Chapter 2 Answers
1) d) They are all of equal importance unless otherwise stated
   The Triple Constraint of Project Management is that Scope, Time, and Cost are all equal unless otherwise defined as such. Quality is often confused in place of Scope with the Triple Constraint. Quality is actually achieved when Scope, Time, and Cost goals have been met.

2) a) Initiating, Planning, Executing, Monitoring and Controlling, Closing
   Per the 3rd edition PMBOK Guide, the process groups that make up the PMI methodology or "Project Management Life Cycle" are Initiating, Planning, Executing, Monitoring and Controlling, and Closing.

3) a) To control resources
   The Functional Manager runs the day-to-day business and is responsible for resources. Project Managers do not always report to Functional Managers. The Functional Manager runs a department or area of business, not the Project Manager. Defining business processes is noise.

4) a) Managing of related or similar projects in a coordinated way
   Program Management utilizes a coordinated management of related projects. Done for a purpose is a characteristic of a project. The other two answers are noise in this question.

5) b) Optimization for a single focus on the project
   Optimization for a single focus on the project means that the team can focus on what the work of the project is and usually only that. The other answers are associated with Functional Organizations.

Chapter 3 Answers
1) a) Conflicting goals of the Sponsors
   If there were conflicting goals of the Sponsors this could significantly impact the project as the attempt to build what would work for all involved could radically alter the plan. The creation of the WBS would be a challenge as well, but not as big as the best answer. The other two answers are noise.

2) a) Stakeholder management
   Stakeholder management involves determining the needs and expectations of the Stakeholders and management of those needs and expectations. Stakeholder identification involves determining the impacted Stakeholders. The other two answers are noise.

3) b) Project Manager and team
   The Project Manager and team are the best selection to create the project management plan and the estimates that feed into it. They are the people doing the work, so they should have the opportunity to estimate and plan it as well as possible. The Sponsor pays for the project. The Project Manager or the team only wouldn't be a good choice as both are needed for a realistic plan.
4) d) Meet with the Sponsor and find out what their concerns are
   Meeting with the Sponsor to figure out their concerns is the best solution; it is the most proactive and
   can provide either an immediate fix or clearest information you can use to identify a concern or
   problem. The answers involving Senior Management are noise; they don't deal with addressing the
   problem. The Triple Constraint answer is noise as well.

5) b) Evaluate the impact to the project and let the customer know the options and impact of the change.
   The Project Manager needs to evaluate the impact to the project and let the customer know the
   options. The Project Manager is there to do what the customer needs according to the plan or
   modified plan. Telling the customer the project is too close to being complete to integrate the change
   wouldn't be the Project Manager's decision to make, neither would defining the work as a new
   project. Ignoring the customer and hoping things disappear is professionally irresponsible.

Chapter 4 Answers

1) d) Verify that all key Stakeholders have provided their input
   Verifying that all key Stakeholders have provided their input is the most important item. If this
   doesn't happen, the project could be delayed or derailed. The WBS isn't addressed in Scope Planning.
   The other two answers are noise.

2) b) Confusion on who is responsible for doing what
   The Responsibility Assignment Matrix shows who is responsible for what areas on the project. The
   Network diagram would provide guidance on what order the tasks occur. The organizational
   structure would confirm who is on the team, and what the reporting structure is. The Gantt chart or
   schedule will show how long the tasks are.

3) b) Communication Management Plan
   The Communication Management Plan helps define what the communication needs of the project are
   for the project team members and Stakeholders. The team list would tell who is on the team. The
   staffing plan would help define how to get people on the team, and Information Distribution Plan is
   noise.

4) c) Assumptions
   Assumptions are created when there is an absence of certain information on a project. It's an
   educated guess. As the project evolves, the assumptions should be fewer. Constraints are items that
   limit a project environment. Team development and staff acquisition are noise.

5) d) Project Management Information System (PMIS)
   The Project Management Information System (PMIS) is a system that is used to store and distribute
   information on a project. This can be a low tech or high tech system. The other three answers are
   noise.
Chapter 5 Answers

1) b) Risk Response Planning
   Risk Response Planning documents who should do what if risk events occur. Risk identification is the process of figuring out what risks and triggers could occur on the project. Qualitative analysis involves assigning probability and impact ratings to the risk. Secondary response planning is noise.

2) b) Risk Seeker
   A Risk Seeker mentality is that of looking for the big reward and being prepared to pay significantly if it is missed. The risk averse mentality is a very conservative approach to risk. A risk neutral mentality is somewhere between that of a Risk Seeker and risk averse mentality. The other answer is noise.

3) c) Either a negative or positive event
   Risk can be of negative or positive consequence on a project. It is something that can happen but hasn't yet. Risk involves uncertainty that is why it involves what could happen, not what has happened.

