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Mid Semester Examination – October – 2017

Model Answer

Branch: M.Tech (Construction Management)

Sem.:- I

Subject with Subject Code: - Management & Project Planning (CVCTM101)

Q. No.1 Attempt any one of the following

(8 x 1 = 8)

A) Functions of Management: -

List of functions

1. Planning

It is the basic function of management. It deals with chalking out a future course of action & deciding in advance the most appropriate course of actions for achievement of pre-determined goals. "Planning is deciding in advance - what to do, when to do & how to do. It bridges the gap from where we are & where we want to be". A plan is a future course of actions. It is an exercise in problem solving & decision making. Planning is determination of courses of action to achieve desired goals. Thus, planning is a systematic thinking about ways & means for accomplishment of pre-determined goals. Planning is necessary to ensure proper utilization of human & non-human resources. It is all pervasive, it is an intellectual activity and it also helps in avoiding confusion, uncertainties, risks, wastages etc.

2. Organizing

It is the process of bringing together physical, financial and human resources and developing productive relationship amongst them for achievement of organizational goals. According to Henry Fayol, "To organize a business is to provide it with everything useful or its functioning i.e. raw material, tools, capital and personnel's". To organize a business involves determining & providing human and non-human resources to the organizational structure.

Organizing as a process involves:

- Identification of activities.
- Classification of grouping of activities.
- Assignment of duties.
- Delegation of authority and creation of responsibility.
- Coordinating authority and responsibility relationships.

3. Staffing

It is the function of manning the organization structure and keeping it manned. Staffing has assumed greater importance in the recent years due to advancement of technology, increase in size of business, complexity of human behavior etc. The main purpose of staffing is to put right man on right job i.e. square pegs in square holes and round pegs in round holes. "Managerial function of staffing involves manning the organization structure through proper and effective selection, appraisal & development of personnel to fill the roles designed on the structure".

Staffing involves:

- Manpower Planning (estimating man power in terms of searching, choose the person and giving the right place).
- Recruitment, Selection & Placement.
- Training & Development.
- Remuneration.
- Performance Appraisal.
- Promotions & Transfer.

4. Directing

It is that part of managerial function which actuates the organizational methods to work efficiently for achievement of organizational purposes. It is considered life-spark of the enterprise which sets it in motion the action of people because planning, organizing and staffing are the mere preparations for doing the work. Direction is that inert-personnel aspect of management which deals directly with influencing, guiding, supervising, motivating sub-ordinate for the achievement of organizational goals.

Direction has following elements:

- Supervision
- Motivation
- Leadership
- Communication
- **Supervision-** implies overseeing the work of subordinates by their superiors. It is the act of watching & directing work & workers.
- **Motivation-** means inspiring, stimulating or encouraging the sub-ordinates with zeal to work. Positive, negative, monetary, non-monetary incentives may be used for this purpose.
- **Leadership-** may be defined as a process by which manager guides and influences the work of subordinates in desired direction.
- **Communications-** is the process of passing information, experience, opinion etc from one person to another. It is a bridge of understanding.

5. Controlling

It implies measurement of accomplishment against the standards and correction of deviation if any to ensure achievement of organizational goals. The purpose of controlling is to ensure that everything occurs in conformities with the standards. An efficient system of control helps to predict deviations before they actually occur. "Controlling is the process of checking whether or not proper progress is being made towards the objectives and goals and acting if necessary, to correct any deviation".

"Controlling is the measurement & correction of performance activities of subordinates in order to make sure that the enterprise objectives and plans desired to obtain them as being accomplished".

Therefore, controlling has following steps:

- Establishment of standard performance.
- Measurement of actual performance.
- Comparison of actual performance with the standards and finding out deviation if any.
- Corrective action.

Q 1.

B) Contribution of F. W. Taylor in modern scientific management.

Scientific management concept

Scientific management concept is one of the principles of management and is also known as classical theory. This principle is propounded by Fredrick Winslow Taylor (F.W Taylor) – the father of management. He was born in USA in 1856.

He joined Midvale steel company where he worked as a machine shop worker for two years as gang boss for some years and as chief engineer at the age of 28. He also joined Bethlehem steel company where he served for a long time. Later he devoted his time to develop the concept of scientific management.

He noticed that there were much disorder and wastage of human as well as other resources at work place. The managers and staffs had no concept about systematic and efficient performance of task. And all were following traditional ways of doing work. So he tried to remove these problems through the development of new concept. Thus the scientific management concept was developed.

