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

Autonomous Institute Affiliated to VTU

## July 2023 Semester End Main Examinations

**Program: B.E.**

**Branch: Chemical Engineering**

**Course Code: 19CH8HSPMF**

**Course: Project Management and Finance**

**Semester: VIII**

**Duration: 3 hrs.**

**Max Marks: 100**

**Date: 04.07.2023**

**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>
<b>Important Note:</b> Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.	1	a)	What are the different stages in the life cycle of a project? Highlight the major decisions to be taken at each of these stages.		CO1	PO11	<b>10</b>
		b)	How the triple constraints affect the project? How triple constraints are handled in project management?		CO1	PO11	<b>10</b>
			<b>UNIT – II</b>				
	2	a)	What factors should be considered when conducting a market and demand analysis for a project? Explain briefly.		CO3	PO10	<b>10</b>
		b)	Explain the key components and steps involved in conducting a thorough technical analysis of a project.		CO3	PO10	<b>10</b>
			<b>UNIT – III</b>				
	3	a)	Describe the concept of time value of money and explain its significance in financial decision-making.		CO5	PO11	<b>10</b>
		b)	Explain the various methods to determine the cost of equity and cost of debt.		CO5	PO11	<b>10</b>
			<b>UNIT – IV</b>				
	4	a)	Define venture capital fund and discuss the analysis of the risks associated with venture capital investments.		CO5	PO11	<b>08</b>
		b)	What are the various methods and means available for raising Capital to finance a project?		CO5	PO11	<b>12</b>
			<b>OR</b>				

	5	a)	Define credit risk analysis and discuss the most effective strategies for mitigating such risks.	CO2	PO9	<b>10</b>																																																			
		b)	Consider an appropriate corporate case and provide a concise overview of the project, followed by a thorough analysis of its financial issues.	CO2	PO9	<b>10</b>																																																			
			<b>UNIT – V</b>																																																						
6	a)	A project has the following characteristics				<b>14</b>																																																			
		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Activity</th> <th style="text-align: center;">Most optimistic Time (a) in weeks</th> <th style="text-align: center;">Most pessimistic time (b) in weeks</th> <th style="text-align: center;">Most likely time (m) in weeks</th> </tr> </thead> <tbody> <tr><td>1-2</td><td style="text-align: center;">1</td><td style="text-align: center;">5</td><td style="text-align: center;">1.5</td></tr> <tr><td>2-3</td><td style="text-align: center;">1</td><td style="text-align: center;">3</td><td style="text-align: center;">2</td></tr> <tr><td>2-4</td><td style="text-align: center;">1</td><td style="text-align: center;">5</td><td style="text-align: center;">3</td></tr> <tr><td>3-5</td><td style="text-align: center;">3</td><td style="text-align: center;">5</td><td style="text-align: center;">4</td></tr> <tr><td>4-5</td><td style="text-align: center;">2</td><td style="text-align: center;">4</td><td style="text-align: center;">3</td></tr> <tr><td>4-6</td><td style="text-align: center;">3</td><td style="text-align: center;">7</td><td style="text-align: center;">5</td></tr> <tr><td>5-7</td><td style="text-align: center;">4</td><td style="text-align: center;">6</td><td style="text-align: center;">5</td></tr> <tr><td>6-7</td><td style="text-align: center;">6</td><td style="text-align: center;">8</td><td style="text-align: center;">7</td></tr> <tr><td>7-8</td><td style="text-align: center;">2</td><td style="text-align: center;">6</td><td style="text-align: center;">4</td></tr> <tr><td>7-9</td><td style="text-align: center;">5</td><td style="text-align: center;">8</td><td style="text-align: center;">6</td></tr> <tr><td>8-10</td><td style="text-align: center;">1</td><td style="text-align: center;">3</td><td style="text-align: center;">2</td></tr> <tr><td>9-10</td><td style="text-align: center;">3</td><td style="text-align: center;">7</td><td style="text-align: center;">5</td></tr> </tbody> </table>				Activity	Most optimistic Time (a) in weeks	Most pessimistic time (b) in weeks	Most likely time (m) in weeks	1-2	1	5	1.5	2-3	1	3	2	2-4	1	5	3	3-5	3	5	4	4-5	2	4	3	4-6	3	7	5	5-7	4	6	5	6-7	6	8	7	7-8	2	6	4	7-9	5	8	6	8-10	1	3	2	9-10	3	7	5
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		<ul style="list-style-type: none"> <li>I. Draw the network and determine critical path.</li> <li>II. Calculate the expected variances for each activity</li> <li>III. Find the expected project completion time</li> <li>IV. Calculate the probability that the project will be completed at least 3 weeks before expected duration.</li> </ul>																																																							
	b)	Explain, how does the use of a Gantt chart contribute to effective project management and scheduling?				<b>06</b>																																																			
		<b>OR</b>																																																							
7	a)	Elucidate the key steps to effectively prioritize projects using the ABC analysis method?				<b>08</b>																																																			
	b)	What are the advantages and significance of utilizing VED analysis In decision-making processes?"				<b>06</b>																																																			
	c)	Explain the concept of Economic Order Quantity (EOQ) and its relevance to project management and finance?				<b>06</b>																																																			