4) b) Unknown unknowns
   Management Reserves are created for unknown unknowns. These are things that wouldn't be expected to happen. Contingency Reserves are created for known unknowns. These are things that we know will happen, we just don't know how much of it will happen. Risk Management is noise.

5) b) Insurable risk
   Insurable risk is risk that you can buy insurance for, which in this case is an insurance policy that ensures what the company will have to pay if the machine breaks. Business Risk comes from simply operating the business. There is no guarantee that an idea will work as you hope. Conformance to quality is part of the Definition of Quality. ISO9000 is a quality standard.

Chapter 6 Answers

1) d) All of the answers
   A WBS includes all of the work in the project. If it is not listed in the WBS, it's not part of the project. A WBS should be decomposed to a realistic level of detail. Not breaking it down far enough can have work slipping through the cracks and breaking it down into too much detail can turn the project into micro-management. Adding up the work in the WBS should equal the work that is in the project.

2) d) All of the answers
   The WBS serves as a primary input for determining what types of resources, and their durations are needed on the project, what the high level costs should be for the project, and what shape the schedule will take when complete.
3) c) The Activity sequencing of the WBS can be done only in parallel.
   The Activity Sequencing of the WBS can be done only in parallel is a noise answer because it makes no logical sense. The other three answers are characteristic of a Work Breakdown Structure (WBS).

4) c) Work package
   The work package is the smallest level that the WBS is broken into. The next level of Decomposition is to create Activity Definitions, which are sometimes known as task lists. A to-do list is noise in this question.

5) a) The Decomposition of the work of the project
   The WBS represents the Decomposition of the work of the project. If the work is shown in the WBS, it is in the project; if it's not shown there, it's not in the project. The task list is Activity Definition, and the schedule is created after the WBS.

Chapter 7 Answers

1) a) Resource Leveling
   Resource leveling takes peaks and valleys and levels them off for a consistent utilization of resources. Fast tracking and crashing are schedule compression techniques; those techniques solve a different type of problem. PERT analysis is noise in this question.

2) c) BFG
   The Critical Path is the longest in the diagram. Of the four paths, BFG is the longest at 13 days. ACE is nine days long. BDE is 11 days. BDG is 12 days.

3) c) Float
   Slack and Float are interchangeable terminology. Lag is a delay between tasks on a Network diagram. GERT and PERT are noise.

4) d) Resource Histogram
   The Resource Histogram displays how resources are utilized on the project. It can be displayed a number of ways, but the general view shows some criteria of resources on the project over a time scale. The Control chart shows output over time. The Pareto diagram shows frequency of defects. The staffing management plan addresses how to deal with staffing related items on the project.

5) a) You can have more than one Critical Path, but they are the longest paths on the project, and more than one Critical Path will increase your project risk.
   The Critical Path is the longest path on the project. If you have more than one path that is the same length, you have multiple Critical Paths. The more of them you have, the riskier the project is.
Chapter 8 Answers

1) a) Parametric
   The parametric estimate involves using a parameter of an amount per unit. In this case, $85 per square foot is the parameter. The analogous estimate is a top down estimate. The bottom up estimate is the detail that is created by the team. Gut feel is noise.

2) a) Bottom-up estimating
   Bottom-up estimating involves creating a very detailed, time consuming and accurate estimate as a result of working at the lowest level of the details of the work to create an estimate and rolling them up into a total overall estimate. Parametric estimating involves using a parameter such as $5.00 a square yard for material. Fast tracking involves re-sequencing already defined tasks to compress the overall duration of the schedule. Analogous estimating involves creating a relatively quick, high level estimate.

3) c) -25% to +75%
   The range of an order of magnitude (OOM) estimate is -25% to +75%. The Definitive Estimate has a range of -5% to +10%. The other two answers are noise in this question.

4) a) Variable indirect
   This type of cost would typically increase for every user and will not likely be associated with a project. Therefore, Variable Indirect is the best description. Variable is not the best answer. Fixed and fixed direct cost descriptions don't fit this type of cost.

5) a) $5,000 US
   To calculate this, there are a few things to determine. What is the value of the asset at the end of the schedule? What is the amount of the asset to begin with? What is the number of years of the depreciation schedule? First, subtract the ending value of the asset from the beginning value of the asset ($25K-$0=$25K). The $25K is then divided by the years (5) of the depreciation schedule. This results in $5K per year of depreciation.

Chapter 9 Answers

1) d) Fast tracking
   Fast tracking involves re-sequencing of activities on the Network diagram to attain compression of the schedule. Crashing involves putting more resources on the Critical Path. Mandatory Dependencies involve a required predecessor before something can begin. Lag is a delay between tasks on the Network diagram.

2) a) Rolling wave planning
   In an environment where there is a great degree of flexibility or instability it's good to use a rolling wave planning approach. This allows the team to plan out as much as reasonably possible, and as they
are executing that part of the plan, they continue to plan future work as they learn more about it. Crashing involves putting more resources on the critical path tasks. Fast tracking involves re-sequencing already defined tasks to compress the overall duration of the schedule. Precedence diagramming is a network diagramming technique.

