would include project manager authority and assignment early but neither is a comprehensive definition. Answer D has nothing to do with governance. PMBOK® Guide - Fifth Edition, section 2.2, page 30 and 34
6. D: Projects are typically done for many reasons. PMBOK® Guide - Fifth Edition, section 1.4.3, page 10
7. B: Sequential and then Overlapping relationship is the correct answer as described in the PMBOK. All of the other choices have made up relationship names. PMBOK® Guide - Fifth Edition, section 2.4.2.1, pages 42-43
8. D: The predictive life cycle is also a plan-driven project life cycle. As much planning as possible is complete before the project starts. This type of planning is also known as the Waterfall methodology or sometimes the SDLC (software development life cycle). Construction projects

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commonly use a predictive or plan-driven life cycle. Change-driven and adaptive life cycles do not typically have the same level of initial planning and are more refined as the project progresses. These projects are sometimes referred to as having an Agile life cycle. PMBOK® Guide - Fifth Edition section 2.4.2.2, page 44

9. A: Project-based organizations refer to various organizational forms that create temporary systems for carrying out their work. The use of PBOs may diminish the hierarchy and bureaucracy inside organizations. PMBOK® Guide - Fifth Edition section 1.5.2.1, page 14
10. C: Progressive elaboration involves continuously improving and detailing a plan as more detailed and specific information and more accurate estimates become available. Project election happens before the project begins. Monitoring and controlling are performed throughout the project and involve checking planned versus actuals. Decomposition is done while creating the WBS and activity identification. PMBOK® Guide - Fifth Edition section 1.3, page 6
11. D: The organization type may be functional or a weak matrix. This would account for the resource issues. The question asks your role which is that of a project coordinator based on the fact you report to a higher authority and can make limited decisions. PMBOK® Guide - Fifth Edition section 2.1.3, page 23
12. C: Because a project done in a matrix organization involves people from across the organization, communications are more complex. PMBOK® Guide - Fifth Edition section 2.1.3, page 23-25
13. A: Regulations are supported by law. Standards are guidance of the way we normally do things. The posted speed limit is a regulation, while work hours from eight a.m. to five p.m. are not mandatory. The other choices don't have an example of both a standard and regulation. PMBOK® Guide - Fifth Edition section 1.1, page 2; Glossary, pages 557 and 563.
14. C: The composite organization is one that could have all of the other standard types of organizations in one company. Some projects may be projectized and others are matrix based. PMBOK® Guide - Fifth Edition section 2.1.3, page 25
15. B: The correct choice is to obtain historical records and guidance from the project management office (PMO). The PMO and the project sponsor are well known sources that can help the project manager. Seeking guidance from the mentioned project manager may help but is not the first choice. The other two choices are not proactive and would not help the situation. PMBOK® Guide - Fifth Edition section 1.4.4, pages 10-12.
16. A: The correct choice is confirm that the phase has reached its objectives and have its deliverables formally accepted. Both verifying that the resources are available for the next phase

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and checking the project's progress compared to its baselines are good things to do, but after the phase is closed. Recommending corrective action would also come if needed after the phase is closed. PMBOK® Guide - Fifth Edition section 2.4.2, page 41

17. D: "It repeats itself every month" implies that the whole project repeats every month. This part of the choice eliminates it as one of the elements of a project. PMBOK® Guide - Fifth Edition section 1.2, page 3
18. A: Organizational project management (OPM) provides a framework and direction for how projects, programs, portfolios, and organizational work should be done to meet the organization's strategic goals. PMBOK® Guide - Fifth Edition section 1.4, page 7
19. C: "Scope, time, cost, quality, risk, resources, and customer satisfaction" is the most accurate list of constraints, or competing demands, that a project manager must deal with. PMBOK® Guide - Fifth Edition section 1.3, page 6. Customer Satisfaction is an added constraint from the Rita Mulcahy Exam Prep, 8th edition, page 28
20. C: The best choice is knowledge, performance and personal competencies and a balance of ethical, interpersonal and conceptual skills. The other choices have some of the elements but not both competencies and skills as listed in the PMBOK. Choice D also has ethical deception which would violate the PMI Code of Ethics. PMBOK® Guide - Fifth Edition section 1.7.1, page 17
21. C: A project is a temporary endeavor with a beginning and an end, a program is a group of related projects, and a portfolio is a group of projects and programs related to a specific strategic objective. Remember to use the process of elimination, ruling out any answer that is not completely correct.
22. B: Existing facilities and infrastructure are not part of the OPA. Each of the other choices is part of OPA and includes both corporate knowledge and process and procedures. PMBOK® Guide - Fifth Edition section 2.1.4, page 27
23. D: The best answer is stakeholders, as their input is critical for collecting all the lessons learned on each project. The term "stakeholders" includes all the other groups
24. C: The only inaccurate description is that stakeholder influence is lowest at the start and increases as the project proceeds. Stakeholder influence starts out high while you as the project manager control and reduce it to the end of the project. PMBOK® Guide - Fifth Edition section 2.4.1, page 40

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25. A: The correct choice is controlling or moderate control, supportive or low control and directive or high control. Choice B has the wrong controls and choices C and D have made up PMO types. PMBOK® Guide - Fifth Edition section 1.4.4, pages 10-11

Project Management Process Questions

1. Understanding the process steps and groups of process are important to project managers. We know that some of the processes in project management are iterative. Which process group can provide feedback between project phases?
 - a. Monitoring and controlling
 - b. Planning
 - c. Executing
 - d. Closing
2. As project managers we always want to make sure stakeholders get the product they were promised. Which process aims to eliminate causes of unsatisfactory performance?
 - a. Control Scope
 - b. Validate Scope
 - c. Control Quality
 - d. Control Cost
3. You have been working on your project for two years and things have been going very well. The project has been virtually flawless. You've had limited changes and the scope is still very close to the original scope statement. Without notice you get word from your sponsor that the project has been cancelled. Which process must happen next?
 - a. Scope control
 - b. Procurement management
 - c. Contract closure
 - d. No additional process is needed because the project has been cancelled
4. There are 5 process groups and 47 process steps outlined in the PMBOK. Which of the following best describes a project process?
 - a. The creation of a product
 - b. The progressive elaboration resulting in a product
 - c. A series of actions that bring about a product, result, or service
 - d. A series of actions that allows the project to move from concept to deliverable
5. There are five project management process groups that allow projects to move from start to completion. Which one of the following is not one of the project management process groups?
 - a. Initiating
 - b. Communicating
 - c. Planning
 - d. Closing

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6. Several things happen at the beginning of a project. First we have an idea for a project and then some sort of project selection. We might consider the cost benefit ratio and even use a murder board. The first formal process group is initiation. Which of the following does not occur in the first process group?
 - a. Creation of a project scope statement
 - b. Identification of internal and external stakeholders
 - c. Development and review of the business case and a feasibility study
 - d. Assignment of the project manager to lead a project

7. There are 10 knowledge areas. A knowledge area represents a complete set of activities, concepts, and terms that make up an area of specialization, project management field, or professional field. Each project management knowledge area is subdivided into which of the following?
 - a. Best practices
 - b. Policies
 - c. Processes
 - d. Guidelines

8. You are managing a project for your IT department. Things are going about as well as expected. You've been getting advice from your PMO and feel like things are under control. You are finally ready to close the project. One of the listed steps below is not part of the closing process; which one?
 - a. Formal sign-off and formal acceptance are received from the customers
 - b. Customer acceptance criteria are determined
 - c. Final versions of the lessons learned are compiled and made available for future projects
 - d. Completed project deliverables are handed off to operations and maintenance

9. In which process group does the project team track, measure, inspect, monitor, verify, review, compare, and regulate the progress and performance of the project; ensure that the plan is working; identify any areas in which changes to the plan are required; and initiate the corresponding changes?
 - a. Monitoring & Controlling
 - b. Closing
 - c. Initiating
 - d. Executing

10. You are the subject matter expert for the new web based forensic testing tool. Currently, you are in the process of implementing corrective actions, preventive actions, approved changes and defect repairs in the project. These actions take place in which process group?
 - a. Executing
 - b. Monitoring & Controlling
 - c. Planning
 - d. Closing

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11. There are 24 process steps in the planning and only 8 in the executing group. Some say the executing process group is just getting the work done. Which one of the following statements is FALSE about the executing process group?
- This process group usually takes the most time and resources
 - The processes in this process group measure and analyze the progress and performance of the project, ensure that the plan is working, identify any areas in which changes to the plan are required, and initiate the corresponding changes
 - Coordinating people and resources, managing stakeholders and conducting procurements
 - This process group consists of processes to complete the work defined in the project management plan and ultimately satisfies the project specifications and objectives
12. You are working on a project to move all the second floor offices to the 8th floor. Currently, the team is working on collecting requirements and establishing estimates for the project. Which process group are you in?
- Initiating
 - Executing
 - Monitoring & Controlling
 - Planning
13. Good projects don't just happen. They stay on track because of good monitoring and controlling practices throughout the project. Which one of the following will have the LEAST impact if a project is not initiated properly?
- Authorizing the project manager to manage the project
 - Defining the scope of the project
 - Identifying the key stakeholders
 - Understanding the goal, objective, and business need of the project
14. There is no question that the planning process group includes many steps. Getting the planning done right is critical to a successful project. Of the following pairs of processes, which have one or more that are NOT planning processes?
- Create WBS and Define Activities
 - Perform Qualitative Risk Analysis and Plan Risk responses
 - Estimate Costs and Sequence Activities
 - Develop Project Team and Develop Schedule
15. All of the following steps can and should be done in a project. The problem is when they should be done. Which of the following is the MOST appropriate thing to do in project closing?
- Work with the customer to determine acceptance criteria
 - Collect historical information from previous projects
 - Confirm all the requirements in the project have been met
 - Gain formal approval of the management plans

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16. After the feasibility study is completed and a project is selected you begin work with the initiating process. The key outputs of this process are which of the following?
- Project Charter, Scope Statement and Contracts
 - Stakeholder Register, Stakeholder Management Plan and Risk Register
 - Stakeholder Management Plan and Business Case
 - Project Charter and Stakeholder Register
17. Most of Time Management is completed in the planning process group. Several of the steps are performed in a logical order by the team members. Which of the following best describes the Estimate Activity Durations process?
- Process of approximating the number of work periods needed to complete individual activities with estimated resources
 - Process of identifying and documenting relationships among the project activities
 - Process of developing an approximation of the monetary resources needed to complete project activities
 - Process of monitoring the status of the project and product scope and managing changes to the scope baseline
18. As the project manager you have to work on controlling project constraints. The three key constraints are cost, schedule and scope. The process of monitoring the status of the project to update project progress and manage changes to the schedule baseline is called what?
- Control Scope
 - Develop Schedule
 - Control Schedule
 - Control Costs
19. The project has been going on for three years and is actually doing very well. The current CPI is .97 and the SPI is 1.1. As the project manager you've received several compliments on your work. The process of collecting, distributing and storing project information including status reports, progress measurement, and forecasts is called what?
- Close Procurements
 - Verify Scope
 - Manage Communications
 - Control Scope
20. Documents are required as part of any project. There are many that end up supplementing the project management plan. Early in the project, the project charter and requirements are used to help define the scope. Which of the following best describes this process step?
- Process of formalizing acceptance of the completed project deliverables
 - Process of developing a detailed description of the project and product
 - Process of identifying and documenting relationships among the project activities
 - Process of completing each project procurement

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21. Many projects have help in conducting risk analysis on their projects. Project Managers need to know the different processes. The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact is which of the following?
- Perform Qualitative Risk Analysis
 - Perform Quality Assurance
 - Perform Quantitative Risk Analysis
 - Perform Quality Control
22. The schedule management area has several process steps. After we know the activities we can estimate activity resources. A good description of this step is which of the following?
- Process of estimating the type and quantities of material, people, equipment, or supplies required to perform each activity
 - Process of defining how to conduct risk management activities for a project
 - Process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule
 - Process of monitoring the status of the project to update the project budget and managing changes to the cost baseline
23. Quality management is a big part of most projects. What is the process of auditing the quality requirements and the results from quality control measurements to ensure appropriate quality standards and operational definitions are used?
- Perform Quality Control
 - Plan Quality
 - Perform Qualitative Risk Analysis
 - Perform Quality Assurance
24. As the project manager you'll need to collect requirements. There are many methods for doing this. Which of the following best describes this process?
- Process of developing a detailed description of the project and product
 - Process of identifying and documenting relationships among the project activities
 - Process of numerically analyzing the effect of identified risks on overall project objectives
 - Process of defining and documenting stakeholders' needs to meet the project objectives
25. Project managers use phases to help define large and complex projects. Projects are also completed using the five process groups. How would you define the process groups?
- The same as the project phases
 - Normally repeated in each of the phases
 - Related to the product and therefore not related to the project phases
 - Related to project management and therefore not related to the project phases

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Project Management Process Answers

1. A: The one process that provides feedback is Monitoring and Controlling. Execution and Planning can also be iterative but neither provides feedback. Monitoring and Controlling is done throughout the project and may often be seen as the constant process group. PMBOK® Guide-Fifth Edition, section 3.1, page 50, and section 3.6, page 57
2. C: Control Quality is in the Monitoring and Controlling process group and is the project's method of making sure the service or result meets all the requirements and specifications before it gets into the users hands. Validate Scope is the process that formalizes the acceptance by the stakeholder. PMBOK® Guide-Fifth Edition, section 5.5, page 133
3. C: With notice of cancellation the next step is to close the project. Neither scope control or procurement management is required. These elements would be addressed as part of the closing process. PMBOK® Guide-Fifth Edition, section 3.7, page 57
4. C: The definition of a process is a set of interrelated actions that brings about a product service or result. Choice D has some truth but is not the best answer. Progressive elaboration is a methodology within a project. PMBOK® Guide-Fifth Edition, section 3, page 47
5. B: The only answer listed that is not a process group is the knowledge area of communications. PMBOK® Guide-Fifth Edition, section 3.9, page 61
6. A: Identification of stakeholders, the project manager being assigned and reviewing the business case and statement of work all occur during initiation. The Scope Statement doesn't occur until planning. PMBOK® Guide-Fifth Edition, section 3.3, page 54
7. C: Each project management knowledge area is subdivided into specific processes, each of which is characterized by its inputs, tools & techniques, and outputs. PMBOK® Guide-Fifth Edition, section 3, page 47
8. B: Customer acceptance criteria are determined during the initiating process group. PMBOK® Guide-Fifth Edition, section 3.7, pages 57-58
9. A: During the monitoring & controlling process group, project performance is measured and analyzed, and needed changes are identified and approved. PMBOK® Guide-Fifth Edition, section 3.6, page 57
10. A: Usually a project will enter the executing process group when the planning is completed or the project management plan has been updated due to change requests, including defect repairs and corrective and preventive actions. The executing process group involves coordinating people and resources as well as integrating and performing the activities of the

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project in accordance with the project management plan. These approved change requests for corrective actions, preventive actions, and defect repairs are implemented in the executing process group. PMBOK® Guide-Fifth Edition, section 3.5, page 56

11. B: The processes in the monitoring & controlling process group track, measure, inspect, monitor, verify, review, compare, and regulate the progress and performance of the project; ensure that the plan is working; identify any areas in which changes to the plan are required; and initiate the corresponding changes. PMBOK® Guide-Fifth Edition, section 3.5, pages 56 and 61
12. D: Requirements are collected from the customers and other stakeholders, and estimates on time, cost, resources, and other things are made during the planning process group. PMBOK® Guide-Fifth Edition, section 3.4, pages 55 and 61
13. B: Detailed project scope will be defined during the planning process group. The success of subsequent processes and activities greatly depends on the way a project is initiated. If a project is initiated properly, it would have the business need and feasibility clearly defined, a clear goal, include objective reasons for selecting this project over other possibilities, have a clear direction for the scope, the project manager assigned, and a list of stakeholders for the project. On the other hand, if a project is not initiated properly, it could result in a limited or total lack of authority for the project manager as well as ambiguous goals or uncertainties as to why the project was initiated. PMBOK® Guide-Fifth Edition, section 3.3, page 54
14. D: Develop project team is a process in the executing process group. All three remaining processes belong to the planning process group. PMBOK® Guide-Fifth Edition, section 3.4, pages 55 and 61
15. C: Collecting historical information and determining high-level acceptance criteria are done in project initiating. Gaining approval of management plans is part of project planning. Confirming that project requirements have been met occurs in project closing. PMBOK® Guide-Fifth Edition, section 3.7, page 57
16. D: Only two of the four choices are actually process groups. Therefore, design and integration can be eliminated as options. Doing the actual work (in executing) will generally take the most project time and resources. PMBOK® Guide-Fifth Edition, section 3.5.3, page 56
17. A: The correct choice is the process of approximating the number of work periods needed to complete individual activities with estimated resources. Documenting relationships, monetary resources, and status for the project and product scopes are not included in determining activity durations. PMBOK® Guide-Fifth Edition, section 6.5, pages 167-168 and page 61

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18. C: The process of monitoring the status of the project to update project progress and manage changes to the schedule baseline is Control Schedule. Each of the other process steps has very different definitions. PMBOK® Guide-Fifth Edition, section 6.7, pages 185-186
19. C: The process of collecting, distributing and storing project information including status reports, progress measurement, and forecasts is called Manage Communications. PMBOK® Guide-Fifth Edition, section 10.2, pages 297 and 61
20. B: Defining the scope is the process of developing a detailed description of the project and product. All the other choices happen after the scope is defined. PMBOK® Guide-Fifth Edition, section 5.3, page 120
21. A: The process of prioritizing risks for further analysis or action by assessing and combining their probability of occurrence and impact is called qualitative analysis. This process is known as a non-numeric process even though impact and probability can be numeric values. Qualification is associated with just assigning the values, not assessing them. PMBOK® Guide-Fifth Edition, section 11.3, page 328
22. A: Estimate Activity Resources is defined as the process of estimating the type and quantities of material, people, equipment, or supplies required to perform each activity. Determining sequences, monitoring project status and conducting risk management are covered in other processes. PMBOK® Guide-Fifth Edition, section 6.4, pages 160-161
23. D: Perform Quality Assurance is the process of auditing the quality requirements and the results from quality control measurements to ensure appropriate quality standards and operational definitions are used. Quality assurance is about doing the right things the right way. Quality control is about checking to see if you have done things right. Assurance is about prevention, control is about inspection. PMBOK® Guide-Fifth Edition, section 8.2, pages 242-243
24. D: Collecting requirements is best described as the process of defining and documenting stakeholders' needs to meet the project objectives. Choice A is Define Scope, Choice B is Define Activities, and Choice C is Quantitative Risk Analysis. PMBOK® Guide-Fifth Edition, section 5.2, pages 110-111
25. B: Phases are unique to each company or business. For example, design, develop, deploy, test would be phases. Within each phase some or all of the five process groups may be repeated. So choice B is correct. PMBOK® Guide-Fifth Edition, section 2.4, pages 38-46

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Integration Management Questions

1. The customer has accepted the completed project scope. However, the lessons learned required by the project management office have not been completed. What is the status of the project?
 - a. The project is incomplete because it needs to be re-planned
 - b. The project is incomplete until all project and product deliverables are complete and accepted
 - c. The project is complete because the customer has accepted the deliverables
 - d. The project is complete because it has reached its due date
2. You have a change control system, a change control board, and you are trying to make sure that all changes to scope go through proper change control. When it comes to project changes, the project manager's attention is BEST focused on:
 - a. Making changes
 - b. Tracking and recording changes
 - c. Informing the sponsor of changes
 - d. Preventing unnecessary changes
3. Funding always seems to be a problem for projects. Getting it, keeping it, and using it wisely and within the plan are important jobs. The customer on your project tells you they have run out of money to pay for the project. What should you do FIRST?
 - a. Shift more of the work to later in the schedule to allow time for the customer to get the funds
 - b. Close Project or Phase
 - c. Stop work
 - d. Release part of the project team
4. A project management plan should be realistic in order to be used for managing the project. Which of the following is the BEST method to achieve a realistic project management plan?
 - a. The sponsor creates the project management plan based on input from the project manager
 - b. The functional manager creates the project management plan based on input from the project manager
 - c. The project manager creates the project management plan based on input from senior management
 - d. The project manager creates the project management plan based on input from the team
5. Many times a project sponsor is assigned because he is senior officer in the business area of the project. One sponsor is usually a good thing, especially if he knows his responsibilities. Your new project is just beginning the planning process when you notice that six individuals have signed the project charter as sponsors. Which of the following should MOST concern you?
 - a. Who will be a member of the change control board?
 - b. Spending more time on configuration management
 - c. Getting a single project sponsor
 - d. Determining the reporting structure

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6. The project manager is working to clearly describe the level of involvement expected from everyone on the project in order to prevent rework, conflict, and coordination problems. Which of the following processes BEST describes the project manager's efforts?
 - a. Develop Project Management Plan and Plan Quality Management
 - b. Manage Stakeholder Engagement and Direct and Manage Project Work
 - c. Validate Scope and Control Quality
 - d. Identify Risks and Develop Project Team

7. Your company was just awarded a 3 billion dollar project. It will begin in three months and was the focus of the last staff meeting. You are the project manager for an existing project. What is the FIRST thing you should do once you hear about the new project?
 - a. Ask management how the new project will use resources
 - b. Resource-level your project
 - c. Crash your project
 - d. Ask management how the new project will affect your project

8. You were just assigned to take over a project from another project manager who is leaving the company. The previous project manager tells you that the project is on schedule, but only because he has constantly pushed the team to perform. What is the FIRST thing you should do as the new project manager?
 - a. Check risk status
 - b. Check cost performance
 - c. Determine a management strategy
 - d. Tell the team your objectives

9. Today's projects can be very complicated and as the project manager you need to be able to manage who does each activity, what time and in what sequence work is done, and when each activity is done. For right now you only need to know when and in what order each activity is done. What is the name of the tool to accomplish this?
 - a. A work verification system
 - b. A work authorization system
 - c. A work and scheduling analysis system
 - d. A time management process system

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10. You have just been assigned as a project manager to implement the new thermal imaging system for the upcoming space probe your company is building. Your company's methodology includes a specific change-driven product development life cycle for the implementation of your project. There is no doubt that many changes will be requested during the course of the project and you want to establish a robust configuration management system to describe the different versions and characteristics of the thermal imaging system to ensure the accuracy and completeness of the description. Which of the following statements is FALSE about configuration management?
- It includes configuration identification, configuration status accounting, and configuration verification
 - It focuses on establishing and maintaining the consistency of a product's requirements
 - It compares the actual project performance against the project management plan and determines whether any corrective or preventive actions are required
 - Its purpose is to maintain integrity of the work product
11. You just received a change request from the customer, which will require an additional \$15,000 and will delay the project by two weeks. The customer mentioned that they were OK with the delay and were willing to pay the extra charges because of the major impact the change will have. Based on your organizational policy, the project management office's approval is required for any change extending the project duration by more than a week. What should you do in this situation?
- Discuss the change with the project management office
 - Do not allow the change since it would extend the project duration by more than one week
 - Allow the change and ask a team member to implement it since it will drastically help the customer and the customer is paying for the change anyway
 - Advise the customer to take the change request to the project management office and explain to them the importance of the change and the customer's willingness to pay for it
12. The project management information system (PMIS) includes access to automated tools utilized during the Monitor and Control Project Work process. Which of the following is NOT true about the PMIS?
- It is used to identify internal and external stakeholders
 - It is used as a collection and distribution system
 - It is used for scheduling, cost and databases
 - It is used for performance indicators and project records
13. The project meeting was just under an hour but two clients and the senior client demanded changes to the product specification. You quickly assess that it will add about four weeks to the critical path. As the project manager your BEST option is which of the following?
- Compress the schedule to recover the four weeks
 - Cut scope to recover the four weeks
 - Advise the clients of the impact of the change
 - Consult with the sponsor about options

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14. Good project managers know that things will change in their projects. They may have an iterative or even adaptive approach but there is a need for a robust change control system. What process are change control meetings a part of?
- Direct and Manage Project Execution
 - Perform Integrated Change Control
 - Monitor and Control Project Work
 - Evaluate Requested Changes
15. You survived the first year in your third project management assignment and you have worked 14 projects. You've noticed that your company doesn't use a project charter. They usually have a business case and project description but a formal charter has never been adopted. Which of the following BEST describes why the project charter would help?
- It describes the details of what needs to be done
 - It lists the names of all team members
 - It gives the project manager authority
 - It describes the project's history
16. You are meeting with a Project Manager who has taken over a project about halfway into the executing process group. The previous project manager retired and the new project manager is upset about the number of change reports streaming in from numerous sources including his boss, the customer and various stakeholders. Dealing with change requests is something the new project manager has read about but this is real life. Where would you refer him?
- Project Scope Statement
 - The previous project manager
 - Project Management Plan
 - Project Charter
17. During project execution you'll need to review the impact of all the project changes and the implementation of those changes. There are three listed methods for doing this, corrective action, preventive action, and defect repair. Which of the following describes corrective action?
- An intentional activity that ensures the future performance of the project work is aligned with the project management plan
 - An intentional activity that ensures the lessons learned of the project work are aligned with the project management plan
 - An intentional activity that realigns the performance of the project work with the project management plan
 - An intentional activity to modify a nonconforming product or product component

