

B.Tech. (Civil) 7th Semester (G - Scheme)

Examination, December-2022

CONSTRUCTION PLANNING AND MANAGEMENT

Paper - PCC-CE-401 G

Time allowed : 3 hours]

[Maximum marks : 75

Note: Question No. 1 is compulsory. Students have to attempt five questions in total at least one questions from each section. All questions carry equal marks.

1. (i) Explain float.
(ii) Explain the term updating.
(iii) Write clear note on BOT technique.
(iv) What are the causes of accidents in construction?
(v) Explain the benefits of computerization in scheduling.
(vi) Explain centralized data base management system in construction planning and management.

Section - A

2. What is the milestones chart? How does it differ from a bar chart? How can milestones chart be developed in to a network?

3. What is mean by probability distribution curve? Differentiate clearly between normal probability curve and beta distribution.

Section - B

4. A construction company has an opportunity to submit a bid for the construction of a new apartment building. From the specification provided by the developer, the PERT network along with three times estimate (in week) for each activity as shown fig. 1. Determine : (i) Critical path and its standard deviation (ii) Probability of completing the work in 33 weeks. (iii) Completion time duration for which the company should bid to provide 95% probability of completing the project in time.

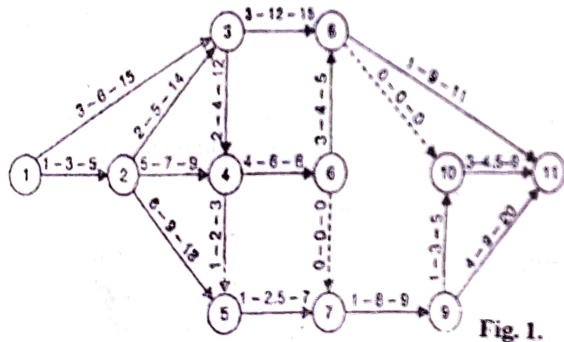


Fig. 1.

5. The data given in the Table about duration and costs of various activities of the network as shown in fig. 2.

Activity	Normal duration (weeks)	Normal cost (Rs.)	Crash duration (Weeks)	Crash cost (Rs.)
1-2	4	4500	2	12000
2-3	5	3000	2	8000
2-4	7	3500	5	6000
3-4	4	5500	2	9500

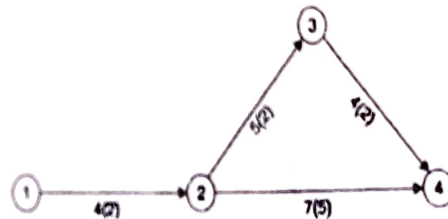


Fig. 2.

The project overhead costs are Rs. 1500 per week. Find the optimum duration and the cost associated with it. Also, draw the least cost network.

Section - C

6. Explain in detail about :
- Jaw crushers
 - Gyratory crushers
 - Impact crushers
 - Hauling equipment