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Sub Code: NCE603

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B. TECH
(SEM-VI) THEORY EXAMINATION 2017-18
CONSTRUCTION TECHNOLOGY & 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 do you mean by project cycle?
- b) Write a short note on 'construction team'.
- c) What is Bar chart?
- d) Define Dummy activity
- e) What do you mean by depreciation?
- f) What is break-even cost analysis?
- g) Write a note on project contract?
- h) What is land acquisition?
- i) what is operational cost?
- j) What are the various types of crane?

SECTION B

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

- a) What is 'job Layout'? Explain factors affecting 'Job Layout'.
- b) What do you mean by CPM and PERT? Illustrate with examples the difference between CPM and PERT.
- c) What are the advantages and disadvantages of debt financing?
- d) Write note on the following:
 - I. Tender
 - II. Earnest money deposit
 - III. Settlement of dispute
 - IV. Commissioning of project
- e) What are the various types of hauling equipment vehicles? Also write in detail their relative advantages and disadvantages.

SECTION C

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

- a) What are the advantages and disadvantages of:
 - I. Line organization
 - II. Line and staff organization
- b) Explain various type of construction in detail.

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

- a) A project consists of eight events predecessor relationship as under. construct the network.

EVENT	1	2	3	4	5	6	7	8
IMMEDIATE PREDECESSOR	--	1	1	2,3	3,4	3,5	6	4,7

- b) Define the following:
- Direct cost and indirect cost
 - Crash time and crash cost
 - Cost slop
 - Optimum time and optimum cost

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

- a) The fixed cost for the year 2013-14 are 60000 Rs. The estimated sales for the period are valued at 200000 Rs. The variable cost per unit for the single product made is 5 Rs. If each unit sells at 25 Rs and the no. of units involved coincide with the expected volume of output. Construct break- even chart and determine the following:
- The break-even point
 - Margin of safety
- b) What do you mean by cash flow diagram? How it is classified?

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

- What are the plans for labour safety on construction site?
- Describe importance of construction contracts for the successful completion of the civil engineering projects.

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

- a) Estimate the number of dump trucks required for transportation of 1500 cum of material per day for average load of 5 Km with the following data:
- Capacity of one dump truck = 20 cum
 Speed during empty haul @ 30km/hr and loaded haul 25 km/hr
 Loading time of one dump truck = 15 minutes
- b) explain a central batching and mixing plant for a very large construction project.