Section 1: Multiple-choice Questions - [25 x 1 = 25 Marks]

Section 2: Fill in the blanks [20 x 1 = 20 Marks]

Section 3: True or False [25 x 1 = 25 Marks]

Review for Section 123

Chapter 1:

1. A project is "a temporary endeavor undertaken to create a unique product, service, or result." Operations, on the other hand, is work done in organizations to sustain the business.
2. Project management knowledge areas describe the key competencies that project managers must develop. Project quality management ensures that the project will satisfy the stated or implied needs for which it was undertaken
3. Project management knowledge areas describe the key competencies that project managers must develop. Project procurement management involves acquiring or procuring goods and services for a project from outside the performing organization.
4. Risk management plans, risk registers, probability/impact matrices, and risk rankings are different tools used in risk management.
5. A project's sponsor is also known as a(n) primary customer.
6. Project management is "the application of knowledge, skills, tools, and techniques to project activities to meet project requirements."
7. A Program is a collection of projects which have common resources
8. A process is a series of actions directed toward a particular result.

Chapter 2:

1. Initiating and closing tasks are usually the shortest (at the beginning and end of a project or phase, respectively), and they require the least resources and time.
2. The project organizational structure is often inefficient for the company as a whole. Assigning staff full time to a project often creates underutilization and misallocation of staff resources.
3. The best way to kill a project is to withhold the required money, human resources, and visibility.
4. The human resources (HR) frame focuses on producing harmony between the needs of the organization and the needs of people. It recognizes that mismatches can occur between the needs of the organization and those of individuals and groups, and works to resolve any potential problems.
5. In an adaptive life cycle: stakeholders define and approve the detailed scope before the start of an iteration, producing a useable product at the end of each iteration.
6. The spiral life cycle model is suitable for projects in which changes can be incorporated with reasonable cost increases or acceptable time delays.
7. Outsourcing is an organization's acquisition of goods and services from an outside source.

Chapter 3

1. Agile is an adaptive product life cycle used when deliverables have a high degree of change and a high frequency of delivery.
2. In an adaptive life cycle: stakeholders define and approve the detailed scope before the start of an iteration, producing a useable product at the end of each iteration.
3. The spiral life cycle model is suitable for projects in which changes can be incorporated with reasonable cost increases or acceptable time delays.
4. Outsourcing is an organization's acquisition of goods and services from an outside source.
5. Because Scrum implies that team members work as a self-directed group, coached by the ScrumMaster, a team contract should not be necessary.
6. A burndown chart shows the cumulative work remaining in a sprint on a day by- day basis.
7. The two main items for monitoring and controlling in the Scrum framework are the daily Scrum and the sprint retrospectives.
8. Because Scrum implies that team members work as a self-directed group, coached by the ScrumMaster, a team contract should not be necessary.
9. A burndown chart shows the cumulative work remaining in a sprint on a day by- day basis.
10. A sprint review is a meeting in which the team demonstrates to the product owner what it has completed during the sprint.

Chapter 4

1. Opportunities are chances to improve the organization. Directives are new requirements imposed by management, government, or some external influence.
2. An organization should always complete high-priority projects first, even if a low- or medium-priority project could be finished in less time.
3. An organization should consider only projects with a positive NPV if financial value is a key criterion for project selection.
4. The ROI is always a percentage. It can be positive or negative.
5. A Gantt chart is not the same as a project management plan.
6. Change requests are common on projects and occur in many different forms. They can be oral or written, formal or informal.
7. The schedule section of the project management plan lists the planned dates for completing key deliverables.
8. The technical processes section describes specific methodologies a project might use and explains how to document information.
9. Strategic planning involves determining long-term objectives by analyzing the strengths and weaknesses, studying opportunities and threats, predicting future trends, and projecting the need for new products and services.
10. A(n) SWOT analysis involves analyzing a company's strengths, weaknesses, opportunities, and threats, and is used to aid in strategic planning.
11. A(n) change control board is a formal group of people responsible for approving or rejecting changes to a project.

