SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech. IV Year I Semester Regular & Supplementary Examinations December-2024
PROJECT PLANNING AND CONTROL
(Open Elective (OE) – IV)

Time: 3 Hours
Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Write about project scheduling and describe various steps involved in project scheduling.	CO1	L1	6M
	b	What is the role of Decision making in project Management. Explain?	CO1	L1	6M

OR

2	a	Explain briefly about development of a network	CO1	L2	6M
	b	Explain in brief the difference between PERT AND CPM networks.	CO1	L2	6M

UNIT-II

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3	a	Discuss briefly about various network rules to follow in a network diagram.	CO2	L1	6M
	b	Define Event with examples? Explain briefly about properties and representation of an Event.	CO2	L2	6M

OR

4		Draw a network diagram for the project having 9 activities with the following interrelationships:	CO2	L3	12M

a) C follows D but precedes F.
b) C follows B but precedes H.
c) G follows F but precedes I.
d) E follows A but precedes I.
e) D follows A.
f) H and I terminate at the same time.
A and B starts at the same time.

UNIT-III

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5	a	What do you understand by the frequency distribution?	CO3	L1	6M
	b	How do you determine i) Mean ii) Variance and iii) Standard deviation	CO3	L1	6M

OR

6		The network for a construction project is shown in figure. The three time estimates for each activity are given along each activity arrow. Compute	CO4	L3	12M

a) Expected time of completion of each activity
b) Earliest expected time for each event
c) Latest allowable occurrence time for each event.
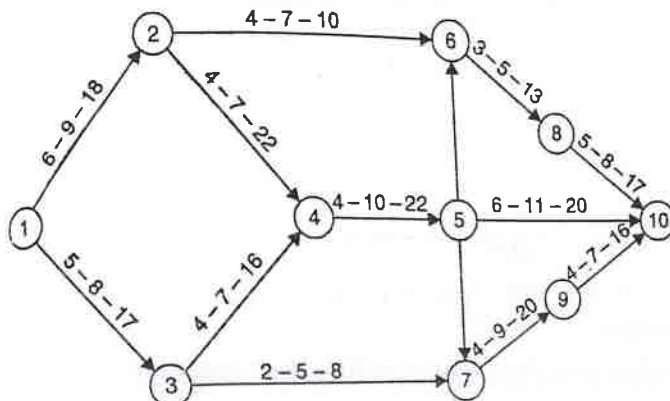
7   The network for a certain project shown in fig , along with the estimated   CO4   L3   12M
     time of completion of each activity marked. Compute the activity times,
     and total float, free float and independent float for each activity. Locate
     the critical path on the network.
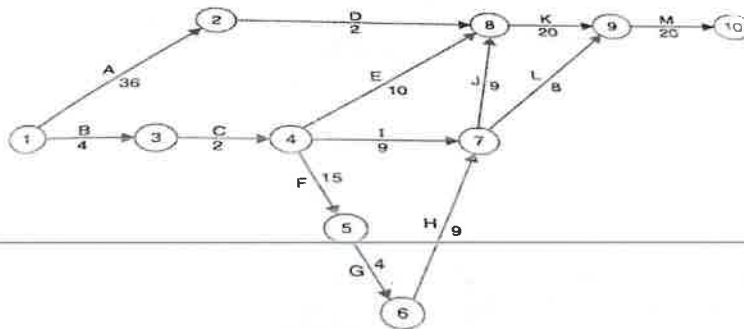
OR

8   A small project consisting of eight activities has the following   CO4   L3   12M
     characteristics:

Activity	Dependency	Duration (days)
A	-	7
B	-	3
C	A	6
D	B	3
E	D,F	3
F	B	2
G	C	3
H	E,G	2

     a) Construct the CPM network.
     b) Determine the critical path, the critical activities and the project
        completion time.
        Compute Total float & Free floats for Non-Critical activities

9 a   What is Cost optimization? What are the various steps involved in   CO4   L1   6M
       time cost optimization?
   b   Explain about Resources usage profiles histograms.   CO4   L2   6M
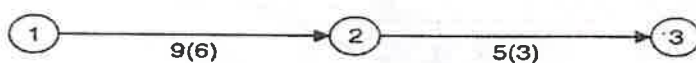
OR

10   Gives the information about various activities of network shown in fig.1   CO4   L3   12M

Activity	Normal duration (days)	Normal Cost (Rs.)	Crash duration (days)	Crash cost (Rs.)
1-2	9	8000	6	9500
2-3	5	5000	3	5500

     The project overhead costs are @ Rs. 300.0 per day. Determine
     (a) Direct cost-duration relationship
     (b)Total cost-duration relationship and the corresponding least cost plan
        (network)

*** END ***