



PRESIDENCY UNIVERSITY

BENGALURU

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End - Term Examinations – May / June 2026

Date: 20- 05-2026

Time:01:00pm – 04:00pm

School: SOE	Program: B.Tech	
Course Code : CIV2035	Course Name: Construction Project Management	
Semester: VI	Max Marks: 100	Weightage: 50%

CO - Levels	C01	C02	C03	C04	C05
Marks	-	10	36	24	30

Instructions:

- Read all questions carefully and answer accordingly.
- Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	Discuss 4 reasons why a contract is used in construction.	2 Marks	L2	C03
2.	Explain briefly a Revised Cost Estimate.	2 Marks	L2	C03
3.	List any 4 documents included in a contract.	2 Marks	L1	C03
4.	Name the two techniques of Resource Optimization.	2 Marks	L1	C04
5.	Identify the Indirect costs involved in construction.	2 Marks	L1	C04
6.	Describe briefly how brainstorming can help identify potential risks during project planning.	2 Marks	L2	C05
7.	List any two ways of minimizing risks in construction.	2 Marks	L1	C05
8.	Discuss the Chance mode method of a decision analysis.	2 Marks	L2	C05
9.	List the project risks that affect a Contractor.	2 Marks	L1	C05
10.	Name the 2 approaches to the Risk assessment.	2 Marks	L1	C05

Part B

Answer the Questions.

Total Marks 80M

11.	a.	When Special Conditions are tailored to a contract, it creates clarity and reduces potential disputes. Recognize the Special Conditions of a Contract that protects their interests without undermining fairness and transparency.	10 Marks	L2	C02																																				
Or																																									
12.	a.	Contract specifications define the quality and scope of work. Explain any 5 specifications of the Contract that ensures both accountability and successful project outcomes.	10 Marks	L2	C02																																				
13.	a.	The following are the time estimates and the precedence relationships of the activities in a project network: <table><tr><th>Activity</th><th>Preceded By</th><th>Duration</th></tr><tr><td>A</td><td>-</td><td>2</td></tr><tr><td>B</td><td>-</td><td>4</td></tr><tr><td>C</td><td>-</td><td>3</td></tr><tr><td>D</td><td>A</td><td>5</td></tr><tr><td>E</td><td>B</td><td>2</td></tr><tr><td>F</td><td>B</td><td>4</td></tr><tr><td>G</td><td>C</td><td>3</td></tr><tr><td>H</td><td>E</td><td>5</td></tr><tr><td>I</td><td>D</td><td>3</td></tr><tr><td>J</td><td>F, G</td><td>5</td></tr><tr><td>K</td><td>H, I</td><td>1</td></tr></table> Draw the project network diagram. Determine the critical path and the project completion time. Also draw a schedule table showing total float and free float.	Activity	Preceded By	Duration	A	-	2	B	-	4	C	-	3	D	A	5	E	B	2	F	B	4	G	C	3	H	E	5	I	D	3	J	F, G	5	K	H, I	1	10 Marks	L3	C03
Activity	Preceded By	Duration																																							
A	-	2																																							
B	-	4																																							
C	-	3																																							
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G	C	3																																							
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I	D	3																																							
J	F, G	5																																							
K	H, I	1																																							
Or																																									
14.	a.	Explain Float and its types in detail.	10 Marks	L2	C03																																				
15.	a.	Risk identification is the first step in the risk management process. There are several Risk Identification processes available in construction industry. Describe any 5 basic methods of Identifying risks in a project team	10 Marks	L2	C05																																				
Or																																									
16.	a.	In the construction industry, risk is an inherent element. Can Uncertainties truly be predicted and controlled? For an effective risk management, explain the different types of risks in a construction project.	5 Marks	L2	C05																																				

	b	Also, discuss the various reasons for the risks involved in construction.	5 Marks	L2	C05
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17.	a.	Understanding risks reduces uncertainties. It does not eliminate risks but simply shifts it. How does Risk Mitigation reduce the impact of risk ? Also , explain the four types of Risk Mitigation.	10 Marks	L2	C05
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Or

