

Roll No.

Total No. of Pages : 02

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B.Tech. (CE) (Sem.-4)

CONSTRUCTION MACHINERY AND WORKS MANAGEMENT

Subject Code : BTCE-402

M.Code : 56084

Date of Examination : 05-07-22

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) Answer briefly :

- (a) Differentiate between Activity and Event.
- (b) Define the term Total float, Free float and Share float.
- (c) Compare PERT and CPM.
- (d) Explain the term Variance and Standard Deviation.
- (e) Discuss the different types of mixers.
- (f) Write any 3 methods (equipments) used for Transportation and Handling concrete.
- (g) What is a Dummy? Where a dummy should be used?
- (h) How do you select the size of power shovel?
- (i) What are the limitations of Bar charts?
- (j) What is a life-cycle curve? What are its uses?

SECTION-B

- 2) What do you mean by frequency distribution? How do you determine :
 - a) most likely time,
 - b) variance,
 - c) standard deviation from frequency distribution.
- 3) What are the objectives of construction planning?
- 4) With neat sketches, explain the working of a dragline.
- 5) A project takes 25 days along the critical path and has standard deviation of 5 days. What is the probability of completing the project within
 - a) 30 days
 - b) 25 days?
- 6) Draw a typical cost-duration curve and show on it the optimum cost and optimum duration. Explain the importance of the curve.

SECTION-C

- 7) Draw the flow diagram and explain the working of hot mix bitumen plant.
- 8)
 - a) Explain the working of hoes with neat sketches.
 - b) How would you determine the economic life of the equipment?
- 9) Table shows information regarding various activities of network shown under :

Activity	Normal duration (days)	Normal cost (Rs.)	Crash duration (days)	Crash Cost (Rs.)
1-2	9	8000	6	9500
2-3	5	5000	3	5500

The project overhead costs are @ Rs. 300 per day:

Determine

- a) direct cost-duration relationship.
- b) total cost-duration relationship and the corresponding least cost plan.

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.