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18. The weekly project meeting just concluded and your sponsor tells you she wants you to consider using linear programming. Thinking about your recent project management training, you reply that it is also known as which of the following?
- Constrained optimization
 - Comparative approach
 - Benefit measurement
 - Impact analysis
19. You and your team have been working a very tough project for over a year. Of course you have operation work you are responsible for as well. Significant changes in financials require a new budget to determine viability for the last two phases. Your budget estimations would NOT include which of the following?
- Fixed costs
 - Sunk costs
 - Direct costs
 - Variable costs
20. In project selection we have to consider depreciation of major expenses. One of the types of depreciation is straight line. Which of the following sequences represents straight line depreciation?
- \$100, \$100, \$100
 - \$100, \$120, \$140
 - \$100, \$120, \$160
 - \$160, \$140, \$120
21. You are tasked with choosing between two potential projects that your organization could undertake. The first, project Lincoln, will cost \$600,000 and will have an NPV of \$50,000. It is estimated to take 3 years to complete. The second project, project Westfall, will cost \$420,000 and will have an NPV of \$68,000. Westfall is estimated at between 4 and 5 years. Which of the two projects should you recommend?
- You don't have enough information to answer this question
 - Project Lincoln
 - Project Westfall
 - Neither project meets the NPV criteria
22. There are several unique tools available to project managers. One of the key tools used throughout project management is called analytical techniques. Which of the following are analytical techniques?
- Future value and present value
 - Regression analysis and grouping methods
 - Reserve and Trend modifications
 - Net present value and benefit cost ratio

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23. Understanding the inputs and outputs of all the project processes can be a daunting task but is useful for establishing a good order for project activities and understanding where things came from and need to go. Changes will occur throughout the project and when the changes are approved they need to be implemented. Approved corrective action is an input to which of the following?
- Validate scope
 - Direct and manage project execution
 - Develop project charter
 - Develop schedules
24. The project selection board is considering which project they should invest capital in. The new software upgrade project promises to be worth \$175,000 in four years. The project selection board wants to know the present value of the return if the interest rate is 6 percent. What is the present value of the new software project?
- \$175,000
 - \$139,000
 - \$220,000
 - \$43,750
25. Before projects are started there are some key documents that help understand what is expected. Among them is the Project Statement of Work, usually just called the SOW. What is the best definition of a Statement of Work?
- A narrative description that specifies exactly what must be done to achieve a specific objective
 - A narrative description that specifies the required functionality of a specified product
 - A narrative description that states all the individual work packages needed to meet a given deliverable
 - A narrative description of the products, services, or results to be delivered by a project

Integration Management Answers

1. B: The lessons learned are project management deliverables, and therefore must be completed for the project to be complete. Re-planning is uncalled for by the situation described. Reaching the planned completion date does not mean the project is necessarily finished. A project is complete when all work, including all project management work, is complete and the product of the project and all project deliverables are accepted. PMBOK® Guide-Fifth Edition, section 4.6, page 100
2. D: Project managers should be proactive. The only proactive answer here is preventing unnecessary changes. You will perform choices A, B and C, but not as much if you work from a proactive methodology. PMP Workbook, pages 44-45
3. B: Every project must be closed, as closure provides a benefit to the performing organization. This means simply stopping work is not the best choice. Shifting work and releasing team members do not solve the problem; they just postpone dealing with it. The best thing for the project manager to do is begin the Close Project or Phase process. PMBOK® Guide-Fifth Edition, section 4.6, page 101
4. D: If we were to rephrase the question, it would be asking, "Who creates the project management plan?" The best answer is that the project management plan is created by the project manager but requires input from the team as well as outputs from other processes, including OPA and EEF. PMBOK® Guide-Fifth Edition, section 4.2.1.2, page 74
5. B: Configuration management, dealing with multiple impacts and competing interests, is the main concern based on having six sponsors. Having a single project sponsor is the norm but more than one is possible. Change control board members would have already been selected and reporting structures, if any, would be taken care of in communications management. PMBOK® Guide-Fifth Edition, section 4.5, pages 96-97
6. A: Notice that this question uses the words "working to clearly describe" and "prevent;" these should tell you the project is in project planning. This eliminates all choices except Develop Project Management Plan and Plan Quality Management. Coordination and conflict prevention relate to Develop Project Management Plan, and preventing rework is part of Plan Quality Management. PMBOK® Guide-Fifth Edition, section 4.2, pages 72-78
7. D: You do not have enough information to consider resource leveling or crashing this project. As you work on any project, you need to constantly reevaluate the project objectives and how the project relates to other concurrent projects. Is your project still in line with corporate objectives? If the other project will impact yours, you need to be proactive and work on options now. PMBOK® Guide-Fifth Edition, section 4, page 64

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8. C: Before you can do anything else, you have to know what YOU are going to do. Developing the management strategy will provide the framework for all the rest of the choices presented and the other activities that need to be done. PMBOK® Guide-Fifth Edition, section 4, page 64
9. B: Each of the other tools (Choices A, C and D) may be homegrown tool names but are not PMI tools. Choice B, a work authorization system is used to coordinate when and in what order the work is performed so that work and people may properly interface with other work and other people. PMBOK® Guide-Fifth Edition, section 6.1.1.3, page 146, and Glossary, page 567
10. C: Comparing the actual project performance against the project management plan and figuring out whether any corrective or preventive actions are required is done as a part of the Monitor and Control Project Work process. All the other statements are true regarding the configuration management process. PMBOK® Guide-Fifth Edition, section 4.5, page 96
11. A: Any kind of organizational policy, process, or guideline must be followed. The project manager should discuss the change request with the project management office and not approve or deny a change request on his own as the change control board (CCB) is responsible for approving or denying the change after evaluating it. The customer should not do the project manager's job by taking the change request to the project office. PMBOK® Guide-Fifth Edition, section 4.5, page 96
12. A: The project management information system (PMIS) provides access to tools used for collecting and distributing information. It also includes tools for scheduling, cost, databases, project records and financials. Stakeholder identification is a continuous, complex, and manual process carried on by the project manager and the team members throughout the project. PMBOK® Guide-Fifth Edition, section 4.4.2.3, page 92
13. D: You may in fact end up doing all the things described in choices A, B and C but since the sponsor has authorized the work, consulting with the sponsor would be the first and best option. PMP Workbook, page 49
14. B: Change control is part of integrated change control. The other processes generate changes and then check them. Technically, evaluate requested changes is not a listed process. It would be done, but is not a process. PMBOK® Guide-Fifth Edition, section 4.5, page 94
15. C: The project charter's main functions are to give approval to start work and give authority to the project manager. The charter has high-level information about the project but does not contain details. Charters may have some team members listed but not all of them. Project history would become part of lessons learned. PMBOK® Guide-Fifth Edition, section 4.13, page 66
16. C: You would refer him or her to the Project Management Plan. The project management plan is a set of several subsidiary plans, one of which is the change management plan. The previous project manager will be of little help and the scope statement and charter are documents in the project management plan. PMBOK® Guide-Fifth Edition, section 4.2.3.1, pages 76-77

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17. C: Corrective action is best described as an intentional activity that realigns the performance of the project work with the project management plan. Choice A is preventative action and Choice D is defect repair. Choice C is a made up answer. PMBOK® Guide-Fifth Edition, section 4.3, page 81
18. A: Linear programming is a type of constrained optimization which is a mathematical approach to help make project selections. Other methods include integer, dynamic and multi-objective programming. The other listed approaches are all basically benefit measurement methods. PMP Workbook, page 36
19. B: Sunk costs are expended costs. Sunk cost usually represents a large amount of money already spent and should not be a factor in deciding whether to continue a troubled project. PMP Workbook, page 38
20. A: If some piece of capital equipment was worth \$1,000 when you bought it and you were using straight line depreciation at even increments over 10 months, it would be depreciated at \$100 per month. PMP Workbook, page 38
21. C: You should recommend project Westfall with an NPV of \$68,000. The time differences are not a factor as they are already calculated into the Net Present Value (NPV). Project Lincoln has a lower NPV and you do have enough information. PMP Workbook, page 49
22. B: Regression analysis and grouping methods are among the eleven techniques listed in the PMBOK. The others are comparative methods for project selection. Reserve and trend modification are made up. PMBOK® Guide-Fifth Edition, section 4.2.2.2, pages 91-92
23. B: Approved corrective action or change requests are an input to Direct and Manage project execution which is in the execution process group. This is where the work gets done, including corrective actions. Validate Scope would occur after corrective actions; the charter is the very first step in the processes and comes before any corrective actions are approved. Develop Schedule is done in planning and could be the subject of the corrective action. PMBOK® Guide-Fifth Edition, section 4.3, page 79
24. B: The present value of the new project would be \$139,000. Using the formula $PV = FV / (1+i)^n$, which is future value divided by 1 plus the interest rate to the power of the periods the project will last. So $\$175,000 / 1.26$ would = \$139,000. Since we know that PV is money before the interest rate is applied, we could have eliminated choice A and C as they don't make sense. Choice D is way too low to be the PV with only a 6% interest rate. PMP Workbook, pages 37-38, 180
25. D: The best description of the Statement of Work is that it is a narrative description the products, services, or results to be delivered by a project. SOWs can be internal and external and may reference the business need, product scope description, and the strategic plan. SOWs do not specify exactly what should be done or how to do it; they are in fact very high level. They also don't address functionality or cover any of the details about work packages. PMBOK® Guide-Fifth Edition, section 4.1.1.1, page 68

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Stakeholder Management Questions

1. Your project has great metrics with a CPI of 1.3 and SPI of 1.2. You are well into the third phase of work but at a meeting your project sponsor says she thinks the project is a failure because of negative feedback she has been getting from important stakeholders. You are surprised, given the current metrics and that the quality of work is very high and meets customer requirements. As the meeting closes your project sponsor asks what you intend to do about the situation. Your best response would be what?
 - a. Revisit the manage stakeholder expectation process in your communications management plan
 - b. Quit the project
 - c. Say nothing
 - d. Send out an email to all stakeholders telling them how great the project is performing financially and schedule wise

2. One of your marketing stakeholders has a reputation for requesting many changes on projects. You expect changes to occur but his changes seem excessive. What is your BEST approach at the beginning of the project to manage this situation?
 - a. Say "No" to the stakeholder a few times to dissuade him from submitting more changes
 - b. Get the stakeholder involved in the project as early as possible
 - c. Talk to the stakeholder's boss to find ways of directing the stakeholder's activities to another project
 - d. Ask that the stakeholder not be included in the stakeholder listing

3. Stakeholders are involved in all sorts of ways on projects. Most are helpful, some not so much. Which of the following statements BEST describes how stakeholders are involved on a project?
 - a. They determine the project schedule, determine deliverables, and requirements
 - b. They help to determine the project constraints and product deliverables
 - c. They help determine the resource needs and determine resource constraints on the project
 - d. They approve the project charter, help provide assumptions, and create the management plans

4. As a project manager one of your tasks that is included in the standard project outputs to several processes is updating the project management plan and project documents. Another is to update the Organizational Process Assets. Which is the best list of things updated in the OPA?
 - a. Project records, lessons learned, and risk tolerance levels
 - b. Both the risk and stakeholder register
 - c. Political climate, marketplace conditions and company work authorization systems
 - d. Feedback from stakeholders, project presentations, and project records

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5. You have been assigned to manage the development of the new security software. The code will be highly complex and cutting edge, and neither your project team nor the client has much experience with this type of coding. The timeline is extremely aggressive. Any delay will be costly for both your firm and the client. You have a project sponsor and have achieved agreement and sign-off on both the project charter and the project management plan. Client personnel have been kept fully informed of the project's progress through status reports and regular meetings. The project is on schedule and within budget, and a final perfunctory review has been scheduled. Suddenly you hear that the entire effort may be cancelled because the security code being developed is totally unacceptable. What is the MOST likely cause of this situation?
- A key stakeholder was not adequately involved in the project
 - The project charter and project management plan were not thoroughly explained to or adequately reviewed by the client
 - Communications arrangements were inadequate and did not provide the required information to interested parties
 - The project sponsor failed to provide adequate support for the project
6. While reading the project charter you see that your project already has over 30 key stakeholders identified. You see that with all five functional areas in the company engaged it will most likely have well over 300 before you finish the identification process. Many of the stakeholders will be users. But there will also be a few very influential stakeholders. As the project manager you want to more extensively involve the stakeholders on the project. Which of the following would be the BEST way to accomplish this?
- Have the stakeholders periodically review the list of project requirements
 - Invite the stakeholders to attend project status meetings
 - Send status reports to the stakeholders
 - Update the stakeholders on the status of all project changes
7. You are the project manager for 20 small process improvement projects that have many commonalities. The stakeholder register shows over 200 stakeholders on the projects. Assessment of each stakeholder is not yet complete. What is your BEST course of action?
- Eliminate some stakeholders
 - Find an effective way to gather the needs of all stakeholders
 - Contact your manager and ask which stakeholders are most important
 - Gather the needs of all the most influential stakeholders
8. One of the first steps in your project is to identify stakeholders and create the stakeholder register. After two weeks you think you have all the information complete. The information in the stakeholder register should be:
- Accessible only to the project manager
 - Available to the project manager and PMO staff
 - Available to all stakeholders and team members
 - Shared with others at the discretion of the project manager

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9. The boss thinks you are already working on the project and you are still trying to identify initial stakeholders. You are probably trying to do both at the same time. As you continue to work your project which of the following are NOT part of your responsibilities?
- Carefully select the appropriate stakeholders for the project
 - Get stakeholders' sign-off that the requirements are finalized
 - Figure out when stakeholders will be involved in the project and how extensively
 - Ask stakeholders to let you know about problems in project communications and relationships
10. We can all agree that stakeholders will be a key part of every project. We can have many stakeholders who fit into each of the areas of the assessment matrix. We can have stakeholders that are added by the sponsor and some who just want to be part of the project. The key objective of stakeholder management is which of the following?
- Communication
 - Coordination
 - Satisfaction
 - Relationships
11. As project manager, you are unable to allocate as much time to interact with your stakeholders as you would like. Which of the following stakeholders will you make it a priority to get to know?
- The stakeholder who is an expert on the product of the project, but is not interested in implementing it in his department
 - The manager of the department that will use the product of the project. She is known to be resistant to change
 - The project sponsor, with whom you have successfully worked on many projects
 - The department employee who is unfamiliar with the product of the project, but open to the positive impacts he believes the product will have on his work environment
12. Once again the inputs, tools and techniques, and outputs come up as a subject you need to understand. One of the key inputs in projects is the stakeholder register. It is an input to which of the following processes?
- Plan Risk Management and Collect Requirements
 - Perform Integrated Change Control and Plan Communications Management
 - Plan Quality Management and Perform Quality Assurance
 - Identify Risks and Develop Project Charter

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13. A project manager working on a political voting assessment project is at a party and talks to friends who will be heavy users of the data when the project is complete. They describe some annoying aspects of the current data and specific areas of interest. The project manager takes this feedback to the sponsor and encourages design and scope changes. Which of the following BEST describes what the project manager has done?
- Scope validation
 - Integrated change control
 - Stakeholder analysis
 - Scope planning
14. During stakeholder analysis Heather, the project manager, finds that there are three new stakeholders that need to be added to the stakeholder register. She identifies them as A, B, and C. Upon further analysis, she finds that A has already voiced concerns about the project feasibility, B is unaware of the project, and C has taken a keen interest in the project, even taking the initiative to solve an impediment. Regarding these stakeholders, what is Heather's priority?
- Thank C for the support and especially for helping to solve the impediment
 - Meet with A to understand concerns and discuss project feasibility
 - Meet with B to inform him or her and to give an overview of the project
 - Meet with both A and B to discuss each of their issues
15. One of the key tools used to evaluate stakeholders is the power/interest grid. It has a few other names but they all generally get the same result. Which of the following is the MOST accurate statement about a power/interest grid?
- Stakeholders cannot be added once the document is created
 - Stakeholders cannot be repositioned in the document once they are positioned
 - Stakeholders should let the project manager know if their power/interest levels change
 - Stakeholder power and interest levels can change throughout the project and it's incumbent on the project manager to proactively monitor these changes
16. There are many interpersonal skills a good project manager should have in his or her toolkit. Some are more applicable than others. To deal with stakeholder engagement, which of the following interpersonal or soft skills are NOT applicable?
- Building trust
 - Minimizing conflict
 - Active listening
 - Overcoming resistance to change
17. There are five levels of stakeholder engagement. What are they?
- Unaware, Resistant, Neutral, Supportive, Influencing
 - Aware, Resistant, Neutral, Supportive, Leading
 - Unaware, Resistant, Neutral, Supportive, Leading
 - Aware, Resistant, Interested, Supportive, Leading

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18. As project managers we know that stakeholders can be generally classified as negative and positive. There are some who can help you and some that may get in the way. There are of course more classifications used in the stakeholder assessment matrix. Which of the following BEST describes a stakeholder?
- People directly involved with the project or whose interests will be impacted negatively or positively by the project or its outcomes
 - Groups of people or an individual impacted by the project's outcomes and directly involved with the project
 - Individuals, groups or organizations who may affect, be affected by, or perceive themselves to be affected by a decision, activity or outcome of a project
 - Individuals, groups or organizations with specific communications requirements that could affect the project and its outcomes
19. You are overseeing a competitive sports testing facility project to address concerns of patron access for a major sports franchise. You are working on identifying all the internal and external stakeholders who have an interest in your project and can positively or negatively impact your project. While identifying the stakeholders, you realize that stakeholder identification is:
- Focused only on stakeholders who will contribute positively to your project
 - Completed in the initial stage of the project life cycle
 - A responsibility of the project sponsor
 - Carried out throughout the project life cycle
20. The area of stakeholder management is a major focus for project managers. It covers several tasks and is worth the effort. Which of the following are not parts of that effort?
- Giving stakeholder extras if needed to meet and exceed their expectations
 - Identifying both internal and external stakeholders
 - Assessing stakeholders' skills, knowledge and expertise
 - Identifying stakeholders' influence-controlling strategies
21. You are overseeing a project to build a new six story office building in a key shopping area in your city. You have completed your internal and external stakeholder identification and have come up with a list of forty stakeholders for the project. You expect that most of the stakeholders will play a positive role in the project and will contribute significantly. As you are drafting the management plan, one of your team members says a stakeholder from the city planning commission is missing on the published stakeholder list. In this situation, what is your BEST course of action?
- Add the stakeholder in your stakeholder list immediately and update everyone
 - It is too late to add any more stakeholders and consider their requirements, so ignore the stakeholder
 - Validate the information received from the team member
 - Set up a meeting with the stakeholder and the team member

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22. You are assigned as a project manager on the most important project your company has ever done. You know the stakeholders will play a vital role in the success of your project and are trying to control stakeholder engagement. You will use meetings and expert judgment and produce updates to your project plans and documents. You will also produce work performance information as a key output. Which of the following BEST describes work performance information?
- Raw data from various sources including spending reports, financial and specific process charts
 - Performance data collected from various controlling processes, analyzed in context, and integrated based on relationships across areas
 - Performance data analyzed and presented as a physical or electronic representation
 - Raw observations and measurements identified during project activities
23. You have been managing a city waste water project and dealing with over 80 stakeholders. Your time reports indicate over 50 hours of work was involved in identification, interviewing and completing the stakeholder register. Now that you know who they are, who is responsible for managing stakeholder expectations?
- Since the project manager alone cannot manage all the stakeholders on a complex, large project, the project manager and project team together are responsible for managing stakeholders' expectations
 - The project sponsor is responsible based on funding control and ability to influence the stakeholders
 - Stakeholders should make sure that their expectations are managed appropriately and that they receive the required information on the project as needed
 - This is the responsibility of the project manager alone
24. You have 34 stakeholders in the lottery gaming process project that you are managing. Your initial data about these stakeholders says most are very supportive. It also shows 3 stakeholders who will need attention. One stakeholder in the “manage closely” quadrant is known to be exceptionally critical about the way project managers control their projects. This stakeholder has the reputation for requesting many changes in projects and relentlessly pushing her agenda. You realize that you need to be meticulous in dealing with this stakeholder and plan to take which of the following approaches?
- Carefully eradicate the need for this stakeholder and remove her from the stakeholder list
 - Have a discussion with the stakeholder's boss and find a way to make the stakeholder support the project positively by not being too critical and aggressive
 - Simply deal with the stakeholder and refuse her requests for changes
 - Involve this stakeholder in the project as early as possible and work closely with her throughout the project

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25. A validated report shows that two of the stakeholders are very concerned about your project. One stakeholder is very panicky that once the project is implemented in his department a lot of people will lose their jobs. The second stakeholder is skeptical about the capability of your team to implement such a large, multifaceted project. As the project manager, what should you do in this kind of situation?
- a. You should send an official e-mail to the stakeholders asking them to direct any queries about the project in writing to you
 - b. Set up a meeting with these two stakeholders and discuss their concerns
 - c. Report to the sponsor about these two stakeholders
 - d. Set up a question-and-answer session about the project and invite all the stakeholders

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Stakeholder Management Answers

1. A: The best option is revisit the manage stakeholder expectation process in your communications management plan. The problem is that you are paying too much attention to the cost and time metrics and are not paying enough attention to what it is that the stakeholders consider a measure of success. By revisiting your communications management plan, especially the manage stakeholder process, you will increase the probability of project success. Quitting the project or saying nothing would be unprofessional. Continuing to focus on the metrics doesn't really solve the problem. PMBOK® Guide-Fifth Edition, section 13.3, pages 404-406
2. B: The project manager cannot avoid the stakeholder because he has a stake in the project. The project manager can say "No," but this does not solve the root cause of the problem. There may be some good ideas within those change requests. The only choice that deals with the problem is getting the stakeholder involved in the project as soon as possible. Changes generally arise due to lack of input at the beginning of the project. If the project manager begins effective communication with this stakeholder early, there is a much better chance of changes being discovered early in the planning process when they will have less of an impact on the project. PMBOK® Guide-Fifth Edition, section 13.3, page 404
3. B: Stakeholders do help in determining project constraints and product deliverables. The project manager determines the project schedule through schedule development. The team and other stakeholders provide the inputs. Stakeholders help in many parts of the project but they don't determine anything by themselves. Leaving out "help" eliminates choices A, C and D. Also, the project sponsor approves the project charter, not the stakeholders. PMBOK® Guide-Fifth Edition, section 13.3, page 404
4. D: The only list that includes elements that would be included in the organizational process assets are feedback from stakeholders, project presentations, and project records. Each of the other lists has elements from the environmental factors. PMBOK® Guide 13.3.3.5, page 409, and PMBOK® Guide-Fifth Edition, section 2.1.5, page 29
5. A: A single high-level executive can end an entire project if he or she is not satisfied with the results, even if that person has, by choice, been only tangentially involved in the project. It is critical to ensure that all of the final decision makers have been identified early in a project in order to ensure that their concerns are addressed. PMBOK® Guide-Fifth Edition, section 13.3, page 407-408
6. A: It seems like all of these are good ideas, but having the stakeholders review the list of project requirements helps discover errors and changes, and could therefore be considered the best choice to keep stakeholders involved on the project. PMBOK® Guide-Fifth Edition, section 13.3, page 405
7. B: You need to consider the needs of all your stakeholders as early as possible to create a better organized project and to minimize changes later. PMBOK® Guide-Fifth Edition, section 13, page 391

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8. D: Remember that the stakeholder register includes the project manager's impression of stakeholders' capabilities and attitudes, and possibly challenges related to working with them. Such notes may not be intended, or appropriate, for all to see. Therefore, the stakeholder register should be shared with others at the discretion of the project manager. PMBOK® Guide-Fifth Edition, section 13.1.3.1, page 398
9. A: The project manager does not have the option of selecting stakeholders. By definition, stakeholders are people or organizations whose interests may be positively or negatively impacted by the project or its product, as well as anyone who can exert positive or negative influence over the project. All stakeholders must be identified and managed to ensure project success. PMBOK® Guide-Fifth Edition, section 13.1, pages 393
10. C: While communication, coordination, and development of relationships are parts of stakeholder management, collectively they contribute to the main objective of this process which is stakeholder satisfaction. PMBOK® Guide-Fifth Edition, section 13, page 391
11. B: As the department manager, this person is a key stakeholder and wields a lot of influence over other stakeholders in her department. The fact that she is resistant to change indicates she will need some personal reassurance from the project manager or she may exert her influence to derail the project. PMBOK® Guide-Fifth Edition, section 13.2.1, pages 396-397
12. A: Of the answer choices listed, the stakeholder register is an input to Collect Requirements, Plan Quality Management, Plan Communications Management, Plan Risk Management, and Identify Risks. Be sure you understand why it is important in each of these processes. PMBOK® Guide-Fifth Edition, section 13.1.3.1, page 398
13. C: The project manager has performed stakeholder analysis by learning stakeholder requirements and making recommendations to fulfill those requirements. Scope validation is a control function related to gaining customer acceptance. Integrated change control relates to looking for multiple impacts of changes. Scope planning creates a scope management plan. PMBOK® Guide-Fifth Edition, section 13.2.1, pages 396-397
14. D: The best choice is to meet with both A and B to discuss each of their issues. This question is about analyzing the stakeholders and prioritizing who needs your attention the most. PMBOK® Guide-Fifth Edition, section 13.2.1, pages 396-397
15. D: Stakeholder power and interest levels can change throughout the project and it's incumbent on the project manager to proactively monitor these changes. Typically, the project manager is responsible for monitoring these changes. Stakeholders can be added as needed to the grid and their power/interest levels changed as appropriate. PMBOK® Guide-Fifth Edition, section 13.2.2.3, page 402
16. B: Minimizing conflict using interpersonal or soft skills applicable to managing stakeholder engagement are building trust, resolving conflict, active listening, and overcoming resistance to change. While resolving conflict and minimizing conflict might appear to be similar, resolving eliminates the conflict and minimizing conflict merely makes the conflict less acute. PMBOK® Guide-Fifth Edition, section 13.3.2.1, page 407

