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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: Information Science and Engineering**

**Duration: 3 hrs.**

**Course Code: 22IS6HSSPM**

**Max Marks: 100**

**Course: Software 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.

<b>UNIT - I</b>			<b>CO</b>	<b>PO</b>	<b>Marks</b>
1	a)	Provide both Projectized and Functional Organizational Structure with a suitable diagram for an IT company managing multiple client-specific software projects, while having departments like Human Resource, Finance, Operations, and Marketing.	<i>CO2</i>	<i>PO1</i>	<b>10</b>
	b)	Illustrate how organizational strategy and priorities align with Portfolios, Programs, and Projects in an Advertising Agency. Provide a suitable diagram to support your explanation.	<i>CO2</i>	<i>PO1</i>	<b>10</b>
<b>OR</b>					
2	a)	Assuming you are the Head of the Computer Science Department, explain how you would apply the 5 project management phases to organize an international technical symposium.	<i>CO1</i>		<b>10</b>
	b)	With a neat diagram, provide a Matrix Organizational structure (Weak, Strong and Balanced) for a IT company with departments Human Resource, Finance, Operations and Marketing.	<i>CO2</i>	<i>PO1</i>	<b>10</b>
<b>UNIT - II</b>					
3	a)	Develop a Project Charter for a healthcare IT project aiming to develop a new mobile application for patient engagement and appointment scheduling.	<i>CO2</i>	<i>PO1</i>	<b>10</b>
	b)	Assuming that you are a project manager in an EdTech company, and you are assigned a project to develop an AI-powered learning platform for a university, illustrate how you would direct and manage the project work.	<i>CO2</i>	<i>PO1</i>	<b>10</b>
<b>OR</b>					
4	a)	Discuss in detail about “Perform Integrated Change Control” process.	<i>CO2</i>	<i>PO1</i>	<b>10</b>

**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.

	b)	How does second-level decomposition in a Work Breakdown Structure (WBS) support the alignment of project phases and deliverables across the project life cycle? Provide an example WBS for a mobile application development project showing major deliverables.	CO2	PO1	10
		<b>UNIT - III</b>			
5	a)	You are managing a construction project that is 6 months into execution. Activity X has a planned value of \$150,000 and actual cost of \$180,000. Activity X is 80% complete. Activity Y has a planned value of \$100,000 and actual cost of \$90,000 and is 100% complete. Calculate the Schedule Performance Index (SPI) and Cost Performance Index (CPI) for the project.	CO3	PO11	10
	b)	Describe comprehensively the various tools and techniques used for cost estimation in project management.	CO2	PO1	10
		<b>OR</b>			
6	a)	You are managing a project which is into six months of its execution. You are now reviewing the project status and you have ascertained that project is behind schedule. The actual cost of Activity A is ₹1,80,000 and that of Activity B is ₹80,000. The planned value of these activities are ₹1,50,000 and ₹50,000 respectively. The Activity A is 90% complete. However, Activity B is only 75% complete. Calculate the schedule performance index and cost performance index and the project on the review date.	CO3	PO11	10
	b)	Explain in detail the key metrics and variances associated with each work package and control account in Earned Value Management (EVM), and describe how these are developed and used for monitoring project performance.	CO3	PO2	10
		<b>UNIT - IV</b>			
7	a)	Provide a detailed explanation of the 'Plan Human Resource Management' process.	CO4	PO7	10
	b)	Discuss the following concepts in relation to Project Quality Management: <ol style="list-style-type: none"> <li>Emphasis on prevention rather than inspection</li> <li>Cost of Quality (COQ)</li> <li>Role of Management Responsibility</li> <li>Continuous Improvement</li> <li>Customer Satisfaction</li> </ol>	CO4	PO10	10

<b>OR</b>					
8	a)	Explain the Seven Quality Management and Control Tools with a clear and well-organized diagram.	<i>CO4</i>	<i>PO10</i>	<b>10</b>
	b)	In detail explain about the tools and technique needed to develop Project Team.	<i>CO4</i>	<i>PO12</i>	<b>10</b>
<b>UNIT - V</b>					
9	a)	Identify the steps involved in Stakeholder Analysis and also explain multiple classification models used for stakeholders analysis	<i>CO4</i>	<i>PO10</i>	<b>10</b>
	b)	Explain the Plan Procurement Management phase in detail.	<i>CO4</i>	<i>PO12</i>	<b>10</b>
<b>OR</b>					
10	a)	You are managing a large-scale IT infrastructure upgrade project for a government organization. To proactively identify and categorize potential risks, you decide to develop a Risk Breakdown Structure (RBS). Explain how you would construct the RBS for this project and illustrate it with a clear diagram.	<i>CO4</i>	<i>PO10</i>	<b>10</b>
	b)	Source selection criteria are typically incorporated into procurement documents to evaluate and score seller proposals. These criteria may be either objective or subjective. Discuss five common criteria that are frequently used in procurement purchasing.	<i>CO4</i>	<i>PO10</i>	<b>10</b>

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B.M.S.C.E. - EVENING SESSION