

3521

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

Examination, November-2023

**CONSTRUCTION PLANNING AND
MANAGEMENT**

Paper-PCC-CE-401-G

Time allowed : 3 hours]

[Maximum marks : 75

Instructions :

- (i) *Question No.1 is compulsory.*
- (ii) *Attempt one question from each section.*
- (iii) *All questions carry equal marks.*
- (iv) *Assume missing data, if any, suitably.*

1. Describe the following:

- (a) Write about the Event and Activity.
- (b) Write about hoists.
- (c) What is project planning?
- (d) What are the uses of compaction?
- (e) What is crashing a project in project management?
- (f) Bar chart

Section-A

2. Draw a network diagram for the given activity and durations in the following table:

Find out the critical path, EST, EFT, LST, LFT, total float and free float.

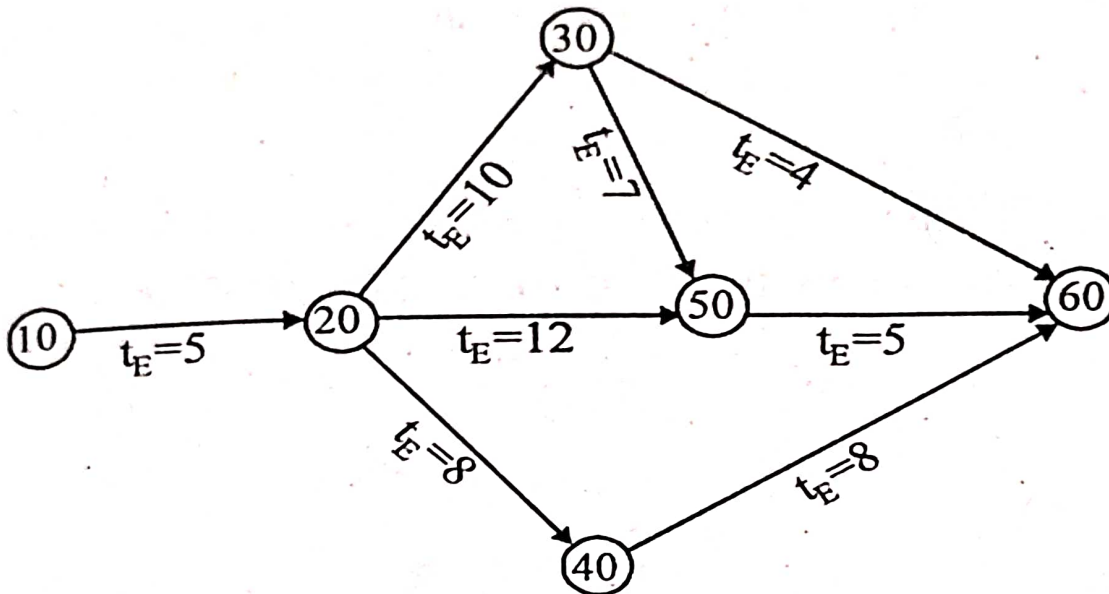
Description of activity	Activity symbol	Preceding activity	Succeeding activity	Duration days
Dig foundation	A	None	B	3
Place form work	B	A	C	6
Place concrete	C	B	G	6
Obtain steel	D	G, H	None	7
Cut and bent	E	None	F	4
Place steel reinforcement	F	E	G	3
Obtain materials for concrete	G	F, C	D	2
	H	None	D	12

3. (a) What are different elements present in PERT network and explain with an example?
- (b) What do you mean by frequency distribution? What is the use of beta distribution in PERT?

Section-B

4. The network of a certain project is shown in Fig. with the estimated durations of various activities. Determine the following:
- (a) Earliest event time and latest event time.

- (b) Earliest and latest start and finish times of each activity.
- (c) Total and free floats for each activity.
- (d) Critical path for the network.



5. Explain about crashing for optimum cost and crashing for optimum resources.

Section-C

6. (a) Describe the various applications of a bulldozer.
- (b) Discuss various operations that can be performed by a bulldozer.
7. Write short notes on:
- Placing of concrete
 - Form work
 - Fabrication and erection

Section-D

8. (a) Discuss BOT technique in detail.
- (b) What do you mean by updating? Why is it essential?
9. (a) Explain what do you mean by resource levelling. Explain the step-by-step process for resource levelling.
- (b) Discuss the resource allocation problems. What are the methods of solving the problems?