Activity	Predecessor Activity	Successor Activity	Duration
A	-	B,C,D,	5
B	A	F,E	10
C	A	G	12
D	A	H	8
E	B	-	4
F	B	G	7
G	C,E	-	5
H	D	-	8

(b) If activities B and E are delayed by 2 and 3 days respectively, calculate EST, EFT, LST, LFT and Project completion time. **6**

4. Explain the process of planning Inventory for Repetitive materials and Non-repetitive one-time purchase materials. **15**

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G141

B.Tech. EXAMINATION, May 2019

(Seventh Semester)

(B. Scheme) (Re-appear Only)

(CE)

CE401B

PROJECT PLANNING AND MANAGEMENT

Time : 3 *Hours*] [*Maximum Marks :* 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. Assume any data if necessary.

Unit I

1. Explain in brief the difference between PERT and CPM networks. Explain the circumstances under which one is preferred over the other. **15**

2.

Activity	Predecessor Activity	Successor Activity	t_o	t_L	t_P
A	-	B,C,D	2	5	7
B	A	F,E	8	10	11
C	A	G	10	12	15
D	A	H	5	8	11
E	B	-	2	4	7
F	B	G	5	7	9
G	C,E	-	3	5	6
H	D	-	6	8	10

(a) Draw the network and calculate the :

(i) Expected time of completion of project.

(ii) Earliest expected time for each event.

(iii) Latest allowable occurrence time for each event

(iv) Slack. **9**

(b) Calculate the Earliest expected time for each event, Latest allowable occurrence time for each event and Slack if project duration is 20 days. **6**

Unit II

3. (a) Draw the network and calculate the :

(i) Earliest Start Time

(ii) Earliest Finish Time

(iii) Latest Start Time

(iv) Latest Finish Time

(v) Total Float for all activities

(vi) Time for completion of project **9**

Unit III

5. Explain the functional classifiction of Construction equipments. What are the advantages and disadvantages of using equipments over manual laborers for constructional projects ? **15**

6.

Act.	Pre. Act	Suc. Act.	Normal Dur.	Crash Dur.	Normal Cost	Crash Cost
A	-	B,D,E	6	3	6000	9000
B	A	C	7	4	7000	8000
C	B	-	8	6	5500	6000
D	A	-	9	7	5000	6000
E	A	F	7	5	6000	6700
F	E	-	8	6	5000	7000

Considering above table, draw the network and calculate most optimum cost to complete the project if overhead rate is Rs. 1,000 per days. **15**

Unit IV

7. Give the classification of contractors on the basis of the cost of contract allotted. Explain the process of indenting in stores in a construction project. **15**

8. Explain various hazards that could occur in construction project. How costs are calculated for accidents ? What are the safety measures that can be taken on site to avoid accidents ? **15**