VPM's
DR VN BRIMS, Thane
Programme: MMS (2024-26)
Third Semester Regular Examination November 2025

Course Name:	**Project Management**	**Course Code**	**C-302**
Roll No.		**Marks**	**30**
Total No. of Questions	3	**Duration**	**1 Hour**
Total No. of printed pages	4	**Date**	**07th November 2025**

Course Outcome Statements:
CO1: Define fundamental project management concepts, terminologies, and frameworks.
CO2: Explain the project lifecycle, key processes, and roles of stakeholders in project initiation, planning, execution, monitoring, and closure.
CO3: Demonstrate project management techniques such as Work Breakdown Structure (WBS), Critical Path Method (CPM), Earned Value Management (EVM), and Risk Assessment in real-world scenarios.
CO4: Analyze project constraints (scope, time, cost, quality, risk, and resources) and recommend optimization strategies for successful project execution.
CO5: Evaluate project success using performance metrics and AI-driven project management tools, and develop innovative project management strategies for industry applications.
CO6: Create innovative project management strategies, frameworks, and execution plans for successful project delivery.

Instructions: -
1. **All questions are compulsory.**
2. **Use of simple calculator is allowed.**
3. **Marks will be given to the conceptual clarity and relevant examples.**

Q. No 1 (All Questions are Compulsory)

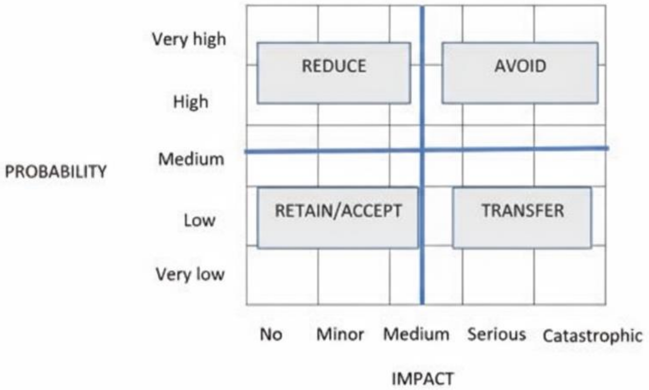
Q. No.		**Questions**	**Marks**	**BL**	**CO**
Q. 1		Case/Case-let Study / Answer the following			
		ABC Technologies has recently initiated a new project that involves multiple interdependent activities. The project manager is aware that the durations of these activities may vary due to uncertainties in resources, technical challenges, and other unforeseen factors. To plan the project effectively and manage these uncertainties, the manager has decided to apply the Program Evaluation and Review Technique (PERT). Using PERT, the manager can estimate the expected time for each activity by considering three different time estimates: optimistic (a), most likely (m), and pessimistic (b). In this context, the optimistic time represents the shortest possible duration if everything goes better than expected, including smooth resource availability and minimal delays. The most likely time provides the best estimate under normal working conditions, accounting for typical challenges and productivity levels the team may face. The pessimistic time	**10**	**Level 5**	**CO5**

reflects the longest possible duration if significant obstacles or delays occur, such as technical issues, resource shortages, or other unexpected risks. By incorporating these three estimates, the project manager can calculate expected durations, identify critical activities, and develop a realistic project schedule that ensures timely completion.

Activity	Optimistic(a)	Most Likely (m)	Pessimistic (b)
1-2	6	6	24
1-3	6	12	18
1-4	12	12	30
2-5	6	6	6
3-5	12	30	48
4-6	12	30	42
5-6	18	30	54

Evaluate Total Project Completion Time by using Network Diagram.

Q. 2		Answer the following			
a	i	**Analyze** the given Risk Response Planning diagram to understand how different combinations of probability and impact lead to risk responses such as *avoid*, *reduce*, *transfer*, and *retain/accept*. **Examine** how each response is suitable for the specific risk level.	5	Level 4	CO4



	ii	A LPG project envisaged the construction of a ground reservoir at total cost of Rs. 4550 million. The project was planned to be completed in 43 weeks. 22 weeks	5	Level 3	CO3

after the commencement, the project status was reviewed. It was noted that at the time of review as per the plan work worth Rs. 1900 million has been rescheduled to be completed, only Rs. 1875 million worth of work had been done and the actual cost incurred was Rs. 1920 million. **Identify** how much additional time and additional cost will be required to complete the project after project review.

Or

b

i. **Examine** the financial data of ABC Co. Ltd given below to prepare and interpret the monthly profit statement for May, June, and July 2025. Break down each element of cost and income to **inspect** how changes in sales, expenses, and interest influence the company's profit position over the three months.

Data:

- **Sales:** May ₹2,00,000; June ₹2,50,000; July ₹3,00,000
- **Cost of Goods Sold:** May ₹1,00,000; June ₹1,20,000; July ₹1,30,000
- **Selling Expenses:** 5% of Sales
- **Rent:** ₹7,000 per month
- **Administrative Expenses:** ₹50,000 in May, increasing by 2% each month thereafter
- **Loan:** ₹1,00,000 at 10% annual interest (assume monthly interest)
- **Corporate Tax Rate:** 50%

5 | **Level 4** | **CO4**

ii EcoGlow Lighting Ltd., a company specializing in sustainable lighting solutions, is preparing to launch a new solar-powered smart LED lamp for home and office use. As part of the project planning team, you must design a detailed project schedule to ensure timely product launch in the market.

Activity	Description	Immediate Predecessor	Duration (Days)
A	Market Research	--	4
B	Product Design	A	6
C	Raw Material Sourcing	A	3
D	Prototype Development	B, C	8
E	Product Testing	D	5
F	Packaging & Branding	D	4
G	Final Review & Approval	E, F	3

5 | **Level 3** | **CO3**

		As a project planning manager, **develop** a Gantt Chart for the above project to visually represent the project schedule and timeline.			
Q. 3		Answer the following			
a	**i**	**Illustrate** Tuckman's model of Team formation with the help of an example.	**5**	**Level 2**	**CO2**
	ii	**List** any **three** internal and any two external stakeholders for Project.	**5**	**Level 1**	**CO1**
Or					
b	**i.**	**Explain** the concept of Agile Project Management. Summarise any **three** principles of Agile Project Management.	**5**	**Level 2**	**CO2**
	ii	**What** are the characteristics of Project?	**5**	**Level 1**	**CO1**