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17. C: The correct choice is Unaware, Resistant, Neutral, Supportive and Leading. PMBOK® Guide-Fifth Edition, section 13.2.2.3, page 402
18. C: The correct choice comes straight from the PMBOK and is Individuals, groups or organizations who may affect, be affected by, or perceive themselves to be affected by a decision, activity or outcome of a project. PMBOK® Guide-Fifth Edition, section 13.1, page 393
19. D: Stakeholder identification will persist throughout the project life cycle. As the project proceeds through each phase, additional stakeholders may become involved while others will be released from the project. Some stakeholders will be identified during the initiating phase in the project charter, while a few other stakeholders may only be interested in the end product and will be involved only at the closing phase. PMBOK® Guide-Fifth Edition, section 13.1, pages 394-395
20. A: Giving stakeholders extras or gold plating should always be avoided. Gold plating is not the preferred way of meeting and exceeding stakeholder expectations. This is not covered in the PMBOK®. Rita Mulcahy PMP Exam Prep, 8th edition, pages 18 and 159
21. C: It is never too late to add stakeholders. Since this is most likely an external stakeholder, validation is the first step. The meeting would come after validation. The last step would be to add the stakeholder to the list. PMBOK® Guide-Fifth Edition, section 13.1, pages 393-395
22. B: Work Performance Information is information performance data collected from various controlling processes, analyzed in context and integrated based on relationships across areas. Data is raw and uninterrupted. Conversion of the data results in information which is then presented in the form of reports. PMBOK® Guide-Fifth Edition, section 13.4.3.1, page 413
23. D: The project manager is responsible for managing stakeholder expectations. Identification, classification and controlling are the responsibility of the project manager, but he or she may get assistance from any of the listed parties. PMBOK® Guide-Fifth Edition, section 1.7.1, page 17
24. D: The project manager simply cannot remove a stakeholder from the stakeholder list since he also has a stake in the project. It will be best to involve this stakeholder as early as possible and work closely with him throughout the project to understand his requirements and expectations and to gain his constructive support. PMBOK® Guide-Fifth Edition, section 13.3, pages 404-405
25. B: An informal verbal communication setting up a meeting with these two stakeholders and discussing their concerns should be the best approach here. Reporting to the sponsor without much detail about these two stakeholders will not solve any real problem. Since not all stakeholders have concerns, setting up a question and-answer session about the project with all the stakeholders will not be appropriate. Sending an official email to the stakeholders asking them to direct any query on the project in writing to the project manager will most probably estrange them. PMBOK® Guide-Fifth Edition, section 13.3, pages 404-405

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Scope Management Questions

1. You are the project manager for a senatorial campaign funding project. It is your first political project and you want to get it right. You are working on the work breakdown structure for the project. The work breakdown structure numbering system allows the project staff to do which of the following?
 - a. Systematically estimate costs of work breakdown structure elements
 - b. Provide project justification and make sure all the elements are covered
 - c. Identify the level at which individual elements are found
 - d. It can be used with project management software to validate hours

2. Early discussions with your sponsor, even before the charter was signed, covered several specific items that would not get funded. During a routine meeting with some of the project stakeholders, the project manager is asked to add work to the project scope. This new work would cost more money. What is the BEST thing for the project manager to do?
 - a. Let the sponsor know about the stakeholders' request
 - b. Present a detailed evaluation of the impact of adding the scope
 - c. Tell the stakeholders the scope cannot be added
 - d. Add the work if there is time available in the project schedule

3. You've been with your new company for four months and are being mentored by a more experienced certified project management professional ("PMP"). You are having difficulty finding enough time to manage the project because the product and project scope are being progressively elaborated. Your mentor tells you that the basic tools for project management, such as a work breakdown structure, can be used during project executing to assist the project manager. For which of the following can a work breakdown structure be used?
 - a. Communicating with the customer
 - b. Showing calendar dates for each work package
 - c. Showing the functional managers for each team member
 - d. Showing the business need for the project

4. During an impromptu project meeting, a team member suggests a "simple" enhancement to the scope that is beyond the published and signed scope statement. The project manager points out that the team needs to concentrate on completing all the work and only the work required. He or she is performing which function or process?
 - a. Change management process
 - b. Scope management
 - c. Quality analysis
 - d. Scope decomposition

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5. You are managing an upgrade project that will increase the network capabilities of the new data base. The project was planned for 8 months and has held regular meetings with stakeholders to keep them informed. You are currently on schedule and budget, but some stakeholders are not satisfied with the deliverables. This situation may delay project completion by several weeks. The MOST important process that could have prevented this situation is which of the following?
 - a. Control Risks
 - b. Control Schedule
 - c. Define Scope
 - d. Control Scope

6. You are the senior engineer for a geothermal energy project. Even as the lead engineer you have many project functions. You recently found out that one of your key competitors is also working on a similar project, but their new applications will include tablet and smart phone apps that your project does not offer. You have implemented a change request to update your project in order to include these exciting missing features. This is an example of which of the following?
 - a. A change due to an error or omission in the business case
 - b. A change due to a legal requirement and constraint
 - c. A change due to an error in the planning phase
 - d. A change due to an external event

7. It has been over 11 months and your project has finally begun the final phase. All the deliverables are completed. While trying to obtain the formal acceptance of the completed project scope and associated deliverables, with whom should you validate the product?
 - a. The sponsor, key stakeholders, and customers
 - b. The customers
 - c. The quality control team members
 - d. The change control board members

8. Your project to complete the security tracking and monitoring station for the upcoming Olympics is not going too well. There have been numerous issues and recently you got frustrated when electrical coding inspectors reported a building code violation. You were asked by management to ensure full compliance to the mandatory city and power industry standards. All of the deliverables are scheduled for completion in three weeks. One of your subject matter experts identified a couple of changes that will drastically enhance performance and make your clients very happy. While trying to sort all of these issues, you receive a text from the senior engineer informing you that he will be leaving the company soon. Of all the issues, which should you address first?
 - a. Notify the customers about the possible delay in the project
 - b. Initiate the change control process to implement new changes
 - c. Find a replacement for the senior engineer
 - d. Ensure compliance with the city and power industry standards

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9. Hillary, a project coordinator, is in the Define Scope process and is helping to develop a comprehensive, detailed description of the project and product. Which of the following is NOT a tool and technique used in this Define Scope process?
- Product analysis
 - Alternatives generation
 - Facilitated workshops
 - Group decision-making techniques
10. You are a contract project manager and your agency just told you that you have been selected as the project manager for a major hardware installation project for a bio-tech company. You just finished introducing yourself to your project team when the VP of operations, your project sponsor, gives you the project charter and says good luck. What should you do next as the first step?
- Instruct the team to work on a scope statement document
 - Instruct the team to work on the WBS
 - Review the charter and make sure all key stakeholders have inputs into the requirements
 - Start working on planning the project
11. You and your team are in the process of collecting project requirements. This will include collecting and documenting quantifiable needs and expectations of the sponsor, customer, and other stakeholders. Which of the following is NOT true regarding this process?
- It describes project deliverables and the work required to create them in detail as well as deliverables description, product acceptance criteria, requirement assumptions and constraints, and exclusions from requirements
 - Requirements documentation and requirements traceability matrix are the key outputs in this process
 - Group creativity techniques and group decision-making techniques are used as tools and techniques in this process
 - The scope management plan and requirements management plan are inputs in this process
12. The scope for the new financial software has just been completed. The team is working on the work breakdown structure. This will be the first time a hierarchal diagram will be used. Traditionally you have used a well-known project software tool. The one part of the WBS you have not completed is the dictionary. Which of the following items would NOT be included in the WBS dictionary?
- Quality requirements, technical references and resources required
 - Description of work, assumptions and constraints, and schedule milestones
 - Change Control Board tools, quality reports, and agreement information
 - Resources required, quality requirements, and code account identifiers

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13. You have just been assigned your eighth project, all of which are being worked at the same time. They are fairly small projects but require your full-time attention. It was determined by key stakeholders and your sponsor to outsource some of the work. What must be considered if a change request affects the procured work?
- Project sponsor
 - Contractual agreement
 - Vendor(s)
 - Cause of the change request
14. As one of the newest members of the Project Management Office you are working with a new project manager who asks you what a scope statement is. Your reply should include which of the following characteristics?
- It defines the scope baseline for the project
 - It defines the requirements for each project within the organization
 - It defines the roles and responsibilities of each project team member
 - It defines the project deliverables and the work needed to create those deliverables
15. The project seemed simple when it was first assigned. It has been five months and it hasn't turned out as easy as you thought. You have a very robust change control system which some say makes it tough to make changes. It can take up to 10 days to get a change from request to approval. Some changes are delayed and every now and then, they are disapproved. Janet, a member of the web design team, has been making changes to her work, which, as a result, changes the project scope. Janet's changes are also known as what?
- Gold plating
 - Scope control defect
 - Scope creep
 - Improvised scope composition
16. One of your recent projects was to evaluate your company's project maturity levels. As a result of what you discovered you want to make sure your company understands the value of creating and utilizing work breakdown structures. To many of the project managers, this is just more work and unnecessary documentation. Which of the following would be the BEST thing you could tell the project managers to convince them to use work breakdown structures?
- Work breakdown structures will prevent work from slipping through the cracks
 - Work breakdown structures are only needed on large projects
 - Work breakdown structures are required only if the project involves contracts
 - Work breakdown structures are the only way to identify risks

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17. Many project managers get confused about the differences between Validate Scope, Control Scope and Control Quality. You just stopped by your PMO and asked for clarification. Their answer was which of the following?
- a. Validation is getting stakeholders to agree to the deliverable; control quality should happen before it gets validated; and controlling the scope focuses on staying within the scope baseline
 - b. Control quality is always done first, then we must focus on controlling the scope, which almost guarantees the scope will be validated
 - c. Control scope is checking deliverables against established metrics; validate scope is making sure stakeholders got what they were promised; and control quality is done by a quality control team
 - d. Control quality and control scope have basically the same objectives, just for different processes, and validate scope is making sure stakeholders are happy with the deliverables
18. When the WBS is created work must be broken down to effectively manage a project. There are several rules or guidelines for how the work gets decomposed. Which of the following does NOT describe how far to decompose the work?
- a. Until it has a meaningful conclusion
 - b. Until it cannot be logically subdivided further
 - c. Until it can be done by one person
 - d. Until it can be realistically estimated
19. In order to create the scope statement several factors should be considered. They include the scope management plan, the charter, requirements documentation and organizational process assets. One of the tools and techniques used with all these inputs is called product analysis. Which of the following BEST describes product analysis?
- a. Working with the customer to determine the product description
 - b. Mathematically analyzing the quality desired for the project
 - c. Gaining a better understanding of the product of the project in order to create the project scope statement
 - d. Determining whether the quality standards on the project can be met
20. Besides traditional project methodologies one the methods PMI talks about is adaptive, sometimes called extreme project management or Agile. Agile collects requirements with user stories. What is the main purpose of a user story?
- a. To document features or functions required by stakeholders
 - b. To create a record of issues encountered on the project
 - c. To perform what-if analysis
 - d. To communicate progress

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21. Your new camera design for Apple is two weeks ahead of schedule. The quality testing phase is near completion. The next phases are user acceptance and implementation. Which of the following processes should the project manager be MOST concerned about before moving into the next phases?
- Validate Scope
 - Control Quality
 - Manage Communications
 - Control Costs
22. As part of your job in the PMO you are conducting a lunch and learn meeting to review key project topics. You are explaining the key differences between project requirements and product requirements. How would you best explain this?
- Project requirements relate to the detail contained in the individual components of the project management plan and the processes that make them up, while product requirements relate to specifications provided by the client and their expectations for the product
 - Project requirements can include tools and techniques for completing the appropriate project process groups, while product requirements can include the method of delivery and manufacturing quality specifications
 - Project requirements relate to the detail included in the project management plan while product requirements are defined by the client's expectations
 - Project requirements can include business requirements, project management requirements and delivery requirements, while product requirements can include technical requirements, security requirements and performance requirements
23. You are carrying out the work to define and document the project stakeholders' needs to meet the project objectives. Which of the following groups are NOT included as tools and techniques for this endeavor?
- Focus groups and job shadowing
 - Requirements traceability matrix, the RACI chart and WBS
 - Group decision-making techniques, prototypes and facilitated workshops
 - Interviews, questionnaires and benchmarking
24. The previous project manager was assigned to another project and you now have ownership of a 2 million dollar building refurbishment project. After reviewing the schedule and scope, you learn that two major deliverables are missing. The key topic of the last two project meetings with your sponsor were to finish on time and budget. What parts of scope management were likely not done properly and should be reviewed and perhaps even repeated?
- Decomposition and activity sequencing
 - Critical path analysis and detailed resource estimates
 - Integrated change control and planning scope management
 - Stakeholder identification and analysis

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25. You are assessing the magnitude of a variation of actual work performed from the original scope baseline. What technique are you utilizing?
- a. Scope baseline analysis
 - b. Change control assessment
 - c. Variance analysis
 - d. Variation change analysis

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Scope Management Answers

1. C: The numbering system allows you to quickly identify the level in the work breakdown structure where the specific element is found. It also helps to locate the element in the WBS dictionary. Project Standard for Work Breakdown Structures - section 2.5
2. C: Based on the information presented, there is no reason to try to convince the sponsor to add the work (choices B and D). Though one could let the sponsor know (choice A), the best choice would be to say no. A better choice would be to find the root cause of the problem, but that choice is not listed here. PMBOK® Guide-Fifth Edition, section 5.3.3.1, pages 123-124
3. A: A WBS does not show dates or responsibility assignments (choices B and C). Those are included on the bar chart and possibly in the communications management plan. The business need (choice D) is shown in the project charter. Showing the customer the WBS is possible. In this situation, the product and project scope are being fine-tuned. It would save the project manager time to effectively manage progressive elaboration if the WBS was used to assist. The WBS helps ensure everyone understands the scope of the work. Project Standard for Work Breakdown Structures - section 3.1
4. B: The project manager is performing scope management. The team member is suggesting an enhancement that is outside the scope of the project charter. Scope management involves focusing on doing the work and only the work in the project management plan that meets the objectives of the project charter. PMBOK® Guide-Fifth Edition, section 5.1.3.1, page 109
5. C: Choices A, B, and D are processes in the monitoring and controlling process group. This situation asks how to prevent the problem. This should have been done during the planning processes. The project deliverables are defined in the Define Scope process (choice C), which is a part of project planning. Good planning reduces the likelihood of a situation like the one described by including the right people and spending adequate time in clarifying the project scope. PMBOK® Guide-Fifth Edition, section 5.3, pages 123-124
6. D: This is a change due to an external event, mainly to remain competitive. The features that the competitors are offering were not included in the scope of the project; thus, they were never discussed during the initiation or planning phases. Due to the risk of losing a potential market, the project manager decided to include them in the project. There is no legal requirement or constraint to include the missing features in this case.
7. A: The project manager should get the approval from the sponsor, key stakeholders, and the customers. PMBOK® Guide-Fifth Edition, section 5.5, page 133
8. D: The most critical item for the project manager is to ensure full compliance with the city and power industry standards. A project manager is responsible for prioritizing the most critical issue to concentrate on. The situation here does not really specify whether the senior engineer is playing a vital role in the project or not. "Gold Plating," or giving customers extra, is not actually

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required in the project. The project manager should evaluate the current situation and then determine if the project will require additional time or not to complete. There is no specific PMBOK® Guide-Fifth Edition reference

9. D: Group decision-making techniques are used as a tool and technique in the Collect Requirements process, not in the Define Scope process. PMBOK® Guide-Fifth Edition, section 4.5.32, page 120
10. C: You should review the project charter and make sure that you have inputs from all key stakeholders in order to avoid confusion and unnecessary change requests in the future. You should then concentrate on creating the scope statement document, the WBS, and the project plan. PMBOK® Guide-Fifth Edition, section 4, page 64
11. A: Choices B, C and D are all components in the collect requirements process. Choice A is talking about the Scope Statement which describes project deliverables and the work required to create them in detail as well as deliverables description, product acceptance criteria, requirements assumptions and constraints, and exclusions from requirements. PMBOK® Guide-Fifth Edition, section 5.2, pages 110-111
12. C: Change Control Board tools and quality reports which are two of the three items in Choice C are not included in the WBS dictionary. PMBOK® Guide-Fifth Edition, section 5.4.3.1, page 13
13. B: Contractual agreements must be reviewed when any type of procurement takes place. Outsourcing is essentially another project within your project. The contract controls the work and helps protect all vested parties. PMBOK® Guide-Fifth Edition, section 12, pages 355-357
14. D: The scope statement defines the project deliverables and the work needed to create the deliverables. It includes what will and will not be done, assumptions, constraints, and acceptance criteria. Roles and responsibilities are assigned as part of Human Resources. Requirements are gathered to help create the scope statement; the scope baseline contains the WBS and the WBS dictionary. PMBOK® Guide-Fifth Edition, section 5.3.3.1, page 123
15. C: Janet's changes are also known as scope creep. Had the changes gone through change control they would have been normal progressive elaboration. Gold plating is giving the customer extras but we don't have enough information to know if Janet's changes are extras. PMBOK® Guide-Fifth Edition, section 5.6, page 137
16. A: Work breakdown structures are required on projects of every size, regardless of whether contracts are involved. Work breakdown structures can be used to help identify risks, but risks can be identified using other methods as well. Preventing work from being forgotten (slipping through the cracks) is one of the main reasons the tool is used, and is the best choice offered here. Project Standard for Work Breakdown Structures - section 3.1, page 13
17. A: The correct response from the PMO should have been that validation is getting stakeholders to agree to the deliverable, control quality should happen before it gets validated, and

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controlling the scope focuses on staying within the scope baseline. Each of the other responses has one or more incorrect definitions. PMBOK® Guide-Fifth Edition, sections 5.5, 5.6, pages 133-136 and 8.3, page 248

18. C: The lowest level of the WBS is a work package, which can be completed by more than one person. The other choices are aspects of a work package. PMBOK® Guide-Fifth Edition, section 5.4, page 126
19. C: Product analysis includes gaining a better understanding of the product of the project in order to create the project scope statement. You need to have a product description before you can do product analysis. Analyzing the level of quality desired is related to the Plan Quality Management process. Determining whether the quality standards on the project can be met is done in the Perform Quality Assurance process. PMBOK® Guide-Fifth Edition, section 5.3.2.2, page 122
20. A: The main purpose is to document features or functions required by stakeholders. A user story is a way of stating a requirement, often using the following format: As a <Role>, I want <Functionality/Goal>, so that <Business Benefit/Motivation>. User stories may be developed in facilitated workshops or as part of other requirements-gathering methods. PMBOK® Guide-Fifth Edition, section 5.2.2.3, page 114
21. A: The Validate Scope process deals with acceptance by the customer. Without this acceptance, the project manager will not be able to move into the next project phase. PMBOK® Guide-Fifth Edition, section 5.5, pages 133-136
22. D: Project requirements relate to the way the project is delivered while product requirements relate to the technical requirements of the product, not just the specifications provided by the client and their expectations of the project delivery methodology. PMBOK® Guide-Fifth Edition, section 3, page 47
23. B: A requirements traceability matrix is an output of the collect requirements process in the PMBOK Guide, not a tool or technique. The RACI chart is part of the Human Resources Plan and the WBS is a part of the scope baseline which is an output of Create WBS. PMBOK® Guide-Fifth Edition, section 5.2, pages 110-111
24. D: Stakeholder identification and analysis is correct because it is likely that some part of the stakeholder's requirements were not incorporated into the scope definition of the project, resulting in deliverables missing from the WBS and the project schedule. Activity sequencing and critical path are parts of time management. Integrated change control is not part of scope management. It is used to help control changes to scope. PMBOK® Guide-Fifth Edition, section 5.1, pages 107-108
25. C: The correct choice is Variance Analysis. You use your project performance measurements to assess the difference between what the scope originally said and what it is now doing. This must always be reflected in the scope baseline. Variation change analysis and scope baseline analysis are both made up terms and not in the PMBOK. PMBOK® Guide-Fifth Edition, section 5.6.2.1, page 139

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Time Management Questions

1. Creating project schedules and network diagrams can be a daunting task. It takes time and effort to create them and keep them current. For control and communication management, a broader, more comprehensive summary activity, is used between milestones or across multiple interdependent work packages, and is displayed in bar chart reports. It is called what?
 - a. Meetings
 - b. Hammock Activity
 - c. Simulation
 - d. Activity list
2. Beth is in charge of her third project this year. Both of the others have gone well. One of the keys to her success was realizing that to control the schedule, she must constantly reanalyze the project to predict project duration. She did this by analyzing the sequence of activities with the least amount of scheduling flexibility. What technique was she using?
 - a. Critical path method
 - b. Flowchart
 - c. Precedence diagramming
 - d. Work breakdown structure
3. As the newest project manager on the team, it seems you get all the complicated projects. All of your projects have many stakeholders and different groups requiring coordination of resources and schedules. One of your manufacturing vendors tells you that they require the design be completed before production of the parts can start. This is an example of what type of dependency for the vendor?
 - a. Discretionary dependency
 - b. External dependency
 - c. Mandatory dependency
 - d. Scope dependency
4. Your PMO just completed some reporting training and several topics were discussed. Classic network diagrams seem to take most of the discussion but they also talked about milestone charts, bar charts, and Gantt charts. Someone even talked about using Excel spreadsheets. Which of the following are GENERALLY illustrated BETTER by bar charts than network diagrams?
 - a. Logical relationships
 - b. Critical paths
 - c. Resource trade-offs
 - d. Progress or status

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5. As a subject matter expert on the project, you are asked to interpret data presented from the project schedule diagram. You only have partial data on one of the network nodes. The early start is day 8 and the early finish is day 17. The only other data you have is the late finish which is day 30. What is the late start day, the duration and the float for this node?
- The late start is day 13, the duration is 8 days and the float is 4 days
 - The late start is day 47, the duration is 18 days and the float is 13 days
 - The late start is day 21, the duration is 9 days and the float is 13 days
 - The early finish is day 17, the duration is 21 days and the float is 9 days
6. You've been working as a project manager for 30 years and for the most part it was always about just getting the work done. Now there are many tools and techniques to consider, and understanding what is involved in scheduling and critical path can be overwhelming. Just yesterday you were told about the 100% rule and the 8/80 rule and the 50/50 rule. Today someone mentioned heuristics. What BEST describes heuristics?
- Control tool
 - Scheduling method
 - Planning tool
 - Rule of thumb
7. Once again the project meeting covered several new topics. The speaker droned on about scheduling and then started talking about multitasking, buffers, critical chain, and some guy named Goldratt. You actually knew what he was talking about. On the way out of the meeting, your sponsor asks you what the critical chain method is. Your answer is which of the following?
- With Critical Chain Method an activity can be delayed without delaying the project finish date
 - It is a scheduling method that allows for buffers to account for limited resources
 - It was developed by Goldratt and says we should ignore the critical path and just multitask
 - The critical chain is also known as Agile and Extreme programming based on limited resources
8. You just received what you need to complete a small portion of the network diagram. Activity A will take 9 days and will start immediately. Activity C will take 4 days and will start when A is done and the successor is Activity F which will take 3 days. Activity G, a 1 day activity, will also start immediately and has S and R in sequence as successors each taking 5 days. Activities R and F are the final activities. Draw a network diagram and determine the critical path, its duration, and the total float for activity C.
- Start-A-C-F-Finish, 11 days duration, activity C has 2 days total float
 - Start-A-C-F-Finish, 16 days duration, activity C has 0 total float
 - Start-G-S-R-Finish, 11 days duration, activity C has 5 days total float
 - Start-A-C -F-Finish, 14 days duration, activity C has 0 total float

