

Indian Statistical Institute, Bangalore
M.S. (QMS) First Year
First Semester - Project Management

Final Exam

Duration: 3 Hrs

Date: 11 November, 2016

Max. Marks: 100

Instructions to the Candidates:

- The question paper Consists of Four Parts. Part –A is objective type questions meant to test your conceptual understanding of the subject taught to you. Each Question carries 2 Marks 1 Mark for picking the right choice and one mark for justifying your selection.
- Part B and Part C Consists of five marks questions and ten marks questions to test your ability to get into the subject in detail.
- Part D Consists of questions on the basis of a case study- this tests your ability to apply the knowledge to real world problem situations and scenario's.
- Part A has a weightage of 10 marks and is compulsory. Part B & C Consists of questions with weightage of 5 marks and 10 marks with a total weightage of 30 & 40 marks respectively. The total marks for section B & C Put together is 70 marks. Part D is a case study problem which is compulsory. This case study carries 20 Marks.

	Part A	Marks
	MULIPLE CHOICE QUESTIONS (MCQ's)	10
I	<p>1.1 You are the project manager for a large construction project. The project objective is to construct a set of outbuildings to house the Olympic support team that will be arriving in your city 18 months from the project start date. Resources are not readily available as they are currently assigned to other projects. Jack, an expert crane operator, is needed for this project two months from today. Which of the following skills will you use to get Jack assigned to your project?</p> <p style="margin-left: 40px;">A. Negotiation and influencing skills. B. Communication and organizational skills. C. Communication skills. D. Problem-solving skills.</p> <p>1.2 The Project Human Resource Management knowledge area contains which of the following processes?</p> <p style="margin-left: 40px;">A. Staff Acquisition, Team Development, and Resource Planning. B. Staff Acquisition, Team Development, and Performance Reporting. C. Organizational Planning, Staff Acquisition, and Team Development. D. Organization Planning, Team Development, and Resource Planning.</p>	

	<p>1.3 The purpose of the Initiation process among the project management process is to:</p> <ul style="list-style-type: none"> A. Formally recognize the existence of a project or project phase. B. Formally recognize the need that brought about the project be it marketing demand, customer requests, business need, technological advances, or legal requirements. C. Formally recognize the stakeholders of the project and identify them in the project charter. D. Formally recognize the project sponsor and document his or her project goals. 	
	<p>1.4 You are the project manager for Changing Tides video games. You have produced a project network diagram and have updated the activity list. Which process have you just finished?</p> <ul style="list-style-type: none"> A. The Activity Sequencing process, which identifies all the specific activities of the project. B. The Activity Sequencing process, which identifies all the activity dependencies. C. The Activity Duration Estimating process, which diagrams project network time estimates. <p>1.5 The Activity Duration Estimating process, which identifies all the dependent 1.9 Which of the following are the tools and techniques of the Cost Budgeting process?</p> <ul style="list-style-type: none"> A. Project management information system, analogous estimating, bottom-up estimating, mathematical analysis B. Analogous estimating, bottom-up estimating, mathematical analysis, computerized tools C. Project management software, analogous estimating, bottom-up estimating, parametric modeling D. Analogous estimating, bottom-up estimating, parametric modeling, computerized tools <p>1.6 Theory Y managers believe which of the following?</p> <ul style="list-style-type: none"> A. That people are motivated only by money, power, or position B. That people will perform their best if they're given proper motivation and expectations C. That people are motivated to achieve a high level of competency D. That people are motivated by expectation of good outcomes activities of the project. 	

