

INDIAN STATISTICAL INSTITUTE

Bangalore Centre

Program:-MS (Quality Management systems)

Course:-Project Management

MID TERM EXAMINATION –SEPTEMBER 2018

Instructions to the Candidates:

The question paper Consists of Three Parts. Part –A is objective type questions meant to test your conceptual understanding of the subject taught to you. Part B Consists of questions to test your ability to get into the subject in detail. Part C Consists of questions on the basis of analytical reasoning and application skills. 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 consists of 7 questions with equal weightage and you need to answer any four it will be evaluated for a total of 20 Marks. Part C consists of 5 analytical questions out of which you will have to attempt three questions. Each of the question will be evaluated for 10 Marks.

Q. No.	Part A	Marks
1	ALL QUESTIONS IN THIS PART ARE COMPULSORY	
1.	Which of these is not one of the constraints of a project? A. Scope. B. Resources. C. Team. D. Budget.	(01)
2.	Which of the following types of Organizational Charts can be BEST used to track project costs. A. Hierarchical-type Organizational Chart. B. Organizational Breakdown Structure. C. Resource Breakdown Structure. D. D. Responsibility Assignment Matrix.	(01)
3.	The amount of authority a project manager possesses can be related to: A. The project manager's communication skills. B. The organizational structure. C. The amount of authority the manager of the project manager possesses. D. The project manager's influencing skills.	(01)
4.	What is one of the advantages of a functional structure? A. All employees report to one manager and have a clear chain of command. B. All employees report to two or more managers, but project team members show loyalty to functional managers. C. The organization is focused on projects and project work. D. Teams are collocated.	(01)
5.	Which of the following is not correct about initial phase of a project? A. The cost associated at the beginning of the project is highest. B. Stakeholders have maximum influence during this phase C. The highest uncertainty is at this stage of the project. D. All the above statements are correct.	(01)
6.	Activity Definition is typically performed by which of the following. A. Project Manager who created the WBS. B. Project Team Members responsible for the work package. C. Project Officer. D. Project Stakeholder.	(01)
7.	Which of the following is true regarding the scope statement? 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.	(01)

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8.	A schedule activity may begin 10 days before the predecessor activity finishes. This is an example of: A. Finish-to-Start B. Start-to-Finish C. Start-to-Start D. Finish-to-Finish	(01)
9.	Which of the following is not correct about initial phase of a project? A. The cost associated at the beginning of the project is highest. B. Stakeholders have maximum influence during this phase C. The highest uncertainty is at this stage of the project. D. All the above statements are correct.	(01)
10.	What are the outputs of the Scope Planning process? A. Product analysis, scope statement, and scope management plan B. Scope statement, scope management plan, and WBS C. Scope statement, supporting detail, and WBS D. Scope statement, supporting detail, and scope management plan	(01)

Q. No.	Part B (Question Numbers 2 to 8) ANSWER ANY FOUR	Marks
2.	Define a Project. List few of the Challenges that are part of project management in today's competitive business environment.	(05)
3.	In what way project management differentiates itself from operations management. Bring out the differences between operations management and project management with help of illustrative examples.	(05)
4.	List the Top ten skills that the project manager must possess in order to be effective in the role of project management. Which among these skills should help the project manager during the project integration phase?	(05)
5.	Represent the triple constraints of project management in the triangle structure. Take the example of the project as organizing relief and rehabilitation to the people of Kerala and explain the relevance of the triple constraints.	(05)
6.	What are the five project management process groups? Mention few of the activities under each process group.	(05)
7.	Outline how you would use the Work Breakdown structure (WBS) to subdivide the work and define work packages. Give an Example.	(05)
8.	What is the meaning of scope creep? What are some of the ways through which you manage the scope creep in the context of a project?	(05)
	Part –C (Question Numbers 9 to 13)	
9.	You are driving a car and have just had a “blow-out”. Your problem/objective is to FIX THE FLAT (change the tire) and continues on your journey safely. Given the individual tasks/steps listed below, develop a work breakdown structure to accomplish your objective. Assume unlimited resources. For your convenience and ease of construction the levels are indicated in the list following the task list. Stop car, get spare tire ,replace lugs, open trunk, get jack, loosen lugs, get screwdriver, position jack, put flat in trunk, remove hub cap, jack up car remove tire, put on spare, lower car ,drive off safely, tighten lugs ,replace screwdriver ,replace hub cap, get lug wrench. remove jack, close trunk remove lugs, replace wrench. Indenture list for WBS development.	(10)