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9. You are managing an art restoration project for a first-time client. The client seems to be very interested in your project schedule. Which of the following is the BEST project management tool to determine the longest time the project will take?
- WBS
 - Network diagram
 - Bar chart
 - Project charter
10. One of your team members informed you that a work package will most likely require ten weeks to complete. In the best case scenario, if everything goes well and there are no surprises, it will take eight weeks. Since he is involved in more than two projects and has several pending deliverables, this specific work package may take eighteen weeks to complete. Based on this information, what is the time range of the work package?
- Eleven weeks to twelve weeks
 - Eight weeks to ten weeks
 - 9.34 weeks to 12.66 weeks
 - Ten weeks to eighteen weeks
11. It was not a fun meeting. The sponsor and two senior stakeholders seemed ready to take over. Your project is in the “red.” The budget was over by \$13,000 and you are behind schedule almost six weeks. Of course you have explanations, but all you heard was get it under control this week. Two options to shorten the project were discussed and you decide to put three noncritical activities on hold so that a few of the resources working on these activities can be assigned to the riskiest part of the schedule. You also ask for four resources to work overtime. The sponsor agrees to pay the additional cost since time is now a critical factor. This is an example of which of the following?
- Crashing
 - Fast-tracking
 - Critical chain method
 - Resource leveling
12. You’re sequencing project activities and are using the Precedence Diagramming Method (PDM) to create a network diagram. Your diagram creates a schematic display of the sequential and logical relationships, dependencies, and the order in which activities in a project must be performed. Durations are also added for each activity in the network diagram to determine the critical path. Which one of the following is FALSE about the critical path?
- It is the longest duration path through a network diagram and has no float
 - It determines the shortest time to complete the project and has no float
 - The activities on the critical path represent the highest schedule risk in the project and can have negative float
 - The activities on the critical path represent critical functionality and have no float

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13. While reviewing your project resource histogram, you notice some issues with work distribution in your project. In order to evenly utilize resources as much as possible, you decide to move some activities from a week when most of resources are engaged to a week when there is limited usage. Which technique are you using in this case?
- Resource leveling
 - Overtime
 - Schedule compression
 - Schedule control
14. This project will be very complicated. You have convinced your boss that traditional project management planning with all the details completed before starting isn't possible. He agrees to let you plan the work in the near term in detail and future work in a higher level. As the project progresses the detail will continue to be defined. This is best defined as what?
- Scope definition
 - Rolling wave planning
 - Decomposition
 - Progressive elaboration
15. Which one of the following estimating techniques uses mathematical models based on historical records from other projects and can produce higher levels of accuracy?
- One-point estimating
 - Analogous estimating
 - Parametric estimating
 - Three-point estimating
16. It seems that late deliverables are always a problem. Getting a better understanding of where you can let activities slip and which ones will affect other activities is an important element of scheduling. A good place to start is getting information about the total float and free float for all of your project activities. So just how does free float differ from total float?
- Subtracting the total float from the critical path duration will give the free float
 - Total float and free float are the same thing
 - Free float affects only the early start of the successor activities
 - Total float is the accumulated amount of free float

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17. New assignments just came out and you have a new infrastructure project that must start in four weeks based on resource availability. That means you have to get your current project completed four days earlier than planned. What do you do about this issue?
- Tell senior management that the project's critical path does not allow the project to be finished earlier
 - Meet with your team to look at options for crashing or fast tracking non-critical path activities
 - Meet with the team to look at options for crashing or fast tracking the critical path
 - Work hard and see what the project status is next month
18. Schedule compression is a method to help projects stay on schedule but they can also cost more. In attempting to complete the project faster, the project manager looks at the cost associated with crashing each activity. The BEST approach to crashing would also include looking at the:
- Risk impact of crashing each activity
 - Customer's opinion of which activities to crash
 - Boss's opinion of which activities to crash and in which order
 - Project life cycle phase in which the activity is due to occur
19. The project plan is in progress and you are working on getting the schedule completed. Which of the following processes includes asking team members about the time estimates for their activities and reaching agreement on the calendar date for each activity?
- Sequence Activities
 - Develop Schedule
 - Define Scope
 - Develop Project Charter
20. The project had been discussed for months and when it was finally approved, the budget and time lines seemed to be already completed. Despite the given schedule and budget you determine your own numbers and discover your schedule estimate is 2 months longer than the given completion date. What is the BEST thing to do?
- Cut product scope
 - Meet with management and tell them the required date cannot be met
 - Tell your boss you'll get it done and then work harder
 - Determine schedule compression options and present your plan to senior management

Section and Knowledge Area Tests

21. Some might say the scheduling processes are similar but the PMBOK has very clear definitions. The process of establishing the policies, procedures and documentation for planning, developing, managing, executing and controlling the project schedule is the definition for what?
- Plan Schedule Management
 - Control Schedule
 - Develop Schedule
 - Sequence Activities
22. The project team is working together on detailed planning. They created a milestone chart, then a bar chart, and are now working on a project schedule network diagram. They hope the detail will resolve the differences in opinion on the schedule. What will the network diagram show the team?
- The sequencing of the activities on the project
 - The decomposition of the work of the project
 - The schedule
 - The duration estimate of the project
23. The project manager and team have created the schedule for rebuilding five small business spaces destroyed by fire earlier in the year. The schedule includes a nine-day delay for executive approval before the plans can be reviewed by the city council. This causes the finish date of the project to slip by nine days. Which of the following best describes the delay?
- A lag from one activity to another
 - A lead on the critical path
 - The float of the activity
 - Need to level resources
24. Formulas play a big part in scheduling. Understanding the math involved in calculating the critical path is required. In any network diagram, slack/float is found when which of the following situations occur?
- Early start and late start are not equal
 - Early start and late finish are not equal
 - Late finish plus lag is greater than zero
 - Early start and late finish equal zero
25. As the schedule is developed project managers need to consider data from past projects and consider that all may not go as planned. This technique is called Reserve Analysis. Which of the following is the BEST description?
- Estimating by multiplying the quantity of work by productivity rate
 - Incorporating time buffers into the activity duration estimates
 - Developing project schedule with contingency reserves as a recognition of the schedule risk
 - Adding resource reserves to the activity resource estimates

Section and Knowledge Area Tests

Time Management Answers

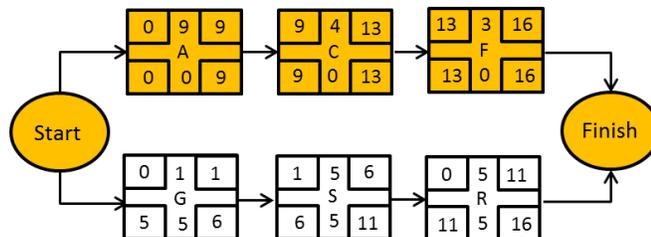
1. B: Grouping interrelated activities together for convenience or focus is done by adding brackets around the set of activities. These are called hammock activities. PMBOK® Guide-Fifth Edition, section 6.6.3.2, page 182
2. A: There are only two choices related to scheduling, they are A and C. Choice C, however, is a diagramming technique that deals with the relationship between activities, not schedule flexibility. PMBOK® Guide-Fifth Edition, section 6.6.2.2, page 176
3. C: Since the dependency is required, it could not be discretionary (choice A) and therefore must be mandatory. No mention is made that the dependency comes from a source outside the project, so external (choice B) is not correct. Scope dependency (choice D) is not a defined term. The key word in this question is "requires." The question defines a mandatory dependency. PMBOK® Guide-Fifth Edition, section 6.3.2.2, page 158
4. D: The bar chart (or Gantt chart) is designed to show a relationship to time. This is best used when demonstrating progress or status as a factor of time. PMBOK® Guide-Fifth Edition, section 6.6.3.2, page 182

5. C: The late start is day 21, the duration is 9 days, and the float is 13 days. None of the other answers have all three correct numbers for the correct sections of the node. PMBOK® Guide-Fifth Edition, section 6.6.2.2, pages 176-177

8	9	17
	A	
21	13	30

6. D: A heuristic is a rule of thumb. Examples are cost per line of code, cost per square foot of floor space, etc. PMP Workbook, page 62
7. B: The Critical Chain Method was developed by E.J. Goldratt. It is a scheduling method that focuses on eliminating multitasking, having dedicated resources, and uses both project and feeding buffers to account for limited resources. Critical Chain has similarities to Agile and Extreme programming. PMBOK® Guide-Fifth Edition, section 6.6.2.3, page 178

8. B: Start-A-C-F-Finish is the critical path, the duration is 16 days and activity C has 0 total float. PMBOK® Guide-Fifth Edition, section 6.6.2.2, pages 176-177



9. B: The network diagram (choice B) takes the work packages from the work breakdown structure (choice A) and adds dependencies. The dependencies allow us to look at the various paths through the diagram. The longest duration path is the critical path. Choice B is the best answer. The bar chart (choice C) may show an end date, but it is not used to determine dates and show progress. The project charter (choice D) may include any required end dates, but not a logical determination of how long the project will take. PMBOK® Guide-Fifth Edition, section 6.6.2.2, page 177

Section and Knowledge Area Tests

10. C: PERT allows the estimator to include three estimates: optimistic, pessimistic, and most likely, given by the equation: PERT or Expected Activity Duration (Beta distribution) = $[P + (4 * M) + O] / 6 = (18 + 4 * 10 + 8) / 6 = 11$ weeks; $STD\ Dev = (P - O) / 6 = (18 - 8) / 6 = 1.66$; Range = PERT -/+ Standard Dev; Therefore the range is $11 \pm 1.66 = 9.34$ to 12.66 . PMBOK® Guide-Fifth Edition, section 6.5.2.4, page 170
11. A: The best option here is to add additional resources to the project activities on the critical path to complete them quickly. Fast-tracking is the technique of doing critical path activities in parallel when they were originally planned in series. Resource leveling is used to produce a resource-limited schedule by letting the schedule slip and cost increase in order to deal with a limited amount of resources, resource availability, and other resource constraints. The critical chain method is another way to develop an approved, realistic, and resource-limited formal schedule. It provides a way to view and manage uncertainty when building the project schedule. PMBOK® Guide-Fifth Edition, section 6.6.2.7, page 181
12. D: The activities on the critical path do not necessarily represent the critical functionalities in the project. The critical path is the longest duration path in the network diagram, and this duration is the shortest time needed to complete the project. The activities on the critical path have no buffer, and any delay in the critical path activities will delay the project; thus, the critical path activities represent the highest schedule risk. PMBOK® Guide-Fifth Edition, section 6.6.2.2, page 177
13. A: Resource leveling is used to produce a resource-limited schedule by letting the schedule slip and cost increase in order to deal with a limited amount of resources, resource availability, and other resource constraints. It can be used when shared or critically required resources are only available at certain times, are in limited quantities, or when resources have been over allocated. We may have several peaks and valleys in our resource histogram. In order to level the resources, evenly utilize them as much as possible, or to keep resource usage at a constant level, we can move some of our activities from the week when we are using a lot of resources to a week when we are hardly using any. PMBOK® Guide-Fifth Edition, section 6.6.2.4, page 179
14. B: Rolling wave planning uses a progressive elaboration approach and plans the work in the near term in detail and future work at a higher level. During the early strategic planning phase, work packages may be decomposed into less-defined milestone levels since all details are not available; later they are decomposed into detailed activities. This kind of planning is usually used in IT and research projects, but is very unlikely in construction projects where any unknowns are normally expensive and destructive. PMBOK® Guide-Fifth Edition, section 6.6.2.2, page 152
15. C: This estimate uses mathematical models based on historical records from other projects. It utilizes the statistical relationship that exists between a series of historical data and a particular delineated list of other variables. Depending upon the quality of the underlying data, this estimate can produce higher levels of accuracy and can be used in conjunction with other estimates to provide estimates for the entire project or for specific segments of the project. Measures such as time per line of code, time per installation, and time per linear meter are considered in this type of estimate. PMBOK® Guide-Fifth Edition, section 6.5.2.3, page 170

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16. C: Free float is the amount of time an activity can be delayed without affecting the early start of its successor. Total float is the amount of time an activity can be delayed without affecting the project completion date. PMBOK® Guide-Fifth Edition, section 6.6.2.2, page 177
17. C: Working activities not on the critical path can be done but not before addressing activities on the critical path by using fast-tracking or crashing. It would be inaccurate to report that the project cannot be finished earlier. Only meeting with the team to look for options for compressing the schedule (by crashing or fast-tracking) relates to problem solving. PMBOK® Guide-Fifth Edition, section 6.6.2.7, page 181
18. A: You may or may not need your customer's or your boss's input, but you will definitely need to include an analysis of risk. PMBOK® Guide-Fifth Edition, section 6.6.3.2, page 182
19. B: The process defined in the question is Develop Schedule. By the time this process is taking place, Develop Project Charter, Define Scope, and Sequence Activities would be completed. PMBOK® Guide-Fifth Edition, section 6.6.2.7, page 181
20. D: Determining options for schedule compression would have the least negative effect on the project. Cutting product scope negatively affects the customer, and is therefore not best. A project manager's job is to determine options for meeting any end date; therefore, simply telling management the required date cannot be met is not correct. Working overtime is expensive and unnecessary when there are many other choices that could be selected first. PMBOK® Guide-Fifth Edition, section 6.6.2.7, page 181
21. A: This is the Plan Schedule Management definition in the PMBOK® Guide-Fifth Edition, section 6, page 141
22. A: The project schedule network diagram shows the sequencing of the activities on the project. The work breakdown structure (WBS) shows the decomposition of the work of the project. The duration estimate of the project comes from the schedule. PMBOK Guide section 6.6, page 172
23. A: This is a lag from one activity to another. Float is also known as slack and in this case it's negative since the schedule finish is delayed by 9 days. A lead is the amount of time a successor activity can be shortened based on its predecessor. No information was given about the critical path. The need to level resources is a distracter. PMBOK Guide 6.3.2.3 page 158
24. A: Float is calculated by subtracting either the early finish (EF) from the late finish (LF) or the early start (ES) from the late start (LS). Only when early start and late start are not equal will there be float or slack. The other three options do not include any of the float formulas. PMBOK Guide section 6.6.2.2, page 177
25. B: Answer C might seem more likely, but note the fine difference that Reserve Analysis is purely a technique of determining activity duration, not a schedule development technique. PMBOK® Guide-Fifth Edition, section 6.5.2.6, page 171

Section and Knowledge Area Tests

Cost Management Questions

1. There are several ways of estimating. The project you are working on now is perfect for analogous estimating. Basically you'll use the cost of a similar project to help estimate the cost of this new project. Which of the following best describes analogous estimating?
 - a. Regression analysis
 - b. Bottom-up estimating
 - c. Organizational process assets
 - d. Enterprise environmental factors

2. You are the project manager for a senior assisted living complex. You have worked very hard to determine the budget. You used analogous estimating and in two cases parametric estimating and even completed bottom-up estimating for two very detailed sections of the project. One of the tools you have in the determine budget process is funding limit reconciliation and one of its outputs is project funding requirements. What's the best definition of both?
 - a. Funding limit reconciliation is comparison of funding limits to commitment of funds; funding requirements are high-level budget estimates with ranges
 - b. Funding limit reconciliation is comparison of funding limits to commitment of funds; funding requirements determines when funds will be needed over the project life
 - c. Funding limit reconciliation is limiting funds to allocated funds; funding requirements is determining when funds will be needed over the project life
 - d. Funding limit reconciliation is only completed on a project over a specified dollar amount; funding requirements is determining when funds will be needed over the project life

3. The process Plan Cost Management was added to the PMBOK Guide, 5th edition. As a project manager you should be familiar with the outputs of the plan. The plan is used to set expectations for things relating to project costs. Which of the following are included in the cost management plan?
 - a. Rules for performance measurement, control thresholds and specific analytical techniques
 - b. Level of accuracy, control thresholds and organizational links
 - c. Levels of precision, levels of accuracy and basis of estimates
 - d. Units of measure, levels of precision and quality control metrics

Section and Knowledge Area Tests

4. It seems like you just started this project a few weeks ago but it has now been almost 5 months. You were lucky to get assigned this project. You've had lots of support but also lots of attention. Current reports show the project is 30 percent complete. You have spent \$25,000 of the project's \$250,000 budget. What is the current earned value for this project?
 - a. 10 percent
 - b. \$75,000
 - c. \$25,000
 - d. Not enough information to know

5. You and your project team are about to enter a meeting to determine project costs. You have elected to use bottom-up estimating and will base your estimate on the WBS. Which one of the following is not an attribute of bottom-up estimating?
 - a. People doing the work create the estimates
 - b. It creates a more accurate estimate
 - c. It's more expensive and time consuming than other methods
 - d. It's more expensive but quicker than other methods

6. You work for one of the biggest consulting firms in the state. As a senior project manager your advice is requested on which of two very worthy projects your client should choose. The client's two projects are both very interesting, but they can only choose one. The project to upgrade all their data center hardware has a net present value (NPV) of \$217,000 and may take up to five years. The software inventory project will only take 1 year and has an NPV of \$265,000. Your recommendation is the software inventory project but the client decides on the data center hardware project. What's the opportunity cost of the client's choice?
 - a. \$48,000
 - b. \$217,000
 - c. \$265,000
 - d. Zero because the NPVs already take into account each project's total duration

7. You are the project manager for the West Branch Call Center Operations Project and 21,000 customer service representatives are invited to attend a training session. Attendance is optional. The costs of the meeting facility are calculated, but the workbook expense depends on how many students register for the class. For every 5,000 workbooks created, the cost is reduced by a percentage of the original printing cost. The workbook expense is which one of the following?
 - a. Fixed costs
 - b. Parametric costs
 - c. Variable costs
 - d. Indirect costs

Section and Knowledge Area Tests

8. You are managing a downtown revitalization project and have just been asked for some earned value data. Your BAC is \$600,000. Accounting says you've spent \$270,000. Reports show you are 40% complete against a plan that said you'd be at 45%. The sponsor is asking what is the CPI and your assessment of the numbers. You answer, it is:
- a. 1.0 and everything is just where it needs to be
 - b. \$30,000 over budget
 - c. 0.89 and we are 11% over budget
 - d. 0.79 and we are 21% over budget
9. Funding for the next fiscal year is due very soon and your management has requested you complete a definitive cost estimate for your current project. Which one of the following is critical to completing this estimate?
- a. Project scope statement
 - b. Work breakdown structure
 - c. Project team
 - d. Expert judgment
10. Which one of the following is an example of resource cost rates that a project manager could use to predict the cost of the project?
- a. Analogous estimating
 - b. Bottom-up estimating
 - c. Commercial database
 - d. Procurement bid analysis
11. You have created a cost estimate for a new project that you'll be managing in your organization. All of the following are inputs to your cost estimate EXCEPT for which?
- a. Project schedule and the human resource management plan
 - b. Organization process assets and enterprise environmental factors
 - c. Scope baseline and risk register
 - d. Activity cost estimates and expert judgement

Section and Knowledge Area Tests

12. Jackson is the project manager of a software development project. The project budget is \$275,000. There were a couple of minor glitches but the project is now considered to be on track and spending will continue as planned. The team reports they have completed 30% of the project and spent \$106,000. Jackson's sponsor wants to know the formula for calculating the new budget. What should Jackson tell the sponsor?
- First $EV = BAC * \text{Actual \%complete}$, then $CPI = PV/AC$, and finally $BAC / CV = EAC$
 - First $EV = BAC * \text{Actual \%complete}$, then $CPI = PV/AC$, and finally $BAC / SV = EAC$
 - First $EV = BAC * \text{Actual \%complete}$, then $CPI = EV/AC$, and finally $BAC / CPI = EAC$
 - First $EV = BAC * \text{Actual \%complete}$, then $CPI = EAC/ETC$, and finally $BAC / CPI = EAC$
13. You are monitoring the status of the project work to update the project budget and manage changes to the cost baseline. Which PMBOK Guide process best describes the work you are doing?
- Determine budget
 - Control costs
 - Earned value management
 - Cost aggregation
14. A project had a budget of \$750,000 and was completed on time. The project expenses, however, were 15 percent more than what the project called for. What is the variance at completion for this project?
- It is impossible to know as not enough information has been given.
 - \$112,500
 - \$637,500
 - \$750,000
15. In past projects determining the budget, dealing with vendors and figuring out if the budget will cover all the costs has never been required. Your new PMO has asked that all three get more attention. After getting clarification from the PMO, you are asked to brief your team on the differences between a vendor bid analysis and reserve analysis. Which of the following is your explanation?
- Vendor bid analysis is done by contract managers to determine what type of contract to use; reserve analysis is adding budget cost for "unknown-unknowns"
 - Reserve analysis, also called padding, is adding cost for uncertainty while vendor bid analysis is simply having a qualified vendor list
 - Reserve analysis is determining additional budget within the cost baseline to be used at the discretion of management while vendor bid analysis may include weighted scoring averages
 - Vendor bid analysis is analyzing what the project should cost based on responsive bids; reserve analysis is adding budget cost for "known-unknowns"

Section and Knowledge Area Tests

16. You are the lead engineer and the design architect for a water purification plant project. The project will be using two new chemicals that the project team has never worked with before. You allot \$15,000 to train the team on the new materials, to insure safety as well as better project performance. The additional money allocated for training is known as what?
- The cost of quality
 - The cost of poor quality
 - Sunk costs
 - Contingency allowance
17. Which of the following answers are ALL items included in the cost management plan?
- The level of accuracy needed for estimates, rules for measuring cost performance, specifications for how duration estimates should be stated
 - Specifications for how estimates should be stated, rules for measuring cost performance, the level of accuracy needed for estimates
 - Rules for measuring team performance, the level of accuracy needed for estimates, specifications for how estimates should be stated
 - Specifications for how estimates should be stated, the level of risk needed for estimates, rules for measuring cost performance
18. Your project has a medium amount of risk and is not very well defined. The sponsor hands you a project charter and asks you to confirm that the project can be completed within the project cost budget. What is the BEST method to handle this?
- Build the estimate in the form of a range of possible results
 - Ask the team members to help estimate the cost based on the project charter
 - Based on the information you have, calculate a parametric estimate
 - Provide an analogous estimate based on past history
19. Good project managers will determine their own budgets even if they are given a budget value in the charter. Then, as a way to make sure risks, the cost of quality and other unanticipated events are covered, both contingency and management reserves should be added to the budget. What is the BEST explanation for contingency reserves?
- They are hidden to prevent management from disallowing the reserve
 - They can be added to each activity to provide the customer with a shorter critical path
 - They are maintained by management to cover cost overruns
 - They are added to the base costs of the project to account for risks

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20. Procurement and dealing with vendors are closely tied to cost. Many times your contract with a vendor will be the primary cost for a project. At the Monday morning conference call your seller tells you that activities completed by your team resulted in a seller cost increase. You should:
- Recommend a change to the project costs
 - Have a meeting with management to find out what to do
 - Ask the seller for supporting information
 - Deny any wrongdoing
21. This is the first time you have used earned value management and the results have been very telling. Your sponsor complimented you at the last staff meeting for presenting a very factual status of your project. You just completed the end of phase EVM report and it shows you will have a cost overrun at the end of the project. Which of the following should you do?
- Evaluate risks in estimates and re-estimate
 - Meet with the sponsor to find out what work can be done sooner
 - Cut quality
 - Decrease scope
22. Understanding Earned Value Management is import to a project manager. Many companies only use EVM for large dollar projects. One of the lesser used tools in EVM is called the To-Complete-Performance Index or TCPI. Which of the following is the correct formula and a brief explanation of TCPI?
- $(BAC-EV)/(BAC-AC) = TCPI$ which is a ratio of the cost to finish the remaining work or at what level we will need to perform to reach the original budget
 - $(BAC-EV)/(BAC-AC) = TCPI$ which will help determine how much money is needed for any new budget estimates
 - $(BAC-PV)/(EAC-AC) = TCPI$ which is always looked at in relation to 1; greater than 1 means more work and less than one means less work
 - $(EAC-PV)/(BAC-AC) = TCPI$ which is always looked at in relation to 1; greater than 1 means less work and less than one means more work
23. Estimating cost is a tough job. At the beginning of the project you just have high-level information, later you get more details as the WBS is completed, and finally you get the best details you'll have and create the cost baseline. Which of the following is the percentage of accuracy expected for the definitive budget?
- 25 to +75
 - 5 to +10
 - 5 to +25
 - 10 to +25

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24. The project data was just published. You sit down to read and understand all the numbers. The EAC is now \$160,000. The CV is -25,000 and the CPI is .93. The SV is +\$11,000 and the SPI is 1.1. The current spending shows cost at \$94,000 and you are 75% complete. The TCPI is 1.1. Which of the following is the translation of these numbers?
- You are over budget by \$25K or 7% and are ahead of schedule by \$11K or 10%
 - You are getting 93 cents on the dollar and are 11% behind schedule with a positive EV
 - Without the BAC data you can't really report anything meaningful
 - You are under budget by \$25K or 93% and are ahead of schedule by \$11K or 10%
25. The budget has just been completed and you are looking at the numbers. You have cost for activities and work packages, all rolling up to the total project costs. This budget even has both reserves included. You remember something about knowns and unknowns but which one of the reserves will NOT be included as part of the cost baseline?
- Emergency reserves
 - Project cost reserves
 - Contingency reserves
 - Management reserves

Section and Knowledge Area Tests

Cost Management Answers

1. C: Analogous estimating is estimating based on an analogy to something else or based on historical data and even lessons learned. None of these were listed but they are all contained in the organizational process assets. PMBOK® Guide-Fifth Edition, section 7.2.2.2, page 204
2. B: Funding limit reconciliation is a comparison of funding limits to commitment of funds; funding requirements are determining when funds will be needed over the project life. High-level budget estimates are called ROM estimates; limiting funds to allocated funds could be done on a project but is not the definition of funding limit reconciliation. Neither definition is limited to projects over a specified dollar amount. PMBOK® Guide-Fifth Edition, section 7.3.2.5, page 212
3. B: Level of accuracy, control thresholds and organizational links are just three of the many outputs of the cost management plan. It is the only choice with three correct listed items. Other items include rules for performance measurement, units of measure, level of precision, reporting formats, process descriptions and additional details which could include other cost-related details like exchange rates for funding choices. PMBOK® Guide-Fifth Edition, section 7.1.3.1, page 198
4. B: The formula for Earned Value is $BAC * \text{the \% of work completed}$. In this case 30% was completed times the \$250,000 which equals \$75,000. PMBOK® Guide-Fifth Edition, section 7.4.2.1, pages 218 and 224
5. D: Bottom-up estimating is getting estimates gathered by those doing the work from all the individual work activities and rolling them up to work packages, then to control levels and to project levels. This all takes time but results in a more accurate and more costly estimate. The only answer that doesn't meet that definition is choice D, that it is more expensive but quicker than other methods. PMBOK® Guide-Fifth Edition, section 7.2.2.4, page 205
6. C: The opportunity cost is \$265,000 which is the value of the project not selected. The data center project was the one selected. Opportunity cost can also be thought of as opportunity lost. PMP Workbook, page 37
7. C: The cost of the workbooks for however many representatives that sign up is a variable cost. Choice A is incorrect as fixed costs do not vary. Choice B is also incorrect as parametric costs can be identified as cost per unit. And choice D is incorrect, as direct costs are a way to describe costs that may be shared between projects. PMP Workbook, page 95
8. C: The formula for CPI is EV / AC . You first need to calculate EV which is 40% of the BAC. The BAC is \$600,000; 40% of that is \$240,000. Once you determine the EV is \$240,000, you divide \$240,000 by \$270,000 which gives you 0.89 and is interpreted as 11 % over budget. PMBOK® Guide-Fifth Edition, section 7.4.2.1, page 219
9. B: The WBS is needed in order to create a definitive cost estimate. The definitive estimate is the most accurate but also takes the longest to complete. Some of the project team may contribute to data collection and those same members may be experts. But neither is needed without the WBS.