Chapter 5

1. A work package is a task at the lowest level of the WBS. It represents the level of work that the project manager monitors and controls.
2. Mind mapping allows people to write and even draw pictures of ideas in a nonlinear format.
3. Even when the project scope is fairly well defined, many IT projects suffer from scope creep—the tendency for project scope to keep getting bigger and bigger. Many IT projects fail due to scope creep.
4. Scope refers to all the work involved in creating the products of the project and the processes used to create them.
5. The requirements management plan documents how project requirements will be analyzed, documented, and managed.
6. To use the top-down approach, start with the largest items of the project and break them into subordinate items. The top-down approach is best suited to project managers who have vast technical insight and a big-picture perspective.
7. A(n) work breakdown structure is a deliverable-oriented grouping of the work involved in a project that defines its total scope.

8. Variance is the difference between planned and actual performance.
9. Prototyping involves developing a working replica of the system or some aspect of the system.

Chapter 6

1. After defining project activities, the next step in project time management is sequencing them or determining their dependencies.
2. The network diagram represents activities that must be done to complete the project. Not every item on the WBS needs to be shown on the network diagram; only activities with dependencies need to be shown.
3. A backward pass through the network diagram determines the late start and late finish dates for each activity. In contrast, a forward pass determines the early start and early finish dates for each activity.
4. Gantt charts provide a standard format for displaying project schedule information by listing project activities and their corresponding start and finish dates in calendar form. In a Gantt chart, a black diamond symbol represents a milestone.
5. The final process in project time management is controlling the schedule, Like scope control, schedule control is a portion of the integrated change control process under project integration management.
6. A start-to-start dependency is a relationship in which the "from" activity cannot start until the "to" activity or successor is started.
7. A technique that can help project managers make schedule trade-offs is determining the free slack and total slack for each project activity. Free slack or free float is the amount of time an activity can be delayed without delaying the early start date of any immediately following activities.
8. Parkinson's Law states that work expands to fill the time allowed.
9. A(n) network diagram is a schematic display of the logical relationships among project activities and their sequencing.
10. A(n) Tracking Gantt chart compares planned and actual project schedule information.
11. A white diamond on a Tracking Gantt chart represents a(n) slipped milestone.

Chapter 7

1. Cash flow analysis is a method of determining the estimated annual costs and benefits for a project and the resulting annual cash flow. Project managers must conduct cash flow analysis to determine net present value.
2. Management reserves allow for future situations that are unpredictable. For example, if a project manager gets sick for two weeks or an important supplier goes out of business, management reserves could be set aside to cover the resulting costs.
3. Analogous estimates requires a good deal of expert judgment and is generally less costly than other techniques. However, it is also less accurate.
4. Project cost management includes the processes required to ensure that a project team completes a project within an approved budget. Project managers must make sure their projects are well defined, have accurate time and cost estimates, and have a realistic budget that they were involved in approving.
5. Indirect costs are not directly related to the products or services of the project, but are indirectly related to performing the project.
6. The first step in project cost management is planning how the costs will be managed throughout the life of the project. The project manager and other stakeholders use expert judgment, analytical techniques, and meetings to produce the cost management plan.

7. The additional percentage or dollar amount by which actual costs exceed estimates is known as a(n) overrun.
8. A(n) cost baseline is a time-phased budget that project managers use to measure and monitor cost performance.
9. Earned value management is a project performance measurement technique that integrates scope, time, and cost data.

Chapter 8:

1. Reliability is the ability of a product or service to perform as expected under normal conditions.
2. Testing needs to be done during almost every phase of the systems development life cycle, not just before the organization ships or hands over a product to the customer.
3. Conformance to requirements means that the project's processes and products meet written specifications. For example, if the project scope statement requires delivery of 100 computers with specific processors and memory, you could easily check whether suitable computers had been delivered.
4. A metric is a standard of measurement. Examples of common metrics include failure rates of products, availability of goods and services, and customer satisfaction ratings.
5. Design of experiments is a technique that helps identify which variables have the most influence on the overall outcome of a process. Understanding which variables affect outcome is a very important part of quality planning.
6. Functionality is the degree to which a system performs its intended function. Features are the system's special characteristics that appeal to users. It is important to clarify what functions and features the system must perform, and what functions and features are optional.
7. Benchmarking generates ideas for quality improvements by comparing specific project practices or product characteristics to those of other projects or products within or outside the performing organization.
8. User acceptance testing is an independent test performed by end users prior to accepting the delivered system. It focuses on the business fit of the system to the organization, rather than technical issues.
9. Cause-and-effect diagrams trace complaints about quality problems back to the responsible production operations.
10. Watts S. Humphrey defines a(n) software defect as anything that must be changed before delivery of the program.
11. Kaizen is the Japanese method of modern quality management called, which relies on continuous small improvements involving everyone from the top management to the lowest level worker in the organization.
12.