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	<p>0.0 Fix Flat 1.0 Stop Car 2.0 Change Tire 3.0 Drive Off 1.1 Stop Car 2.1 Get Tools and Spare 2.2 Jack up Car 2.3 Remove Flat 2.4 Replace with Spare 2.5 Lower Car 2.6 Replace Tools/Spare 3.1 Drive off Safely 2.1.1 Open Trunk 2.1.2 Get Jack 2.1.3 Get Screwdriver 2.1.4 Get Lug wrench 2.1.5 Get Spare 2.2.1 Position Jack 2.2.2 Remove Hubcap 2.2.3 Loosen Lugs 2.2.4 Jack up Car 2.3.1 Remove Lugs 2.3.2 Remove Tire 2.4.1 Put on Spare 2.4.2 Replace Lugs 2.4.3 Tighten Lugs 2.5.1 Lower Car 2.5.2 Replace Hubcap 2.6.1 Put Flat Tire Away 2.6.2 Replace Screwdriver 2.6.3 Replace Wrench 2.6.4 Replace Jack.</p>																																													
10.	<p>Draw a network for house construction project. The sequences of activities with their predecessors are given in the Table below.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="text-align: center;">Name of the Activity</th> <th style="text-align: center;">Starting and Finishing event</th> <th style="text-align: center;">Description of activity</th> <th style="text-align: center;">Predecessor</th> <th style="text-align: center;">Time duration (days)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">A</td> <td style="text-align: center;">(1,2)</td> <td style="text-align: center;">Prepare the house plan.</td> <td style="text-align: center;">---</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">B</td> <td style="text-align: center;">(2,3)</td> <td style="text-align: center;">Construct the house.</td> <td style="text-align: center;">A</td> <td style="text-align: center;">58</td> </tr> <tr> <td style="text-align: center;">C</td> <td style="text-align: center;">(3,4)</td> <td style="text-align: center;">Fix the door/windows.</td> <td style="text-align: center;">B</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">D</td> <td style="text-align: center;">(3,5)</td> <td style="text-align: center;">Wiring the house.</td> <td style="text-align: center;">B</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="text-align: center;">E</td> <td style="text-align: center;">(4,6)</td> <td style="text-align: center;">Paint the house.</td> <td style="text-align: center;">C</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">F</td> <td style="text-align: center;">(5,6)</td> <td style="text-align: center;">Polish the doors/Windows</td> <td style="text-align: center;">D</td> <td style="text-align: center;">1</td> </tr> </tbody> </table> <p>Draw the network diagram. Determine the project duration. Compute the Earliest start and Finish times. Identify the critical path.</p>	Name of the Activity	Starting and Finishing event	Description of activity	Predecessor	Time duration (days)	A	(1,2)	Prepare the house plan.	---	4	B	(2,3)	Construct the house.	A	58	C	(3,4)	Fix the door/windows.	B	2	D	(3,5)	Wiring the house.	B	2	E	(4,6)	Paint the house.	C	1	F	(5,6)	Polish the doors/Windows	D	1	(10)									
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11.	<p>Following is the information regarding a project. The parameters are the optimistic time, pessimistic time, most likely time. Analyze based on the information provided using the PERT model.</p> <table border="1" style="width: 100%; border-collapse: collapse; margin: 10px 0;"> <thead> <tr> <th style="text-align: center;">Description</th> <th style="text-align: center;">Index</th> <th style="text-align: center;">Predecessors</th> <th style="text-align: center;">Parameters</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Foundation</td> <td style="text-align: center;">A</td> <td style="text-align: center;">Not applicable.</td> <td style="text-align: center;">1.5, 3.5, 8.5</td> </tr> <tr> <td style="text-align: center;">Frame</td> <td style="text-align: center;">B</td> <td style="text-align: center;">A</td> <td style="text-align: center;">3,4,5</td> </tr> <tr> <td style="text-align: center;">Order windows</td> <td style="text-align: center;">C</td> <td style="text-align: center;">Not applicable.