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The scope statement is essentially the input for the WBS. PMBOK® Guide-Fifth Edition, section 7.2, page 201 and PMP Workbook, page 96

10. C: A commercial database is called published estimating data in the PMBOK. It is data stored and used by companies to save time by using known and trusted data for both cost and schedule estimates. PMBOK® Guide-Fifth Edition, section 6.4.23, page 164
11. D: Activity cost estimates and expert judgement are both outputs of the Estimate cost process.. All of the other choices are inputs and can be considered part of the cost estimates. PMBOK® Guide-Fifth Edition, section 7.2, page 200
12. C: In this scenario you need three formulas to get to EAC, or the new budget. They are, first, $EV = BAC * \text{Actual \%complete}$, then $CPI = EV/AC$, and finally $BAC / CPI = EAC$. None of the other answers have three correct formulas. PMBOK® Guide-Fifth Edition, section 7.4.2.2, pages 220-221
13. B: The process of controlling costs is one of the more technical processes to understand for the PMP exam as it includes the earned value tools and techniques. Choice A, determine budget, develops the cost baseline which is then monitored during the control cost process. Choice C, earned value management is not a process, but a tool. Choice D, cost aggregation, is when you add all of your individual cost estimates together. It is not a monitoring and controlling process. PMBOK® Guide-Fifth Edition, section 7.4, page 215
14. B: The formula for this problem is variance at completion which is $EAC - BAC$. In this case the BAC was \$750,000 and the final cost was 15% higher than the BAC, or \$112,500 higher. The final costs were \$862,500 which represents the EAC. PMBOK® Guide-Fifth Edition, section 7.4.2.2, pages 222-224
15. D: The only definition with both of the analysis terms is choice D. Vendor bid analysis is analyzing what the project should cost based on responsive bids and reserve analysis is adding budget cost for “known-unknowns.” Choice A includes unknown-unknowns and choice C says reserve analysis funds are controlled by management. Neither of these is true. Choice B can be eliminated based on the term padding, which is not allowed. PMBOK® Guide-Fifth Edition, section 7.2.2.9, page 207
16. A: Training to help improve project performance is called the cost of quality. This includes anything you do to help avoid poor quality. Testing, calibrating tools, hiring trainers are all included in the cost of quality. Sunk cost is the term for money already spent and contingency allowances are funds for cost overruns. PMBOK® Guide-Fifth Edition, section 7.2.2.7, page 206, also section 8.1.2.2
17. B: Every item in choice B accurately describes a part of the cost management plan. Notice how one word in each of the other options makes the entire choice incorrect. Choice A refers to duration estimates, which are created during the time management process; choice C includes measuring team performance, a part of human resource management; and choice D includes risk. PMBOK® Guide-Fifth Edition, section 7.1.3.1, pages 198-199
18. A: The risk level is medium; the charter was just completed and isn't going to have the details needed for an accurate estimate. The other choices are not blatantly wrong, but the best choice is to estimate in a range. A range will give you a plus or minus for your estimate rather than the usual single value. PMBOK® Guide-Fifth Edition, section 7.2.2.2, pages 205-206

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19. D: They are added to the base costs of the project to account for risks. Choice A is an inappropriate action, choice B is an incorrect statement, choice C describes management reserves. During the risk management process, you determine appropriate cost contingency reserves for risk events. The sum of these reserves should be added to the total project estimate to cover the cost of risk events happening. PMBOK® Guide-Fifth Edition, section 7.2.2.6, page 206
20. C: In this case you want to ask the seller for supporting information. This is the same first step for any changes. Evaluate the impact or, in this case, evaluate the situation. After you understand the issues you can then talk to management. Recommending project cost changes makes no sense without knowing all the facts. Since you don't know the whole story yet, you cannot deny or assume wrong doing. We don't know that anybody did anything wrong. PMP Workbook, page 46
21. A: The correct answer is to evaluate risks in estimates and re-estimate. Look for the choice that would have the least negative impact in this situation. You would not need to meet with the sponsor to do choice B. Choices C and D always have negative effects. The choice with the least negative impact is choice A. PMBOK® Guide-Fifth Edition, section 7.1, page 195, section 11.12.1.2, page 321
22. A: The correct formula is $(BAC-EV)/(BAC-AC) = TCPI$. The short definition of TCPI is that it is a ratio of the cost to finish the remaining work or at what level will we need to perform to reach the original budget. In both choices C and D, the values of above 1 and below 1 are reversed. Choice B talks about how much money is needed; that would be determined using EAC or even ETC. PMBOK® Guide-Fifth Edition, section 7.4.2.3, page 221
23. B: -5 to +10 is the correct spread. PMBOK® Guide-Fifth Edition, section 7.2, page 201
24. A: The correct translation of the data presented is that you are over budget by \$25K or 7%, and are ahead of schedule by \$11K or 10%. Choices B and D both have elements of truth but also have completely wrong data. Choice C is not true, as even without the BAC we have valuable data. PMBOK® Guide-Fifth Edition, section 7.4.2.1, pages 218-219
25. D: The two types of reserves included in cost management are management and contingency reserves. Contingency reserves are part of the cost baseline while management reserves are for "unknown-unknowns" and are controlled by management. They are not part of the baseline but are included in the total budget. Choices A and B may be used but are not PMBOK terms. PMBOK® Guide-Fifth Edition, section 7.2.2.6, page 206

Section and Knowledge Area Tests

Quality Management Questions

1. You are working a very tough project. Creating new hex bolts for the police helicopter fleet requires top-level quality controls. Recently the project was caught off guard with several quality delivery issues. Your sponsor tells you quality is now the top constraint. If another problem with quality occurs, the BEST thing for the project manager to do is which of the following?
 - a. Allow the schedule to slip by cutting cost
 - b. Allow cost to increase by fixing the root cause of the problem
 - c. Allow risk to increase by cutting cost
 - d. Fix the problem as soon as possible
2. The operations manager is reviewing the minutes from a meeting his top project manager held on quality. The attendee list includes some stakeholders and team members. The minutes indicate that the team has been doing a great job, that teamwork is very good, but also that the schedule was compressed. The current CPI is 1.1. The project manager gets a call from the operations manager who suggests there really isn't time to hold meetings about quality when the schedule is so compressed. This doesn't seem right; what's the BEST reason the operations manager is wrong?
 - a. Improved quality leads to increased productivity, increased cost effectiveness, and decreased cost risk
 - b. Improved quality leads to increased productivity, decreased cost effectiveness, and increased cost risk
 - c. Improved quality leads to increased productivity, increased cost effectiveness, and increased cost risk
 - d. Improved quality leads to increased productivity, decreased cost effectiveness, and decreased cost risk
3. Many times the focus on quality is lost while just getting the work done. Understanding even the smallest ideas is important for good project results. From the project perspective, which of the following is a quality attribute?
 - a. Determines how effectively the performing organization supports the project
 - b. Provides the basis for judging the project's success or failure
 - c. Specific characteristics for which a product is designed and tested
 - d. Objective criteria that must be met
4. You have always been an attention to detail type of person. Doing things the right way was your focus but you never thought about it as quality management. So far you have a great record for good work and have been recognized twice this year for "outstanding quality" on your projects. Two of your colleagues ask you for your definition of quality. Which of the following is your answer?
 - a. It is meeting and exceeding the customer's expectations
 - b. It can include adding extras to make the customer happy
 - c. It is simply the degree to which the project meets requirements
 - d. It is very clearly conformance to management's objectives

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5. The main topic discussed at the project meeting was quality management. Your functional manager seems to be obsessed with all the areas of quality. So far all is going well on your project. The customer is happy and basic quality reports have been very good. Almost as if you are being tested, your functional manager asks you as he passes in the hall, which is NOT an input or tool and technique of Control Quality?
 - a. Inspection
 - b. Approved change request
 - c. Deliverables
 - d. Verified deliverables

6. The list of tools available to projects for quality management seems endless. Your software engineering project has several issues that need attention and you need to focus on the most critical issues first. You also have on-going work in phase 2 that seems abnormal. Which two tools would help with these issues?
 - a. Cause and Effect Process Improvement Charts and Scatter Diagrams
 - b. Pareto and Control Charts
 - c. Histograms and what-if analysis
 - d. Control Charts and Interrelationship diagrams

7. As part of the PMO you've been tasked to conduct a quick class on quality tools and the topic is standard deviation. You just covered the numbers and a basic overview. One of your junior project managers asks you to describe standard deviation. Without being technical, your answer is which of the following?
 - a. It is how far the estimate is from the highest estimate
 - b. It is how far the measurement is from the mean
 - c. It is just how correct the sample is
 - d. It is how much time remains in the project

8. Understanding the different sigma levels came up yesterday in the quality review meeting. They talked about levels that might be used in one of the control tools. The level discussed was 3 sigma. What percentage is associated with this value?
 - a. 68.26%
 - b. 99.99%
 - c. 95.46%
 - d. 99.73%

9. Two things were demanded by the sponsor. One, to stay on schedule, and the other was great quality management. One of your subject matter experts suggested conducting audits during the project. Which of the following would NOT result from quality audits?
 - a. Determination of whether project activities comply with organizational policies
 - b. Improved processes to increase productivity
 - c. Creation of quality metrics
 - d. Confirmation of the implementation of approved change requests

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10. Your company uses control charts routinely and they set the sigma values at 3 sigma. Several metrics are charted and the results have been very good. Your senior engineer brings in chart results that show seven data points in a row on one side of the mean. What should be done?
- Perform a design of experiments
 - Adjust the chart to reflect the new mean
 - Find an assignable cause
 - Nothing. This is the rule of seven and can be ignored
11. Many businesses, big and even some small ones, operate in what's called a just-in-time environment. Whether for a project or operations, a just-in-time environment will still require a higher level of attention because the amount of inventory in such a situation is generally which of the following?
- 45 percent
 - 10 percent
 - 12 percent
 - 0 percent
12. The project you are working on has an increase in cost effectiveness, increased productivity, and increased morale. It turns out you have been following good quality management practices. Which of the following is NOT true about the different approaches to quality management?
- Commonly used improvement models include the Malcom Bridge Award, OPM3 and CMMI
 - Tools used include TQM, Six Sigma and Lean Six Sigma as well as PDCA
 - Stay focused on customer satisfaction with management being totally responsible for all aspects of quality management
 - Understanding cost of quality and prevention over inspection
13. At the end of a project, the project manager finds four areas of functionality and three areas of performance that didn't go through change control. These additions reduced the schedule and cost by about 8%. The customer has expressed satisfaction with the project. What does this mean in terms of success of the project?
- The project was an unqualified success
 - The project was unsuccessful because it was gold plated
 - The project was unsuccessful because the happy customer would have paid more for the work
 - The project was successful because the team had a chance to learn new areas of functionality and the customer was satisfied

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14. The project is to install new cooling units in two downtown hotels. As the project manager, Sara is concerned that her project practices are still a little rough and asked for your expert opinion. You advised her to compare her actual or planned practices to those of other projects, both in and beyond the performing organization, to identify a basis for performance measurement, improvement ideas, and best practices. What tool & technique are you referring to?
- Design of experiments
 - Cost-benefit analysis
 - Statistical sampling
 - Benchmarking
15. You and your senior engineer are reviewing plans for a new data center. Your engineer tells you that he needs to know if there will be any performance issues from operating the power modules in a very heated environment using unshielded power during heavy power or light power consumption periods. What is the BEST quality control tool to determine if there are any performance issues given these two variables?
- Independent estimates
 - Interrelationship diagram
 - Statistical sampling
 - Scatter diagrams
16. Planning for quality is one of the most important steps a project manager can complete. Setting expectations for tools, rules and processes can have a big impact on the project and product. There are several critical outputs of the quality management plan and they are which of the following?
- Project document updates, lessons learned updates, and project plan updates
 - Meetings, seven basic quality tools, and enterprise environmental factors
 - Process improvement plan, quality metrics, and quality checklists
 - Quality metrics, cost-benefit analysis, cost of quality, and benchmarking
17. Your sponsor is a bit of a history enthusiast and is always asking about quality theories. Based on his interest you do some studying in case the topic comes up in a meeting or general conversation. Sure enough, he mentions both Plan-Do-Check-Act, a cycle of activities designed to drive continuous improvement, and Fitness for Use, the idea that equipment is built for a specific purpose and should only be measured against that purpose. He asks who the theorist associated with each is. You confidently answer with the following.
- W. Edwards Deming and Joseph Juran
 - Joseph Juran and Phillip Crosby
 - Douglas McGregor and Kaoru Ishikawa
 - Bruce Tuckman and William Shewhart

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18. There are over 20 different tools mentioned in the PMBOK. Some are very familiar to most project managers; some are not. We use the seven basic tools and we can also use the quality management control tools. Which list has the quality management control tools used in performing quality assurance?
- Control charts, histograms, network diagrams and scatter diagrams
 - Pareto diagrams, cause and effect diagrams, scatter diagrams and tree diagrams
 - Process decision program charts, affinity diagrams, matrix diagrams and activity network diagrams
 - Benchmarking, brainstorming, force field analysis and design of experiments
19. The ceremony just concluded and one of the project managers was recognized for product delivery with high quality and no noticeable defects. Before attendees left the meeting there were grumblings about the limited features offered by the product. This kind of product that has a high level of quality but does not include many of the features of comparable products is referred to as which of the following?
- Low quality
 - Low grade
 - Inaccurate
 - Sketchy
20. The local cable company just installed fiber cables up and down the streets of your neighborhood. New high speed services are the big buzz. The whole event is one you are very familiar with as your best friend is the project manager for the whole project. In a recent discussion she told you that a cost-benefit analysis was done and that she was very apprehensive about the high cost of nonconformance. She explains non-conformance cost and she asks if you can determine which of the following is NOT an example of nonconformance?
- Processing customer complaints
 - Machinery maintenance and calibration
 - Bad word-of-mouth advertising
 - Field repair work
21. Several of the tools and techniques in Quality Management can be used in various project processes. In which of the following processes would you use proprietary quality management methodologies?
- Plan Quality Management
 - Perform Quality Assurance
 - Control Quality
 - Perform Quality Management

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22. As the project manager supervising development and testing of a new drug compound for nerve damage patients, you just created a project budget, formalized a communications management plan after identifying all major stakeholders and their information needs, and even completed identification of the work packages. The morning staff meeting includes notification from your boss that you are moving to manage a higher-priority project, leaving the drug compound development project to another project manager. What should the new project manager do first?
- Enter in the executing process group
 - Initiate the Identify Risks process
 - Facilitate completion of the scope statement
 - Identify quality standards
23. To what does the following sentence refer? "The point where the benefits or revenue to be received from improving quality equals the incremental cost to achieve that quality."
- Quality control analysis
 - Marginal analysis
 - Standard quality analysis
 - Conformance analysis
24. Someone from the quality department comes to see you about beginning a quality audit of your project. Your project is in the oil and gas industry and has lots of quality requirements. The team, already under pressure to complete the project as soon as possible, objects to the audit. You should explain to the team that the purpose of a quality audit is the following:
- Part of an ISO 9000 investigation
 - To check if the customer is following its quality process
 - To identify inefficient and ineffective policies
 - To check the accuracy of costs submitted by the team
25. You are halfway through the communications and information technology project for the next Olympics. The wiring and security development is complete and the control consoles are going into place, when a lead program manager sends you a text that he is worried that your project will not meet required quality standards. What should you do in this situation?
- Assure senior management that during the Plan Quality process it was determined that the project would meet the quality standards
 - Analogously estimate future results
 - Form a quality assurance team
 - Check the results from the last quality management plan

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Quality Management Answers

1. B: Being proactive is good but dealing with the root cause and the probable effect is the best way of dealing with the problem. If a problem with quality occurs again, some other project constraint(s) must change to accommodate fixing the problem. Allow schedule to slip, choice B, could be an option but may not need to occur because schedule compression may come in other areas. Also, cutting cost does not necessarily cause the schedule to slip. Creating additional cost, rather than cutting cost, eliminates choice D. PMP workbook, page 45
2. A: There is always time to deal with quality management because improved quality leads to increased productivity, increased cost effectiveness, and decreased cost risk. Quality should produce a decrease rather than an increase in cost risk as a result of less rework, so choices B and C can be eliminated. Choice D says quality provides decreased cost effectiveness due to less rework, which is incorrect. PMBOK® Guide-Fifth Edition, section 8, pages 227-229
3. C: Quality attributes are the measurements that determine if the product is acceptable. They are based on the characteristics of the product for which they were designed. PMBOK® Guide-Fifth Edition, section 8.3, page 250
4. C: Quality is simply the degree to which the project meets requirements. Choices A and B cannot be best because there can be a cost impact (or time, risk, etc.) of exceeding expectations or adding extras. PMBOK® Guide-Fifth Edition, section 8, page 227
5. D: Verified deliverables is the only output listed. Inspection and approved change requests are tools and techniques. Deliverables is an input. PMBOK® Guide-Fifth Edition, section 8.3, page 249
6. B: The correct tools are Pareto and Control Charts, the Pareto chart for determining which to work on first and the control chart for determining abnormalities. There is no such thing as a cause and effect process improvement chart. PMBOK® Guide-Fifth Edition, section 8.1.2.3, pages 237-238
7. B: Standard deviation is the measurement of a range around the mean. Standard deviation is not covered in the PMBOK but is covered in several other sources of project management guidance. Ranges of estimates are covered in PMBOK® Guide-Fifth Edition, section 6.5.3, page 172
8. D: The correct value for 3 Sigma is 99.73. Sigma values are not discussed in the PMBOK. PMP workbook, pages 113- 114
9. C: Audits result in finding things that may be right or wrong by looking at work and processes in progress. Choices A, B and D could all come from audits. Quality metrics are an output of the Plan Quality process. They are an input to the Perform Quality Assurance process, which is the process in which quality audits take place. PMBOK® Guide-Fifth Edition, section 8.2, page 243
10. C: The rule of seven applies here. If you have seven data points in a row on the same side of the mean, statistically the mean has shifted, calling for action to correct the problem. PMBOK® Guide-Fifth Edition, section 8.1.2.3, page 238

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11. D: With a just-in-time environment, supplies are delivered when you need them and not before. Therefore, you have little or no inventory. Standard JIT inventory levels are zero. Just-in-time inventory levels are not covered in the PMBOK but is covered in the PMP workbook, page 120
12. C: The only element not true is management being totally responsibly for all aspects of quality management. The project manager is responsible with the help of the team. Management is responsible for providing adequate resources. Staying focused on customer satisfaction is a true part of Choice C. PMBOK® Guide-Fifth Edition, section 8, page 229
13. B: Gold plating, giving the customer extras in a project, wastes time and probably cost. It makes the project unsuccessful. Adding things to a project after going through change control is not gold plating. Gold plating is not covered in the PMBOK but is covered in the PMP workbook, page 56
14. D: Benchmarking is comparing actual or planned practices to those of other projects, both in and beyond the performing organization, to provide a basis for performance measurement, to generate improvement ideas, and to identify best practices. Design of experiments (DOE) is a statistical method usually applied to the product of a project and provides a "what-if" analysis of alternatives to identify which factors might improve quality. Statistical sampling involves choosing part of a population of interest for inspection instead of measuring the entire population. Cost-benefit analysis is a comparison of the cost of quality to the expected benefit. The benefit of quality must outweigh the cost of achieving it. The primary benefit of quality is increased stakeholder satisfaction and less rework, which means higher productivity and lower cost. PMBOK® Guide-Fifth Edition, section 8.1.2.4, page 239
15. D: Scatter diagrams are used to determine if there is any correlation between different variables. Independent estimates are used in procurements and negotiations; interrelationship digraphs are used to show logical relationships between items. Benchmarking might be of use but would not be the best tool in this scenario. PMBOK® Guide-Fifth Edition, section 8.1.2.3, page 238,245
16. C: Process improvement plan, quality metrics and quality checklists are all outputs of the Plan Quality Management Process. The other lists have tools and techniques as well as inputs from the process. PMBOK® Guide-Fifth Edition, section 8.1., page 232
17. A. Your response should have been W. Edwards Deming and Joseph Juran. Kaoru Ishikawa is known for the cause and effect diagram; Bruce Tuckman is known for the stages of team development. William Shewhart actually came up with PDCA but Deming is better known for it. Phillip Crosby is known for the idea of the cost of quality, advocating prevention over inspection, and the concept of zero defects. Douglas McGregor is an HR theorist known for the X and Y theory. PMP Workbook, Quality Management, page 108
18. C: Process decision program charts, affinity diagrams, matrix diagrams and activity network diagrams is the only list with quality management control tools. The other lists have some quality control tools but also have tools from the seven basic tools list and the additional tools list. PMBOK® Guide-Fifth Edition, section 8.2, pages 242-246

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19. B: Products that are produced at an acceptable level of quality and meet the desired requirements of the customer but have limited functionality and features compared to similar products are referred to as low grade. PMBOK® Guide-Fifth Edition, section 8, page 228
20. B: Machinery maintenance and calibration is an appraisal function that is included in the cost of conformance. All other costs listed are costs of nonconformance. PMBOK® Guide-Fifth Edition, section 8.1.2.2, page 235
21. A: Proprietary quality management methodologies (such as Six Sigma, Lean Six Sigma, Quality Function Deployment, and CMMI) are used as tools & techniques in the Plan Quality Management process. PMBOK® Guide-Fifth Edition, section 8, page 229
22. D: The previous project manager did not complete the planning; thus, planning should be completed first, followed by executing. Identifying risks and quality standards are both done in the planning process group, but quality standards are identified prior to risk identification in the project. PMBOK® Guide-Fifth Edition, section 8.1, page 231
23. B: Marginal analysis is the point where the benefits or revenue to be received from improving quality equals the incremental cost to achieve that quality. Marginal Analysis is not covered in the PMBOK but is covered in the PMP workbook, page 120
24. C: The main purpose of an audit is to identify inefficient and ineffective policies. Audits don't check for customers following processes or cost accuracies submitted by the team. They also have nothing to do with ISO 9000 investigations. PMBOK® Guide-Fifth Edition, section 8.2.2.2, page 247
25. C: The correct choice is to form a quality assurance team. Checking results from a previous quality management plan doesn't solve anything and analogous means comparing or making an analogy to something from the past. Assuring your senior management that, because it was in the plan, all will be well may be something you do, but only after and maybe as a result of forming the quality assurance team. PMBOK® Guide-Fifth Edition, section 8.2, pages 242-243

Section and Knowledge Area Tests

Human Resources Management Questions

1. You realize the value of training and made sure all of your junior team members received the required training to perform their activities. In early work assessments, you are concerned to discover that one of your team members is still lacking needed job competency and requires further improvement. What is the best course of action?
 - a. Replace the team member with an experienced resource
 - b. Have an urgent discussion with the team member and inform him that he will be out of the project if there is no immediate improvement
 - c. Have a discussion with the functional manager about the lack of competency of the team member
 - d. Identify the team member's current training needs and provide more focused training

2. As the project manager you are working on a complex plant decommissioning project that has rigorous quality standards and tight schedule constraints. You just found out that one of the key deliverables in the project was not completed because the responsible team member was assigned to another higher-priority project by her functional manager. With whom do you need to address the issue?
 - a. The sponsor
 - b. The president of the company
 - c. The customers and the functional manager
 - d. The team member's functional manager

