GIET UNIVERSITY, GUNUPUR – 765022

M. Tech. (Third Semester) Examinations, December – 2022

MPESE3012 – Project Planning and Construction Management

(Structural Engineering)

Time: 3 hrs   Maximum: 70 Marks

(The figures in the right hand margin indicate marks.)

PART – A   (2 x 10 = 20 Marks)

Q.1. Answer all questions

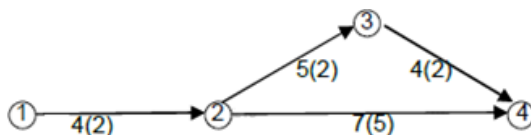|		CO#	Blooms Level
a.	Define events and activities in connection with network analysis.	CO1	1
b.	Name the four activity times associated with CPM analysis.	CO1	1
c.	Define CPM.	CO2	1
d.	What do you mean by constraint?	CO1	2
e.	What are the types of error in network?	CO3	1
f.	What is management?	CO1	1
g.	Define division of work.	CO2	2
h.	What are the two aspects for the selection of construction equipment?	CO3	1
i.	What are the four 'M' defined in construction management?	CO1	1
j.	What is tender?	CO1	2

PART – B   (10 x 5 = 50 Marks)

Answer *ANY FIVE* questions

		Marks	CO#	Blooms Level
2. a.	The durations and costs of various activities of the network shown in the figure below are given in the table below. The project overhead costs are Rs.5000 per week. Find the optimum duration and the cost associated with it.	10	CO2	3

Activity	Normal duration (weeks)	Normal cost (Rs.)	Crash duration (weeks)	Crash cost (Rs.)
1-2	4	5000	2	12000
2-3	5	4000	2	7500
2-4	7	3600	5	6000
3-4	4	6000	2	10000

Also draw the least cost network for above question.
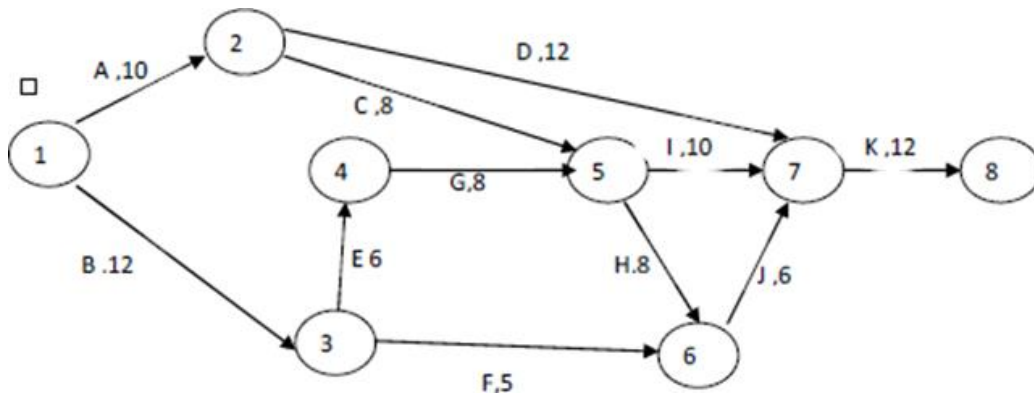
3.a. For the following network find   10   CO2   3

    I. Critical Path

    II Total Duration Of the Network

Also find the Total float, Free float, Independent float and Interfering float for each activity.

4. a.	Describe briefly about the Supervisor's responsibilities for quality control in construction industry.	5	CO1	2
b.	Describe the preparatory work for the construction project.	5	CO3	2
5.a.	Describe the role of construction planning in the management of construction industries.	5	CO3	3
b.	List down the various steps to draw a network of a project.	5	CO1	3
6. a.	Explain three time estimates with reference to PERT.	5	CO2	3
b.	Define and explain the direct and indirect cost of an accident	5	CO4	3
7.a.	Explain the purpose and important activities of different stages in construction	5	CO1	2
b.	State the difference between PERT and CPM.	5	CO2	3
8. a.	Write Short notes on Fulkerson's Rule	5	CO3	2
b.	Write Short notes on Bar Chart	5	CO1	3

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