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Paper Id: 

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Sub Code: ECE 801

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**B. TECH.**

**(SEM VIII) THEORY EXAMINATION 2017-18  
CONSTRUCTION TECHNOLOGY AND MANAGEMENT**

**Time: 3 Hours**

**Total Marks: 100**

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

**SECTION A**

**1. Attempt all questions in brief. 2 x 10 = 20**

- a. What is meant by indenture level structure?
- b. Write two salient features of AOA network.
- c. Write the key concept behind Time Value of Money.
- d. Define Physical depreciation.
- e. What is a contract?
- f. Write the uses of bulldozers.
- g. What is project updating?
- h. What is economic efficiency?
- i. What is Crash cost and crash time?
- j. Define dummy activity.

**SECTION B**

**2. Attempt any three of the following: 10 x 3 = 30**

- a. What is meant by Project Cycle? Explain it in detail.
- b. Draw beta distribution curve and explain all time estimates used in PERT.
- c. Write about different types of contract in detail.
- d. A candidate for Civil Services Examination takes no less than 25 minutes to answer a question and sometimes as much as 48 minutes, 35 minutes times are most frequent than any other time. If this performance were an activity in a PERT project, Calculate
  - i. Mean expected time to answer a question
  - ii. Its variance
  - iii. Time to be allocated for answering a question in scheduling the project.
- e. Discuss the factors which influence the selection of Construction equipment.

**SECTION C**

**3. Attempt any one part of the following: 10 x 1 = 10**

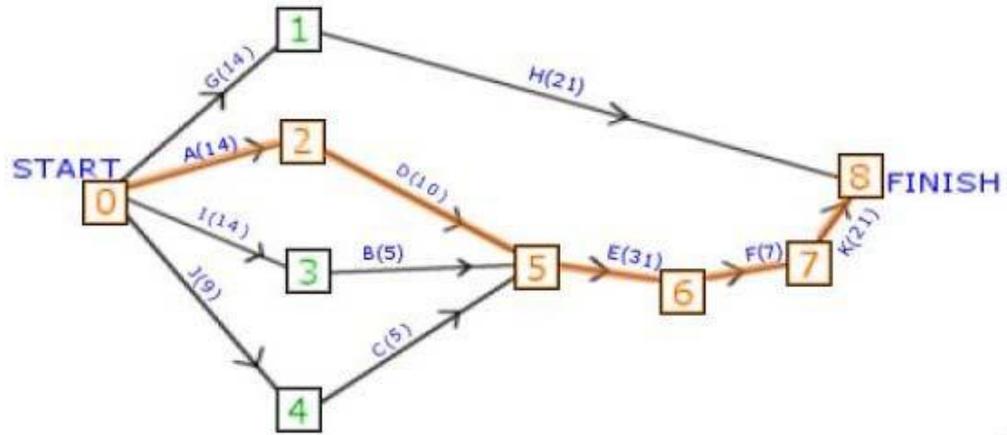
- (a) What is a construction project? Explain different forms of business organization.
- (b) Explain Project planning and Project scheduling in detail.

**4. Attempt any one part of the following: 10 x 1 = 10**

- (a) A company has purchased an equipment whose first cost is Rs 1,00,000 with an estimated life of 8 years. The estimated salvage value of the equipment at the end of its lifetime is Rs 20,000. Determine the depreciation charge and book value using the Sinking Fund method of depreciation with interest rate of 12%, compounded annually.
- (b) Write objectives of Break Even Chart. Also explain Salvage Value and Scrap Value.

5. Attempt any *one* part of the following: 10 x 1 = 10

- (a) What is a bar chart? Explain its advantages and limitations.
- (b) Find all the activity times, all the floats, Critical Path and Project duration for following CPM network



6. Attempt any *one* part of the following: 10 x 1 = 10

- (a) Write short notes on-
  - i. Back hoe
  - ii. Clamshells
- (b) Discuss various types of equipments used for concreting operations.

7. Attempt any *one* part of the following: 10 x 1 = 10

- (a) What are disputes in the tender? How are they resolved?
- (b) What are the laws related to labour welfare?