3. A project manager recently got her PMP certification and joined the professional Project Management Institute (PMI). The local chapter meets on a regular basis for professional development and to cover new opportunities, trends, and issues in project management. Satisfaction gained by the project manager from association with this group is most closely aligned with which of the following?
 - a. Victor Vroom's Expectancy Theory
 - b. The third level of Maslow's Hierarchy of Needs
 - c. Herzberg's Motivator-Hygiene Theory
 - d. Theory X

4. You are currently managing your team by completing performance appraisals, resolving issues and conflicts, observing, using issue logs, keeping in touch, providing feedback, and various other methods. These describe which one of the following human resource management processes?
 - a. Plan Human Resource Management
 - b. Acquire Project Team
 - c. Develop Project Team
 - d. Manage Project Team

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5. A project manager is focusing on enhancing project performance by team building and improving the competencies, team interaction, and overall team environment. While referring to Tuckman's model, she notices that the team members begin to start trusting and working together as they adjust work habits and behaviors to work as a team. What stage of team development is the project manager referring to?
 - a. Forming
 - b. Adjourning
 - c. Storming
 - d. Norming

6. The project you are working on was simple at first but as the number of stakeholders grew and as after-hours work became the norm, it became more difficult to get everyone together. You decide to have all the team members meet in the same physical location for the first time. Keeping the meetings together and in person may be the best solution for your issues so you are using collocation. Which of following does NOT fit the definition?
 - a. The goal is to enhance team members' ability to perform as a team
 - b. It is also called a war room
 - c. It is meant to identify concerns and issues and to come up with mutually agreed-upon solutions
 - d. The goal is to identify the individual(s) or team responsible for project issues and inform them about it

7. You are in planning for all areas of human resources including identifying and documenting project roles, responsibilities, required skills, competencies, reporting structure, and other items. Which one of the following is NOT a tool and technique in this process?
 - a. Hierarchical-type organizational charts
 - b. Recognition and rewards
 - c. A responsibility assignment matrix
 - d. Organizational theory

8. In a thorough review of the charter and scope statement you see that senior management wants quality audits conducted to insure all the current policies and procedures are followed. During the first audit, the senior auditor wants to look at team member certification requirements and review the training plans. You should refer the auditor to which of the following?
 - a. Staffing management plan
 - b. RACI chart
 - c. Training and certification management plan
 - d. Resource breakdown structure

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9. You are working on a critical software development project. Significant application development is required along with lots of testing to insure quality. Over the last few months, one of your coders has been working very hard and may even be working on her own from home. Her work is outstanding and to show your appreciation, you awarded her the 'team member of the month' three months in a row. What is the most likely impact this will have on the project team?
- This will initiate a healthy competition among the team members
 - This will drastically improve team cohesiveness
 - This will negatively impact team morale
 - There will be no impact because team members hardly care about recognition and rewards
10. Which of the following is the best definition for the "halo effect"?
- To promote from within
 - To hire the best
 - To move people into project management based on good performance in their technical fields
 - To move people into project management because they have had project management training
11. Project sponsors have an important role in helping projects and dealing with the project manager. Unfortunately sponsors are often assigned based on owning the same functional area the project is focused on. To make sure your project sponsor is able to do his job, you need to know which of the following BEST describes their role.
- Helping to plan activities
 - Helping to prevent unnecessary changes to project objectives
 - Identifying unnecessary project constraints
 - Helping to develop the project management plan
12. One of the key skillsets project managers need is basic soft skills. They need to be able to communicate. There are several methods for dealing with conflict. You have two issues that need your attention. For problem number one you need a resolution technique that will generate the MOST lasting solution and with problem two, things are getting a little heated. In problem order, what are the two methods that would be used for these conflicts?
- Forcing and Smoothing
 - Smoothing and Compromise
 - Compromise and Negotiations
 - Problem solving and Withdrawal

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13. Project managers should have identified conflicts as early into the project as possible. High-level conflicts may have been identified in the charter and even more detailed in the scope statement. The most common causes of conflict on a project are schedules, project priorities, and what?
- Personality
 - Resources
 - Cost
 - Management
14. The project has been challenging to manage. Everyone has been on edge due to pressure to complete the project on time. Unfortunately, the tension has grown to the point where team meetings have become shouting matches and little work is accomplished during the meetings. One team member asks to be excused from future team meetings, as all the shouting upsets him. Meanwhile, the sponsor has expressed interest in attending future team meetings in order to better understand how the project is going and the issues involved in completing the project, and the customer has started discussions about adding scope to the project. In this situation, it would be BEST for the project manager to:
- Ask the sponsor if the information needed could be sent in a report rather than have her attend the meetings
 - Inform the team member who asked to be excused from the meetings of the value of communication in such meetings
 - Involve the team in creating ground rules for the meetings
 - Hold a team-building exercise that involves all the team members
15. Evaluating your team and individuals on their performance is part of being a good project manager. It often gets forgotten because it is a functional manager's job during operations. There are two types of performance appraisals, one is project performance appraisals, the other is team performance assessments. The difference is that project performance appraisals focus on:
- How an individual team member is performing on the project
 - An evaluation of the project team's effectiveness
 - A team-building effort
 - Reducing the staff turnover rate
16. Early in the project, in your role as the project manager, you needed to solve a complex problem. The issue was resolved with a facilitated team decision about what needed to be done. A few months later, the problem resurfaced. What did the project manager MOST likely NOT do?
- Perform proper risk analysis
 - Confirm the decision solved the problem
 - Have the project sponsor validate the decision
 - Use an Ishikawa diagram

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17. The project cost performance index (CPI) is 1.03, the benefit cost ratio is 1.6, and the latest round of performance reviews identified few needed adjustments. Collocation to a new building was completed when the project started. Everyone was excited to have all new facilities. The sponsor is providing adequate support for the project and few unidentified risks have occurred. In an attempt to improve performance, the project manager spends part of the project budget on new chairs for the team members and adds the term "senior" to each team member's job title. Which of the following is the MOST correct thing that can be said of this project or the project manager?
- The project manager has misunderstood Herzberg's theory
 - The project is slowly spending more money than it should and the project manager should begin to watch cost more carefully
 - The performance review should be handled better to find more adjustments
 - The project manager should use good judgment to determine which variances are important
18. The new project is exciting to both the project manager and the team. This is the project manager's first assignment as project manager. The team feels they will be able to complete work that has never been tried before. There are 29 people contributing to the product description and the team consists of 9 experienced experts in their field. Part way through planning, three highly skilled technical team members are disagreeing about the scope of two of the deliverables. One is pointing to the draft WBS and saying that two additional work packages should be added. Another is saying that a particular work package should not even be done. The third team member agrees with both of them. How should the project manager BEST deal with the conflict?
- He should listen to the differences of opinion, determine the best choice, and implement that choice
 - He should postpone further discussions, meet with each individual, and determine the best approach
 - He should listen to the differences of opinion, encourage logical discussions, and facilitate an agreement
 - He should help the team focus on agreeable aspects of their opinions and build unity by using relaxation techniques and common-focus team building
19. The project is just starting and has stakeholders from 14 different departments. The project charter was signed by one person and contains over 30 major requirements that must be met on the project. The sponsor has informed the project manager that the SPI must be kept between 0.95 and 1.1. A few minutes of investigation resulted in the identification of 34 stakeholders, and the schedule objectives on the project are constrained. The project manager has just been hired. Which of the following types of project management power will BEST help the project manager gain the cooperation of others?
- Formal
 - Referent
 - Penalty
 - Expert

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20. To successfully motivate a team in today's high tech-high demand environment, which motivational theories should the project manager use to maintain a happy, productive team?
- Expectancy Theory and Theory X
 - Theory Y and Bloom's Taxonomy Hierarchy
 - Myers Briggs Factors and Expectancy Theory
 - Theory Y, Expectancy and Herzberg's Hygiene Factors
21. A key job for the project manager is to understand the inputs for the process that he or she will execute during the project. While managing the project team, the "manage team process," which of the following are considered valid inputs according to the PMBOK Guide, 5th edition?
- Project Performance Appraisals
 - Resource Calendars
 - Activity Resource Requirements
 - Human Resource Management Plan
22. Every project will have some team members who have worked together before and some who have just joined a team. Understanding team stages and which stage the team is in now may be very helpful for team building, proper motivation and improving overall performance. You have six team members who have all worked together in three previous projects. They are experienced in their fields and may be thought of Theory Y workers. Which of the following best describes the stages of team development for these new members?
- Forming and Norming
 - Storming and Norming
 - Storming and Adjourning
 - Adjourning and Performing
23. One of the key steps in the executing process group is acquire project team. Project managers need to acquire the rest of their teams for any current or future project work. They can use pre-assignment and take into account virtual teams, but eventually may need to use a tool to help make final decisions. To rate and score potential team members which of the following tools would be used and what are the selection criteria?
- Acquisition with skills, resource calendars and internal factors
 - Negotiation with availability, cost and project staff assignments
 - Multi-criteria decision analysis with cost, experience and attitude
 - Interrelationship Diagram with availability, experience and skills
24. The Human Resources Plan includes information on roles and responsibilities and project organization charts. It also includes a staffing management plan. Which of the following is the best list of things included in the staffing management section of the HR plan?
- Role, authority, responsibility, competency, and lessons learned
 - Staff acquisition, resource calendars, availability, cost and experience
 - Training needs, recognition and rewards, staff release plans and compliance
 - Staff acquisition, compliance, safety, negotiation and virtual teams

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25. Which of the following is NOT true for a Responsibility Assignment Matrix (RAM)?
- a. Defines what project team is responsible for each WBS component
 - b. Defines what project member is responsible for each activity
 - c. Text description of roles, responsibilities, authorities
 - d. Defines all people associated with each activity

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Human Resources Management Answers

1. D: The role of the project manager is to make sure that team members get the required training and assistance to perform their activities. PMBOK® Guide-Fifth Edition, section 9.3.2.2, page 275
2. A: It is one of the key roles of the sponsor to prevent unnecessary changes in the project, in addition to providing funding for the project. PMBOK® Guide-Fifth Edition, section 2.2.1, page 32
3. B: The third level of Maslow's Hierarchy of Needs is the need for social connections or belonging, such as love, affection, approval, friends, and association. Vroom's Expectancy Theory demonstrates that employees who believe their efforts will lead to effective performance and who expect to be rewarded for their accomplishments remain productive as rewards meet their expectations. Herzberg's Motivator-Hygiene Theory suggests that hygiene factors can destroy motivation, but improving them under most circumstances will not improve motivation. Motivating people is best done by rewarding people and letting them grow. Theory X managers believe that average workers are incapable, avoid responsibility, have an inherent dislike of work, and are only interested in their own selfish goals. PMP Exam Workbook, pages 131-132
4. D: Manage Project Team is the process of managing the team through observing, using issue logs, keeping in touch, providing feedback, completing performance appraisals, resolving issues and conflicts, and other factors. PMBOK® Guide-Fifth Edition, section 9.4, page 279
5. D: The team members are in the Norming stage as they are adjust work habits and behaviors to work as a team. They begin to start trusting and working together. PMBOK® Guide-Fifth Edition, section 9.3.2.3, page 276
6. D: The objective of collocation, or the war room, is to build a better relationship among the team members, enhance their ability to perform as a team, identify concerns and issues in the project, and figure out solutions for those issues. The idea is not to point fingers at other team members or get involved in any kind of argument. PMBOK® Guide-Fifth Edition, section 9.3.2.5, page 277
7. B: Recognition and rewards are used as a tool & technique in the Develop Project Team process, not in the Plan Human Resource Management process. Hierarchical-type organizational charts, a responsibility assignment matrix and organizational theory all are used as tools & techniques in the Develop Human Resource process. PMBOK® Guide-Fifth Edition, section 9.3.2.6, page 277
8. A: The staffing management plan identifies the training needs and certification requirements of the team members. One example of a responsibility assignment matrix is a RACI chart, which can be used to ensure clear divisions of roles and responsibilities. Training and certification management plan is a fake term. A resource breakdown structure (RBS) looks like a typical organizational chart, but this one is organized by types of resources. An RBS can help track project cost as it ties to the organization's accounting system. PMBOK® Guide-Fifth Edition, section 9.1.3.1, page 266
9. C: A project manager can kill team morale by consistently rewarding the same individual repeatedly as it can be perceived that the project manager is playing favorites. If the team

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members believe that the rewards are “win-lose” and that only certain team members will be rewarded, it may demoralize them. In this kind of situation, the project manager can consider team awards, which is a win-win as all the team members are recognized for their contributions. PMBOK® Guide-Fifth Edition, section 9.1.3.1, page 266

10. C: The halo effect refers to the tendency to move people into project management because they are good in their technical fields. Just because a person is good in a technical field does not mean he or she will also be a good project manager. PMP Exam Workbook, page 133
11. B: Although the sponsor may help plan some of the activities, it is not his or her exclusive duty. Some project constraints come from the sponsor and no constraint is considered unnecessary. The project management plan is created by the team and approved by the sponsor and other management. Since the project objectives are stated in the project charter, and it is the sponsor who issues the project charter, helping to prevent unnecessary changes to project objectives is the correct answer. PMBOK® Guide-Fifth Edition, section 2.2.1, page 32
12. D: For problem one the correct method would be problem solving, also referred to as collaborating. Problem solving normally takes more time, but it gets buy-in from everyone, generating a more lasting solution. Problem number two requires withdrawal, which would give time for things to cool off. PMBOK® Guide-Fifth Edition, section 9.4.2.3, page 283
13. B: According to the PMP workbook and other PMI sources, the top sources of conflict are schedules, project priorities, resources, and technical opinions. Surprisingly, "personality" is not a major cause of conflict. PMP Exam Workbook, page 130
14. C: The best thing to do would be to set up new ground rules governing team behavior and then plan a team-building exercise. Here is a situation where all four choices are possible, but there is one BEST answer. Asking the sponsor if the information could be sent in a report does not solve the root cause of the problem described. Informing the team member of the value of communication in meetings merely dismisses the concerns of the team member and might cause anger. A team-building exercise would take planning and so could not be done right away. Remember, the sponsor might be attending the next meeting and at least one team member might not attend because of past problems. PMBOK® Guide-Fifth Edition, section 9.3.2.3, page 277
15. A: Team performance assessments evaluate the project team’s effectiveness as a whole. Project performance appraisals deal with how each team member is performing on the project. The correct choice is A, how an individual team member is performing on the project. Choice B refers to the whole team and the other 2 choices may be affected by either of the assessments but do not fit the definition. PMBOK® Guide-Fifth Edition, section 9.4.2.2, page 282, and 9.4.1.3, page 281
16. B: The issue was resolved with a team-facilitated meeting but we have no indication that the problem was solved. In the real world many times you might assume the problem is solved. The steps of problem solving include: implement a decision, review it, and confirm that the decision solved the problem. You may want to argue about this one, but save your breath. These are just like questions on the exam. PMP Exam Workbook, page 130
17. A: According to Herzberg’s Theory, fixing bad working conditions will help motivate the team, but improving conditions will not improve motivation. Buying new chairs and enhancing the team

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members' titles improves existing working conditions. The project manager needs to focus on the motivating agents and not the hygiene factors. In choice A, there is no indication that the costs are trending in any particular direction. In choice B, there is no reason to think that performance reviews would turn up more adjustments. The project manager should always use good judgment but nothing in this question talks about judgment regarding variances, so choice D is eliminated. PMP Exam Workbook, page 131

18. A: He should listen to the differences of opinion, determine the best choice, and implement that choice. Listen, make a choice, and solve the problem. Postponing discussions would prolong the problem and still require group coordination. Facilitation with the group implies consensus and is not the optimum choice. Compromise might be an option but was not specifically mentioned. PMBOK® Guide-Fifth Edition, section 9.4.2.3, page 283
19. A: Generally, the best forms of power are reward or expert. The project manager has not had time to become a recognized expert in the company and reward power is not included as a choice here. This leaves formal power as the only logical answer. PMP Exam Workbook, page 129
20. D: Theory Y, Expectancy Theory, and Herzberg's Hygiene Factors give you the best chance in this situation. These theories are finding widespread acceptance in today's business environment. In choice A, Theory X applies to workers who are mistrusted. In choices B and C, the Meyers Briggs and Bloom Taxonomy are not HR theories. PMP Exam Workbook, pages 131-132
21. D: The Human Resource Management Plan is the only input to the manage project team process. A project performance appraisal is a tool and technique, resource calendars are an output of acquire project team and activity resource requirements are an input to the HR plan. PMBOK® Guide-Fifth Edition, section 9.4.2.2, pages 279 and 282
22. B: The question is referring to Tuckman's stages of team development. In this case the team members have been with the team for a while and have been on other projects together as a team. They are most likely forming and storming. They may be performing but that was not a choice. Adjourning eliminates choices C and D. PMBOK® Guide-Fifth Edition, section 9.3.2.3, page 276
23. C: The tool used to help in acquiring the project team is called a multi-criteria decision analysis. The criteria include cost, experience and attitude. Other criteria are availability, experience, ability, knowledge, skills and international factors. Choices A and B, acquisition and negation, are also tools used to select teams but are not used to rate and score potential team members. PMBOK® Guide-Fifth Edition, section 9.3.2.5, page 271
24. C: Choice C has 4 of the seven listed elements, training needs, staff release plans, compliance and recognition and rewards. The other elements are staff acquisition, resources calendars and safety. In choice D, Negotiation and virtual teams are tools for acquire resources; Choice A includes the elements of roles and responsibilities. Choice B has 2 of the elements but the other three are parts of a multi-criteria decision analysis chart. PMBOK® Guide-Fifth Edition, section 9.1.3.1, page 265
25. C: The resource assignment matrix is designed to show who owns each activity. Choice A, B and D all indicate various elements of who is responsible for the work. Choice C includes a text description of roles and authorities which might be in a staffing management plan, but not the RAM. PMBOK® Guide-Fifth Edition, section 9.1.2.1, page 262

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Communications Management Questions

1. Communication is key to the success of a project. As the project manager, you have three stakeholders with whom you need to communicate, giving you six channels of communication. There are two options; option one, add one stakeholder, or option two, add five stakeholders. What is the new number of channels for each option?
 - a. 7 and 22
 - b. 10 and 36
 - c. 12 and 48
 - d. 16 and 56
2. Two of your team members are having a heated discussion about a complicated work package. They are talking about who's doing what and in what order. To really understand what is going on, you should pay MOST attention to which of the following?
 - a. What is being said and by who
 - b. What is being said, who is saying it, and the time of day
 - c. Physical mannerisms and what is being said
 - d. The pitch and tone of the voices, and physical mannerisms
3. You are working on an international project and have team members in over 11 countries. This project represents over 30% of your company's revenue expectation for the fiscal year and as the project manager you are very concerned about its success. The length of the project schedule is acceptable. What type of communication should be used?
 - a. Informal verbal communication
 - b. Formal written communication
 - c. Formal verbal communication
 - d. Informal written communication
4. Communications covers a lot of territory for project managers. Knowing what the key processes are may be helpful. What is the term used for processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control and monitoring, and the ultimate disposition of project information?
 - a. Project Communications Management
 - b. Project Communications Plan
 - c. Stakeholder Communications
 - d. Program Communications

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5. Developing an appropriate approach and plan for project communications based on the stakeholder's information needs and requirements, and available organizational assets describes which process?
 - a. Manage Communications Management
 - b. Plan Communications Management
 - c. Control Communications Management
 - d. Communications Analysis

6. Planning communications management is about who needs what information, what format, how the information is retrieved, where the information is stored. Which of the following are NOT inputs used in this process?
 - a. Project Management Plan and stakeholder register
 - b. Stakeholder register and enterprise environmental factors
 - c. Organizational process assets and enterprise environmental factors
 - d. Project Management Plan and Communications Management Plan

7. You are managing a very complex project. The communications plan was over 11 pages. You have over 340 stakeholders and have not even computed the communications channels. The project updates are required to be out every two weeks. Early in the morning the reports get sent out. What method of communications is being used?
 - a. Communication requirements analysis
 - b. Stakeholder management strategy
 - c. Pull communications
 - d. Push communications

8. You are the project manager of an innovative virtual reality project in your company. You closely monitor and manage your project and are happy with project progress. You review status deliverables with your team members just prior to the project stakeholder status update meeting. Your team developed a prototype, an impressive model of the proposed end product, and presented it to the stakeholders for reactions and feedback. This was an iterative process, and the prototype was modified numerous times to incorporate the feedback until the requirements were finalized for the product. Which one of the following BEST reflects your status meeting?
 - a. You do not mention anything about the prototype
 - b. You demonstrated the prototype to the stakeholders and obtained their formal approval
 - c. You reported on the progress of the prototype and point out that it's a completed task
 - d. You reviewed the technical documentation of the prototype and obtained formal approval

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9. While planning communication for the process evaluation project you are aware that you have to pay particular attention to your body mannerisms, facial expressions, and tone and pitch of your voice to communicate effectively. Which of the following are TRUE about communication?
- Acknowledge means the receiver has received and agreed with the message
 - Encode means to translate ideas or thoughts so that others can understand them
 - Noise has nothing to do with sending and receiving messages
 - Verbal and nonverbal communication is weighted at about 55% and 35%.
10. Your company has access to just about all of the available technologies. Your meetings have used virtual team presentation software for two years with great success. While editing your communications plan, you again consider the communication technologies you have available. Which communication technology you use and its effect on the project will take into account all of the following factors EXCEPT:
- Urgency of the need for information: Are regularly issued written reports enough for the project, or is frequently updated information needed at a moment's notice?
 - Expected project staffing: Are the proposed communication systems compatible with the experience and expertise of the project participants, or is extensive training and learning required?
 - Duration of the project: Is the available technology likely to change before the project is over?
 - Reason for the distribution of information: What are the reasons for distributing information?
11. As a senior application developer you drew the short straw to complete the project reports. The project is a simple construction build and has made good progress for the first several reports. Your communications plan indicates that reports describe where the project now stands regarding performance measurement baseline in cost, schedule, scope, and quality. This type of report is called which of the following?
- Status report
 - Quality report
 - Progress report
 - Forecast report
12. You are a subject matter expert on a project that has had three different project managers. Both the stakeholder register and communications management plan are completed and detailed. It is now time to execute your communications management plan. Which one of the following is TRUE regarding Manage Communications?
- Manage Communications will end when the product has been accepted
 - Communication methods such as individual and group meetings, video and audio conferences, computer chats, and other remote communication methods are used to manage communications
 - Manage Communications is a monitoring & controlling process
 - Manage Communications only carries out predetermined communication and does not respond to unplanned requests from stakeholders

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13. Throughout the project you are monitoring and controlling communications. You are trying to make sure the right stakeholders are getting the communications they need and that the communication is classified as effective. Of the data available to you, which is the LEAST useful?
- Change requests
 - Work Performance data
 - Issue log
 - Project Communications
14. Because projects are rated as 90% communications, there is a lot of room for both noise and communications constraints. Which one of the following is an example of a project communication constraint?
- Ad-hoc conversations
 - Demands for formal reports
 - Stakeholder management
 - Team members in different geographical locales
15. The mantra for Western Electronics has always been great customer service. This philosophy carries over to all project work and gets emphasized at every meeting. Nick is the project manager for three projects and all have the same focus on solid customer relationships. Several early meetings before work began were all about getting to know and understanding the client. Which one of the following is a valid reason for Nick's belief in the importance of customer relationships?
- A poor communications model between Nick and the customer will affect his project bonus since the client completes Nick's performance evaluation
 - Nick needs to educate the customer on the processes and the client isn't very familiar with basic project management
 - The customer is always right
 - The communications between Nick and his customers can convey project objectives more clearly than can language in project contracts
16. Everybody talks about lessons learned: who needs to write them, when they get written, where they get archived. Why should a project team complete lessons-learned documentation?
- To ensure project closure
 - To help future project teams complete their projects more accurately
 - To show management what they've accomplished on the project
 - To show the project stakeholders what they've accomplished on the project
17. It is commonly acknowledged one of the most important skills a project manager should develop is their communication skills. Which of the following is not accomplished with communication skills?
- Setting and managing expectations
 - Reviewing the work breakdown structure to ensure team members know what has to be done
 - Persuading a person or organization to perform an action
 - Listening actively and effectively

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18. The contract selected is a cost reimbursable contract. It has been closely controlled. You have a privity clause that limits communications with the primary contractor. You have a great relationship with your contractor and have worked with them on three other contracts. In the last meeting several recommended changes were identified and the contract will need to be amended. What is the most appropriate communications type when dealing with changes to a contract?
- Informal written via email
 - Formal written via email or document
 - Formal verbal in person or on the phone
 - Electronic memo
19. Your communications plan should be used to outline who, what, when, where, how and how often for all methods and models of communications. Which of the following are NOT factors that influence the method of communication distribution between team members?
- How the information can be retrieved
 - Time zones, languages barriers and cross cultural considerations
 - Local government requirements and regulations
 - Communications formats and where it is stored
20. You are leading your first international project and discover that it requires constant communications with influential stakeholders. You are working in three very different time zones and the International Date Line is making things more complicated. All of these factors were known, yet there are still a lot of communications problems. These problems are called noise or blockers. Which of the following are the BEST examples of noise or blockers?
- Educational differences, hostility, different language or cultures
 - Differences in motivation, educational differences, feedback, heavy machinery
 - A scenic view, the WBS dictionary, not being collocated
 - Cultural differences, noisy surroundings, vertical or pull communications
21. Language and culture can be issues in today's global projects. Understanding different dialects and even slang can cause issues. Today is one of "those days" and you are having difficulty concentrating on what a stakeholder is saying during a business meeting. Some of the words are difficult to understand and you find yourself saying you understand when you do not. What technique can help you understand better?
- Repeat the message back to the stakeholder
 - Ask them to write everything down
 - Asked to postpone the meeting until you feel better
 - Ask them to speak slower

