

Total No. of printed pages = 7



**RETEST EXAMINATION - 2019**

Semester : 6th

Subject Code : CT-603

**CONSTRUCTION AND PROJECT  
MANAGEMENT**

Full Marks - 70

Time - Three hours

The figures in the margin indicate full marks  
for the questions.

**Instructions :**

1. All questions of PART-A are compulsory.
2. Answer any *five* questions from PART-B.

**PART - A**

Marks - 25

1. Fill in the blanks : 1×10=10
  - (a) CPM stands for \_\_\_\_\_.
  - (b) A-O-N stands for \_\_\_\_\_.

[Turn over

- (c) EST stands for \_\_\_\_\_.
- (d) Path joining the critical activities in a network is called as \_\_\_\_\_.
- (e) Event which marks the beginning of an activity is called \_\_\_\_\_ event.
- (f) Activity which does not consume any time and resources is called \_\_\_\_\_ activity.
- (g) \_\_\_\_\_ represents beginning or end of an activity.
- (h) A-O-A stands for \_\_\_\_\_.
- (i) LST stands for \_\_\_\_\_.
- (j) \_\_\_\_\_ indicates the range within which the start and finish times of an activity may vary without affecting the completion time of the project.

2. Write true or false :  $1 \times 10 = 10$

- (a) PERT is an activity oriented.
- (b) CPM is an event oriented.
- (c) In PERT three different activity times are used to estimate the expected time

- (d) Critical path is the most important sequence of activities which determines project completion period.
- (e) Bar chart does not indicate critical activities which require careful attention.
- (f) CPM is used for repetitive type of projects where the time estimates can be determined accurately.
- (g) Independent float is the excess of minimum available time over the activity duration.
- (h) A network will have only one final node. Final node will have only incoming arrows.
- (i) Activities along critical path are called non critical activities.
- (j) Optimistic time is the maximum time required to complete an activity under abnormal or extremely adverse conditions.

3. Choose the correct answer :  $1 \times 5 = 5$

- (a) The main function of construction management is
- (i) Planning (ii) Organising
- (iii) Directing (iv) All of these

(b) Which of the following type of technique is most suitable in case of research and development type of activity

(i) CPM (ii) PERT

(iii) Bar chart (iv) None of these

(c) Event which marks the completion of an activity is called

(i) Head event (ii) Tail event

(iii) Dummy event (iv) None of these

(d) Slack is associated with

(i) activities (ii) events

(iii) Both of these (iv) None of these

(e) PERT adopts following approach

(i) deterministic (ii) probabilistic

(iii) Both of these (iv) None of these

## PART - B

Marks - 45

4. (a) Explain various time estimates in PERT. 3

(b) What are the rules for developing a network? 3

(c) Explain the different types of specifications. 3

5. (a) What are the advantages of arbitration? 3

(b) What are the safety measures for demolition? 3

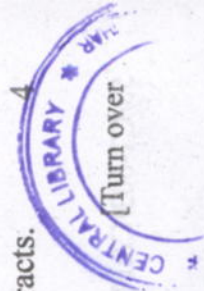
(c) Explain resources required for construction industry. 3

6. (a) Explain advantages and disadvantages of Bar chart. 4

(b) Differentiate between PERT and CPM. 5

7. (a) Explain contract document. 5

(b) Explain various special contracts. 4



8. A project is expected to take 15 months along the critical path, having a standard deviation of 3 months. What is the probability of completing the project within ?

- (a) 15 months
- (b) 21 months
- (c) 12 months

The probability percentage for different values of probability factors are 15.87% for -1; 50% for 0; 97.72% for +2.

$$3+3+3=9$$

9. A typical serious candidate for civil services examination takes not 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, estimate

- (a) expected time to answer a question
- (b) its variance
- (c) the time to be allocated for answering a question in scheduling the project.

$$3+3+3=9$$

10. Time estimates in days for various activities of a project are shown in the network diagram below. Determine the critical path.

