

Roll No.

Total No. of Pages : 02

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B.Tech. (CSE / EE / ECE / IT) (Sem.-6)

**CONSTRUCTION ENGINEERING & MANAGEMENT**

Subject Code : BTCE-503-18

M.Code : 79415

Date of Examination : 15-07-22

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION-A**

**1. Write briefly :**

- a) What is meant by depreciation?
- b) What are the functions of crane?
- c) Define construction and construction management.
- d) What is direct project cost?
- e) What is need of expansion joint in construction?
- f) What are the limitations of Bar Chart?
- g) Define activity cost slope.
- h) Differentiate between PERT and CPM.
- i) List two disadvantages of small trucks.
- j) Where raft foundation is used?

## SECTION-B

2. Explain about Resource Analysis and Resource Allocation.
3. Draw a PERT network for the following and find expected mean time, variance and SD of the project.

Activity	Three-time estimates (days)
0-1	2-3-10
0-2	4-5-6
1-2	0-0-0
1-3	6-7-8
1-4	1-5-9
2-5	3-5-19
3-4	0-0-0

4. Describe various stages of Project Management.
5. Differentiate between histogram and S curves highlighting their advantages and disadvantages.
6. Give the differences between industrial form work and conventional form work.

## SECTION-C

7. Explain in detail compaction, batching and mixing of concrete.
8. What is the operating principle of a power shovel? What are the factors which affecting the output of a power shovel?
9. For the network having following details determined optimum duration and corresponding minimum cost. Indirect cost = Rs. 2500 / week

Activity	Normal cost (Rs.)	Normal Duration	Crash cost (Rs.)	Crash Duration
1-2	4500	4	6500	2
1-3	7000	6	10000	4
1-4	5000	5	7000	4
4-5	8000	8	9500	5
2-5	7000	5	7800	3
3-5	4000	4	5000	2

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**