

lib 20/5/17 - 11/17

**B.TECH.**  
**THEORY EXAMINATION (SEM-VI) 2016-17**  
**CONSTRUCTION TECHNOLOGY & MANAGEMENT**

Time : 3 Hours

Max. Marks : 100

Note : Be precise in your answer. In case of numerical problem assume data wherever not provided.

**SECTION - A**

1. Explain the following: 10 x 2 = 20
- (a) What is the term planning?
  - (b) Write the classification of scheduling.
  - (c) Enumerate the limitations of Bar chart.
  - (d) Give use of learning curves in estimating duration.
  - (e) Define break even cost analysis.
  - (f) Brief short notes on total cost curve.
  - (g) Define arbitration.
  - (h) Describe the term land acquisition.
  - (i) Write the methods of tunneling.
  - (j) What are the factors affecting the selection equipments?

**SECTION - B**

2. Attempt any five of the following questions: 5 x 10 = 50
- (a) Define organization and explain its types.
  - (b) Explain the principles of planning. State their advantages and limitations.
  - (c) Draw the network and design the critical path and calculate the completion time of the project whose activities are as follows.

ACTIVITY	DURATION IN DAYS	PRECEDING
A-B	7	-
B-C	10	A-B
B-D	15	A-B
C-D	7	B-C
C-E	12	B-C
D-E	3	B-D,C-D
E-F	5	C-E,D-E

- (d) Describe about the depreciation and break even cost analysis of construction projects.
- (e) A project of five activities, whose activity relationships, activity durations (normal and crash) and activity costs (normal and crash) are given in the following table. Estimate the optimum cost and time.

Activity	Normal		Crash	
	Time (Week)	Cost (Rs)	Time (Week)	Cost (Rs)
10-20	3	12000	2	16000
10-30	6	18000	3	24000
20-40	2	20000	1	23000
30-40	4	16000	2	21000
40-50	5	30000	4	35000

- (f) Explain the procedure of opening the tenders, acceptance of tenders and the execution of agreement for carrying out a work.
- (g) Explain various types of contract system with advantages and disadvantages.

- (h) Explain the various conveying equipments in detail.

**SECTION - C**

Attempt any two of the following questions:

2 x 15 = 30

- 3 (i) Explain the different classification of scheduling in detail.  
(ii) Enumerate the difference between CPM and PERT.
- 4 (i) Compare direct and indirect cost in the construction project.  
(ii) Explain the legal aspects of contracts and various laws related to contracts
- 5 Explain in detail about various types of earth work equipments with special purpose usage for each equipments.