

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E /B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL - MAY 2025

Seventh Semester

Civil Engineering

CE3701 - Estimation, Costing and Valuation Engineering

Regulations - 2021

Duration : 3 Hrs

Maximum : 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

Q.No	Questions	BLT	CO	Marks
1.	Mention the types of estimates available.	L1	1	2
2.	Estimate the quantities of brickwork and plastering required in a wall 4m long, 3m high and 30cm thick. Calculate also the cost if the rate of brick work is Rs.32.00 per cu.m and of plastering is Rs. 8.50 per sq.m.	L3	1	2
3.	List the factors affecting Schedule of Rates.	L1	2	2
4.	Describe the term market rate.	L2	2	2
5.	Define specification and mention its types.	L1	3	2
6.	Explain the purpose of Tender Notice in brief.	L2	3	2
7.	Write the essentials requirements of contract.	L1	4	2
8.	What are the types of penalties that are imposed on a contract and why are they imposed?	L2	4	2
9.	List the purpose of valuations.	L1	5	2
10.	Write the difference between scrap value and salvage value.	L2	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

Q.No	Questions	BLT	CO	Marks
11. a	The details of a septic tank are shown in Fig-01. Estimate the following items of work. 1)Earth work excavation 2)CC 1:2:4 bed for foundation 3)Brick work at 1:4CM 4)20mm Cement Plaster on walls	L4	1	16

