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**SUBJECT: PROJECT MANAGEMENT**

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**SEMESTER: 6TH SEMESTER**

**EXAMINATION: FINAL TERM**



**IQRA NATIONAL UNIVERSITY**

**Q1: Learning Outcomes of Project Management:**

Following are ten learning outcomes of project management:

1. Using Project Management we can manage the scope, cost, timing and quality of the project.
2. Applies the Project Management processes to start, plan, complete, monitor, control and close projects and to coordinate all the elements of the project.
3. Using interpersonal skills to manage the human resources of a certain project including organizing, managing and leading the team, using these strategies to influence others, manage conflict and leading towards a successful project completion.
4. Using project management knowledge, processes, lifecycle and the different management concepts, tools and different techniques to make the project successful.
5. To interact with team and stakeholders in a professional manner, respecting all the differences and to ensure a concerted project environment.
6. It manages project risk, identifying, analyzing and responding to risk effectively.
7. Legal and ethical standards are applied to complete the project.
8. Project is completed in an appropriate and better way such that all the variables of the environment are being counted and nothing is harmed during the completion of the project.
9. Project management practices are applied in launching of new programs, products, services and different events that are relative to the needs of stakeholders.
10. To manage the logistics, assessment, planning, budget, resources and performance of the project and teams.

**Practical implementation of the project management:**

When a project is managed well and in proper way then a new phase is started which is the implementation. Implementation is the most important phase in a project. Practically implementation means that the project is going on the prescribed and planned way. The project manager is the one who direct, deliver the results and manage all the activities of the project. He should keep track of how well the team is performing. Also different people are assigned with different duties in order to work effectively. All the documents are put together and assigned to different persons. This phase keeps the project plan on track with careful monitoring and control processes. This phase is typically where approved changes are implemented.

**Q2: Components of Project Budget:**

Project budget means the total projected costs required to complete a project over certain period of time. The project budget is a plan which acts as a baseline to measure the costs of the project. Project budget starts from the very first activity and ends with the very last activity of the whole project.

The following are the components of the project budget:

1. Activity Estimates 2. Work package estimates 3. Control Account estimates

4. Project estimates 5. Contingency reserves 6. Cost baseline

7. Management reserves 8. Cost budget

1. **Activity Estimates:**

An activity can have costs from multiple dealers, in addition to internal costs for labor and materials. Full estimates from all sources can be updated so those costs associated with a particular activity can be grouped by adding the activity code to the detailed estimate.

For example: If Munda dam has to be built by a private firm. The cost for different small activities like machinery, labor and other engineering tools must be estimated first and then the cost of the whole project will be estimated. Activity codes for those costs are given like 1.2, 1.3, 2.0 etc.

1. **Work package estimates:**

A work package is a group of activities in a project because they look like project themselves, they are often assumed as sub projects within a larger project. Work packages are the smallest unit of work that a project can be broken down to when creating your work breakdown structure.

For example: The big engineering project works are break down to simple and easy task and appointed to different teams.

1. **Control account estimates:**

Control account estimate is a tool that is used as a management control point that includes the addition of a number of specific and key elements of a number of [project](https://project-management-knowledge.com/definitions/p/project/) specific elements, and after the successful adding, a quantity of the performance to date will take place. The elements which are commonly [combined](https://project-management-knowledge.com/definitions/i/integrated/) using the [control account](https://project-management-knowledge.com/definitions/c/control-account/) tool include the possibility of a project, the project’s actual cost as well as the project’s budget, and the project’s timetable. Control accounts are placed at many planned points of the project’s [work breakdown structure](https://project-management-knowledge.com/definitions/w/work-breakdown-structure/).

1. **Project estimates:**

A project estimate is the estimate of how much time and money is needed to complete a project. Every business has a budget and wants to know the costs before they are willing to begin a project.

## **Contingency Reserves**

Most projects have something unpredicted happen that rises costs above the original estimates. If estimates are hardly exceeded, the estimating method should be revised because the estimates are too high. It is impossible to expect which activities will cost more than expected, but it is reasonable to accept that some of them will. Funds allocated for this purpose are called **contingency reserves**. Because it is possible that this money will be consumed, it is part of the total budget for the project. If this fund is satisfactory to meet the unplanned expenditures, then the project will complete within the budget.

