UPES
UNIVERSITY OF TOMORROW

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2022

Course: Construction Management Practices **Semester: II**
Program: M.Tech, Structure Engg. , Civil Engg **Time 03 hrs.**
Course Code: CIVL 7017 **Max. Marks: 100**
Pages: 05
Instructions: All questions are compulsory
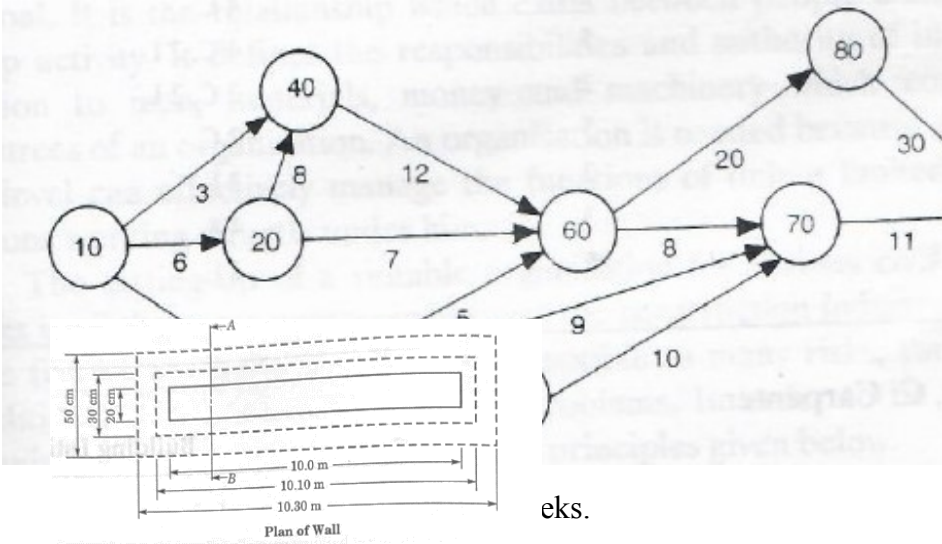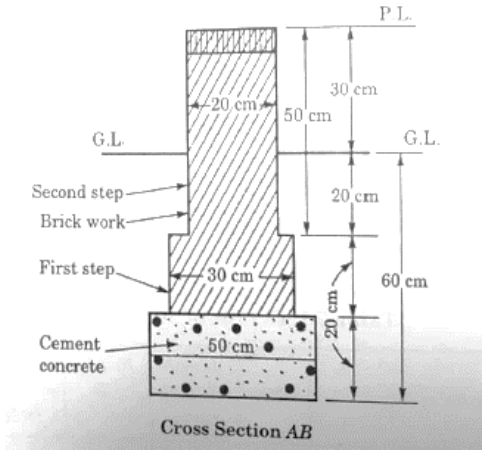
|	SECTION A		
S. No.		Marks	CO
Q 1	Why construction industry is	4	CO1
Q 2	Define the various phases of construction project management in brief.	4	CO4
Q 3	Define the contract & tender? What are processes from tendering to contract.	4	CO3
Q 4	What is rate analysis in construction project & what are various factors affects it?	4	CO5
Q 5	Draw the network diagram for the following activities of a construction project	4	CO2

Activity	Predecessor Activity	Duration (Days)	Activity	Predecessor Activity	Duration (Days)
A	-	13	G	D, F	8
B	A	8	H	E	6
C	B	10	I	H	7
D	C	9	J	G, I	14
E	B	11	K	J	18
F	E	10			

	SECTION B		
Q 6	In construction industry, list down various types of contract generally used? Explain difference in PPP Contract and Lumpsum contract. OR	10	CO3

	Define Project management for construction project? What are various phases of project management? Define all phases in brief.		
Q 7	Analyze the Construction project shown below Find (1) critical Path (2) completion time of Project (3) All Float of activities	10	CO2
Q 8	Calculate Quantities of following items for below wall 1. Earth work 2. Cement Concrete 3. Brickwok 	10	CO5
Q 9	Define Project management for construction project? What are various phases of project management? Define all phases in brief. **OR** Would you be a project manager of construction project, which are various accounts for construction Project failure?	10	CO1
SECTION-C			
Q 10	Calculate the quantity of earth work for the road, partly in cutting &	**20**	**CO5**

partly in filling, from the longitudinal section given below. Side slopes in cutting & filling are 1 in 1 (1:1). The formation width is 10.00 metre. Formation Slop is 1 in 100 fall
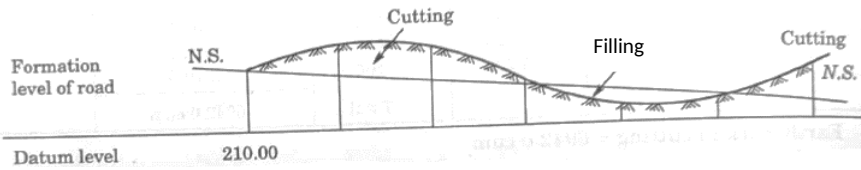
| Depth of cutting (m)	0.00	5.00	4.00	-	-	-	1.00
Height of filling (m)	-	-	-	1.00	2.50	3.00	-
Formation Level (m)	220.00	219.00	218.00	217.00	216.00	215.00	214.00
N. S. L (m)	220.00	224.00	222.00	216.00	213.00	212.00	215.00
R. D. (m)	0	100	200	300	400	500	600

NSL- Natural Soil Level   R. D. – Road Chainage

| Q 11 | For the below mentioned network assume that, after working 15 days on the project, the following conditions exist: | 20 | CO2 |

a. Activities 1-2, 1-3, & 1-4 are completed as originally planned
b. Activity 2-4 is in process & will be completed in 3 more days
c. Activity 3-6 is in process and will need 18 more days for completion
d. Activity 6-7 appears to present some problem & its new estimated time of completion is 12 days
e. Activity 6-8 can be completed in 5 days instead of originally planned 7 days
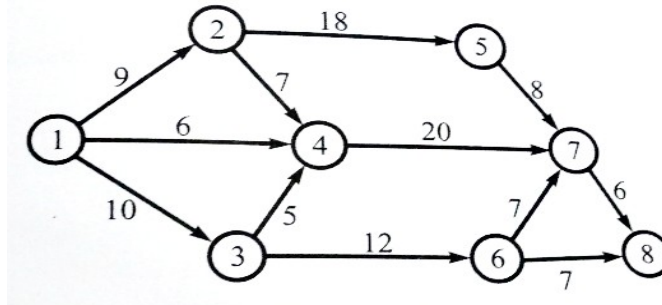
Formulate a new project based on the assessment at the end of 15 days. Including all activities in the new project.

OR

A Project consists of 7 activities, whose time estimate and manpower

requirement are indicated below:

Activity	1-2	1-3	2-3	2-4	3-5	4-5
Duration (days)	2	4	8	5	7	2
Manpower Bar- Benders (B)	2	-	6	3	2	1

Do resource smoothing & show the same by drawing Histogram for Bar-benders.