Contributions of F.W Taylor

While working in Midvale Company as a manager Taylor observed that employees were not performing as per their capacity of productivity. And he considered that this condition was occurring because of no care towards the waste. Taylor worked towards the experiments at his work place to increase the worker's efficiency so that maximum output could be achieved by utilizing effort at maximum level.

1. Scientific task setting: -

Taylor observed that the management does not know exactly the works – pieces of work- volume of works- which are to be performed by the workers during a fixed period of time- which is called working day. In a working day how, much work is to be done by a worker but be fixed by a manager and the task should be set every day. The process of task setting requires scientific technique. To make a worker do a quantity of work in a working day is called scientific task setting

2. Differential payment system: -

under this system, a worker received the piece rate benefit which will attract the workers to work more for more amount of wages and more incentives would be created to raise the standardization of output to promote the workers to produce more and perform more task than before and utilize waste time to earn more wages.

3. Reorganization of supervision: -

concepts of separation of planning and doing and functional foremanship were developed. Taylor opines that the workers should only emphasize in planning or in doing.

4. Scientific recruiting and training: -

staffs and workers should be selected and employed on scientific basis. Management should develop and train every worker by providing proper knowledge and training to increase their skills and make them effective

5. Economy: -

efficient cost accounting system should be followed to control cost which can minimize the wastages and thoroughly reduced and thus eliminated.

6. Mental revolution: -

Taylor argued that both management and workers should try to understand each other instead of quarrelling for profits and benefits which would increase production, profit and benefits.

Q. No.2 Attempt any three of the following: (4 x 3 = 12)

a) objectives of the management

The broad purposes or objectives of the management are as follows—

1. Optimum utilisation of resources:

The most important objectives of the management are to use various resources of the enterprise in a most economic way.

2. Growth and development of business:

By proper planning, organisation and direction etc., management leads a business to growth and development on sound footing. It helps in profitable expansion of the business. It provides a sense of security among the employers and employees.

3. Better quality goods:

The aim of the sound management has always been to produce the better quality products at minimum cost. Thus, it tries to remove all types of wastages in the business.

4. Ensuring regular supply of goods:

Another objective of management is to ensure the regular supply of goods to the people. It checks the artificial scarcity of goods in the market. Hence, it keeps the prices of goods within permissible limits.

5. Discipline and morale:

The management maintains the discipline and boosts the morale of the individuals by applying the principles of decentralisation and delegation of authority. It motivates the employees through monetary and nonmonetary incentives. It helps in creating and maintaining better work culture.

6. Mobilising best talent:

The employment of experts in various fields will help in enhancing the efficiency of various factors of production. There should be a proper environment which should encourage good persons to join the enterprise.

7. Promotion of research and development:

Management undertakes the research and development to take lead over its competitors and meet the uncertainties of the future.

8. Minimise the element of risk:

Management involves the function of forecasting. Though the exact future can never be predicted yet on the basis of previous experience and existing circumstances, management can minimise the element of risk.

9. Improving performance:

Management should aim at improving the performance of each and every factor of production. The environment should be so congenial that workers are able to contribute their maximum to the enterprise. The fixing of objectives of various factors of production will help them in improving their performance.

10. Planning for future:

Another important purpose of management is to prepare a prospective plan. No management should feel satisfied with today's work. Future plans should take into consideration what is to be done next. Future performance will depend upon present planning. So, planning for future is essential to every organisation.

Q2.

B) Role of PMC in construction projects

- Managing projects and related various activities within given time, quality and budget.
- Providing guidelines regularly.
- Conducting periodic reviews to make sure that the project work is on the right track.
- Coordinating various functional activities from within and outside project management teams.
- Allocation of various activities among team members for the completion of project work within stipulated time period.
- Planning and forecasting various activities
- Organizing the different activities.
- Commanding and coordinating with the team members
- Monitoring the different processes which are involved in the construction of any particular project.
- Selecting most appropriate employ for the job.
- Managing the manpower for different works.

Q2.

C) Role & Responsibilities of Project Manager**Role:-**

- A Project Manager is a key figure of any Service Team. They will be primarily responsible for the overall successfulness of delivering a project, reaching set targets both safely and correctly.
- They must be able to perform effectively within tight time-scales, keep within strict budgets and create a positive client environment such that clients become/remain in a good relationship throughout the contract.
- They will manage a set of service deliveries, which must be achieved on time to ensure all activities in the schedule are completed in time. To overcome certain task, project managers must show

initiative and be able to find ways to best adapt a situation to provide a successful overall critical path analysis.