Chapter 9:

1. In addition to using a RAM to assign detailed work activities, you can use it to define general roles and responsibilities on projects. This type of RAM can include the stakeholders in the project.
2. People who work overtime just to get extra pay or because of their own poor work or planning should not be rewarded
3. Coercive power involves using punishment, threats, or other negative approaches to get people to do things they do not want to do. For example, a project manager can threaten to fire workers or subcontractors to try to get them to change their behavior.
4. Sharpening the saw is the process of self-renewal.
5. The RAM (responsibility assignment matrix) allocates work to responsible and performing organizations, teams, or individuals, depending on the desired level of detail.
6. Psychosocial issues that affect how people work and how well they work include motivation, influence and power, and effectiveness.
7. Resource leveling is a technique for resolving resource conflicts by delaying tasks. It is a form of network analysis in which resource management concerns drive scheduling decisions (start and finish dates). The main purpose of resource leveling is to create a smoother distribution of resource usage.

Chapter 10:

1. For projects to succeed, every project team member needs both types of skills, and needs to develop them continuously through formal education and on-the-job training.
2. An important aspect of communications is the number of people involved in a project. As the number increases, the complexity of communication increases because there are more channels or pathways through which people can communicate. Communication becomes more complex as you increase team size.
3. Blogs are journals on the Web that allow users to write entries, respond to another poster's comments, create links, upload pictures, and post comments to journal entries.
4. Minutes should be short and focus on the crucial decisions and action items from the meeting.
5. Status reports describe where the project stands at a specific point in time. Status reports can take various formats depending on the stakeholders' needs.
6. If a team has 10 communication channels between its various members, it can be deduced that the team has five members by using the formula for calculating communication channels.

7. Interactive communication happens when two or more people to exchange information via meetings, phone calls, or video conferencing.
8. Improving an organization's ability to communicate requires a cultural change in an organization that takes a lot of time, hard work, and patience.

Section 4: Answer the following Questions [6 x 5 = 30 Marks]

Section 4: Review

1.Elaborate on the Project Management Life Cycle process?

The Project Management Life Cycle is a series of various activities/tasks that are crucial for accomplishing project objectives or targets. This helps in structuring the efforts and simplifying them into a series of logical and manageable steps. The Project Management Life Cycle consists of four simple phases which are listed below:

Initiation
It's the first and most vital step in the life-cycle of your project where the initial scope of the project gets defined and resources are committed. This process group ensures the success of your project.
Planning
In this process group, an appropriate level of detail is jotted for the project to plan time, cost and resources. It estimates the work needed and manage risk effectively.
Executing
This process group consists of the processes which are used to complete the work defined in the project management plan. It's about achieving the project's objectives. It also involves tracking, reviewing and regulating the performance of the project. Also, you need to identify potential problems quickly and take corrective actions.
Closing
This process group is an important part of project management, performed to finalize all project activities to complete the project. This means finishing all activities across all the process groups, disbanding the project team and signing off the project with the customer using the project closure report.

2. What are the most important skills that a Project Manager should possess?

Most important skills that a Project manager must possess are:

Communication
Leadership
Team Management
Negotiation Power
Personal Organization
Risk Management

3. How will you start your job as a new project manager?

When you start your job a project manager first few things that you need to take care of are:

Listen, observe and learn
Understand your client's needs and wants
Know your team and their personalities
Take the opportunity to learn some new skills
Help out around the workplace
Try to master the tools your company possesses

4. What are the major types of risks you might encounter in a project?

Majorly encountered risks in a project are:

- Cost Risk
- Schedule Risk
- Performance Risk
- Resource Risk
- Technology Risk
- Market Risk
- Legal Risk
- Strategic Risk
- Governance Risk
- Operational Risk
- External Risk

5. Why does a Project Manager need to be proactive?

Proactive Managers have higher chances of finding out the risks and implementing solutions in order to minimize them. Being proactive, lets them have more control over their project tasks and resources. They can keep a better track of all tasks and issues to work towards implementing small changes and improvements for higher productivity and efficiency. Organizes frequent meetings for developers to talk about their problems, brainstorm solutions, share best practices etc. Compares the actual costs and time spent on tasks on a weekly basis with the planned numbers.

