
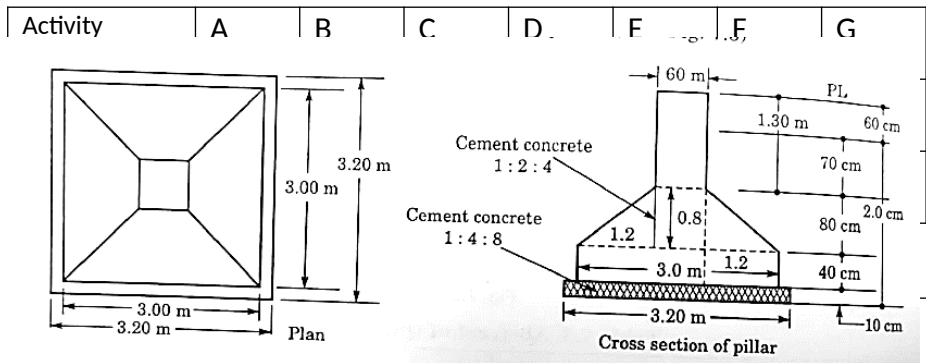


<b>Name:</b> <b>Enrolment No:</b>			
<b>UNIVERSITY OF PETROLEUM AND ENERGY STUDIES</b> <b>End Semester Examination, May 2022</b>			
<b>Course:</b> Construction Management Practices <b>Program:</b> M.Tech, Structure Engg. , Civil Engg <b>Course Code:</b> CIVL 7017 <b>Pages:</b> 05 <b>Instructions:</b> All questions are compulsory		<b>Semester:</b> II <b>Time</b> 03 hrs. <b>Max. Marks:</b> 100	
<b>SECTION A</b>			
S. No.		Marks	CO
Q 1	Briefly explain the importance of project management for construction project.	4	CO1
Q 2	Would you be a project manager of construction project, which are various accounts for construction Project failure?	4	CO4
Q 3	When any contract considered as Void contract. Explain	4	CO3
Q 4	Why Estimation is important for the construction Project?	4	CO5
Q 5	Draw a network diagram for the project having nine activities with following relationship  i. C follows D but precedes F ii. C follows B but proceeds H iii. G follows F but precedes I iv. E follows A but receives I v. D follows A vi. H and I terminate at same time vii. A and B start at same time  Draw the network and number the event using Fulkerson rules.	4	CO2
<b>SECTION B</b>			
Q 6	In construction industry, list down various types of contract generally used? Explain difference in PPP Contract and Lumpsum contract. OR Define Project management for construction project? What are various phases of project management? Define all phases in brief.	10	CO3
Q 7	A construction project consist of 7 activities as mentioned below. Draw	10	CO2

the project network and determine following  
 a. Project duration  
 b. Critical path



Q 8

Calculate quantities for following items & prepare abstract of quantity.

1. Earthwork
2. Cement Concrete 1:4:8 Mix
3. Cement Concrete 1:2:4 Mix

10

CO5

Q 9

A project consists of four activities as detailed below. Determine optimum project completion time assuming indirect costs @ Rs. 2000/- per week

Activity	Normal Time $T_N$ (weeks)	Crash Time $T_C$ (weeks)	Normal Cost $C_N$ (Rs.)	Crash Cost $C_C$ (Rs.)
(1-2)	4	2	4000	12000
(2-3)	5	2	3000	7500
(2-4)	7	5	3600	6000
(3-4)	4	2	5000	10000

Draw the time-cost diagram also.

