

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. 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 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.

Q. No.	Part A	Marks
I	1.1 A project is considered successful when: 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.	10
	1.2 What are the triple constraints? A. Time, schedules, and quality B. Time, availability, and quality C. Time, money, and schedules D. Time, money, and quality	
	1.3 The Project Human Resource Management knowledge area contains which of the following processes? 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	
	1.4 The purpose of the Initiation process is to: 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	
	1.5 You are a project manager for an agricultural supply company. You have just completed and obtained sign-off on the scope statement for your new Natural Bug Busters project. A key stakeholder has informed you that a deliverable is missing from the scope	

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	<p>statement. This deliverable is a critical success factor. You should do which of the following?</p> <ul style="list-style-type: none">A. Inform the stakeholder that work not stated in the scope statement is excluded from the project.B. Modify the scope statement to reflect the new deliverable.C. Inform the stakeholder that this deliverable can be included in the next project since sign-off has already been obtained.D. Modify the scope statement after an approved change request has been received from the stakeholder	
	<p>1.6 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 projectB. The Activity Sequencing process, which identifies all the activity dependenciesC. The Activity Duration Estimating process, which diagrams project network time estimatesD. The Activity Duration Estimating process, which identifies all the dependent activities of the project	
	<p>1.7 What are the Quality Planning process outputs?</p> <ul style="list-style-type: none">A. Quality management plan, benchmarking, checklists, evaluation criteriaB. Quality management plan, benchmarking, operational definitionsC. Quality management plan, checklists, inputs to other processesD. Quality management plan, operational definitions, checklists, inputs to other processes	
	<p>1.8 Which of the following is true regarding the critical path?</p> <ul style="list-style-type: none">A. It should never be compressed.B. It allows for looping and branching.C. The critical path technique is the same as PERT.D. It's the duration of all tasks with zero float.	
	<p>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 analysisB. Analogous estimating, bottom-up estimating, mathematical analysis, computerized toolsC. Project management software, analogous estimating, bottom-up estimating, parametric modelingD. Analogous estimating, bottom-up estimating, parametric modeling, computerized tools	
	<p>1.10 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 positionB. That people will perform their best if they're given proper motivation and expectationsC. That people are motivated to achieve a high level of competencyD. That people are motivated by expectation of good outcomes	

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Part B Answer any four questions from the following		
II	<p>11. Define a project. Give an example. Identify the relationships between portfolios, programs and projects.</p> <p>12. What is the relationship between Project Function and the Operations Function in an organization? How do you manage this relationship?</p> <p>13. What are the different types of organization structures identified in Project mode of working in organizations? Compare the characteristics of Lightweight and Heavy weight project organizational structures.</p> <p>14. Identify and specify the roles of the five process groups that are defined in the project management context. Sketch the diagram showing the time phase of a project and the process group interactions.</p> <p>15. What is Project Scope Management? Mention the major aspects of project scope management.</p> <p>16. What are the inputs, Tools & Techniques and the Outputs of the cost estimating process during the development phase of project cost management?</p> <p>17. List the tools useful for the Project Quality Management team. Diagrammatically represent the fishbone diagram to tackle the problem of schedule delays in projects.</p> <p>18. The Risk Response Planning process is the last risk-planning process and culminates with the risk response plan. List the strategies that are useful for responding to risk and assigning individuals to manage each risk response.</p> <p>19. Mention the different types of contracts in project procurement management. Discuss any one of these types highlighting their characteristics.</p> <p>20. Briefly outline the process of project integration management. What is the need and motivation for this knowledge area in project management?</p>	30
PART C (10 Marks Questions) Answer any three questions from the following		
III	<p>21. Every project must work within the triple constraint combination of time, money, and quality. One or two of the triple constraints, sometimes all three, are limited. As a project manager, one of your biggest jobs is to balance the triple constraints while meeting or exceeding the expectations of your stakeholders. Take any example of any project that you may know and discuss any five issues that involved the decision making involving the tradeoff's with respect to the triple constraints.</p> <p>22. "Project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements." It is the responsibility of the project manager to ensure project management techniques are applied and followed. Deliberate the statement with help of examples.</p> <p>23. Based on your knowledge of development of work breakdown structures and the information of a house project in indented structure as follows:-</p>	40

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1. House Project 1.1 Primary Structure 1.1.1 Foundation Development 1.1.1.1 Layout – Topography 1.1.1.2 Excavation 1.1.1.3 Concrete Pour 1.1.2 Exterior Wall Development 1.1.3 Roof Development 1.2 Electrical Infrastructure 1.3 Plumbing Infrastructure 1.4 Inside Wall Development: Rough Finish.