6. Explain the entire team forming process you follow for your team.

Developmental stages of the team generally consist of:

Forming: In this stage, the entire group unites for the first time where the focus is to build relationships within the team and clarify the mission or vision of the project.
Storming: In this stage, team members get more comfortable in sharing their opinions with the team and with a possibility of internal conflict within the group.
Norming: In this stage, the project team receives the clarity and support on the tasks to proceed with the project.
Performing: By this stage, the team members learn to trust and accept each other. Each of the team members become competent, autonomous and is able to handle the decision-making process without anyone's supervision.
Adjourning: This is the final stage of the team forming process, which takes place after project completion. In this stage, the team is broken up and resources are released.

7. What are the knowledge areas and how relevant are they in a project?

Knowledge Areas are the core technical subject matter that are vital for effective project management. All the 49 processes are primarily part of these knowledge areas where they are grouped based on their commonalities. Below I have listed down the 10 knowledge areas of project management framework:

1. Project Integration Management
2. Project Scope Management

3. Project Schedule Management
4. Project Cost Management
5. Project Quality Management
6. Project Resource Management
7. Project Communications Management
8. Project Risk Management
9. Project Procurement Management
10. Project Stakeholder Management

8. What are the processes and process groups in the project management framework?

A process in the project management framework is a defined way of doing tasks that are involved in the successful completion of a project. These processes define the actions to be taken along with their sequence. There are around 49 processes in the project management framework embedded in various process groups. Process groups are a collection of processes that are applicable through various stages of a project.

There are 5 process groups in which 10 knowledge areas and 49 processes are mapped into. The five process groups are:

1. Initiation
2. Planning
3. Executing
4. Monitoring & Control
5. Closing

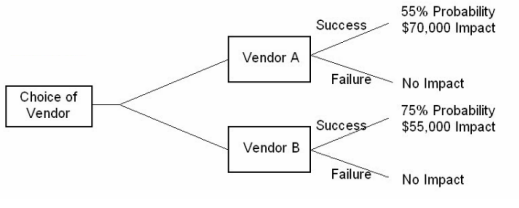
9. What are the most important skills that a Project Manager should possess?

Most important skills that a Project manager must possess are:

1. Communication
2. Leadership
3. Team Management
4. Negotiation Power
5. Personal Organization
6. Risk Management

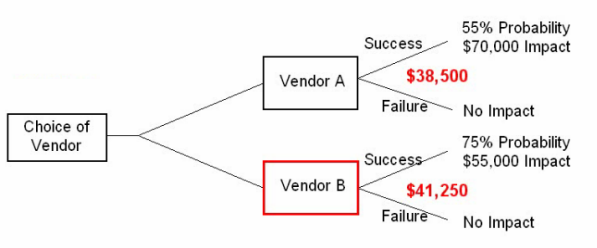
10. Let us say, we are given the task of deciding between Vendor A and Vendor B. Vendor A has a Success Probability of 55% and an Impact of $ 70,000 while there is no impact on Failure. Similarly Vendor B has a 75% probability of Success and has an impact of $ 55,000 and he too has no impact on Failure. Based on this information, how would you choose the Vendor?

The simple Answer would be – Use Decision Tree Analysis. So, based on this question, if I were to create a Decision Tree, it would look like below:



So, here:

EMV for Vendor A: = 70000 * 55% = 38,500
EMV for Vendor B = 55000 * 75% = 41,250



Now, you know the EMV for each vendor. So, the wiser choice would be to choose Vendor B because the Expected Monetary Value of choosing Vendor B is greater than Vendor A.

Example 2:
For Vendor A:
EMV for Failure = 1000 * 30% = 300
EMV for Success = 6000 * 70% = 4200
Total EMV for Vendor A = $ 4,500/-

For Vendor B:
EMV for Failure = -1200 * 40% = -480
EMV for Success = 7500 * 60% = 4500
Total EMV for Vendor B = $ 4,020/-

So, based on the total EMV, Vendor A is the better choice…

11. For the following table of information below,

1. Draw the network diagram
2. List the network paths
3. Determine the critical path(s)
4. Determine the float for each activity
5. What is the minimum time to complete the project? Duration?

Activity	Duration	Dependency	Float
Start	0 days		
A	5 days	Start	
B	2 days	Start	
C	3 days	A, B	
D	5 days	Start	
E	6 days	Start	
F	4 days	D, E	

G	2 days	C, F	
H	5 days	G	
I	7 days	G	
J	3 days	H	
Finish	0 days	I, J	