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22. As the project manager you need to be aware of your nonverbal communications including proper physical mannerisms, such as facial expressions, hand gestures, and body language, while conveying a message. You also need to be particularly observant to pitch and the tone of your voice, and you should try to receive comments and feedback from the receiver while communicating. Your communication skills will be utilized most during which of the following processes?
- Communication Change Control
 - Report Performances
 - Plan Communications
 - Manage Communications
23. Your environmental clean-up project to clean up waste products for one of your clients has been very successful and rewarding. A key stakeholder articulates her concerns about missing relevant information in recent project status reports. She says some deliverables are being misrepresented. She is also is worried that her team has no visibility in this project and has requested you look into the matter as soon as possible. What should you do FIRST in this situation?
- Revisit the information distribution process in your project
 - Have an urgent meeting with the stakeholders to understand what her team is working on
 - Ask the stakeholder to send the status of her team so that you can incorporate them in your report
 - Revisit your communications management plan
24. The project has over 85 stakeholders and you review your plan for large distribution methods. You decided to post the information in an online knowledge repository for access at the discretion of the stakeholders. This type of communication method is known as which of the following?
- Interactive communication
 - Push communication
 - Expert judgment
 - Pull communication
25. As a project manager, you are required to report project performance to all your stakeholders on a regular basis. Which one of the following reports can utilize earned value measurement (EVM) in its preparation for management?
- Status reports, trend reports, and performance reports
 - Stakeholder register reports, simulation model reports, and trend reports
 - Performance reports, inventory data reports, and budget reconciliation reports
 - Meetings, closure reports, and audit reports

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Communications Management Answers

1. B: In this question the project manager must be counted as one of the stakeholders. Counting the PM there are actually 4 stakeholders to begin with and 6 channels of communication. The question is asking how many total channels of communication you will have with a team of 5 people for option one and then 9 for option two. The formula is $[n \times (n-1)]/2$ or $5 \times 4/2 = 10$ and $9 \times 8/2 = 36$. PMBOK® Guide-Fifth Edition, section 10.1.2.1, page 290
2. D: The pitch and tone of the voices, and physical mannerisms is the best choice. Choice C has elements of non-verbal communications which represents 55% of communications; choice D adds pitch and tone which is paralingual. Words represent only 7% of communication. PMP Workbook, page 134
3. B: In general most communications in the project is formal written. In a project with complex communications, formal written communications is the best means of communications to ensure clear communications and have a written record. PMBOK® Guide-Fifth Edition, section 10, page 287 and PMP Workbook, pages 138-139
4. A: Project Communications Management is defined as the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control and monitoring, and the ultimate disposition of project information. Stakeholder Management is a process to identify impacted individuals and groups. Project Communications Plan is about developing approaches to communications based on needs of the stakeholders. Program Communications is a made up term. PMBOK® Guide-Fifth Edition, section 10, page 287
5. B: Plan Communications Management involves developing an appropriate approach and plan for project communications based on stakeholders' information needs and requirements, and available organizational assets. Managing is about creating and collecting, while control is about monitoring and controlling communications. Communication requirements analysis is an input to manage communications but just plain communications analysis isn't included in the PMBOK. PMBOK® Guide-Fifth Edition, section 10, page 287
6. D: The Project Management Plan is an input, but the communication management plan is an output of this process step. All of the other listed pairs are inputs to the process. PMBOK® Guide-Fifth Edition, section 10, page 289
7. D: Push communications describes a method that involves just sending out the reports. Sending could have involved several methods. Pull communications is posting the information for stakeholders. Choices A and B are not communications methods. PMBOK® Guide-Fifth Edition, section 10.1.2.4, page 295
8. C: Because this is a status meeting you reported on the progress of the prototype and point out that it's a completed task. You had already completed the prototype and should just report on the progress of the project in a status meeting rather than demonstrating any prototype or reviewing any technical documentation. PMBOK® Guide-Fifth Edition, section 10.2.2.5, page 301, and PMP Workbook, page 138

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9. B: The only statement that is true is that encode means to translate ideas or thoughts so that others can understand them. Choice A, acknowledgments, means the receiver has received the message but does not mean that the receiver necessarily agrees with the message. Noise communication blockers play a vital role in effective communications. Verbal communications is weighted at 7% and nonverbal at 55%. PMP Workbook, page 134, and PMBOK® Guide-Fifth Edition, section 10.1.2.3, page 293
10. D: Communication technology will take into account urgency of the need for information, expected project staffing, and duration of the project, but not the reason for the distribution of information. PMBOK® Guide-Fifth Edition, section 10.1.2.2, page 292
11. A: Status reports address the current condition of a project, including risks and issues. Progress reports refer to work that has been completed during a reporting period and forecasts refer to future scheduled work. PMBOK® Guide-Fifth Edition, section 10.2.2.5, page 301
12. B: Communication methods such as individual and group meetings, video and audio conferences, computer chats, and other remote communication methods are used to manage communications. Stakeholders may need information distributed even after the product has been accepted as they want to get information about the closure of the project and the contract. Manage Communications is an executing process. It carries out not only predetermined communication but also handles responses to unplanned requests from stakeholders. PMBOK® Guide-Fifth Edition, section 10.2, page 297
13. A: The change requests are the least useful of this list. They are in fact an output of the control communications process. All of the other listed items are inputs to the control communications process and would be useful to determine if the communications has been effective. PMBOK® Guide-Fifth Edition, section 10.3, page 303
14. D: Team members who are not located physically close together can be a communications constraint, since it can be tougher to communicate when distance between team members exists. Ad-hoc communications are like side-bars and will happen all the time. Stakeholder Management is a process, not a constraint. Demands for formal reports may be considered a constraint, but certainly not more than team members not collocated. PMBOK® Guide-Fifth Edition, section 9.3.2.5, page 277
15. D: Nick and the customer's relationship can allow clearer communications on project objectives than what may be expressed in project contracts. The contract should take precedence on any issues but direct contact is often the best way to achieve clear and concise communication. Choice A may be true but the focus on personal gain rather than the good of the project is not the best answer. Choice B may also be required but is not the reason for establishing strong relationships. Choice C may be perceived to be true but a contract will take precedence in any disagreements. Some may argue that the customer is not always right; we just need to make them believe it. No direct PMBOK reference. PMP workbook, page 162
16. B: The main purpose of lessons learned is to help future projects. Documentation of both pluses and minuses in a project can be very helpful to future project managers. Lessons learned are part of project closure but do not ensure it. And the purpose of lessons learned is not to show project or individual accomplishments. PMBOK® Guide-Fifth Edition, section 10.2.3.4, page 303

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17. B: Reviewing the work breakdown structure is a technical skill, not a communication skill. Setting and managing expectations, persuading, and good listening skills are all communications skills. Many think it is the technical, financial, risk, quality and scope management skills that make projects successful. They are important, but communication is essential to all of them. PMBOK® Guide-Fifth Edition, section 10, page 287
18. B: A contract is a legally binding document and, as such, all communication about contracts should be formal and in writing. The method of transmission can be email or an attached document. Even with the great relationship you have with this vendor, informal or verbal communications is not appropriate for a contract. An electronic memo is also very informal. PMBOK® Guide-Fifth Edition, section 10, page 287, and PMP Workbook, page 138
19. C: Local government requirements and regulations may affect communications in general with the local city or county government, but does not affect communications distribution with your project team. How the information is retrieved, where and what format it is stored in, time zones, and cultural considerations are all things that will affect communications. PMBOK® Guide-Fifth Edition, section 10.1, page 290
20. A: Educational differences, hostility, different language or cultures are all examples of noise or blockers. Feedback, a scenic view and heavy machinery could cause noise but by themselves are not noises. The WBS dictionary should enhance communications, not be a blocker. Vertical (pull) communications is a type and method of communication, not a blocker. Not being collocated is normal and would not be a blocker or noise. PMBOK® Guide-Fifth Edition, section 10.1.2.3, page 293, and PMP Workbook, page 137
21. A: Part of effective communications is ensuring that the message from sender to receiver is properly decoded. An effective way to do this is to repeat the key points back to get clarity. With a dialect problem, speaking slower does no good. Postponing the meeting solves nothing and writing everything down during a meeting is impractical. Meeting minutes could be used but they are essentially verifying decoding in writing after the meeting. PMBOK® Guide-Fifth Edition, section 10.1.2.3, pages 293-294
22. D: In every project, execution is where the bulk of the work occurs. Manage communications is the execution of your communications management plan, which covers a broad range of topics such as what, how, when, and how frequently information will be communicated and requires a lot of communication ability and skills. Communication Change Control and Report Performances are not processes. Communications planning involves identifying the information and communication needs of the people involved in a project by determining what needs to be communicated, when, to whom, with what method, in which format, and how frequently. Although planning is time consuming, it does not take as much as manage communications. PMBOK® Guide-Fifth Edition, section 10.2, page 297
23. D: Since the stakeholder is receiving the status reports, there is no issue with the information distribution process. You should revisit your communications management plan first to understand the information need, communications requirements, format, method, time frame, and frequency for the distribution of required information for this specific stakeholder. This is a root cause approach. Understanding your plan or the fixes to it will better help you understand what might have been missed and get it fixed. PMBOK® Guide-Fifth Edition, section 10.1.3.1, page 296

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24. D: Pull communication utilizes intranet sites, e-learning, knowledge repositories, and other types of accessible databases for a large volume of information or for a large audience who will be accessing the contents at their own discretion. Expert judgment generally refers to the input from subject matter experts. Interactive communication is between two or more parties performing a multidirectional exchange of information. In push communication, information is distributed, but it is not certified that the information reached its intended audience or was understood. PMBOK® Guide-Fifth Edition, section 10.1.2.4, page 295
25. A: Earned value terms such as AC, EV, PV, EAC, ATC, VAC, and BAC can be used for status, trend, and performance reports. Simulation model, inventory data, budget reconciliation and stakeholder register are documents, but not necessarily reports. Meetings, closure and audits are not normally reports. The best answer is status, performance and trend reports. PMP Workbook, page 138

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Risk Management Questions

1. Risk management includes several process steps. One step, understanding and assessing both positive and negative risks, is critical to project success. Which of the following is not a factor in project risk assessment?
 - a. Risk events and risk probabilities
 - b. Insurance premiums
 - c. Risk importance and priority
 - d. Cost in money or time
2. Your project is very typical with all sorts of issues, but now seems to be under control. Your carefully planned contingency reserves are all but depleted because three predicted events occurred. Two months are still scheduled for project work. You only have a few activities left but two of them are on the critical path. An urgent call from your sponsor insists that the project be finished two weeks early in order to receive an additional profit. You send out a request for proposal to a local vendor in hopes the work can be done faster which also frees some of your resources to work on the remaining activities. This scenario is all about which of the following?
 - a. Reserve
 - b. Scope validation
 - c. Opportunities
 - d. Threats
3. The hard work of calculating and estimating probabilities and impacts paid off as your boss asked for the latest data on a critical part of your project. Your numbers show a 70 percent chance of a \$400,000 profit and a 30 percent chance of an \$80,000 loss. With high confidence, your calculation for the expected monetary value (EMV) is which of the following?
 - a. \$280,000 profit
 - b. \$95,000 loss
 - c. \$256,000 profit
 - d. \$234,000 loss
4. Determining risk often involves determining the range. Control charts are often used to help show when an event crosses a threshold. Control charts show the ends of a range of estimates are + or- 3 sigma from the mean. The following range estimates are reported to you. Which has the least risk?
 - a. 40 days, plus or minus 5 days
 - b. 11 to 19 days
 - c. Optimistic = 14 days, most likely = 38 days, pessimistic = 56 days
 - d. A mean of 16 days

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5. The project you are working on is very complicated. It seems like every day you are getting warnings about staying on schedule and meeting the budget goals. Changes have been requested and completed that affect both. Schedule objectives are the concern today. Which of the following risk events is MOST likely to interfere with attaining a project's schedule objective?
 - a. Contract disputes that generate claims for increased payments
 - b. Delays in obtaining required approvals
 - c. Substantial increases in the cost of purchased materials
 - d. Slippage of the planned post-implementation review meeting

6. All the risks have been assessed and key resources not being available when needed has a 20 percent chance of happening in a given month. The project is expected to last six months. What is the probability that this risk event will occur during the fourth month of the project?
 - a. Less than 5 percent
 - b. 80 percent
 - c. More than 60 percent
 - d. 20 percent

7. Determining probability and impact is often necessary in project evaluations. Obtaining project bid approvals before the deadline was assessed at \$12,000. There is an 80% probability of success; being late at 20% was assessed as (\$2,400). What does the (\$2,400) represent?
 - a. Expected monetary value
 - b. Risk value
 - c. Present value
 - d. Contingency budget

8. You are three months into the execution process group and have a very detailed risk register. One of your junior team members identifies a risk that is not in the risk register. The risk may not be legitimate. What should you do?
 - a. Get further information on how the team member identified the risk, because you already performed a detailed analysis and did not identify this risk
 - b. Disregard the risk, because risks were identified during project planning
 - c. Inform the customer about the risk
 - d. Analyze the risk

9. The project is to create new power grid design for most of the Southeastern part of the country. It has received national attention. You just received a call from a senior engineer telling you about a major problem that occurred and was not included in the risk register. What should you do FIRST?
 - a. Create a workaround
 - b. Reevaluate the Identify Risks process
 - c. Look for any unexpected effects of the problem
 - d. Tell management

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10. Much work was completed to deal with project risks. The qualitative analysis is completed and selected items are being evaluated for quantitative analysis. You are working on comparing and analyzing impacts of identified risks. The result of your work shows the greatest risk and then progressively smaller risks with both positive and negative impacts. Which of the following best describes your work?
- Historical records from previous projects
 - The Delphi technique
 - A sensitivity analysis
 - Expert judgment
11. As the project manager you can use several tools to help understand project risks. Monte Carlo analysis is one of them. What is the Monte Carlo analysis used for?
- To get an indication of the risk involved in the project
 - To estimate an activity's length
 - To simulate possible quality issues on the project
 - To prove to management that extra staff is needed
12. The project started last year, was postponed, and then started again this year. The project team is creating the project management plan when asked by senior management to identify project risks and provide a form of qualitative output as soon as possible. What should the project team provide?
- Prioritized list of project risks
 - Risk triggers
 - Contingency reserves
 - Probability of achieving the time and cost objectives
13. A project manager is creating a risk response plan. However, every time a risk response is suggested, another risk is identified that is caused by the response. Which of the following is the BEST thing for the project manager to do?
- Document the new risks and continue the Plan Risk Responses process
 - Make sure the project work is better understood
 - Spend more time making sure the risk responses are clearly defined
 - Get more people involved in the Identify Risks process, since risks have been missed
14. As the project manager, you need to create a risk register and risk responses. You will also qualify risk and may even quantify them. Some risks may end up on what's called a watch list. The watch list is an output of which risk management process?
- Plan Risk Responses
 - Perform Quantitative Risk Analysis
 - Perform Qualitative Risk Analysis
 - Plan Risk Management

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15. The risk management plan was completed and the project manager and key stakeholders used various methods to identify risks and create a risk register. The register was reviewed to make sure all the risks were understood and that triggers had been identified. Some risk qualification and quantification was completed. Later, in the Plan Risk Responses process, you reviewed all the risks identified by the stakeholders to determine appropriate response strategies. The lessons learned session for this situation may have determined which of the following?
- The project manager should have waited until the Perform Qualitative Risk Analysis process to get the stakeholders involved
 - Additional stakeholders should have been involved in the Plan Risk Responses process
 - The project manager should have created workarounds
 - Triggers should not be identified until the Identify Risks process
16. Organizations and stakeholders are willing to accept varying degrees of risk depending on their risk attitude. Which of the following describes the level of uncertainty or the level of impact at which a stakeholder may have a specific interest and below that, the organization will accept the risk, or above this measure, the organization will not tolerate the risk?
- Risk Appetite
 - Risk Threshold
 - Risk Tolerance
 - Risk Reward
17. There are eight tools or techniques in the Identify Risk process. Which of the following tools or techniques is NOT used in the Identify Risk process?
- SWOT Analysis
 - Diagramming Techniques
 - Checklist Analysis
 - Risk Categorization
18. Your team is using the project risk register and has started a quantitative assessment of the risk. You tell your team that it is better to start with qualitative analysis first. What reasons do you give your team for this decision?
- Quantitative analysis takes the numerical values assigned during the qualitative process and adds a more intuitive interpretation of the risk
 - Qualitative analysis provides accurate numerical values based on probability and impact that can then be quantified
 - There is no particular reason why one should be done before the other. It is just the way your organizational processes require the process to be completed
 - Qualitative analysis provides a subjective rapid means of prioritizing risk and indicating which risks can have quantitative analysis applied to them

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19. You are supervising a project to develop a new food additive. While analyzing your project, you identify that there is a 65% probability of earning \$620,000 if the additive is successful. Costs for being unsuccessful plus time, effort and equipment were assessed at about \$75,000. Using the data given you compute \$376,250. What does this value represent?
- Net present value (NPV)
 - Return on investment (ROI)
 - Economic value added (EVA)
 - Expected monetary value (EMV)
20. The risk register is almost completed. You have identified over 80 risks and assigned a category, probability, impact, risk triggers, and some risks have dollars or time associated based on their probability and impacts. Urgency has been considered and now you need to determine risk responses. Your project is a software development project with data and storage components. You have eleven programmers and four database experts. Early in phase 3 two programmers may be pulled off your project and reassigned. The impact was determined as significant but you decide to deal with the risk if it occurs. Your risk strategy is which of the following?
- Passive acceptance
 - Active acceptance
 - Risk avoidance
 - Risk mitigation
21. As a senior advisor on a project to create new airflow regulators for a deep sea diving operation, you are currently in the Identify Risks process. One of the inputs is enterprise environmental factors. While exploring the EEF which of the following are not included?
- Organizational risk attitudes
 - Commercial databases
 - Assumptions analysis
 - Published checklist
22. You have a risk management plan in your organizational process assets but need to make sure it is complete and has all the elements you'll need for your project. The plan should contain a basic approach, plans for risk identification, analysis, responses and controls. Which of the following statements is NOT true regarding Plan Risk Management?
- The risk management plan, which is a part of the overall project management plan, is an input to all other risk processes
 - The risk management plan includes a description of the responses to risks and triggers
 - The risk management plan is an output of the Plan Risk Management process.
 - The risk management plan includes methodology, roles and responsibilities, budget, risk categories, definition of risk probability and impact, revised stakeholder tolerances, reporting formats, and other items

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23. Keith, a senior project manager, has a detailed risk response plan for his dialect recognition project. His team utilized all of the appropriate tools and techniques and executed the predefined preventive and contingency actions to respond to identified project risks. Keith finds out that some of the risks have been reduced in impact but still remain as potential threats. He decides to develop additional contingency and fallback plans for these risks as soon as possible. These risks are called what?
- Secondary risks
 - Residual risks
 - Primary risks
 - Workarounds
24. You are in the Control Risks process which includes identifying, analyzing, and planning for newly arising risks, keeping track of identified risks, reanalyzing existing risks, monitoring trigger conditions, monitoring residual risks, and reviewing the execution and effectiveness of risk responses. Which of the following are NOT included as outputs of the Control Risk process?
- Variance and trend analysis
 - Work performance information
 - Change requests
 - Project management plan updates
25. Project risk is an uncertain event or condition in the future that, if it occurs, will have a positive or negative impact on one or more project objectives, including scope, schedule, cost, and quality. Risks can have one or more causes and, if they occur, can have one or more impacts. Which of the following three characteristics best describes risk management?
- Risk event, probability, and amount at stake
 - Severity, duration, and cost of impact
 - Source, probability, and frequency of risk
 - Timing, frequency, and cost of risk

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Risk Management Answers

1. B: Insurance premiums are not factors in assessing project risk. They come into play when you determine which risk response strategy you will use. Each of the other factors is key to project risk assessment. PMBOK® Guide-Fifth Edition, section 11.3, pages 328-333
2. C: The project manager is working an opportunity to get additional profits. This may include analyzing the appropriateness of using management reserves to cover the cost of the opportunity. Scope validation involves meeting with the customer to gain formal acceptance, therefore can be eliminated. Reserve is mentioned in the situation, but the use of reserves is not the primary concern. Threats can also be eliminated as the project is now under control. PMBOK® Guide-Fifth Edition, section 11, page 311
3. C: Expected monetary value is calculated by $EMV = \text{probability} \times \text{impact}$. We need to calculate both positive and negative values and then add them: $0.7 \times \$400,000 = \$280,000$, $0.3 \times (\$80,000) = (\$24,000)$. Expected monetary value = $\$280,000 + (\$24,000) = \$256,000$ profit. PMBOK® Guide-Fifth Edition, section 11.4.2.2, pages 338-339
4. C: The estimate with the smallest range is the least risky, therefore 7 days is correct. An optimistic estimate of 14 days, most likely estimate of 38 days, and pessimistic estimate of 56 days represents a range of 7 days. Pessimistic – optimistic / 6; $(56-14 = 42)/6 = 7$. There was some misdirection in this question. The sentence on control charts and +/- 3 sigma is extraneous. Choice D, a mean of 16 days, is not a range estimate and can be eliminated. Choice A, 40 days plus or minus 5 days, equals a range of 10 days and choice B, 11 to 19 days, equals a range of 8 days. PMP Workbook, pages 74-75
5. B: Delays in obtaining required approvals is the only choice that always causes a time delay and is therefore the most likely to threaten the project schedule. Cost increases and contract disputes for payments will not necessarily interfere with schedule. If a "post-implementation" review meeting slips, it won't interfere with the project schedule. PMBOK® Guide-Fifth Edition, section 11.2.1, pages 321-322
6. D: There is no calculation is needed. If there is a 20 percent chance in any one month, the chance in the fourth month must therefore be 20 percent. PMBOK® Guide-Fifth Edition, section 11.4.2.1, page 337
7. B: The quantity derived by multiplying the probability of a negative impact by its likely impact stated in monetary terms is called the risk value. The dollar value obtained from both sides of the monetary impacts is called the EMV. In this case $EMV = 0.8 \times \$12,000 = \$9,600$ for success and $0.2 \times \$12,000 = (\$2,400)$ for being late. Total EMV equals $\$7,200$. The $(\$2,400)$ represents the risk value or only one side of the EMV. PMBOK® Guide-Fifth Edition, section 11.4.2.2, page 339
8. D: First, you want to determine what the risk entails and the impact to the project, then determine what actions you will take regarding the risk. Informing the customer and investigating how the risk was determined could be next steps after analysis. PMBOK® Guide-Fifth Edition, section 11.2.1, page 321, also PMP Workbook, pages 148-149

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9. A: Since this is a problem that has occurred, rather than a potential problem that has just been identified, the first thing you must do is address the risk by creating a workaround. Because an unidentified problem or risk occurred, it is important to reevaluate the Identify Risks process as well as to look for unexpected effects of the problem, however, they are not your first choices. You might need to inform management, but this is reactive, not proactive. PMP Workbook, page 144
10. C: The sensitivity analysis is a tool used to analyze and compare potential impacts for identified risks. It may be graphically depicted in what is called a tornado diagram. Expert judgement may be used but is not the name of the process; Delphi technique involves expert judgment but is a technique asking questions anonymously to gain information and eventually a consensus. Historical records may be used in a sensitivity analysis but are not the name of the tool. PMBOK® Guide-Fifth Edition, section 11.4.2.2, page 338, also PMP Workbook, page 153
11. A: Project risk can be assessed using Monte Carlo analysis. By considering the inputs to the weighted estimates and the network diagram, a better overview of project risk is possible. A Monte Carlo analysis could indicate that an estimate for an activity needs to change, but not what the activity estimate should be. Monte Carlo is a simulation, but it does not specifically address quality, nor does it deal directly with staff or resource needs. PMBOK® Guide-Fifth Edition, section 11.4.2.2, page 340, also PMP Workbook, page 153
12. A: A prioritized list of risks is an output of Perform Qualitative Risk Analysis. The probability of achieving time and cost objectives is determined during the Perform Quantitative Risk Analysis process. Risk triggers and contingency reserves are parts of the Plan Risk Responses process. PMBOK® Guide-Fifth Edition, section 11.3.3.1, page 333
13. A: In this scenario you are identifying secondary risks and the best thing to do is to document the newly identified risks and continue the Plan Risk Responses process. Identifying secondary risks is an important part of completing the Plan Risk Responses process. Making sure project work is understood and spending time clearly defining responses are worth doing but are not the best things in this scenario. Getting more people involved may also be helpful but not the best thing. The best thing to do is to work on the newly identified risks. PMBOK® Guide-Fifth Edition, section 11.5.3.2, pages 347-348
14. C: While performing the risk qualification process, low-priority risks are classified as being on a watch list. These risks are worth “watching” but not worth any further action at this time. Risk on the watch list may change probabilities and impacts if the situation around the risk changes. PMBOK® Guide-Fifth Edition, section 11.3.2.1, page 330
15. B: The key lesson learned is to include others in the Plan Risk Responses process. Plan Risk Responses must include the involvement of all risk owners and possibly other stakeholders. As many stakeholders as possible should be included in the Identify Risks process. You should not wait until risk quantification. Risk triggers can be identified in the Identify Risks process, but they are generally identified and added to the risk register in the Plan Risk Responses process. Workarounds are created as unidentified risk events occur and no information indicates risks have occurred. PMBOK® Guide-Fifth Edition, section 11.5, page 343
16. B: The risk attitudes of stakeholders are classified into three themes. Risk Threshold is the one defined in the question. Risk appetite is the degree of uncertainty an entity is willing to take on in