</td> <td style="text-align: center;">7,10,19</td> </tr> <tr> <td style="text-align: center;">Walls</td> <td style="text-align: center;">D</td> <td style="text-align: center;">B</td> <td style="text-align: center;">2,2.5,6</td> </tr> <tr> <td style="text-align: center;">Wiring</td> <td style="text-align: center;">E</td> <td style="text-align: center;">D</td> <td style="text-align: center;">3,3.5,7</td> </tr> <tr> <td style="text-align: center;">Plumbing</td> <td style="text-align: center;">F</td> <td style="text-align: center;">D</td> <td style="text-align: center;">2,2.5,6</td> </tr> <tr> <td style="text-align: center;">Ducting</td> <td style="text-align: center;">G</td> <td style="text-align: center;">D</td> <td style="text-align: center;">2,4,6</td> </tr> <tr> <td style="text-align: center;">Dry wall</td> <td style="text-align: center;">H</td> <td style="text-align: center;">E,F,G</td> <td style="text-align: center;">2.5,3,3.5</td> </tr> <tr> <td style="text-align: center;">Install windows</td> <td style="text-align: center;">I</td> <td style="text-align: center;">B,C</td> <td style="text-align: center;">0.5,1,1.5</td> </tr> <tr> <td style="text-align: center;">Paint & Clean</td> <td style="text-align: center;">J</td> <td style="text-align: center;">H</td> <td style="text-align: center;">1.5,2,2.5</td> </tr> </tbody> </table>	Description	Index	Predecessors	Parameters	Foundation	A	Not applicable.	1.5, 3.5, 8.5	Frame	B	A	3,4,5	Order windows	C	Not applicable.	7,10,19	Walls	D	B	2,2.5,6	Wiring	E	D	3,3.5,7	Plumbing	F	D	2,2.5,6	Ducting	G	D	2,4,6	Dry wall	H	E,F,G	2.5,3,3.5	Install windows	I	B,C	0.5,1,1.5	Paint & Clean	J	H	1.5,2,2.5	(10)
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12.	<p>Consider that you are involved in the activity of creating a document containing the project scope statement. Take the Example of either a Campus Cleaning drive on the Indian Statistical Institute (Bangalore) premises or Conducting an Inter collegiate sports festival to show case the sports talent of students on ISI Bangalore campus. You are asked to submit a document of scope statement to seek approval from the authorities of the institute. Based on the following heads prepare a scope statement for the project that you may wish to consider.</p> <ul style="list-style-type: none"> • Executive Summary – Brief summary of the project • Business Objectives – Should be stated in business terms • Product Scope Description – Describes what the project will accomplish • Project Deliverables – A detailed list of deliverables the project will produce • Product Acceptance Criteria – Describes what requirements must be met for the project to be accepted as complete • Project Exclusions – Description of work that is not included in the project and therefore outside the scope 	(10)																																												

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	<ul style="list-style-type: none">• Project Constraints – Lists limits on resources for time, money, staff, or equipment• Project Assumptions – Describes the list of assumptions under which the project team and Stakeholders are working to complete the project	
13.	<p>Consider the task of developing the project charter. You are now the project manager vested with responsibility of providing internet service to the students of a residential campus which has clearly identified academic zones and residential zones. You have to prepare a project management plan document to start with the idea of providing internet connectivity all across the campus. Prepare a project charter document using the following items as the basic structure of the project charter.</p> <p>Executive Summary, Problem/Opportunity, Enter one or more statements of the problem(s) that the project will resolve, Measureable Business Objectives / Success Criteria, In Scope, Out of Scope, Business Case, Assumptions Major Risks involved.</p>	(10)

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