	<p>1.7 Your company manufactures small kitchen appliances. They are introducing a new product line of appliances in designer colors with distinctive features for kitchens in small spaces. These new products will be offered indefinitely starting with the spring catalog release. Which of the following is true?</p> <ul style="list-style-type: none">A. This is a project because this new product line has never been manufactured and sold by this company before.B. This is an ongoing operation because the company is in the business of manufacturing kitchen appliances. Introducing designer colors and features is simply a new twist on an existing process.C. This is an ongoing operation because the new product line will be sold indefinitely. It's not temporary. <p style="padding-left: 40px;">This is not a project or an ongoing operation. This is a new product introduction not affecting ongoing operations.</p> <p>1.8 A project is considered successful when:</p> <ul style="list-style-type: none">A. The product of the project has been manufactured.B. The project sponsor announces the completion of the project.C. The product of the project is turned over to the operations area to handle the ongoing aspects of the project.D. The project meets or exceeds the expectations of the stakeholders <p>1.9 You have been assigned to a project in which the objectives are to direct customer calls to an Interactive Voice Response system before being connected to a live agent. You are in charge of the media communications for this project. You report to the project manager in charge of this project and the VP of marketing, who share responsibility for this project. Which organizational structure do you work in?</p> <ul style="list-style-type: none">A. Functional organization.B. Weak matrix organization.C. Projectized organization.D. Balanced matrix organization. <p>1.10 Which of the following is true regarding the scope statement?</p> <ul style="list-style-type: none">A. It describes how to make changes to project scope.B. It describes project deliverables and serves as a baseline for future project decisions.C. It assesses the stability of the project scope and is a baseline for future project decisions.D. It assesses the reliability of the project scope and describes the frequency of changes and their impacts.	

	Part B (Short Answers) Answer any eight from the Following)	40
	<p>11. Give an example of a project and through this example highlight the different components of a typical definition of a project.</p> <p>12. Define clearly the following: Portfolios, Programs Projects and operations.</p> <p>13. Compare the characteristics of Lightweight and Heavy weight project organizational structures.</p> <p>14. Sketch the diagram showing the time phase of a project and the process group interactions. Identify the five process groups.</p> <p>15. Mention the major inputs, tools & techniques and outputs with reference to project scope management.</p> <p>16. Mention the different techniques of the cost estimating process and write one liner on each.</p> <p>17. Diagrammatically represent the fishbone diagram for handling the effect of schedule delays in projects.</p> <p>18. You have been appointed the project manager (Read as Event manager) for organizing a music concert in your home town. Present a structure of the Work Breakdown structure (WBS) to subdivide the work and define work packages.</p> <p>19. “Have you ever seen the toy vehicles that seem to be headed in a particular direction, only to bump into a solid structure and change direction? They continue bumping into things and changing direction until they eventually run out of energy. If you attempt to lead a project without addressing risk and Uncertainty, you’ll begin to feel much like one of those toys”. Explain this analogy to project risk management.</p> <p>20. Some Savvy project managers have discovered that information gathered through informal channels of communication can often be more valuable than information gathered through more formal methods, such as team meetings. Explain how such strategies help in Project Communication management.</p>	
	Part C(Answer any three full questions)	30
	<p>21. Project managers are usually dedicated and committed to the project. Who should be “looking over the shoulder” of the project manager to make sure that the work and requests are also in the best interest of the company? Does your answer depend on the priority of the project? Is project management designed to transfer power from the line managers to the project manager? Give Examples.</p>	

22. What are different forms of alternative organizational structures that are explored for suitability in the context of project management? A company has two major divisions, both housed under the same roof. One division is the aerospace group, where all activities are performed within a formal matrix. The second division is the industrial group, which operates with pure product management, except for the MIS department, which has an informal matrix. If both divisions have to share common corporate resources, what problems can occur?
23. Briefly discuss elements of Project time management. You are the project manager of a nine-month effort. You are now in the fifth month of the project and are more than two weeks behind schedule, with very little hope of catching up. The dam breaks in a town near you, and massive flooding and mudslides take place. Fifteen of your key functional people request to take off three days from the following week to help fellow members dig out. Their functional managers, bless their hearts, have left the entire decision up to you. Should you let them go?
24. Bring out the importance of work breakdown structure in project planning. The preparation of the work breakdown structure is not easy. The WBS is a communications tool, providing detailed information to different levels of management. If it does not contain enough levels, then the integration of activities may prove difficult. If too many levels exist, then unproductive time will be made to have the same number of levels for all projects, tasks, and so on. Each major work element should be considered by itself. Remember, the WBS establishes the number of required networks for cost control. Discuss this aspect of WBS.
25. Draw the network and identify the critical path. Also calculate the earliest-latest starting and finishing times for each activity:

