

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA (PART TIME)– SEMESTER 4– EXAMINATION – SUMMER 2019

Subject Code: 3549971

Date: 04/05/2019

Subject Name: Project Management (PM)

Time: 10:30 AM To 01:30 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q. No.		Marks
Q.1	Explanations the following: (a) Project (b) WBS (c) CPM (d) Gantt Chart. (e) Baseline (f) Triple Constraint (g) Risk Mitigation	14
Q.2	(a) How risk can be managed in a project? Discuss various risk management strategies	07
	(b) Project Managers are not created in any B-schools. Do you agree with the statement? Discuss qualities of project managers.	07
	OR	
	(b) You are working on a major project as project manager and going halfway through the project you realize that you've made a mistake due to which you will have to rework on the project from the very beginning. How will you handle this situation meeting the deadline of the project?	07
Q.3	(a) What is project visibility? Discuss project visibility aspects in various stages of its life cycle.	07
	(b) (i) "Management of materials and equipments forms the core of project management" -Justify the statement. (ii) Discuss the various methods of resource allocation.	07
	OR	
Q.3	(a) What quality control methods prevalent in project management? Explain why TQM is important in project management.	07
	(b) Bring out the importance of pre-feasibility, feasibility studies and technical analysis in ensuring success in the operation phase of the project.	07
Q.4	CASE STUDY: One fine Monday in spring 2008, Thomas Glacia was waiting for his students in a classroom at the 4th Avenue building to come back from a 15- minute break. Thomas was a senior lecturer of a local institute in Eugene, Oregon. This term he was teaching two classes, which were already completed. But his assignment wasn't yet over. He	

still had to teach this special session, which covered project management concepts. Why special? It was because there were only five undergraduates in the class; Jill, Kelly, Alice, Mackey, and Octavio, who failed the final exam, and needed to retake the exam in three days. As Thomas was looking at his lecture notes, his students returned to the room for the second half.

SPECIAL SESSION

Thomas : Okay, guys. Let ' s continue. We have discussed project management concepts and the differences and relationships between project management and their related principles. We also talked about the triple constraints which every project must meet: the time given, the budget, and the acceptable quality standard. Now let ' s move on and talk about the project management process.

Now someone tell me how many processes do we have, according to the PMBOK? And what are they? You guys already learned about it. Come on.

Alice: There are nine processes. They are time management, cost management, quality management, risk management, etc. Right?

Thomas : Well, nice try, but not quite. Those are the knowledge areas, Alice. We have only five process groups, not nine! What are they? Anyone?

Kelly: Initiating, Planning, Executing, Monitoring and Controlling, and Closing process groups.

Thomas : Exactly. These processes overlap, and are used as a guideline for applying appropriate project management knowledge and skills during the project. They are iterative, and many processes are repeated during the project. The first process is initiating. Like its name implies, this is when we initiate a project. This is when we get some ideas of the project scope, and identify the purposes of the project.

Kelly: What are we really looking for in the scope and purpose of the project?

Thomas: We need to clearly and explicitly define what the project is intended to achieve and what its scope of interest will be. One output of the process is a project charter. And the charter is . . . ?

Jill: I just read about it. The charter is a summary of project team members.

Thomas: Well, that could be one element in the charter. The charter is actually a document that formally authorizes a project or a phase and documents initial requirements that satisfy the stakeholders' needs and expectations. Now for the second process, the planning process — what do we have to do there?

Mackey: We can break a project into a number of smaller pieces, and arrange them in a top - down structure, which is called a work breakdown structure. Also, we should define what resources and time commitments are required to carry out the project through the work breakdown structure.

Octavio: Also, we need to create a project plan that involves resource plan, financial plan, quality plan, acceptance plan, and communications plan.

Mackey: But how will we deliver a project and present it to our customer for their acceptance?

Thomas: Not too fast, Mackey. That' s the third process, the execution. The execution process is undertaken to perform the work defined in the project plan to achieve the project ' s objectives. The activities here may include creating project deliverables; managing tools, equipment, and people; managing risks; and creating project data such as schedule, cost, technical, and quality progress.

Alice: I think the most challenging task for me is not executing, but rather monitoring and controlling the tasks executed.

Thomas: That ' s the fourth process. We monitor and control projects to identify the potential problems in a timely manner so corrective actions can be taken promptly. Monitoring and controlling projects will benefit the project performance since it is

observed and measured regularly to identify variances from the project plan.

Octavio: Could you give some examples of monitoring and controlling a project, please? I mean what exactly do we need to monitor in a project?

Thomas: What about risk? When risk becomes a problem, it can greatly affect a project's cost, schedule, scope, or quality. So, it needs to be closely monitored and controlled. One way of monitoring and controlling risks is to create and deploy a Risk Management Plan which anticipates any project challenges. Usually, the progress of monitoring and controlling is provided through the project status report to all stakeholders of the project.

Jill: Monitoring and controlling are the same, aren't they? I am not quite clear on these two terms.