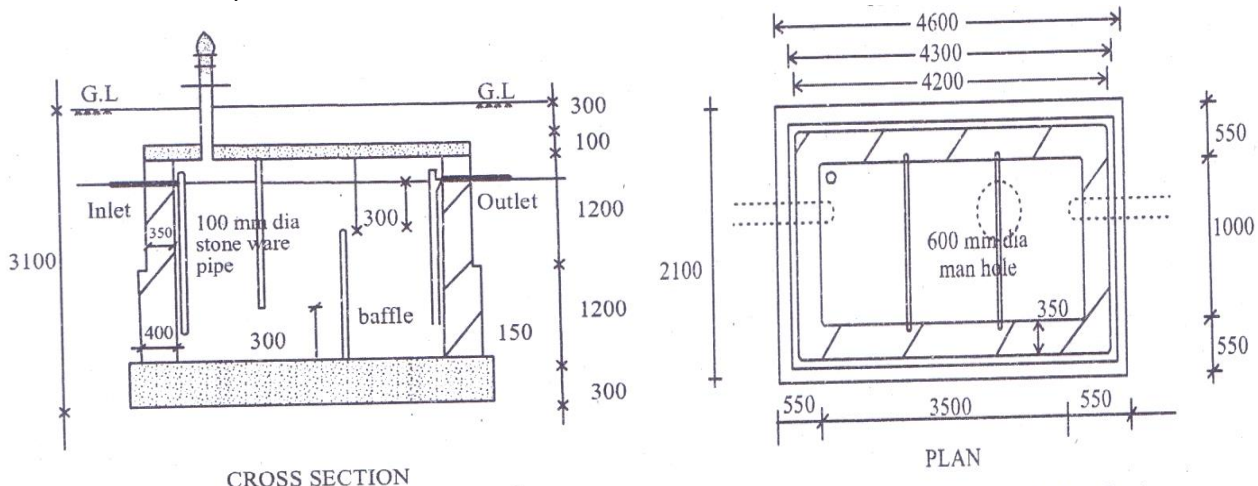


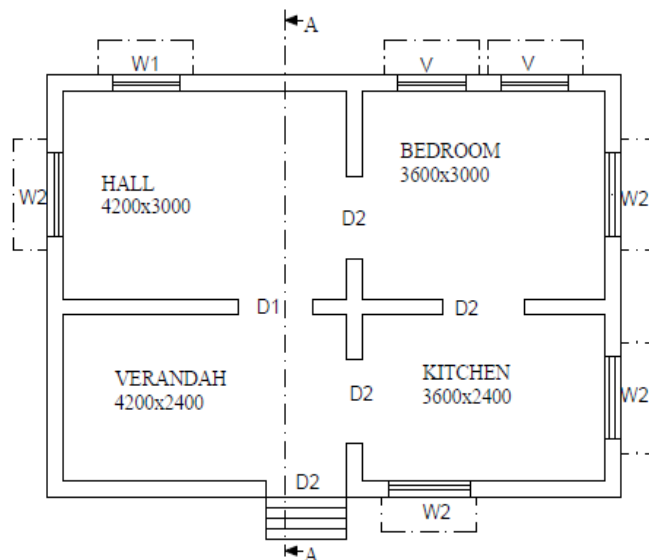
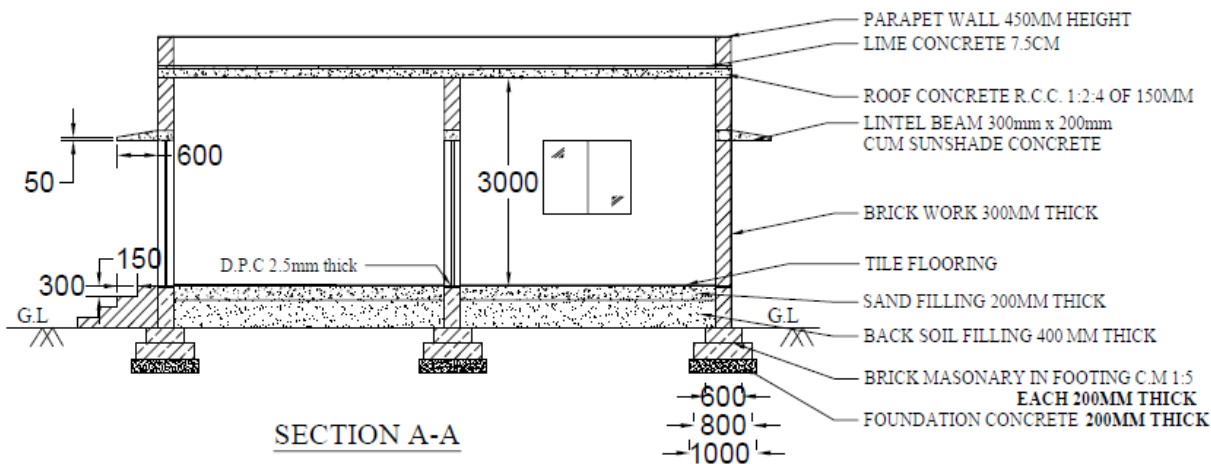
Fig -01 Septic tank (All dimensions are in mm)

Or

b Prepare a detailed estimate of a residential building as shown below L4 1 16

Fig -02 using long wall and short wall for the following items

- 1) Brickwork in superstructure including deduction
- 2) 12mm thick plastering inside walls
- 3) Whitewashing 3 coats inside the building
- 4) R.C.C concrete quantity required in roof



JOINERIES DETAILS (mm)		
D1	DOOR	1100 X 2100
D2	DOOR	1200 X 2100
D3	DOOR	1000 X 2100
W1	WINDOW	1000 X 1200
W2	WINDOW	1200 X 1200
V	VENTILATOR	1000 X 600

ALL DIMENSIONS ARE IN MM

SINGLE BED RESIDENTIAL BUILDING
AREA = 52 Sq.M

Fig -02 Residential building

12. a Analysis the rate of the following. Assume your own rates suitably. L4 2 16

Reinforced cement concrete 1:2:4 with 1.2% of steel in slab for 12m3.

Labour Details: Mason for laying and centering 1No at Rs.600 per day, carpenter for centering and cranking the reinforcement is Rs.2 per Kg of steel, Mazdoor of 5Nos at Rs. 350 per day, Bhishti of 2Nos at Rs. 300 per day, Cost of shuttering and curing is Rs. 2000.

Material Details: The cost of a cement bag is Rs. 320, fine aggregate is Rs. 3,500 per cubic meter, coarse aggregate is Rs. 2,200 per cubic meter, and steel is priced at Rs. 72 per kilogram.

Or

	b	Compare and contrast standard data, observed data, and the schedule of rates in construction cost estimation. How does each contribute to achieving accurate project budgeting?	L4	2	16
13.	a	Describe the detailed specifications for the items listed below 1) Reinforced cement concrete 2) Brick work in I class	L3	3	16
		Or			
	b i	Describe the different types of tenders used in construction projects, and how do they impact the bidding process?	L3	3	10
	ii	What are the key provisions of the TTT Act, and how do they affect the rights and responsibilities of contractors in construction projects?	L3	3	06
14.	a	Explain the following types of contracts in detail 1) Fixed Price Contract 2) Measurement contract 3) Turnkey Contract 4) Design and Build 5) Cost Plus Contracts	L3	4	16
		Or			
	b i	Explain in detail about arbitration, qualities of good arbitrator.	L3	4	08
	ii	List the difference between Early Money Deposit and Security Money Deposit in tender.	L3	4	08
15.	a	Examine in detail about various methods of calculations of depreciation.	L3	5	16
		Or			
	b	In a plot of land cost Rs, 20, 00,000 a building has been newly constructed at a total cost of Rs. 80, 00,000 including sanitary and water supply works, electrical installation, etc. The building consists of four flats for four tenants. The owner expects an 8 percent return on the cost of construction and 5 percent return' on the cost of land. Calculate the standard rent for each flat of the building Assuming: (i) The life of the building as 60 years and a sinking fund will be created on 4% interest basis. (ii) Annual repair cost at 1% of the cost of construction. (iii) Other outgoings including taxes at 30% of the net return on the building.	L3	5	16