

Assignment

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Section : B

Subject : Construction Management
(theory)

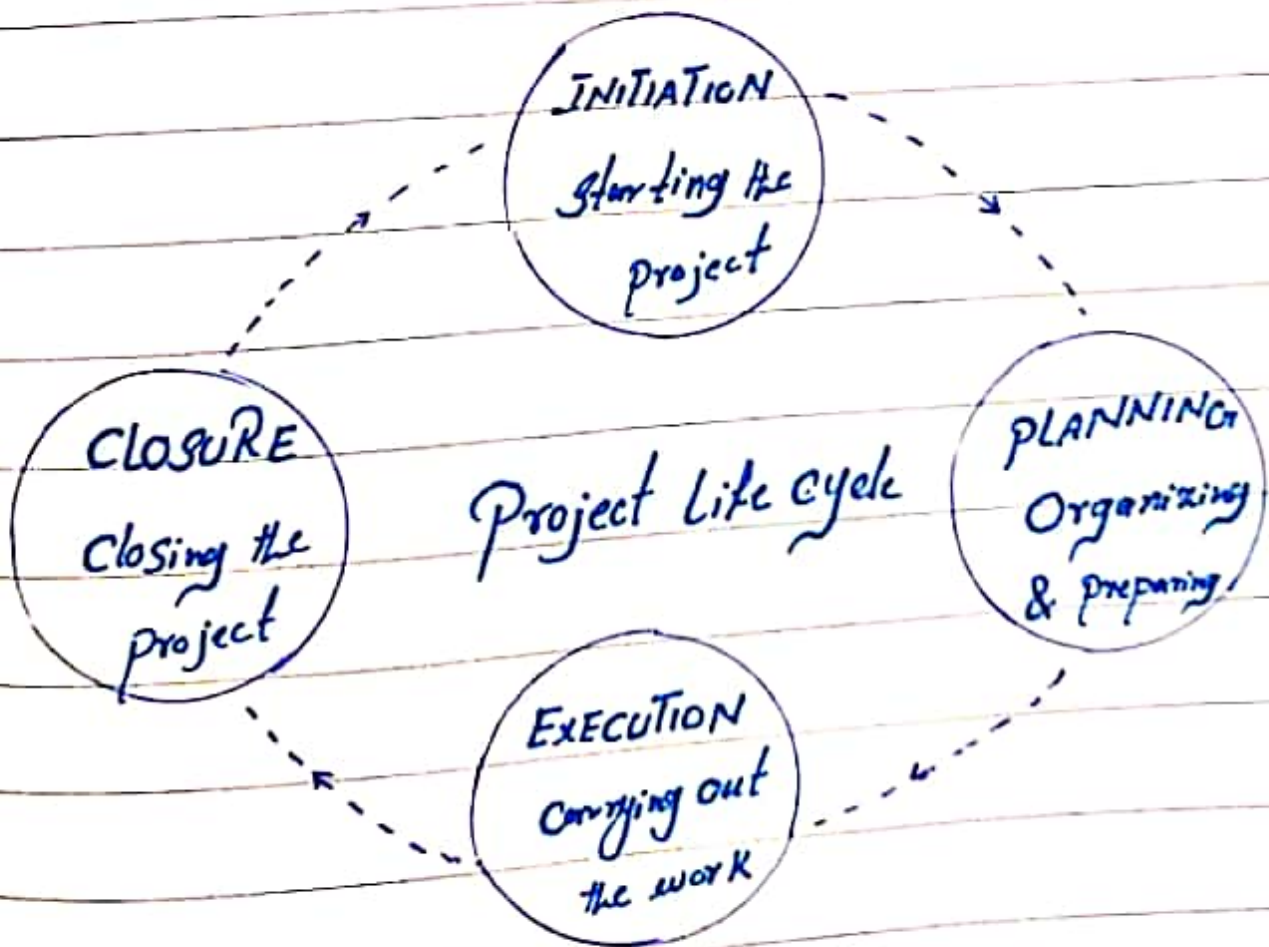
Submitted To : Dr. Engr. Zeeshan Ahad

-: Assignment :-

Question 1: what is project life-cycle
explain briefly with diagram?

Ans:-

Project Life - Cycle -



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 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. Issues of feasibility ("Can we do the project"?) and justification ("Should we do the project"?) are addressed.

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 group 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 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 time in this steps. 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 sponsor 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 customer has accepted the final solution, the project is ready for closure.

Closing Phase :-

1) 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.

Question 2 :-

1) Define and explain briefly major types of construction projects ?

Ans:- Types of Construction projects:

Broadly speaking, you can separate construction project types into 3 categories :-

- Private construction
- State construction
- Federal construction

1. Private Construction Projects :-

The first type of construction project is the private construction project. but simply private projects are projects of every type that are owned, controlled or commissioned by a private party. Private parties

include individuals, homeowners, corporations, other business entities, non-profit associations, privately funded schools, hospitals, public financial companies, etc.

Anything, in other words that is not the government.

Private construction projects come in all different shapes and sizes, and this is when it's useful to look at the character of the work performed to segment private construction into different subcategories. These subcategories would include:

Residential Construction :-

whenever construction work is being performed to a single-family residence or residential

Facility with (usually) less than 3 or 4 units. If you are working on an apartment complex this would more likely be considered a commercial project instead of a residential project. Similarly, if you are working at a condominium, the work would be residential if upon a single unit, but if on the entire complex or the common elements, the work would more likely be considered commercial.

Commercial Construction :-

Commercial construction is the construction of any buildings or similar structures for commercial purposes. Commercial construction includes a huge variety of projects including

building restaurants, grocery stores, Sky
scrapers, shopping centers, sports facilities,
hospitals, private schools and universities, etc.

Industrial Construction :-

This is a relatively small segment of the
construction industry. These projects include
power plants, manufacturing plants, solar
wind farms, refineries, etc.

while termed "industrial construction" it
is pretty interchangeable with "commercial
construction".

2. State Construction Projects :-

Some people get confused by the term

"state" when talking about state construction projects because the term "state" can refer to projects commissioned by a county, city, municipality, government board, public school board or any other state-funded entity. The term "state construction" means, therefore any government-funded construction that is not "federal" which is discussed in the next section.

State construction projects can take a variety of forms.

They can be pretty traditional projects like the construction of a public school or government building (like a court room). These projects can also be pretty sophisticated, such as the construction of a bridge, searline, highways, etc.

3. Federal Construction Projects :-

Federal construction projects are very similar to state projects. Just like state projects they can take on a variety of forms: very simple and traditional, and very complex, and the stuff being constructed can be pretty similar to the stuff constructed by state authority: courthouses, government buildings, flood control projects, etc.

The difference between state and federal projects simply depends on who owns or controls the underlying project site. The difference is not which entity funds the project, because federal funds are all over state (and even private) projects.

The difference is in who owns and control project.

If work done on a state courthouse using federally provided funds, it is a state project. If work done on a federal courthouse, however, it's a federal project.

work done on a federally funded interstate is usually a state project because the states control the highways.

work done through the US Army Corps of Engineers, however, even on state land such as the levees, is always a federal project because it is federally controlled.