Thomas: They are related. Monitoring is collecting, recording, and reporting information concerning all aspects of project performance that the project manager or others in the organization wish to know. In our discussion, it is important to remember that monitoring should be kept distinct from controlling and from evaluation.

On the contrary, controlling uses the data supplied by monitoring to bring actual performance into approximate equivalence with planned performance. Evaluation is performed through judgments that are made about the quality and effectiveness of project performance.

Mackey: How do we monitor our projects?

Thomas: Usually, the first task in monitoring projects is to identify the key factors in the project action plan. The factors should focus on results rather than activities. Then, we need to collect several important data. Data can be frequency counts, numbers, subjective numeric ratings, indicators, and verbal measures. Then, we can generate project progress reports after data collection has been completed.

Alice: That must be difficult. I bet there would be problems with the project reporting.

Thomas: Yes, there are actually three common project reporting problems, which are too much detail, poor correspondence to the parent firm's reporting system, and a poor correspondence between the planning and monitoring systems.

Jill: What kind of analysis do we use to monitor the entire project?

Thomas: There are several techniques. The most well-known one is the Earned Value Analysis. Earned value analysis is abbreviated as EVA, measuring overall performance by using an aggregate performance measure. The earned value chart depicts scheduled progress, actual cost, and actual progress to allow the determination of spending, schedule, and time variances. In practice, there are a number of commercial software packages that can help in monitoring project status, but the common desirable attributes that most project managers prefer are user friendliness, schedules, calendars, budgets, reports, graphics, networks, charts, migration, and consolidation.

Mackey: What about controlling?

Thomas: Control is an act of reducing the difference between plan and reality. Project control focuses on three elements of a project: performance, cost, and time. Is the project delivering what it promised to deliver or more? Is it making delivery at or below the promised cost? Is it making delivery at or before the promised time? There are two purposes of control. First, it is to regulate results through altering activity. Second, it is to conserve the organization's physical, human, and financial assets.

Kelly: What about the control report? I learned about this, but I forgot. What should be included?

Thomas: The control report should include project objectives, milestones and budgets, final project results, and recommendations for improvement.

Jill: I see. A good controlling system must help. So what kind of controlling system should we establish?

Thomas: It should be flexible, cost effective, and truly useful. More importantly, it should operate in an ethical manner, in a timely manner, and be sufficiently accurate. Anything else you want to add?

Kelly: Well, it should be easy to maintain and simple to operate.

Alice: It should be fully documented and extendable, as well, I think.

Thomas: That's good. One of the problems in controlling projects is the control of change. It is difficult because it causes uncertainty, increases sophistication in a project, and has to modify rules applying to the project processes.

Let me recap. We already discussed four project management processes; project initiation, project planning, project execution, and project monitoring and controlling processes. Now let's move on to the final process, the closing process. How many ways can a project be terminated?

Jill: I think it can be terminated by the extinction. Sorry, I don't remember the rest.

Thomas: Come on. The exam is coming in three days. In addition to the extinction, a project can also be terminated by addition, integration, and starvation.

Octavio: I didn't know a project can be stopped by addition! What exactly is that?

Thomas: It's in the book, Octavio. You should read it again before the exam. It means that project personnel, property, and equipment are simply transferred from the dying project to the newly born division. It transforms a project into a division of the firm and then, if real economic stability seems assured, the new project in that division can be created.

Kelly: How do we know when to terminate a project?

Thomas: Making a decision to terminate a project is difficult, but a number of factors can be used to reach a conclusion. For example, the factors that are considered in terminating projects are technical, economic, market, the customer's satisfaction, the impact of the project on the organization, etc.

Alice: What should be included in the project final report?

Thomas: You tell me.

Mackey: I think the report should include the process knowledge gained from the project.

Octavio: It should include what we have learned. For instance, it should incorporate project performance comments, administrative performance comments, personnel suggestions, etc.

Thomas: That's good. Time is almost up. Make sure you guys review the materials today again before the exam. This is your last chance. And I hope that I won't see you in class again next year. Good luck guys!

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|-----|--|----|
| (a) | What project management tools were mentioned in this case? | 07 |
| (b) | Which of the process groups do you think is the most challenging one? Explain your reasons | 07 |

OR

- | | | | |
|------------|-----|---|----|
| Q.4 | (a) | How are the knowledge areas and project management processes related? | 07 |
| | (b) | In your opinion, what is termination by starvation? | 07 |

Q.5 Consider a small project that involves the following activities.

Activity	Preceding Activity	Completion Times (days)		
		Optimistic	Most Likely	Pessimistic
A	-	5	6	7
B		4	5	18
C	A	4	15	20
D	B,C	3	4	5
E	A	5	16	18

- (a) (i) Determine the expected value and the variance of the completion time for each activity. **07**
(i) Use the expected times from (a) to find the critical path.

- (b) Assuming that the normal distribution applies, determine the probability that the critical path will take between 18 and 26 days to complete. **07**

OR

- Q.5** (a) How much time must be allowed to achieve a 90% probability of timely completion? **07**

- (b) By using *modified probability of completion* method, what is the probability that **all paths** will take before 18 weeks? **07**
