

<b>Module 1: Introduction</b>	
<b>Sr. No.</b>	<b>Question</b>
1	What are the different phases through which a construction project passes?
2	Why is construction project management needed?
<b>Module 2: Project Organization</b>	
3	Enlist various forms of project management structure. Discuss pure project management with its advantages and disadvantages.
4	Discuss important traits of a project coordinator.
<b>Module 3: Construction Economics</b>	
5	Explain evaluation of public projects by benefit/cost ratio method.
6	Define: MARR, IRR and IROR.
7	Construction project of 5 years duration executed by a firm incurs investments of Rs. 5,00,000 in the beginning and Rs. 3,00,000 at the end of 3rd year. Firm receives payments of Rs. 1,50,000 at the end of 2nd, 3rd, 4th and 5th year from the owner. Determine whether the project is beneficial to the firm or not. Take $i = 9\%$
<b>Module 4: Construction Planning</b>	
8	What is float? Explain different types of float.
9	What is network? Discuss various network rules.
10	Prepare a work breakdown structure for a residential building project.
11	Explain Line of Balance techniques and how it is advantageous in construction field?
12	Differentiate between CPM and PERT with suitable examples.
13	Distinguish between Network diagram and Time grid diagram. Narrate advantages of time grid diagram.

14	<p>The data for the project is given in table. Prepare the network diagram with the estimated duration of various activities.</p> <table border="1" data-bbox="352 369 1437 884"> <thead> <tr> <th rowspan="2">Activity</th> <th rowspan="2">Activity on arrow (i-j)</th> <th rowspan="2">Duration (Days)</th> <th colspan="2">Activity immediately</th> </tr> <tr> <th>Preceded</th> <th>Follow</th> </tr> </thead> <tbody> <tr><td>A</td><td>1-2</td><td>6</td><td>-</td><td>D,E</td></tr> <tr><td>B</td><td>1-3</td><td>7</td><td>-</td><td>F,G</td></tr> <tr><td>C</td><td>1-4</td><td>8</td><td>-</td><td>H</td></tr> <tr><td>D</td><td>2-5</td><td>7</td><td>A</td><td>I,J</td></tr> <tr><td>E</td><td>2-7</td><td>8</td><td>A</td><td>L</td></tr> <tr><td>F</td><td>3-4</td><td>4</td><td>B</td><td>H</td></tr> <tr><td>G</td><td>3-6</td><td>4</td><td>B</td><td>K</td></tr> <tr><td>H</td><td>4-5</td><td>9</td><td>C,F</td><td>I,J</td></tr> <tr><td>I</td><td>5-6</td><td>5</td><td>D,H</td><td>K</td></tr> <tr><td>J</td><td>5-7</td><td>6</td><td>D,H</td><td>L</td></tr> <tr><td>K</td><td>6-7</td><td>6</td><td>G,I</td><td>L</td></tr> <tr><td>L</td><td>7-8</td><td>9</td><td>E,J,K</td><td>-</td></tr> </tbody> </table> <p>Determine the following:</p> <ol style="list-style-type: none"> <li>1). Critical path for the network,</li> <li>2). Earliest start and finish time, latest start and finish time for each activity,</li> <li>3). Total, free float and independent floats for each activity.</li> </ol>	Activity	Activity on arrow (i-j)	Duration (Days)	Activity immediately		Preceded	Follow	A	1-2	6	-	D,E	B	1-3	7	-	F,G	C	1-4	8	-	H	D	2-5	7	A	I,J	E	2-7	8	A	L	F	3-4	4	B	H	G	3-6	4	B	K	H	4-5	9	C,F	I,J	I	5-6	5	D,H	K	J	5-7	6	D,H	L	K	6-7	6	G,I	L	L	7-8	9	E,J,K	-
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15	<p>A small construction company wants to complete the project (as given below) in 08 days. Determine probability.</p> <table border="1" data-bbox="352 1216 1485 1406"> <thead> <tr> <th>Activity</th> <th>Optimistic Time (to)</th> <th>Most Likely Time (tm)</th> <th>Pessimistic Time (tp)</th> </tr> </thead> <tbody> <tr><td>1-2</td><td>1</td><td>4</td><td>7</td></tr> <tr><td>1-3</td><td>2</td><td>5</td><td>8</td></tr> <tr><td>2-3</td><td>3</td><td>6</td><td>9</td></tr> </tbody> </table> <table border="1" data-bbox="352 1429 1406 1518"> <tbody> <tr> <td>Probability factor (Z)</td> <td>-1.2</td> <td>-1.3</td> <td>-1.4</td> <td>-1.5</td> </tr> <tr> <td>Probability (%)</td> <td>11.51</td> <td>9.68</td> <td>8.08</td> <td>6.68</td> </tr> </tbody> </table>	Activity	Optimistic Time (to)	Most Likely Time (tm)	Pessimistic Time (tp)	1-2	1	4	7	1-3	2	5	8	2-3	3	6	9	Probability factor (Z)	-1.2	-1.3	-1.4	-1.5	Probability (%)	11.51	9.68	8.08	6.68																																									
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16	What is updation of project? What will be the frequency for updation? Why it is essential?																																																																			
17	What are the objectives of resource allocation? Explain what do you mean by resource levelling? Explain step by step process of resource levelling.																																																																			

<b>Module 6: Construction Equipment Management</b>	
18	What do you mean by breakeven analysis? Which are the assumptions and advantages of breakeven analysis?
<b>Module 7: Construction Accounts Management</b>	
19	Which are the applications of funds flow statements?
<b>Module 8: Construction Material Management</b>	
20	Discuss Economic Order Quantity (EOQ) model with total cost curve.
21	Discuss ABC analysis for material management.
<b>Module 9: Construction Project Cost and Value Management</b>	
22	Why is the cost code important?
<b>Module 10: Construction Quality Management</b>	
23	What is quality control? Enlist objectives and advantages of quality control.
24	Differentiate between quality assurance and quality control
<b>Module 11: Construction Safety Management</b>	
25	Enumerate and discuss various causes of accidents.
<b>Module 12: Linear programming in construction management</b>	
26	Write steps to solve linear programming problem by graphical method.
<b>Module 13: Factors for Success of a Construction Project</b>	
27	Enumerate the factors for success of the construction project.