- A PM will be expected to support the development of the leadership, both on-site and back in the offices. They will need to organise the best team possible to complete the project, whilst training and teaching the employees towards the company's core values. Encouragement of excellence and quality in work will lead to a great reputation amongst clients.

Responsibilities:-

- Plan the delivery of the project at hand.
- Manage the day-to-day working, utilisation, implementation and technical consultants engaged on client assignments. From ensuring the correct material turns up before a job, to explaining the work ethics and activities to colleagues.
- Report progress on projects by suitable media to sector management, maintain and update project reporting, checkpoints and financial reporting to a high standard.
- Plan and arrange visits to existing and new potential clients, ensuring every client receives sufficient support to enhance their relationships.
- Develop contacts with senior staff, directors, and other influential staff within each account during the implementation phase.
- Co-ordinate required support levels and training.
- Produce reports on each project at agreed intervals, and whenever substantive actions are required.

Q2.

d) The Project Life Cycle (Phases)

- The project manager and project team have one shared goal: to carry out the work of the project for the purpose of meeting the project's objectives. Every project has a beginning, a middle period during which activities move the project toward completion, and an ending (either successful or unsuccessful). A standard project typically has the following four major phases (each with its own agenda of tasks and issues): initiation, planning, implementation, and closure. Taken together, these phases represent the path a project takes from the beginning to its end and are generally referred to as the project "life cycle."

Initiation Phase

- During the first of these phases, the initiation phase, the project objective or need is identified; this can be a business problem or opportunity. An appropriate response to the need is documented in a business case with recommended solution options. A feasibility study is conducted to investigate whether each option addresses the project objective and a final recommended solution is determined.
- Once the recommended solution is approved, a project is initiated to deliver the approved solution and a project manager is appointed. The major deliverables and the participating work groups are identified, and the project team begins to take shape. Approval is then sought by the project manager to move onto the detailed planning phase.

Planning Phase

- The next phase, the planning phase, is where the project solution is further developed in as much detail as possible and the steps necessary to meet the project's objective are planned. In this step, the team identifies all of the work to be done. The project's tasks and resource requirements are

identified, along with the strategy for producing them. This is also referred to as “scope management.” A project plan is created outlining the activities, tasks, dependencies, and timeframes. The project manager coordinates the preparation of a project budget by providing cost estimates for the labour, equipment, and materials costs. The budget is used to monitor and control cost expenditures during project implementation.

- Once the project team has identified the work, prepared the schedule, and estimated the costs, the three fundamental components of the planning process are complete. This is an excellent time to identify and try to deal with anything that might pose a threat to the successful completion of the project. This is called risk management. In risk management, “high-threat” potential problems are identified along with the action that is to be taken on each high-threat potential problem, either to reduce the probability that the problem will occur or to reduce the impact on the project if it does occur. This is also a good time to identify all project stakeholders and establish a communication plan describing the information needed and the delivery method to be used to keep the stakeholders informed.
- Finally, you will want to document a quality plan, providing quality targets, assurance, and control measures, along with an acceptance plan, listing the criteria to be met to gain customer acceptance. At this point, the project would have been planned in detail and is ready to be executed.

Implementation (Execution) Phase

- During the third phase, the implementation phase, the project plan is put into motion and the work of the project is performed. It is important to maintain control and communicate as needed during implementation. Progress is continuously monitored and appropriate adjustments are made and recorded as variances from the original plan. In any project, a project manager spends most of the time in this step. During project implementation, people are carrying out the tasks, and progress information is being reported through regular team meetings. The project manager uses this information to maintain control over the direction of the project by comparing the progress reports with the project plan to measure the performance of the project activities and take corrective action as needed. The first course of action should always be to bring the project back on course (i.e., to return it to the original plan). If that cannot happen, the team should record variations from the original plan and record and publish modifications to the plan. Throughout this step, project sponsors and other key stakeholders should be kept informed of the project’s status according to the agreed-on frequency and format of communication. The plan should be updated and published on a regular basis.
- Status reports should always emphasize the anticipated end point in terms of cost, schedule, and quality of deliverables. Each project deliverable produced should be reviewed for quality and measured against the acceptance criteria. Once all of the deliverables have been produced and the customer has accepted the final solution, the project is ready for closure.

Closing Phase

- During the final closure, or completion phase, the emphasis is on releasing the final deliverables to the customer, handing over project documentation to the business, terminating supplier contracts, releasing project resources, and communicating the closure of the project to all stakeholders. The last remaining step is to conduct lessons-learned studies to examine what went well and what didn’t. Through this type of analysis, the wisdom of experience is transferred back to the project organization, which will help future project teams