1. **Cost Baseline:**

A cost baseline is an accepted time phased plan. Once a detailed budget is developed and approved, the project manager should issue this baseline and set it as a point of comparison for actual performance progress. The baseline budget is the tool for measuring how project changes affect our timetable and budget.

## **Management Reserves**

If something happens during the project that needs a change in the project scope, money may be needed to contract with the condition before a change in scope can be negotiated with the project sponsor or client. It could be a chance as well as a challenge. For example, if a new technology were invented that would greatly improve your accomplished project, there would be extra cost and a modification to the scope, but it would be worth it. Money can be made accessible at the manager’s pleasure to meet needs that would change the scope of the project. These funds are called **management reserves**

1. **Cost Budget:**

Cost budgeting is a instrument to estimate the costs or needed efforts for projects, work packages or activities in project management. Cost budgeting includes the approximation of costs, setting a stable budget, and managing and controlling the actual costs compared to the estimated ones.

**Q3: Project Quality:**

Quality management is the process to ensure all the project activities necessary to design, plan and implement a project effectively and efficiently with respect to the purpose of the objective and its performance. Project quality management is not purchasing the most expensive material or services available on the market. Quality and grade are not the same. Grade are characteristics of a material or service such as additional features. A product may be of good quality and be of low grade. Quality management is a continuous process that starts and ends with the project. It is more about preventing and avoiding than measuring and fixing poor quality outputs. It is part of every project management processes from the moment the project initiates to the final steps in the project closure phase. It is not about finding and fixing errors after the fact, quality management is the continuous monitoring and application of quality processes in all aspects of the project. Quality management is not an event - it is a process, a consistently high quality product or service cannot be produced by a defective process. Quality management is a repetitive cycle of measuring quality, updating processes, measuring, updating processes until the desired quality is achieved. Quality management improve the tasks during the project and enables the team to use the most useful material throughout the project.

**Purpose of** **Project Quality Management:**

The main principle of project quality management is to ensure the project will meet or exceed stakeholder’s needs and expectations. The project team must develop a good relationship with key stakeholders, specially the donor and the beneficiaries of the project, to understand what quality means to them. One of the causes for poor project evaluations is the project focuses only in meeting the written requirements for the main outputs and ignores other stakeholder needs and expectations for the project. Quality must be viewed on an equal level with scope, schedule and budget. If a project donor is not satisfied with the quality of how the project is delivering the outcomes, the project team will need to make adjustments to scope, schedule and budget to satisfy the donor’s needs and expectations. To deliver the project scope on time and on budget is not enough, to achieve stakeholder satisfaction the project must develop a good working relationship with all stakeholders and understand their stated or implied needs.

**Project Quality Management Processes:**

Project management consists of four main processes:

* Quality Definition
* Quality Assurance
* Quality Control
* Quality Improvements

Defining quality is the first step, the project manager and the team must find what quality standards will be used in the project, it will look at what the contributor, recipients, the organization and other key stakeholders to come up with a good definition of quality. Identifying quality standards is a key component of quality definition that will help identify the key characteristics that will govern project activities and ensure the beneficiaries and donor will accept the project outcomes. Quality management implies the ability to anticipate situations and prepare actions that will help bring the desired outcomes. Assurance of the quality during the project is very important. If the quality is compromised at any stage during the project then defects will take place in the project and the project will go towards defective side. Assuring the quality is the duty of quality officers. Quality is controlled by these assigned officers or engineers during the project. They work collectively in team and ensure to control the quality of the products. During the project the quality improvement is checked and when needed the quality is improved. Quality improvement means systematic activities that are organized and implemented by an organization to monitor, asses and improve its quality. Special teams monitor the quality of the products and improve time by time.

**Q4:**

|  |  |  |
| --- | --- | --- |
| **Activity** | **Predecessor** | **Duration** |
| 1 | - | 3w |
| 2 | 1 | 3w |
| 3 | 1 | 6w |
| 4 | 2 | 8w |
| 5 | 4,3 | 4w |

**Critical Path Diagram:**

Activity-5

Activity-4

Activity-2

**Final**

4w

8w

3w

Activity-1

**Start**

6w

Activity-3

3w

1. Critical path: 1-2-4-5 Non critical path: 1-3-5
2. Duration: 18 weeks Duration :13 weeks
3. Float of Activity 3: LS-ES = 8-3 = 5 weeks
4. Float of activity 2: LS-ES = 3-3 = 0 week
5. Duration of critical path – Duration of non-critical path = 18-13 = 5 weeks