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B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

June 2025 Semester End Main Examinations

Programme: B.E.

Semester: VI

Branch: Biotechnology

Duration: 3 hrs.

Course Code: 23BT6HSPMF

Max Marks: 100

Course: Project Management and Finance

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

UNIT - I			CO	PO	Marks																																		
1	a)	Compare and contrast functional management with project management in terms of structure, authority, and communication flow.	CO1	PO 11	10																																		
	b)	Explain why a feasibility study is essential before initiating a project.	CO1	PO11	5																																		
	c)	What are the key components used to characterize a project in engineering management?	CO1	PO11	5																																		
OR																																							
2	a)	Apply the project life cycle concept to plan a campus solar power installation project.	CO1	PO11	10																																		
	b)	Enumerate the roles and responsibilities of a project manager.	CO1	PO11	5																																		
	c)	Explain the importance of defining a project scope clearly before the execution of a project.	CO1	PO11	5																																		
UNIT - II																																							
3	a)	A project consists of the following activities with three time estimates:	CO2	PO11	15																																		
		<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Activity</th> <th>Predecessor</th> <th>T_o</th> <th>T_m</th> <th>T_p</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>-</td> <td>2</td> <td>4</td> <td>6</td> </tr> <tr> <td>B</td> <td>A</td> <td>3</td> <td>6</td> <td>9</td> </tr> <tr> <td>C</td> <td>A</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>D</td> <td>B</td> <td>5</td> <td>7</td> <td>11</td> </tr> <tr> <td>E</td> <td>C</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>F</td> <td>D,E</td> <td>3</td> <td>5</td> <td>7</td> </tr> </tbody> </table>	Activity	Predecessor	T_o	T_m	T_p	A	-	2	4	6	B	A	3	6	9	C	A	4	5	6	D	B	5	7	11	E	C	2	3	4	F	D,E	3	5	7		
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F	D,E	3	5	7																																			
i.	Draw the network diagram for the project.																																						

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

		<p>ii. Find the expected time (TE) and variance for each activity</p> <p>iii. Identify the critical path.</p> <p>iv. Calculate the expected project duration.</p> <p>v. Find the probability that the project will be completed in 20 days if it is normally distributed.</p>			
	b)	Compare and contrast at least two project scheduling techniques	CO2	PO11	5
		OR			
4	a)	Identify and explain four major sources of finance available for engineering or infrastructure projects. Discuss the suitability of each for a start-up vs. an established company.	CO2	PO11	10
	b)	Explain the role of financial institutions in project financing. How do they assess and manage project risk before funding?	CO2	PO11	10
		UNIT - III			
5	a)	Discuss the importance of effective communication in project management. What are the key components of a project communication plan, and how does it help avoid project delays?	CO3	PO11	10
	b)	Using a simple example, illustrate how project managers make decisions involving time-cost tradeoffs. What factors must be considered before crashing a project?	CO3	PO11	10
		OR			
6	a)	Describe the challenges in coordinating a cross-functional project team and suggest strategies a project manager can use to ensure effective collaboration and alignment among stakeholders.	CO3	PO11	10
	b)	Explain the relationship between project cost and project completion time. How can reducing project duration impact overall project costs?	CO3	PO11	5
	c)	What is blockchain technology, and how can it enhance transparency, security, and trust in project management?	CO3	PO11	5
		UNIT - IV			
7	a)	List and explain four common types of contracts used in project management. How does each type affect risk allocation between the client and the contractor?	CO3	PO11	10
	b)	Outline the steps in the project risk management process. Provide an example of how a risk can be identified, assessed, and mitigated in a software development project.	CO3	PO11	10
		OR			
	8 a)	What criteria are commonly used to evaluate submitted tenders? How can project managers ensure fairness and transparency in the selection process?	CO3	PO11	10

	b)	Describe the major types of project organization structures. How does each structure affect authority and communication flow within a project?	CO3	PO11	10
UNIT - V					
9	a)	What are the key responsibilities involved in the termination and closeout phase of a project, and why are they important?	CO3	PO11	10
	b)	Identify and explain at least three performance indicators that can be used to assess the success of a project.	CO3	PO11	10
OR					
10	a)	Describe how stakeholder feedback can be incorporated into project closeout and evaluation processes. What benefits does this provide?	CO3	PO11	10
	b)	How can project documentation during closeout be used in future project planning and risk management?	CO3	PO11	5
	c)	What are the main objectives of project evaluation, and how do they contribute to organizational learning and improvement?	CO3	PO11	5

B.M.S.C.E. - EVEN SEMESTER 2022-23