INDIAN STATISTICAL INSTITUTE

Bangalore Centre

Program:-MS (Quality Management systems)

Course:-Project Management

END SEMESTER EXAMINATION

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.
- 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 weight age of 10 marks and is compulsory. Part B & C Consists of questions with weight age of 5 marks and 10 marks with a total weight age 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.

Q.No.	Part A	Marks
1	Fill in the Blanks with the most appropriate term by understanding the context and its relevance to project management. (1 mark each)	**10**
1.1	The procurement planning will be viewed from the _____ perspective, as the process of identifying what products and services are best procured outside the project organization.	
1.2	As per PMBOK _____ is defined as the process required to ensure that the project will satisfy the needs for which it was undertaken (by addressing) both the management of the project and product of the project.	
1.3	_____ is the process of identifying the quality standards the project needs to comply with, to achieve the required condition and satisfy the terms of the contract.	
1.4	The systematic process of identifying, analyzing and respond to project risk is known as _____ as per PMBOK.	
1.5	The matrix plots of the probability of risks occurring against the impact on the project, Giving rise to risks and impacts Quantified as High ,Medium or Low – Generating a Matrix of nine possibilities is known as the _____ matrix.	
1.6	It is the project manager's responsibility to not only develop the project organization structure, but also develop the project's _____ plan and lines of communication.	

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1.7	"The process required to ensure timely and appropriate generation, collection, dissemination, Storage and ultimately disposition (disposal) of project information. It provides the critical links among people, ideas and information that are necessary for success.". This is the definition of _____ as per PMBOK.	
1.8	In the application of the Critical Path Method, the _____ shows the sequence of the activities where these logical relationships can be either mandatory or discretionary. (Also called the precedence diagram).	
1.9	The _____ constraint denoted as FS is the most common type of constraint in which other activities can not start until the previously initiated activities are finished.	
1.10	Abraham Maslow's experiment led to the statement that individuals always strive to achieve the higher order needs, but this can be achieved once the lower order needs have been satisfied. Thus he expressed the needs achievement in the form of _____ of needs.	
	Part B (Short Answers) **(Answer any Six from the Following) Each question carries 5 Marks.**	**30**
2	Compare and Contrast the Program evaluation & review techniques with critical path method.	
3.	List out the contents of Project Communication Management Plan.	
4.	With the help of a Simple sketch or diagram explain the generalized process of communication.	
5.	Give the general categorization of Project risks and Sketch the Risk Breakdown structure for a typical project as per the4 Categories of risks generally identified in any typical project environments.	
6.	Quality Control is defined as "the process of monitoring specific project results to determine if they comply with Quality standards and identify ways to eliminate causes of unsatisfactory results". Discuss the methods used for the Quality Control activities in a project taking the on-time transfer of project deliverables as the Quality standards targeted.	
7.	The general risk response plan developments are a combination of eliminate, mitigate, deflect or accept risks. Take an example and clarify the meaning of the risk response strategies mentioned herein.	
8.	Explain the meaning of Fixed price contract (Lump sum price) and the Cost plus Contract.	

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<table>
<tr><td>9.</td><td>Consider the problem faced by an oil company that is trying to decide whether to drill an exploratory oil well on a given site. Drilling costs $200,000. If oil is found, it is worth $800,000. If the well is dry, it is worth nothing. However, the $200,000 cost of drilling is incurred, regardless of the outcome of the drilling. Construct the payoff matrix structure for this problem by identifying decision alternatives and states of nature.</td><td></td></tr>
<tr><td>10.</td><td>“Issues typically important in the structuring of a project include the degree of project/functional orientation, (and) the extent of project management authority”. Explain clearly the need and importance of properly defined organization structure for projects using this statement as the basis. .</td><td></td></tr>
<tr><td>11</td><td>“Effective teamwork is generally at the heart of effective project management”. Do you agree with this statement? Why or why not? Explain with an example of a situation in project which may require effective team contribution.</td><td></td></tr>
<tr><td></td><td>Part C (Answer any Four full questions)</td><td>40</td></tr>
<tr><td>12</td><td>Using the information in Table, assuming that the project team will work a standard working week (5 working days in 1 week) and that all tasks will start as soon as possible:
<table>
<tr><th>Task</th><th>Task Description</th><th>Duration (Working Days)</th><th>Predecessor/s</th></tr>
<tr><td>A</td><td>Requirement Analysis</td><td>5</td><td>-</td></tr>
<tr><td>B</td><td>Systems Design</td><td>15</td><td>A</td></tr>
<tr><td>C</td><td>Programming</td><td>25</td><td>B</td></tr>
<tr><td>D</td><td>telecom</td><td>15</td><td>B</td></tr>
<tr><td>E</td><td>Hardware Installation</td><td>30</td><td>B</td></tr>
<tr><td>F</td><td>Integration</td><td>10</td><td>C,D</td></tr>
<tr><td>G</td><td>System Testing</td><td>10</td><td>E,F</td></tr>
<tr><td>H</td><td>Training/Support</td><td>5</td><td>G</td></tr>
<tr><td>I</td><td>Handover and Go-Live</td><td>5</td><td>H</td></tr>
</table>
(i) Determine the critical path of the project (3 marks) (ii) Calculate the planned duration of the project in weeks (3 marks) (iii) Identify any non-critical tasks and the float (free slack) on each. (4 marks)</td><td></td></tr>
<tr><td>13.</td><td>Performance reporting in projects uses any or all of the following types of Graphical and Tabular Formats
Gantt Charts, S-Curves, Histograms & EVA Tables.
Discuss in detail these tools by showing the formats in which they are presented and the purposes they are used to effectively monitor and control the performance of projects.</td><td></td></tr>
</table>

