

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 100613

Roll No.

B.TECH.

Theory Examination (Semester-VI) 2015-16

CONSTRUCTION TECHNOLOGY & MANAGEMENT

Time : 3 Hours

Max. Marks : 100

Section-A

1. Attempt all parts. All parts carry equal marks. Write answer of each part in short. (2 × 10 = 20)

- (a) State the objectives of integrated project management.
- (b) What are the important stages in the planning of a project?
- (c) How is the milestone chart an improvement over the bar chart?
- (d) List out the classification of scheduling.
- (e) How you can calculate the earliest expected time and latest allowable occurrence time in PERT?
- (f) Illustrate the CPM technique as used in scheduling a construction project.

- (g) Suggest a suitable method for submitting the periodical reports for effective control through CPM.
- (h) What are the main objectives of cost control system?
- (i) Differentiate between CPM and PERT.
- (j) Write down the advantages of Hoisting equipments.

Section-B

2. Attempt any 5 questions from this section.

(10 × 5 = 50)

- (a) What are the different types of organizational structures? Outline in brief the characteristics, advantages and disadvantages of each structure.
- (b) In what respect does the functional organization differ from the line-and-staff organization ?
- (c) Discuss in details about the limitations of a bar chart.
- (d) Illustrates the relationship between 'time' and 'cost' .
- (e) Write short notes on :
 - (i) Network comparisons
 - (ii) Project cost analysis

- (g) Discuss elements of cost control and its importance.
- (h) How are cost control systems classified? Explain.
- (i) Write down the elements of Tender preparation.

Section-C

Note : Attempt any 2 questions from this section.

(15 × 2 = 30)

3. (a) Explain: 'work breakdown structure', prepare the work breakdown structure for the launching of a communication satellite. Assume the activities suitably.
- (b) A target date of completion is to be forecast based on the following information :
- Item A takes 7 weeks for completion
 - Item B takes 5 weeks
 - Item C depends on the completion of both A and B and requires 3 weeks
 - Item D follows up of item C and requires 2 weeks

Prepare a bar chart and mile stone chart for scheduling the completion date.

4. (a) The time estimates for the activity P,Q and R in a project are as follows :

Activity	t_o	t_m	t_p
P	10	12	14
Q	6	8	12
R	5	10	12

- (i) Determine the expected time and variance of each activity.
- (ii) Which activity has more reliable time estimates?
- (b) Discuss briefly about cash flow forecasting.
5. (a) Explain in details about different types of contract and their relative advantages and disadvantages.
- (b) Explain the following with neat sketch:
- Hauling equipments
 - Conveying equipments
 - Tunneling equipments