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15ARC86

Eighth Semester B.Arch. Degree Examination, July/August 2022 Project and Construction Management

Time: 3 hrs.

Max. Marks: 100

*Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Kindly refer/provide z (probability) tables for numerical.*

Module-1

1 State the life cycle stages of a typical project. Also elaborate in detail the life cycle stages in a construction project. (20 Marks)

OR

- 2 a. Define the term Project. State the principles and objectives of Project Management. (08 Marks)
b. Briefly state the types of construction projects. (12 Marks)

Module-2

3 What is value engineering? Explain the following decision making principles and tools used by the project manager:
a. Decision tree
b. SWOT Analysis
c. Cost-Benefit Analysis. (20 Marks)

OR

- 4 a. Discuss in detail the various steps in scope management. State examples from the field of construction. (15 Marks)
b. Discuss the roles and responsibilities of Project/Construction managers. (05 Marks)

Module-3

5 Carry out the PERT analysis for the following data and workout the T_E and standard deviation of the project and make statements on probabilities of completions if T_E is increased and decreased. What is the probability of completion of the project in 45 days and 38 days?

Activity	Optimistic t_o	Pessimistic t_p	Most likely t_m
A	3	21	12
B	1	7	4
C	5	17	14
D	2	14	5
E	6	30	15

(Refer 2 probability tables).

(20 Marks)

OR

- 6 Explain the following techniques used in project scheduling and management:
a. Work break down structure
b. Bar chart
c. Milestone chart
d. Network theories PERT and CPM. (20 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

Module-4

- 7 a. Discuss the various safety measures and management required for workers health in the construction industry. (10 Marks)
b. State the codes and standards for quality management. (10 Marks)

OR

- 8 Elaborate on the various techniques for project monitoring and control in construction management. (20 Marks)

Module-5

- 9 a. State the factors affecting the selection of construction equipment. (06 Marks)
b. Why is standardization of equipment important? (06 Marks)
c. Explain the concepts of useful life, operating life and actual working life of construction equipment. (08 Marks)

OR

- 10 Describe and sketch any five equipments used in large scale construction. (20 Marks)

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