10

CO2

### SECTION-C

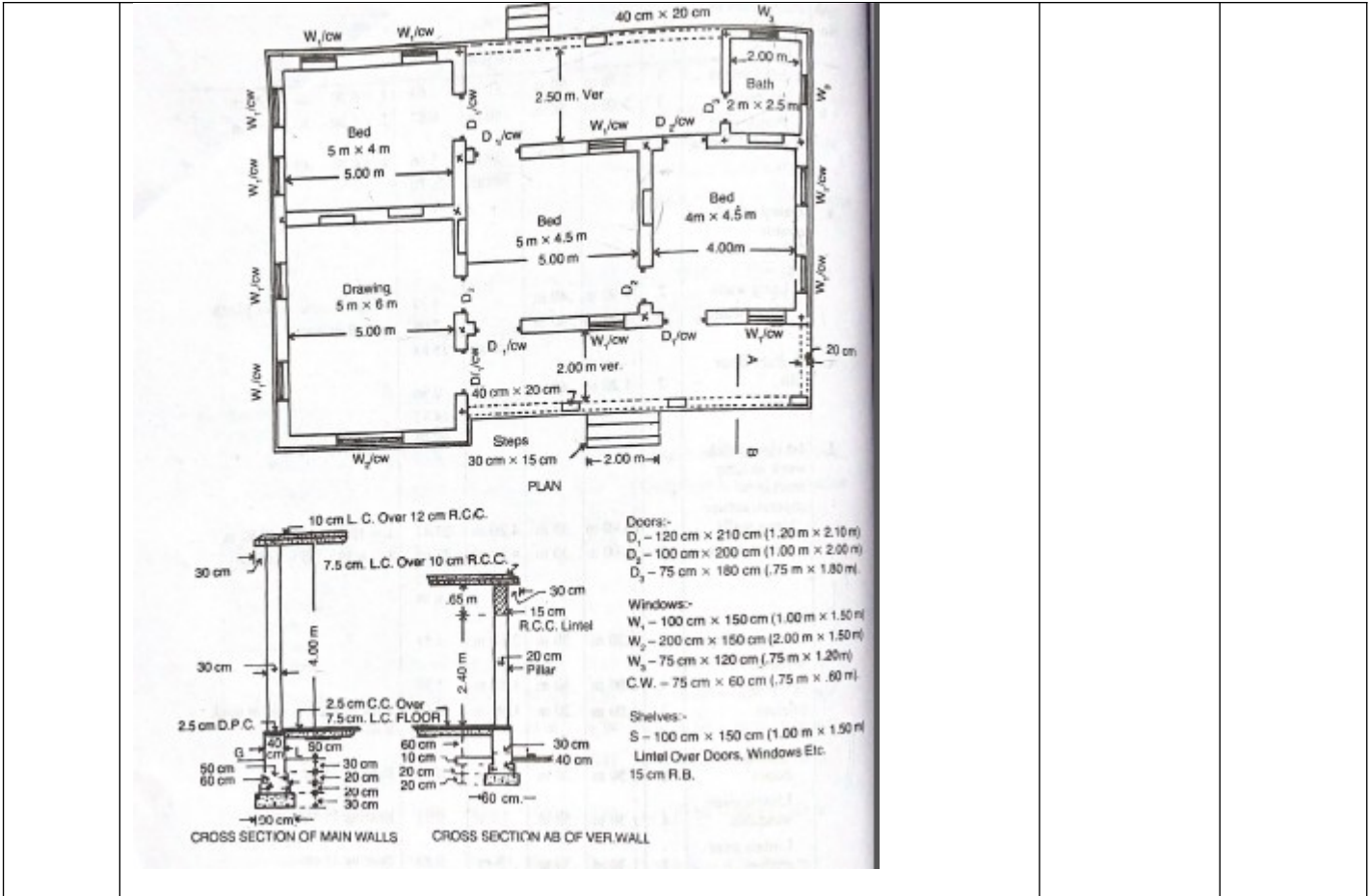
Q 10

Calculate quantities for the below mentioned items for the residential building as shown in fig:

1. Earth work in excavation
2. Lime Concrete work in foundation
3. Brickwork in Foundation
4. Brickwork in Superstructure

20

CO5



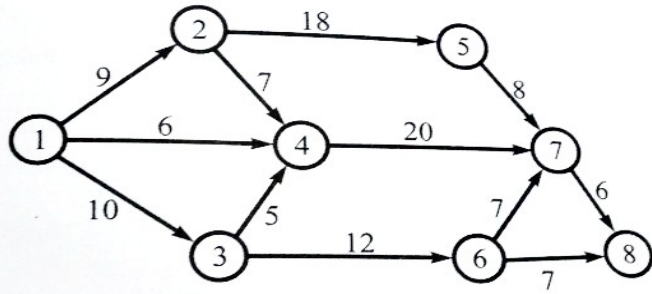
Q 11

For the below mentioned network assume that, after working 15 days on the project, the following conditions exist:

- 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

20

CO2



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.