Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2018

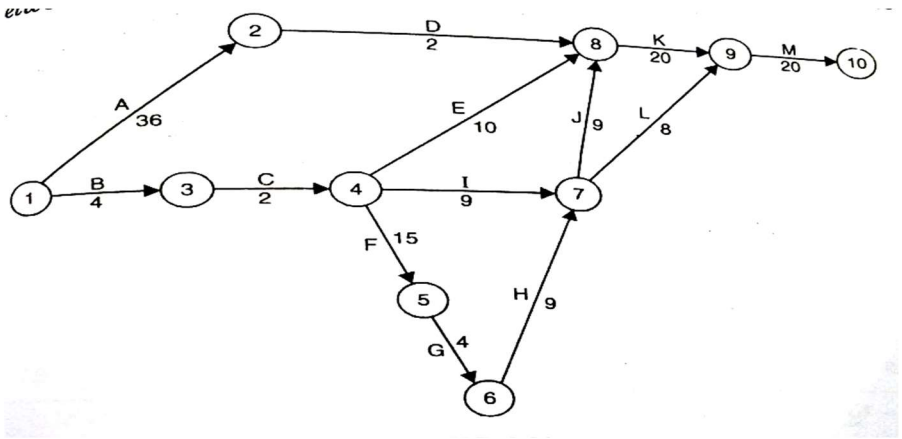
Course: Construction Management Practices (CIVL 7017) **Semester: II**
Program: M. Tech, Structural Engineering
Time: 03 hrs. **Max. Marks: 100**

Instructions: Attempt all questions of section-A.
Attempt any 4 questions of section B.
Attempt two questions of section C.

SECTION A

S. No.		Marks	CO
Q 1	Which feature of construction industry make it unique? Define Briefly.	4	CO1
Q 2	What is Drawback & Advantage of invitation of tender by open competition method?	4	CO3
Q 3	Define the following terms: (a) Offer; (b) Acceptance; (c) Counter offer	4	CO1
Q 4	Distinguish between percentage rate contract & the cost plus percentage contract.	4	CO3
Q 5	Write circumstances under which agreement (contract) is void.	4	CO3

SECTION B
(Attempt any Four)

Q 6	Explain Proper Procedure for submission and opening of tenders for construction Contracts.	10	CO3
Q 7	What is FIDIC? How it is important for contract management? Write brief on it.	10	CO3
Q 8	The network of a construction project as shown in fig below with estimated durations of various activities.  Determine the following	10	CO2

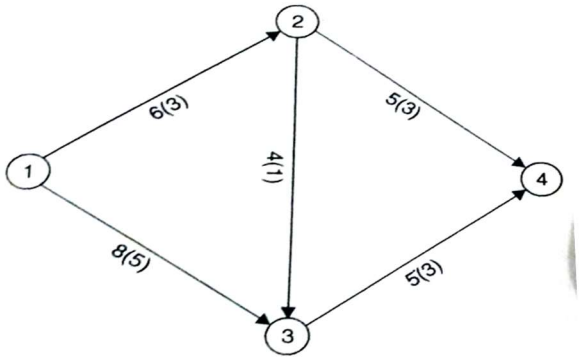
	(i) Activity time, (ii) Total float & free float for each activity (iii) Critical Path for the network		
Q 9	Explain different alternate dispute resolution methods? Define arbitration & its advantages over mediation.	**10**	**CO4**
Q 10	Define Project Quality Management System. Explain process of Quality Management system in detail.	**10**	**CO4**

SECTION-C
(Attempt Two questions)

Q 11

For the below mentioned project network, determine the optimum duration & the corresponding minimum cost.

Activity	Normal Duration (weeks)	Normal Cost (Rs.)	Crash Duration (weeks)	Crash Cost (Rs.)
1-2	6	7000	3	14500
1-3	8	4000	5	8500
2-3	4	6000	1	9000
2-4	5	8000	3	15000
3-4	5	5000	3	11000



The indirect cost for the project is Rs. 3000/- per week. For the mentioned project network, determine the optimum duration & the corresponding minimum cost

20 **CO2**

(OR)

For the given data below of a construction project schedule draw network and determine following

i. Critical path
ii. All floats

Activity	A	B	C	D	E	F	G
Predecessors	-	-	A, B	C	C	D	D, E
Durations	3	5	4	6	3	2	4

20 **CO2**

Q 12 (i)	Calculate the quantity of earthwork by all the three methods of mensuration for 100m length of a road, the heights of banks at the two ends being 1.4m and 1.8m. The formation width is 15m and side slopes is 2:1 (Horizontal:Vertical). Assume there is no transverse slope is there. If the rate for earthwork in banking is Rs.275/- per cubic meter, calculate the cost of the earthwork by all the three methods.	**8**	
(ii)	Calculate the area of side slopes of a portion of a bank for a length of 500m, the height of the banks at two ends being 2.2m and 3.8m and the ratio of side slope is 2:1. If the side slopes are to be provided with 10cm thick stone pitching, calculate the cost of pitching at the rate of Rs.100/- per cubic m.	**8**	**CO5**
(iii)	Write a brief note on any three of the following: a. Permanent and Temporary Land Acquisition b. Advantages of Project cost analysis in civil engineering c. Types of coats and their material specification in Metalling of roads d. Type of Contingencies in road construction and their management.	**6**	