

B.E Sem 8, C-Scheme, Choice based R 2019-20, May 2025  
 Date: 21/5/2025  
 Branch - Electrical

Time: 3-hour

Max. Marks: 80

- N.B.:** (1) Question **NO. 1** is Compulsory.  
 (2) Attempt any **THREE** questions out of the remaining five.  
 (3) All questions carry equal marks.  
 (4) Assume suitable data, if required, and state it clearly.  
 (5) Notations carry the usual meaning.

**Q. 1** Answer any **FOUR**.

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- Explain the necessity of project management in achieving organizational goals.
- What is Goldratt's critical chain method?
- What are the numeric and non-numeric models of project selection?
- What is concurrent engineering?
- Explain various Reasons for project termination.
- Define scope creep. What are two ways to control it in a project?

**Q.2**

- Describe the typical and atypical project life cycles, highlighting the stages in the stage-gate process. 10
- Assume that ABC Inc. is considering two projects, namely Project X and Project Y, and wants to calculate the NPV for each project. Both project X and project Y are four-year projects, and the cash flows of both projects for four years are given below: 10

Year	Project A Cash Flows in Rs.	Project B Cash Flows in Rs.
1	5000	1000
2	4000	3000
3	3000	4000
4	1000	6750

The firm's cost of capital is 10% for each project, and the initial investment amount is Rs.10,000. Calculate the NPV of each project and determine in which project the firm should invest.

**Q.3**

- What are the advantages and risks of outsourcing in project management? 05
- List the key components of a project communication plan. 05
- Describe the methods of project cost estimation and differentiate between top-down and bottom-up budgeting approaches. 10

**Q.4**

- What are the different types of contracts? Draw the graph showing risk exposure to the buyer and seller in various contract types. 10

- b. A small project consisting of ten activities has the following characteristics:

Activity	Preceding Activity	Time Estimate weeks		
		Optimistic	Most likely	Pessimistic
A	—	4	5	12
B	—	1	1.5	5
C	A	2	3	4
D	A	3	4	11
E	A	2	3	4
F	C	1.5	2	2.5
G	D	1.5	3	4.5
H	BE	2.5	3.5	7.5
I	H	1.5	2	2.5
J	F,G,I	1	2	3

Determine the critical path.

- Q.5 a. Explain the Probability and impact matrix. What are the risk response strategies for negative risks(threats) and positive risks(opportunities). 10
- b. Explain the four stages of team development and growth. 10
- Q.6 a. Discuss the various reasons for project termination and explain different types of project termination. 10
- b. Explain the importance of ethics in projects. 05
- c. Explain the Triple constraint of project management in brief. 05