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anticipation of a reward; risk tolerance is the degree, amount or volume of risk that an organization or individual will withstand. Risk reward is not one of the themes but a concept that helps understand if the risk is worthwhile. PMBOK® Guide-Fifth Edition, section 11.5, page 311

17. D: SWOT, diagramming techniques and checklist analysis are all tools used in identify risks. The others are documentation reviews, information gathering, assumptions analysis and expert judgment. Risk categorization is part of risk planning and used in creating the risk breakdown structure. PMBOK® Guide-Fifth Edition, section 11.1.3.1, pages 315-316, and section 11.2, page 319
18. D: Qualitative analysis provides a subjective rapid means of prioritizing risk and indicating which risks can have quantitative analysis applied to them. Choice A uses the word intuitive which makes it incorrect. Qualitative analysis does not provide accurate numerical values. Additionally, qualitative risk analysis is done first to prioritize risk quickly and indicate which of these should be subject to more accurate qualitative analysis. PMBOK® Guide-Fifth Edition, section 11.3, page 328
19. D: The \$376,250 represents the Expected Monetary Value, calculated by multiplying 65% x \$620K which equals \$403K and then subtracting 35% x \$75K which is \$26,350. The difference between the possible gains and possible losses is the EMV. Net Present Value is the present value of total benefits minus the cost over many time periods. Return on Investment (ROI) calculates the rate of return a company can make by investing in a project. $ROI = (\text{benefit} - \text{cost}) / \text{cost}$. Economic Value Add (EVA) – is the amount of added value the project produces above the cost of financing the project. PMBOK® Guide-Fifth Edition, section 11.4.2.2, page 339, also PMP Workbook, page 37
20. A: The team has decided to go for passive acceptance, which requires no action. Passive acceptance is also called a workaround. Since it is seldom possible to eliminate all risks and if the cost or impact of avoid, transfer, and mitigate is too high, acceptance can be the preferred strategy. It indicates that the project team is simply accepting the risk and will continue with the project. PMBOK® Guide-Fifth Edition, section 11.5.3.2, page 348, also PMP Workbook, page 157
21. C: Assumptions analysis is a tool and technique in the Identify Risks process, not an input. Each of the other elements are components of the enterprise environmental factors. PMBOK® Guide-Fifth Edition, section 11.2.1.12, page 323
22. B: The Plan Risk Management process establishes the basis to approach, plan, and execute risk management activities throughout the life of the project and develops the risk management plan. The risk management plan does not include a description of the responses to risks or triggers. Responses to risks are documented in the risk register as part of the Plan Risk Responses process. PMBOK® Guide-Fifth Edition, section 11.1, pages 313-318
23. B: Residual risks are the risks that remain after the execution of risk response planning and for which contingency and fallback plans can be created. Their probability and impact have been reduced through mitigation. These risks are included in the outputs of the Plan Risk Responses process and are expected to remain as threats. Primary risks included in the initial risk identification process are generally most obvious. Secondary risks are new risks that are created due to the implementation of selected risk response strategies. Workarounds are unplanned responses developed to deal with the occurrence of unanticipated risk events. PMBOK® Guide-Fifth Edition, section 11.5.3.2, page 348, also PMP Workbook, page 144

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24. A: Variance and trend analysis are tools and techniques used in the Control Risks process. Each of the others are inputs to the process. PMBOK® Guide-Fifth Edition, section 11.6, page 349
25. A: A risk event is the actual occurrence of the risk, such as an equipment failure. Risk probability is the likelihood that a risk event may occur. The amount at stake refers to the impact or consequence of the risk on one or more project objectives including scope, schedule, cost, and quality. Duration, sources, and frequency all eliminate the other choices. PMBOK® Guide-Fifth Edition, section 11, page 310

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Procurement Management Questions

1. This is your fifth project with an external contract. It is with an electronics company who will be building new listening sensors for the Mars Rover. The contract is a fixed price (FP) contract with a fee of \$930,000 to complete the work. The project has just passed the 7th month, and your costs have just exceeded \$890,000. As per the contract, your company is now responsible for any cost overrun from this point forward and the buyer will not share any of it. This situation is BEST described as which of the following?
 - a. The project manager spent too much money on the project
 - b. The project has reached the point of total assumption (PTA)
 - c. The buyer is cheating the seller
 - d. The project budget was miscalculated initially

2. Your project has a cost reimbursable contract. You've worked with the contract manager to document project purchasing decisions, specify the procurement approach, define selection criteria to identify potential sellers, and put together a procurement management plan. Which of the following BEST describes this process?
 - a. Conduct Procurements
 - b. Plan Procurements
 - c. Close Procurements
 - d. Control Procurements

3. You are working a complicated credit verification system for one of your best clients. Four of the eight modules have been completed and two more are ready for demonstration. In the morning staff meeting you are informed that the client has terminated the project. In just two phone calls you find that they found a cheaper and faster off-the-shelf solution for their need and no longer want the project to continue. Which of the following is your FIRST action?
 - a. Keep your team working on the project to give senior management time to have a discussion with the client
 - b. Stop all work and release the team immediately
 - c. Work with the team to document the lessons learned
 - d. Close the contract

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4. You are in the Close Procurements process and want to document the procurement lessons learned from everyone involved in your project to help improve how your organization will handle procurements in the future. When should you start lessons learned and which of the following best describes them?
 - a. At the beginning of the project and you would include who did things right or wrong
 - b. At the beginning of the project to help recognize successes and failures
 - c. At the beginning of the project and using the payment system to process considerations as per the terms of the contract
 - d. At the end of the project to provide process improvement recommendations and what will be done differently next time, etc.

5. Even though the contract manager may be doing most of the contract work, you as the project manager may still need to ensure that the seller's performance meets contractual requirements, that both the buyer and seller meet their contractual obligations, and that the legal rights of both the buyer and seller are protected. What process do these steps describe?
 - a. Procurement performance reviews
 - b. Inspections and audits
 - c. Performance reporting
 - d. Control Procurements

6. You already have three other projects and this morning you got one more added to your workload. The project is to design and develop new firefighting equipment for no-visibility situations. You are trying to make sure that no seller receives preferential treatment and that all sellers have a clear, common understanding of the procurement, technical, and contractual requirements. Your key objective is to provide all potential contractors with the information they need to determine if they would like to continue with the contracting process. Which one of the following will assist you with your goal?
 - a. Source selection criteria
 - b. Independent estimate
 - c. Procurement negotiation
 - d. Bidder conference

7. Heather is a project manager overseeing a county-wide voting automation system. After four months of work Heather gets a call from the client letting her know they would end the contract due to a change in business direction. Compensation for work completed was also discussed. This is an example of which one of the following?
 - a. Letter of intent
 - b. Termination for convenience
 - c. Breach of contract
 - d. Material breach

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8. You are working another project with an outside vendor and are still in the plan procurement process. Your team developed the procurement document to solicit proposals from prospective sellers and easily compare their responses. Which of the following is NOT true about the procurement document?
 - a. It may include the procurement statement of work and evaluation criteria
 - b. It should not be too rigorous to allow any flexibility for the sellers to be innovative
 - c. It contains clear, complete, and concise descriptions of performance, design, functionality, reporting, format, and support requirements
 - d. It may contain a request for proposal (RFP), an invitation for bid (IFB or request for bid, RFB), and a request for quotation (RFQ)

9. Dawson Pharmaceuticals selected your company to run their drug trial project. Dawson is one of the highest rated drug companies in South America and is excited to introduce a new drug to combat early dementia. As the senior project manager assigned, you initiated a conversation with one of the foreign vendors about outsourcing phase two testing of this new drug. The vendor is very enthusiastic about the drug's potential and has requested a copy of the statement of work (SOW) to get more information. Which one of the following is FALSE about the SOW?
 - a. Dawson Pharmaceuticals must write the SOW with the necessary detail
 - b. The SOW should contain the details of the new drug
 - c. The SOW should have the details as required but not so much as to give out all the sensitive information and trade secrets of Dawson Pharmaceuticals
 - d. The SOW should have enough detail for the vendor to figure out if they are capable and qualified to manufacture the drug

10. Your company has a very robust centralized contracting office. Everything has to follow very strict guidelines. As a senior project manager you have a lot of experience with contracting but an issue with two simple helicopter bolts has you wondering what the right process is. The project is to design a new rotator core for three of the Navy's helicopters. You are on schedule and want to stay on schedule. The bolts you need are only available through an out of state supplier. Due to patent constraints it appears there is only the one supplier. The supplier's website shows prices for the bolts within your approved limit. What should you do in this situation?
 - a. Consider purchasing the material from the source even though it is a sole source
 - b. Keep exploring options to find suitable bolts for the new rotors
 - c. Notify management that there is only one source, therefore you cannot purchase the material
 - d. Ask your centralized contracting department to take care of this situation

11. One of your simpler projects is getting finished. You are in the process of closing. There are several processes coming together as things get finalized. Which of the following is correct?
 - a. Close procurements comes before close project or phase
 - b. Close project or phase occurs only if the project is completed as planned
 - c. Close project or phase and close procurements occur at the same time
 - d. Close project or phase comes before close procurements

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12. You are working your first government defense project. The seller wants to get an idea of when he will have to pay cost overruns. What is the point of total assumption given the following data? Expected Cost=\$250,000; Expected Profit=\$37,500; Target Price=\$287,500; Buyer/Share Ratio=60%/40%; Ceiling Price=\$325,000
- \$299,875.00
 - \$323,125.00
 - \$312,500.00
 - \$341,250.00
13. Which of the following best describes a purchase order?
- The buyer establishes a price and the seller must agree with the price
 - The buyer and seller establish contract parameters during a single negotiation session
 - It is a detailed contract with a not-to-exceed price for the buyer to accept or reject
 - It is considered a simple contract and only needs to be signed by the buyer
14. The project being considered is big but has a limited scope definition. Last year was tough on projects and you need to protect your company from financial risk. Kevin, your program manager, asks for your help in selecting the contract. As the buyer, what is the BEST type of contract to choose?
- Fixed price (FP)
 - Cost plus percentage of cost (CPPC)
 - Time and material (T&M)
 - Cost plus fixed fee (CPFF)
15. The contract has been in negotiations for four weeks. Daily discussions between your company and the selected vendor have become complex. You make some notes agreeing to work late shifts that both you and the vendor sign. However, when the work is being done, your vendor claims they are not required to work late shifts because it was not included in the subsequent contract. Which of the following best describes the vendor's assertion?
- It is incorrect, because both parties must comply with what they agreed on
 - It is correct, because there was an offer
 - It is generally correct, because both parties are only required to perform what is in the contract
 - It is generally incorrect, because all agreements must be upheld
16. Your project has just been fast tracked and you are looking to quickly bring in a subcontractor to complete the networking infrastructure. There isn't time to issue a request for proposal (RFP), so you choose to use a company you have used many times before for software development. Of the following, which is your primary concern?
- Collusion between subcontractors
 - The subcontractor's qualifications
 - The subcontractor's evaluation criteria
 - Holding a bidder conference

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17. The discussion in the project meeting finally shifted to your project. Project cost seems to be the focus. The issue being considered is whether to have our own company do part of the project or hire another company to do the work. Your opinion is to do the work internally, based on which of the following reasons?
- There is a lot of proprietary data
 - You have the expertise but you do not have the available manpower
 - You do not need control over the work
 - Your company resources are limited
18. This is the third project you've done with the same vendor. So far everything has gone very well. Performance reports reflect both you and the vendor are satisfied with the relationship. The decision is made to provide the vendor a small office in your facility and agree to share ideas on what you want the vendor to work on toward potential future projects and the vendor can also ask your company for guidance on what they should be working on to accommodate your future needs. You may even initiate a master service agreement. This type of arrangement is which of the following?
- Single source contract
 - Acceptance Criteria
 - Teaming agreement
 - Sole source contract
19. The bridge expansion project was just awarded to the seller. Contract terms and conditions require a work plan be issued for the buyer's approval prior to commencing work, but the seller fails to provide one. Which of the following is the BEST thing for the buyer's project manager to do?
- File a letter of intent
 - Develop the work plan and issue it to the seller to move things along
 - Issue a default letter
 - Issue a stop work order to the seller until a work plan is prepared
20. Responses to the proposals have been reviewed and unfortunately the project team is arguing about the prospective sellers who have submitted proposals. Several team members argue for a certain seller while another group of team members wants the project to be awarded to a different seller. The advice from the project manager is for the team to focus on which of the following?
- Procurement documents
 - Procurement audits
 - Source selection criteria
 - Procurement management plan

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21. The performing organization is trying to decide whether to split the procurement department and assign procurement responsibilities to departments directly responsible for the projects. A procurement professional might not want this split to occur because he or she would lose which of the following in a decentralized contracting environment?
- Standardized company project management practices
 - Loyalty to the project
 - Experience
 - Access to others with similar expertise
22. Your project team member delivers a project deliverable to the buyer. However, the buyer refuses the deliverable, stating it does not meet the requirement on page 300 of the technical specifications. You review the document and agree with the buyer. What is the BEST thing to do?
- Explain that the contract is wrong and should be changed
 - Issue a change order
 - Review the requirements and meet with the responsible team member to review the WBS dictionary
 - Call a meeting of the team to review the requirement on page 300
23. The contract was just signed after what seemed like weeks of negotiations. Once signed, the contract is considered legally binding unless which of the following situations occurs?
- It is declared null and void by either party's legal counsel
 - It is a violation of the applicable law
 - One party is unable to perform
 - One party is unable to finance part of the work
24. The project has a cost reimbursable contract and recent audits determine that overcharges are being made. If the contract does not specify corrective action, which of the following is the BEST course of action for the buyer?
- Change the contract to require more frequent audits
 - Continue to make project payments
 - Halt payments until the problem is solved
 - Void the contract and start legal action to recover the overpayments
25. The key stakeholders in a contract are the buyers and the sellers. Which of the following is not a term used to describe a buyer in a contract?
- Client
 - Prime contractor
 - Entrepreneur
 - Service provider

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Procurement Management Answers

1. B: The point of total assumption (PTA) is the cost point in the contract where the seller assumes responsibility for all cost overruns as costs beyond this point are considered to be due to mismanagement. The PM may have spent too much money but this isn't clear. The buyer cheating the seller doesn't make sense. Miscalculation of the initial budget is also possible but isn't the best description of this situation. PMP Workbook, pages 168-169
2. B: Plan Procurement Management is the process of documenting project purchasing decisions, specifying the approach, defining selection criteria to identify potential sellers, and putting together a procurement management plan. Conducting procurements involves executing the planned processes; controlling involves validating and checking variances; and closing involves final payments, verifying deliverables and contract completion signatures. PMBOK® Guide-Fifth Edition, section 12.1, page 358
3. C: Each of these steps can be considered. Completing lessons learned is the first step. A project can be terminated any time for a certain cause or simply for convenience of the buyer. If a project is terminated before the work is completed, you still need to document the lessons learned and add them to the organizational process assets. There are always important lessons that you can learn when a project goes seriously wrong, even when you did nothing to contribute to the decision to terminate the contract. Continuing to work to allow time for discussion costs money and is not the best decision. Releasing the team would make it hard to complete lessons learned. Closing the contract will occur, but after lessons learned. PMBOK® Guide-Fifth Edition, section 12.4, pages 386-389
4. B: Lessons learned should be started at the beginning of the project. A final review can be conducted in close procurements for that specific area. Choice D, process improvement would be part of lessons learned, but starting them at the end of the project makes this choice incorrect. Including who did things right or wrong is not the purpose of lessons learned, so choice A is incorrect. Using the payment system as part of lessons learned doesn't make sense and makes choice C incorrect. PMBOK® Guide-Fifth Edition, References 3, page 544
5. D: Control Procurements is the process of ensuring the seller's performance meets contractual requirements, ensuring that both seller and buyer meet their contractual obligations, and ensuring that legal rights of both seller and buyer are protected. The focus here is to manage the relationship between buyer and seller, monitor contract performance, and make appropriate changes and corrections. Procurement performance reviews, inspections and audits, and performance reporting are tools and techniques used in the Control Procurements process. PMBOK® Guide-Fifth Edition, section 12.3, page 379
6. D: A bidder conference is intended to assure that no seller receives preferential treatment and that all sellers have a clear, common understanding of the procurement, technical and contractual requirements. The goal is to make sure there is no collusion among sellers and/or buying agents, and sellers do not save questions for later private meetings in order to gain competitive advantage. Independent estimates are often prepared by the procuring organization to judge whether the statement of work was adequate in its description or that the seller fully understood or responded

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fully to the statement of work. These estimates also help the organization check the reasonableness of the seller's response or cost proposal and proposed pricing. The goal of procurement negotiation is to achieve clarification and agreement on the structure and requirements of the contract prior to signing. PMBOK® Guide-Fifth Edition, section 12.2.2.1, page 375

7. B: Termination for convenience is a contract clause that permits the buyer to terminate a contract at any time for a cause or convenience. Usually there will be specific conditions associated with the execution of this clause. A letter of intent is a letter expressing the intention of the buyer to hire the seller. It is not a contract; thus, it does not have any legal binding. A breach/default is not meeting a contractual obligation by the seller or the buyer. A material breach is so severe that it is not possible to continue work under the contract. PMBOK® Guide-Fifth Edition, section 12.4, page 387
8. C: Choice C is the definition of a Statement of Work (SOW) which is not a procurement document. Well-designed procurement documents help in easier comparison of seller responses, more complete proposals, more accurate pricing, and decrease in the amount of changes in the project. Procurement documents may contain all the work that is to be completed, as well as terms, conditions, and evaluation criteria. You want the seller to be as innovative as possible when they come up with the design and methods for completing your project. It may contain a request for proposal (RFP), invitation for bid (IFB, or request for bid, RFB), and request for quotation (RFQ). PMBOK® Guide-Fifth Edition, section 12.1.3.2, page 367, and 12.1.3.3, page 368
9. A: It is not mandatory for the client to come up with the SOW all the time. The seller can come up with the SOW through requirements collection tools and techniques. Also the seller can update the buyer's SOW and get it reviewed and approved. The SOW can be detailed but also should protect sensitive information. The SOW is designed to give the vendor enough info to know if they can do the work. PMBOK® Guide-Fifth Edition, section 12.1.3.2, page 367
10. A: Consider purchasing the bolts even though it is a sole source. In competitive forms of procurement, a seller is selected from a list of qualified sellers interested in and capable of doing the job. The competition can result in the selection of a better seller and decreased price. Unless required by law there is no reason for going through the entire procurement process. You can use either sole source contracting or single source. Exploring the option to find suitable bolts for the new rotors could cause the schedule to slip. Notifying management that there is only one source and that you cannot purchase the material is incorrect. Asking your centralized contracting department to take care of this situation says you are not responsible for procurement. You could ask for advice but not for them to take care of it. PMP Workbook, page 174
11. A: Close Procurements comes before close project or phase. In a single-phase project, closing procurements will occur before the phase (or project) is closed out. Close Project or Phase occurs regardless of how the project ends. PMBOK Guide-Fifth Edition, section 12.4, pages 386-387
12. C: \$312,500.00. The formula for point of total assumption (PTA) is as follows: $((\text{Ceiling Price}-\text{Target Price})/\text{Buyer Share}) + \text{Target Cost}$. $\$312,500.00 = ((\$325,000 - \$287,500)/0.6) + \$250,000$. PMP Workbook, pages 168-169
13. D: A purchase order is in fact a simple contract that only the buyer needs to sign. It is not a detailed contract; buyers and sellers don't negotiate a purchase order. And even though the buyer might like to set the price, that isn't the way it normally works. PMP Workbook, page 161

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14. D: Of the options given, the only contract that limits fees for large projects with limited scope definition is cost plus fixed fee. Fixed price contracts would be used for known scope and generally smaller projects. Time and materials are for smaller projects with known scope. The cost plus percentage of cost contract would not help reduce the financial risk. PMBOK Guide-Fifth Edition, section 12.1.1.9, page 364
15. C: The vendor is only required to perform what is defined in the contract. Making and agreeing on things in notes is not enforceable unless it was in the signed contract. This scenario does not describe an offer which makes choice B incorrect. The vendor's assertion is basically correct, making both choices A and D also incorrect. PMBOK Guide-Fifth Edition, section 12, page 357
16. B: Your primary concern is the subcontractor's qualifications. Software development and network infrastructure are not the same types of projects. Although you have used this contractor before, how can you be sure the company is qualified to do the new work since it is not exactly like the previous work? Collusion between contractors doesn't make sense. Neither does holding a bidder's conference with a single source selection. The subcontractor's evaluation criteria may be considered but isn't your primary concern. PMBOK Guide-Fifth Edition, section 12.2, pages 371-377
17. A: Proprietary work or data is a primary factor in making the decision whether to do the work internally or have it done by an outside vendor. Having the expertise would be a factor to do the work yourself but limited resources in both choices B and D eliminate these as answers. Not needing control over the work would be a factor resulting in outsourcing the work, not doing it yourself. PMBOK Guide-Fifth Edition, section 12.1.3.5, page 370, PMP Workbook, pages 167-168
18. C: This is an example of a teaming agreement. Vendor collocation with a company and equal sharing of ideas for current or future projects helps speed up the negotiations process and may even eliminate it. It is a good idea to have teaming agreements with multiple same type vendors to insure competition. This scenario does not represent a sole or single source contract. Acceptance criteria are an element of a contract. PMP Workbook, page 174
19. C: When a seller does not perform according to the contract terms and conditions, they have defaulted and the project manager must take action. You might prefer to investigate the default by contacting the seller and asking what is going on, but that choice is not available here. You must send the formal written notice as soon as you become aware of the default so that you do not give up any right to receive the work plan in the future. You can contact the seller for a discussion as the second thing you do. Therefore, the best choice is to let the seller know they are in default. The default notification letter will instruct the seller to meet the performance requirement. PMBOK Guide-Fifth Edition, section 12.3, pages 379-381
20. C: The source selection criteria is the primary tool for evaluating potential sellers and should be used by the team in order to make a selection. The procurement management plan and documents may include source selection criteria, but in this case are not as specific as the actual source selection criteria. Procurement audits would not occur until during the project, not before the source was selected. PMBOK Guide-Fifth Edition, section 12.1.3.4, pages 368-369
21. D: In a decentralized procurement environment, there is less focus on maintaining contracting skills or expertise and access to other procurement professionals with comparable expertise would be

Section and Knowledge Area Tests

reduced. The change would not impact the organization's overall project management practices, only procurement. Loyalty to the project would be gained, not lost, in a decentralized environment, as the procurement manager is part of the project team. PMP Workbook, page 174

22. C: This question is written from the perspective of the seller. The contract could be wrong or the customer could be wrong, but this should have been discovered earlier if proper project management was followed. A seller cannot issue a change order (although they could request one). If you selected calling a meeting with the team, remember that project management is not about making every decision with ALL the team members. The best choice involves reviewing the requirements documentation and meeting with the appropriate team member. If such a problem has arisen, it could mean something was wrong in the WBS dictionary or in how the team member completed the work. PMBOK Guide-Fifth Edition, section 12.3.2, pages 383-384
23. B: One of the elements of a contract is that it must be legal. If it is not, then the contract is not binding. Generally a signed contract is legally binding and inability to perform or get financing, or one party's belief that the contract is null and void does not change the fact that the contract is binding. If both parties agree to terminate the contract, the contract can move into the Close Procurements process. PMBOK Guide-Fifth Edition, section 12, page 357
24. B: The best choice available is to continue to make payments. A better answer would be to halt payments on the "disputed amount" but that isn't a possible answer. Halting payments would be a breach of contract on the buyer's part. Changing the contract to require more frequent audits does not solve the problem. Voiding the contract and beginning legal action is too severe and cannot be done unilaterally. PMP Workbook, page 174
25. C: Entrepreneur is never used to describe the buyer in a contract. A client, someone requesting services, and even a prime contractor are all examples of buyers in a contract. PMBOK Guide-Fifth Edition, section 12, page 358

PMP Certification Answer Sheets

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CA = Correct Answer G= Guessed M =Misread

QA	Value								
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9	11.1	13	7.69	17	5.88	21	4.76	25	4.00
10	10.0	14	7.14	18	5.56	22	4.55	26	3.85
11	9.09	15	6.67	19	5.26	23	4.35	27	3.70

Scoring Table - Questions answered value x number of questions correct = score

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