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<table>
<tr><td>14.</td><td>Given that the Project HRM – the processes that organize, manage, and lead the project team. The project team – those with assigned roles to complete the project. The project management team – responsible for management and leadership. Project HRM can also include. Sponsors, clients, support staff. Elaborate in detail the activity and processes of Project Human Resource Management.</td><td></td></tr>
<tr><td>15.</td><td>The major process of Project risk management includes: Risk identification: Risk quantification: Risk response development: and Risk response control. Explain these processes and outline the activities of the project risk management.</td><td></td></tr>
<tr><td>16.</td><td>Is there a difference between a leader and a manager? The economist says “A leader challenges the status quo: a manager accepts it. “. Based on your experience what distinguishes individual as a leader or managers. Give your answers with respect to the following: Decision Making, Action Centered Relationship, Motivation, Conflict resolution and Delegation. Do you require more managers or more leaders?</td><td></td></tr>
<tr><td>17.</td><td>Outline the procedure as envisaged in the format provided below for preparing a log of risk identification and risk control methods. Take a technical risk in drilling a bore well in your campus using a technique or alternatively a particular method of farming and the Impact of technology obsolescence on this and complete the format to a reasonable level of accuracy, based on your own assumptions and your imagination of the issue of technology obsolescence.
<table>
<tr><td>Risk ID</td><td></td><td>Potential Impact</td><td></td></tr>
<tr><td>Functional Area</td><td></td><td>Risk Factor (P*I)</td><td></td></tr>
<tr><td>Risk Category</td><td></td><td>Positive or Negative Impact</td><td></td></tr>
<tr><td>Risk Description</td><td></td><td>Response Category</td><td></td></tr>
<tr><td>Date Identified</td><td></td><td>Status/Comments</td><td></td></tr>
<tr><td>Raised By</td><td></td><td>Trigger</td><td></td></tr>
<tr><td>Date Assigned</td><td></td><td>Proposed/Actual Resolution</td><td></td></tr>
<tr><td>Assigned To</td><td></td><td>Contingency Plan</td><td></td></tr>
<tr><td>Probability</td><td></td><td></td><td></td></tr>
</table></td><td></td></tr>
<tr><td>18.</td><td>Six months ago Doug Reynolds paid $25,000 for an option to purchase a tract of land he was considering developing. Another investor has offered to purchase Doug's option for $275,000. If Doug does not accept the investor's offer he has decided to purchase the property, clear the land and prepare the site for building. He believes that once the site is prepared he can sell the land to a home builder. However, the success of the investment depends upon the real estate market at the time he sells the property. If the real estate market is down, Doug feels that he will lose $1.5 million. If market conditions stay at their current level, he estimates that his profit will be $1 million; if market conditions are up at the time he sells, he estimates a profit of $4</td><td></td></tr>
</table>

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<table>
<tr><td></td><td>million. Because of other commitments Doug does not consider it feasible to hold the land once he has developed the site; thus, the only two alternatives are to sell the option or to develop the site. Suppose that the probabilities of the real estate market being down, at the current level, or up are 0.6, 0.3 and 0.1 respectively. Construct a decision tree and use it to recommend an action for Doug to take.</td><td></td></tr>
<tr><td>19.</td><td>On the basis of company history, Build-Rite's management has determined that the optimistic, most probable, and pessimistic times for each activity are as follows:
<table>
<tr><th>Activity Number</th><th>Activity</th><th>OPTIMISTIC TIME (Days) a</th><th>MOST PROBABLE TIMe (Days) m</th><th>PESSIMISTIC Time (Days) b</th></tr>
<tr><td>1</td><td>Walls and Ceiling</td><td>3</td><td>5</td><td>7</td></tr>
<tr><td>2</td><td>Foundation</td><td>2</td><td>3</td><td>4</td></tr>
<tr><td>3</td><td>Roof Timbers</td><td>1</td><td>2</td><td>3</td></tr>
<tr><td>4</td><td>Roof Sheathing</td><td>1</td><td>2</td><td>9</td></tr>
<tr><td>5</td><td>Electrical Wiring</td><td>4</td><td>4</td><td>4</td></tr>
<tr><td>6</td><td>Roof Shingles</td><td>4</td><td>8</td><td>12</td></tr>
<tr><td>7</td><td>Exterior Siding</td><td>1</td><td>3</td><td>17</td></tr>
<tr><td>8</td><td>Window</td><td>1</td><td>2</td><td>3</td></tr>
<tr><td>9</td><td>Paint</td><td>2</td><td>2</td><td>2</td></tr>
<tr><td>10</td><td>Inside Wall Board</td><td>2</td><td>3</td><td>4</td></tr>
</table>
Construct the PERT network and determine the Expected total project duration. Identify the critical path. How will you compute the probability of meeting a deadline for the project schedule?</td><td></td></tr>
<tr><td></td><td>PART-D
(CASE STUDY)</td><td>20</td></tr>
<tr><td>20..</td><td>Project teams work together to achieve common goals. Through interaction they strive to enhance their creativity, Innovation, Problem Solving, decision making, morale and</td><td></td></tr>
</table>

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	team performance. As a team leader of a motor racing team or alternatively the annual cultural festival convener, you are responsible for designing and building the team. There are many challenges for building a team, Outline your strategies for building the team for the project you consider. Your presentation should consider the following ;- i.Team Selection Techniques. ii.Ideal team size before subdivision. iii.Why teams win, Why teams fail. iv.Team Development phases. (Forming, Storming, Norming, Performing, Maturing, Declining) . v.Does the team leader need to be a technical expert in motor racing or Convener possesses great talent at cultural exposition?	