Activity	Preceding Activity	Time (Weeks)
A	-	7
B	-	8
C	-	6
D	A	6
E	B	6
F	B	8
G	C	4
H	D,E	7
I	F,G,H	3

	<p>26. Discuss risk planning and risk assessment stages of project risk management. Risk planning develops a risk management strategy, which includes both the process and implementation approach for the project. Early efforts should establish the purpose and objective, assign responsibilities for specific areas, identify additional technical expertise needed, describe the assessment process and areas to consider, define a risk rating approach, delineate procedures for consideration of handling strategies, establish monitoring metrics (where possible), and define the reporting, documentation, and communication needs. Risk assessment is the <i>problem definition</i> stage of risk management, the stage that identifies and analyzes program issues in terms of probability and consequences, and possibly other considerations (e.g., the time to impact). Use these statements to build your answer.</p>	
	<p>PART-D (CASE STUDY)</p> <p>Read the Case Study and Prepare a Brief report on Project Management Challenges</p>	<p>20</p>
	<p>Make a Brief Report on the Major issues that are part of the Project Management Challenges in the different knowledge areas based on the reading of the case study pertaining to Williams’s machine tool company.</p> <p>For 85 years, the Williams Machine Tool Company had provided quality products to its clients, becoming the third largest U.S.-based machine tool company by 1990. The company was highly profitable and had an extremely low employee turnover rate. Pay and benefits were excellent. Between 1980 and 1990, the company’s profits soared to record levels. The company’s success was due to one product line of standard manufacturing machine tools. Williams spent most of its time and effort looking for ways to improve its bread-and-butter product line rather than to develop new products. The product line was so successful that companies were willing to modify their production lines around these machine tools rather than asking Williams for major modifications to the machine tools. By 1990, Williams Company was extremely complacent, expecting this phenomenal success with one product line to continue for 20 to 25 more years. The recession of the early 1990s forced management to realign their thinking. Cutbacks in production had decreased the demand for the standard machine tools. More and more customers were asking for either major modifications to the standard machine tools or a completely new product design. The marketplace was changing and senior management recognized that a new strategic focus was necessary. However, lower-level management and the work force, especially engineering, were strongly resisting a change. The employees, many of them with over 20 years of employment at Williams Company, refused to recognize the need for this change in the belief that the glory days of yore would return at the end of the recession. By 1995, the recession had been over for at least two years yet Williams Company had no new product lines. Revenue was down, sales for the standard product (with and without modifications) were decreasing, and the employees were still resisting change. Layoffs were imminent. In 1996, the company was sold to Crock</p>	

<p>Engineering. Crock had an experienced machine tool division of its own and understood the machine tool business. Williams Company was allowed to operate as a separate entity from 1995 to 1996. By 1996, red ink had appeared on the Williams Company balance sheet. Crock replaced all of the Williams senior managers with his own personnel. Crock then announced to all employees that Williams would become a specialty machine tool manufacturer and that the "good old days" would never return. Customer demand for specialty products had increased threefold in just the last twelve months alone. Crock made it clear that employees who would not support this new direction would be replaced. The new senior management at Williams Company recognized that 85 years of traditional management had come to an end for a company now committed to specialty products. The company culture was about to change, spearheaded by project management, concurrent engineering, and total quality management. Senior management's commitment to product management was apparent by the time and money spent in educating the employees. Unfortunately, the seasoned 20-year-plus veterans still would not support the new culture. Recognizing the problems, management provided continuous and visible support for project management in addition to hiring a project management consultant to work with the people. The consultant worked with Williams from 1996 to 2001. From 1996 to 2001, the Williams Division of Crock Engineering experienced losses in 24 consecutive quarters. The quarter ending March 31, 2002, was the first profitable quarter in over six years. Much of the credit was given to the performance and maturity of the project management system. In May 2002, the Williams Division was sold. More than 80% of the employees lost their jobs when the company was relocated over 1,500 miles away.</p>	
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