18.	a.	Project Risks include internal and external risks. Briefly classify all the categories and describe the reasons behind these risks.	10 Marks	L2	C05
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19.	a.	The following are the time estimates and the precedence relationships of the activities in a project network: <table><tr><th>Activity</th><th>Predecessor Activity</th><th>Optimistic time estimate (to days)</th><th>Most likely time estimate (tm days)</th><th>Pessimistic time estimate (tp days)</th></tr><tr><td>A</td><td>-</td><td>2</td><td>4</td><td>6</td></tr><tr><td>B</td><td>A</td><td>3</td><td>6</td><td>9</td></tr><tr><td>C</td><td>A</td><td>8</td><td>10</td><td>12</td></tr><tr><td>D</td><td>B</td><td>9</td><td>12</td><td>15</td></tr><tr><td>E</td><td>C</td><td>8</td><td>9</td><td>10</td></tr><tr><td>F</td><td>D, E</td><td>16</td><td>21</td><td>26</td></tr><tr><td>G</td><td>F</td><td>2</td><td>5</td><td>8</td></tr><tr><td>H</td><td>G</td><td>1</td><td>3</td><td>5</td></tr></table> Draw the PERT network for the project. Find the critical path and mean duration. Also find (i) What is the probability of the project finishing within 52 days? (ii) What is the project duration within which the project can be finished with 65% probability?	Activity	Predecessor Activity	Optimistic time estimate (to days)	Most likely time estimate (tm days)	Pessimistic time estimate (tp days)	A	-	2	4	6	B	A	3	6	9	C	A	8	10	12	D	B	9	12	15	E	C	8	9	10	F	D, E	16	21	26	G	F	2	5	8	H	G	1	3	5	20 Marks	L3	CO3
Activity	Predecessor Activity	Optimistic time estimate (to days)	Most likely time estimate (tm days)	Pessimistic time estimate (tp days)																																														
A	-	2	4	6																																														
B	A	3	6	9																																														
C	A	8	10	12																																														
D	B	9	12	15																																														
E	C	8	9	10																																														
F	D, E	16	21	26																																														
G	F	2	5	8																																														
H	G	1	3	5																																														

Or

20.	a.	The following are the time estimates and the precedence relationships of the activities in a project network:	20 Marks	L3	C03
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Activity	Predecessor Activity	Optimistic estimate of time	Most likely estimate of time	Pessimistic estimate of time
A	-	2	4	6
B	A	8	11	20
C	A	10	15	20
D	B	12	18	24
E	C	8	13	24
F	C	4	7	16
G	D,F	14	18	28
H	E	10	12	14
I	G,H	7	10	19

Draw the PERT network for the project. Find the critical path and mean duration. Also find

- What is the probability of the project finishing within 52 days?
- What is the project duration within which the project can be finished with 55% probability?

21.	a.	Explain Resource Levelling and Resource Smoothing. Give suitable examples for each.	10Marks	L2	CO4
	b.	Explain Project Crashing . An activity has a normal duration of 10 days crash duration of 8 days. What will be the crash cost per day if Normal cost is Rs. 18,000 and Crash Cost is Rs. 28,000?	10 Marks	L2	CO4
Or					
22.	a.	Summarize the Earned Value Analysis(EVA) and the fundamental metrics of EVA?	10 Marks	L2	CO4
22.	b.	A project has been started 12 months ago, it has incurred a cost of Rs.20 Lakhs to complete 40% of the work whereas the Allocated cost in the budget for 40% work was Rs. 16 Lakhs. According to the time schedule, in 12 months 43% of project was planned to be completed at a budgeted cost of Rs. 18 Lakhs. Comment on the status of the project using various metrics of Earned value analysis .	10 Marks	L3	CO4