

- (f) Explain resource smoothing and resource leveling.
- (g) Discuss slack and critical path.
- (h) Explain the advantages of histogram.
- (i) What is material management ? How does inventory help in management ?
- (j) Explain the importance of safety measures in construction. 1.5×10=15

Roll No.

Total Pages : 04

J-21-0124

B. Tech. EXAMINATION, 2021

Semester VII (CBCS)

CONSTRUCTION ENGINEERING AND
MANAGEMENT

CE-704

Time : 2 Hours

Maximum Marks : 60

The candidates shall limit their answers precisely within 20 pages only (A4 size sheets/assignment sheets), no extra sheet allowed. The candidates should write only on one side of the page and the back side of the page should remain blank. Only blue ball pen is admissible.

Note : Attempt *Four* questions in all, selecting *one* question from any of the Sections A, B, C and D. Q. No. 9 is compulsory.

Section A

1. (a) List various methods of construction. Discuss the basis of the most commonly used method.

- (b) Define contract document. Briefly discuss the contents of contract document. $2 \times 7.5 = 15$
2. (a) List and explain the various checks to be applied for quality control during construction.
- (b) Discuss the various components of construction cost. Also discuss the basis of classification of the construction cost. $2 \times 7.5 = 15$

Section B

3. (a) Discuss the equipment used for concreting of different construction components.
- (b) Explain the factors that control the operating cost of equipment. $2 \times 7.5 = 15$
4. Elaborate various types of disputes that arise in construction practices. What are the steps to be adopted to settle the disputes ? **15**

Section C

5. The time estimates for three activities A, B and C are as follows :

	Optimistic	Most Likely	Pessimistic
	Time	Time	Time
A	10	12	14
B	6	8	12
C	5	10	12

Determine expected time and variance for each activity. Which activity has more reliable time estimates ? **15**

6. Discuss in brief the resources allocation problem. What are the methods of solving the problem ? **15**

Section D

7. Write short notes on the following :
- (a) ABC Analysis
- (b) Safety in Construction. $2 \times 7.5 = 15$
8. Explain the concept of Project Management Information System (PMIS). Discuss the advantages of PMIS. **15**

(Compulsory Question)

9. (a) Define and explain tender document.
- (b) Explain the requirement of quality control in construction.
- (c) List various types of budget.
- (d) Discuss the technic of conveyance in construction.
- (e) Explain the role of arbitrator in dispute.