Develop all the ways in which WBS can be represented in the project documents. Identify work packages.

24. A project consists of the following activities with precedence relationships as shown.

- (i) Draw the project Network
- (ii) Find the critical path
- (iii) Determine the total float and free float of each activity.

Job	Predecessor	Time (weeks)
A	-	3
B	-	6
C	A	2
D	A,B	4
E	A	2
F	C	7
G	B,C	4
H	C,E	3

25. The details of a project are given as under:

Activity	Immediate Predecessors	Time (days)		
		t_o	t_m	t_p
A	-	25	30	45
B	-	10	15	20
C	-	20	25	35
D	A	3	3	5
E	C	5	7	12
F	B	1	1	1
G	D,F	4	5	7
H	D,F	2	2	3
I	E,F	4	4	6
J	H,I	8	10	14
K	G,J	6	8	15

- (i) Draw the network diagram
- (ii) Find the Critical path
- (iii) Determine the probability
 - a. That the project gets completed before 54 weeks
 - b. The project takes more than 70 weeks to get completed.

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	<p>26. Spreadsheets are a common tool for resource planning, cost estimating, cost budgeting, and cost control. Many companies use more sophisticated and centralized financial applications software for cost information. Project management software has many cost-related features. Discuss the need for IT Enablement of project cost management process and the software tools commonly deployed by the project management teams in organization. Highlight cost estimation techniques.</p> <p>27. Performance reporting in projects during the control phase can be done using Gantt Charts, S-Curves, Histograms and EVA Tables. Discuss each of these performance monitoring tools with illustrations on their ability to track the project time, cost and quality aspects.</p> <p>28. Consider the area of project human resource management and the Four main process Develop Human Resources Plan, Acquire Project Team, Develop Project Team and Manage Project Team. Take the Example of a project for a web site development for an existing organization as a Software product development project and discuss the importance of these four main processes.</p>	
	PART-D (CASE STUDY)	
	<p>The London Heathrow Terminal 5 (T5) project was one of the most complex projects ever undertaken in the United Kingdom and was the biggest construction site in Europe. The total Investment in the T5 project was £4.3 billion and took approximately 37 million person-hours to complete. Elements of the Terminal 5 project include the main terminal, two satellite terminals, air-traffic control tower, and connections to public transport, road works, rails, and tunnels. Once completed and delivered to the British Airport Authority (BAA), T5 will serve as the base for British Airways (BA) and finally fulfill its ultimate goal of enhancing the competitive advantages of London and the United Kingdom. Researchers in project management have used this case to understand complexities in the real world. It is possible and necessary for the management team of complex projects to learn from previous experience as well as from other sources, even from other industries. The T5 team has learned from the early accidents occurring during the construction of the Heathrow Express project and, as a result, has changed its approach toward project risk management. Further, the T5 team has employed management methods that are rarely applied in the construction industry, such as just-in-time manufacturing, to enhance the productivity of construction sites. All of this experience and knowledge helped the T5 project meet the criteria of time, quality, cost, and safety.</p> <p>Based on this short description of the case situation and your knowledge in the area of project management, Answer the following questions.</p> <ul style="list-style-type: none">• List the goals and Targets of this project.• Outline the scope statement, supporting detail, and scope management plan.• Identify the major stakeholders in this project. Mention the role of each of the stakeholders in the effective implementation of project goals. <p>During the construction process of the T5 project, risks were well managed. A new thinking about risk management was developed by the project team. The team found that transferring</p>	20

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	<p>risks to contractors does not reduce the overall level of risk as ultimately it is the project that will suffer. By considering this, the team has endeavored to reduce the risk in design and project execution and to resort to external bodies to share risks.</p> <ul style="list-style-type: none">• Write about the process of preparing the risk response strategies for the project.	
	<p>Leadership and organization design are crucial for the success of a complex project. The planning and design phases of a complex project are perhaps the most challenging and turbulent periods. Potential changes and new trends in technology, requirements, and all other aspects challenge the project team. Without consistent and capable leadership, this phase could cause immense problems in the future. Furthermore, such a complex project as T5 involves multiple parties that include contractors, clients, and other stakeholders, and in most cases, different parties have conflicting interests. How to deal with this delicately is a challenge to all senior managers. T5's success in this area is that it has a top management team comprised of senior staff from BAA, BA, and other organizations to tackle problems promptly.</p> <ul style="list-style-type: none">• Based on your knowledge of Project Human Resource Management. Relate to this case situation and identify the challenges during HR Planning, acquisition of Human resources.	