3) a) Crashing
   Crashing is the process of putting more resources on the critical items. Fast Tracking is re-sequencing the Critical Path activities to achieve schedule compression. Staff Acquisition doesn't fit here. Re-planning is noise.

4) b) Sunk cost
   Sunk costs are those that have already been spent on the project. They shouldn't be taken into consideration when determining whether to continue on the project. There is nothing in the situation about phasing the project. The budgeted cost of work performed is the Earned Value (EV). Opportunity cost doesn't apply here.

**Chapter 10 Answers**

1) c) Create and publish an agenda, and establish the leader of the meeting
   Creating and publishing an agenda, and knowing who is in charge of a meeting are two ways to have a highly organized effective meeting.

2) d) Receiver
   The receiver has the responsibility to receive the message, decode it and (if necessary) request additional information from the sender for clarification, and (ideally) let the sender know that the message was understood. The sender is responsible for verifying that the message was received and interpreted correctly. This typically comes from feedback that is provided by the receiver.

3) b) Problem solving
   Problem solving is the most proactive and lasting solution. Reward really wouldn't fit here. Compromise could water down the solution. Withdrawing would be professionally irresponsible.

4) b) Formal
   Once the Charter is signed, the Project Manager has formal authority. The level of authority is defined in the Charter. Reward involves providing incentives to people on the project. Referent involves whom you are connected to on the project or in the organization. The other answer is noise.

5) b) Organizational chart
   The Organizational Breakdown Structure (OBS) is also known as an organizational chart. The staffing management plan defines the staffing rules as it relates to the project. The Responsibility Assignment Matrix shows who is responsible for what on the project. The Resource Histogram shows what quantities of resources are utilized over time.
Chapter 11 Answers

1) a) Gantt chart
   The Gantt chart shows the people doing the work where the project is working to the plan. The Milestone chart is used for executive reporting. The Network diagram is used to show the sequencing of activities on the project. The Work Breakdown Structure (WBS) is used to show the work that is in the project.

2) c) Language
   The Communication Model includes the sender to deliver the message, the receiver to get the message, and the message as the information being exchanged.

3) c) Forecast Report
   The Forecast Report shows what is expected to happen on the project. The Status Report shows where the project is to date. The Earned Value Report shows Earned Value data. The Project Report shows what has been completed since the last reporting period.

4) d) Work Breakdown Structure
   The team is creating the Work Breakdown Structure (WBS). This will allow them to see what the work of the project is. The schedule shows sequencing and timelines as well as the work of the project. The Gantt chart shows bars indicating when the tasks happen. The Responsibility Assignment Matrix shows who is responsible for what areas on the project.

5) b) Approximately 90%
   Approximately 90% of a Project Manager's time is spent communicating. This could be via e-mail, meetings, listening, speaking, web conference, etc.

Chapter 12 Answers

1) a) $417.50
   To calculate the Earned Value (EV), multiply the percent complete of each task by its Planned Value (PV); that will provide the EV for each task. The next step is to add the Earned Value for each task to determine the total Earned Value for the project. This amount is $417.50 US.

2) d) To Complete Performance Index
   The To Complete Performance Index or TCPI shows the efficiency needed of the remaining resources to come in on budget. Cost variance shows the difference between work done and what was paid for it. Cost Performance Index shows the ratio between the work done and what was paid for it. Estimate to complete shows the amount remaining to be spent based on the current spending efficiency (CPI).
3) b) Estimate to Complete
   Estimate to Complete shows the remaining amount of money needed based on current (to date) spending efficiency. Cost Variance is the difference between the amount of work done and the amount paid for it. Estimate at Completion is the total amount of money the project is expected to cost based on current spending efficiency. Budget remaining is a noise answer.

4) a) Schedule Performance Index (SPI)
   The Schedule Performance Index will tell you if you are ahead, on, or behind schedule. Less than 1.0 means you are having schedule problems. 1.0 means you are doing exactly as planned on the schedule. Greater than 1.0 means you are progressing faster than planned. The Cost Performance Index will show the spending efficiency of the project. The Budget at Completion is the overall budget estimate for the project. The Cost Variance shows the amount that the project is over or under budget.

5) c) -$77.50
   To calculate this, the Earned Value (EV) and Actual Cost (AC) need to be calculated first. To do this, multiply the percent complete of each task by its Planned Value (PV); that will provide the EV for each task. Sum the Earned Value of each task to determine the total Earned Value. Sum the Actual Cost of each task to determine the total Actual Cost. The Earned Value of $417.50 is then subtracted from the Actual Cost of $495.00. This provides a CV of -$77.50. This means that the project is $77.50 over budget.