

Total number of printed pages: Civil Engineering (D)/VI/DCE603

2023

CONSTRUCTION AND PROJECT MANAGEMENT

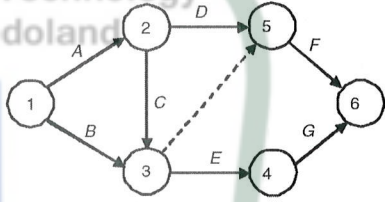
Full Marks: 100

Time: Three hours

The figures in the margin indicate full marks for the questions.

Answer any five questions.

1.	a)	What are the characteristics of PERT?	5
	b)	Explain different methods of network representation.	5
	c)	Explain five rules for developing a network with an example for each rule.	10
2.	a)	Explain the safety measures to be adopted during drilling and blasting	5
	b)	Explain the fire safety measures to be followed.	5
	c)	Calculate the float and determine the critical path for the network shown below.	10
3	a)	What are the limitations of bar chart?	5
	b)	What are the safety measures for demolition?	5
	c)	Define the following i) Activity ii) Event iii) Critical Path	10

		iv) EST v) LFT																																	
4.	a)	What are the uses of preparing material schedule? Prepare material schedule for construction of small RCC room.	5																																
	b)	What are the purposes of preparing labour schedule during construction? Prepare material schedule for construction of small RCC room.	5																																
	c)	Solve the network given below <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Activity</th> <th>Optimistic Time (weeks)</th> <th>Most Likely Time (weeks)</th> <th>Pessimistic Time (weeks)</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>3</td> <td>5</td> <td>7</td> </tr> <tr> <td>B</td> <td>5</td> <td>7</td> <td>10</td> </tr> <tr> <td>C</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>D</td> <td>1</td> <td>6</td> <td>10</td> </tr> <tr> <td>E</td> <td>3</td> <td>5</td> <td>8</td> </tr> <tr> <td>F</td> <td>2</td> <td>6</td> <td>10</td> </tr> <tr> <td>G</td> <td>4</td> <td>8</td> <td>12</td> </tr> </tbody> </table> 	Activity	Optimistic Time (weeks)	Most Likely Time (weeks)	Pessimistic Time (weeks)	A	3	5	7	B	5	7	10	C	2	3	4	D	1	6	10	E	3	5	8	F	2	6	10	G	4	8	12	10
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5.	a)	Explain the resources required for construction industry.	5																																
	b)	What are the objectives of construction management?	5																																
	c)	Explain five stages in construction.	10																																
6.	a)	Explain lumpsum contract with its advantages and disadvantages.	5																																
	b)	What are the advantages of arbitration?	5																																
	c)	Explain different types of special contracts.	10																																