Name: **Enrolment No:**	

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

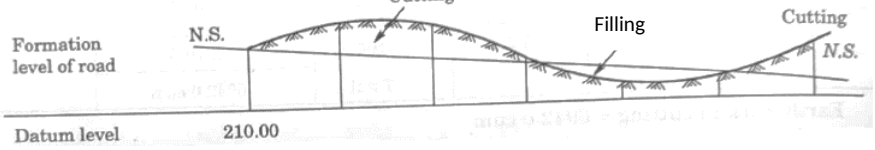
Course: Engineering Economics, Estimating & Costing — **Semester: VI Sem**
Program: B. Tech, Civil Engg — **Time: 3 Hours**
Course Code: CIVL 3024 — **Max. Marks: 100**
Pages: 04
Instructions: All questions are compulsory

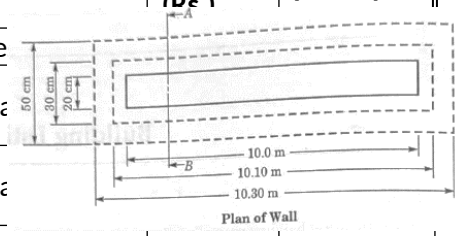
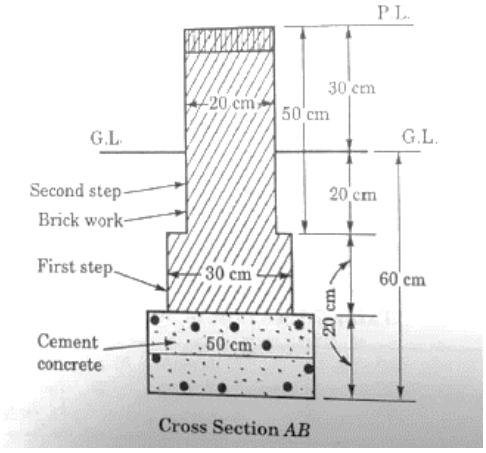
SECTION A

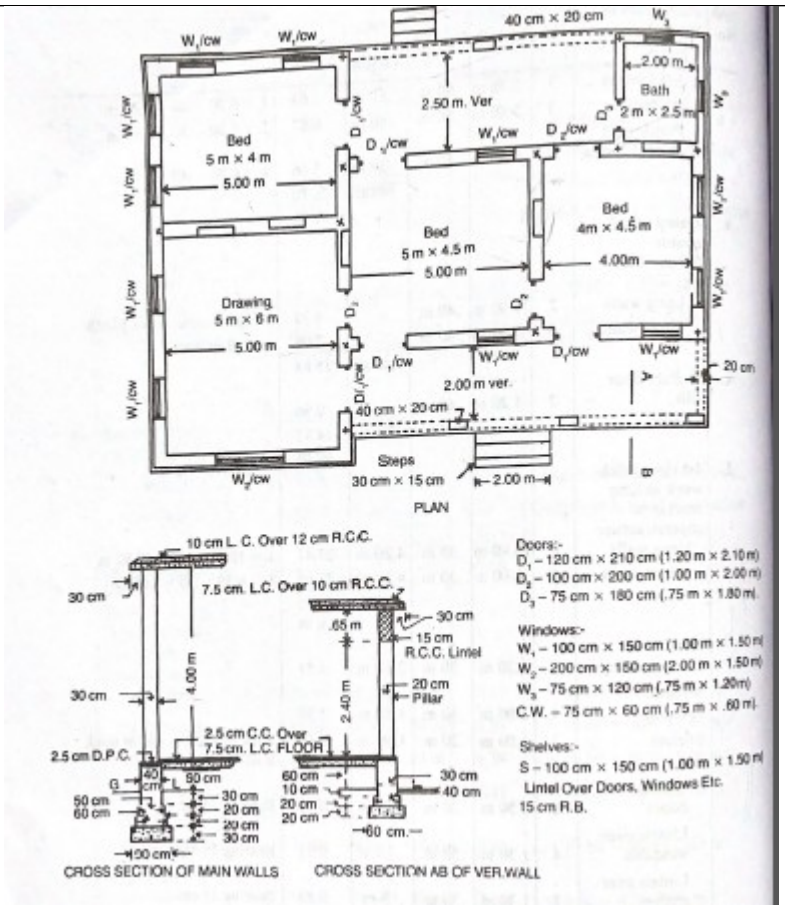
S. No.		Marks	CO
Q 1	Briefly explain market and how it helps to stabilise the prices.	**4**	**CO1**
Q 2	Explain different component of LPG & one advantage of each one of them for India.	**4**	**CO1**
Q 3	Define rate analysis in construction industry & its benefits?	**4**	**CO4**
Q 4	Mention one parameter each through which: 1. Supply curve can be shifted to right 2. Demand Curve can be shifted to right	**4**	**CO1**
Q 5	Unit of measurement for different items(in MKS): a. RCC work in foundation b. Brickwork in Super-structure wall c. Dado Work d. Plastering- Outside wall e. Skirting (thickness type & Height specified) f. Brick work in Partition g. Shuttering / Form h. Lime Concrete in foundation	**4**	**CO2**

SECTION B

Q 6	A Construction project with a 4 year life and a cost of Rs. 225,000 generates revenue of Rs. 48,000 in year 1, Rs. 67,000 in year 2, Rs. 95, 000 in year 3 and Rs. 110,000 in year 4. If the discount rate is 15%, Can be accepted the project? Year Cash Flow DCF @ 15% Present Value	**10**	**CO1**
Q 7	Analyses the rate for RCC work in beam with M20 concrete mix with 2% reinforcement excluding centering, shuttering & staging complete. Or What are various factors affecting the rate analysis ? Define first principle method of rate analysis.	**10**	**CO4**
Q 8	Do rate analysis for First class brickwork in super structure with cement	**10**	**CO4**



	mortar (1:6). Assume suitable data, if required **Description** / **Wages per day (Rs.)** / **Utilization per day** / **Description** / **Rate (Rs.)** He … ent — 350 per bag Ma … d — 250 per Cuft. Ma … k — 400 per 100 nos. Bhisti — 300 — 0.8 Cum 		
Q 9	Calculate Quantities of following items for below wall 1. Earth work 2. Cement Concrete 3. Brickwok  Assume other date suitably.	**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 Superstructure 4. Brick work in Foundations	**20**	**CO3**



By short wall- Long wall method

OR

Centerline method

Q 11	Calculate the quantity of earth work for the road, partly in cutting & 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						**20**	**CO3**

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