

Paper id **100253**Roll No.

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B.TECH
(SEM VIII) THEORY EXAMINATION 2018-19
CONSTRUCTION TECHNOLOGY & MANAGEMENT

Time: 3 Hours

Total Marks: 100

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a. Define elements of management.
 - b. What are project cycle?
 - c. Define mile stone chart.
 - d. What are equivalence concept.?
 - e. Define contract.
 - f. What are the advantages of contracts.?
 - g. What are the external communication?
 - h. Write elements of tender.
 - i. Name the hoisting equipments.
 - j. Define earth moving equipments.

SECTION B

- 2. Attempt any three of the following: 10x3=30**
- a. Explain the role of construction industry in national development.
 - b. What are the different types of floats involved in CPM?
 - c. Draw a PERT network for the following and find expected mean time, variance and SD of the project.

Activity	Three-times estimate(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	3-5-9
3-4	0-0-0

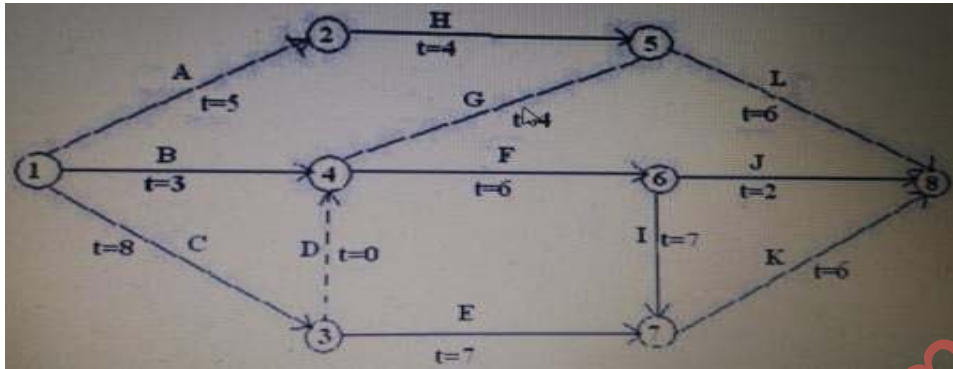
- d. Explain about crashing for optimum cost and crashing for optimum resources.
- e. What are the various factors affecting while selecting construction equipment's?

SECTION C

- 3. Attempt any one part of the following:**
- a. List out the rights and responsibilities of project manager.
 - b. What do you understand by Quality Control in Construction industry? How it helps in good quality of workmanship?

4. Attempt any one part of the following:

- What are different elements present in PERT network and explain with an example.
- The network of a certain project is shown in figure. With the estimated durations of various activities. Determine following (i) earliest event time and latest event time (ii) Earliest and latest start and finish time of each activity (iii) total and free floats for each activity.



5. Attempt any one part of the following:

- What do you mean by budget uncertainty? How risk is managed in projects?
- What do you mean by contract of guarantee? Distinguish between contract of guarantee and contract of indemnity

6. Attempt any one part of the following:

- State how a variation in a lump sum contract may be made and priced?
- A construction company purchases 1000 bags of cement annually. each bag of cement costs Rs 350 and the cost incurred in procuring each lot is Rs. 120. The cost of carrying is 25% what is the most economic order quantity ? what is average inventory level?

7. Attempt any one part of the following:

- Differentiate between impact and Gyratory Crushers based on their use and application.
- Highlight and explain the various factors governing the selection of earthmoving equipment. And With neat sketches, explain any two methods of earthmoving