SRM VALLIAMMAI ENGINEERING COLLEGE

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF CIVIL ENGINEERING

QUESTION BANK

VII SEMESTER

1903701 ESTIMATION, COSTING AND VALUATION ENGINEERING

REGULATION 2019
ACADEMIC YEAR 2025 - 2026

Prepared by

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SRM VALLIAMMAI ENGINEERING COLLEGE

(An Autonomous Institution)
SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF CIVIL ENGINEERING

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SUBJECT CODE / NAME: 1903701 ESTIMATION, COSTING AND VALUATION ENGINEERING
SEM / YEAR: VII / IV
REGULATION: 2019
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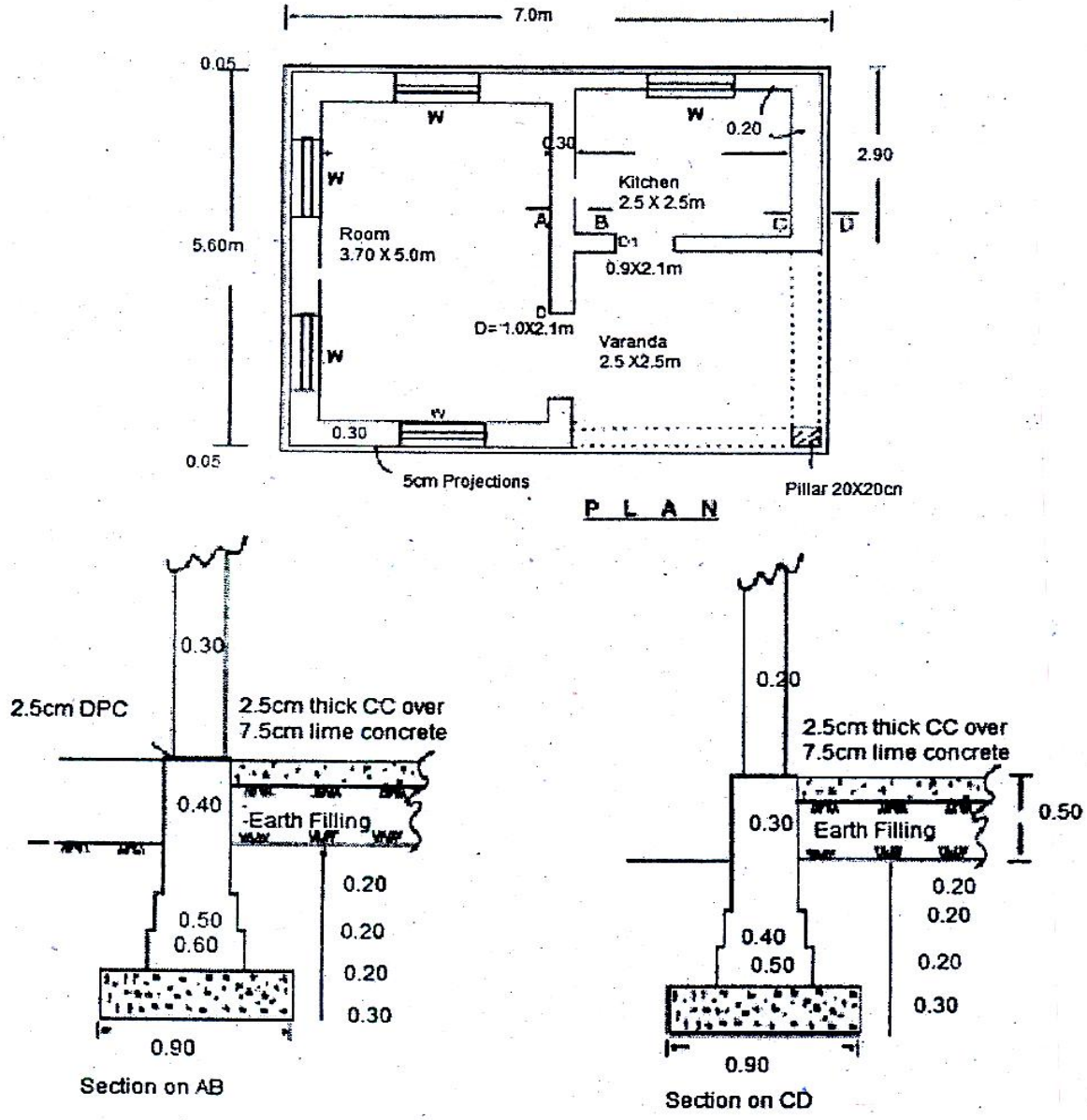
UNIT I ESTIMATE OF BUILDINGS
Load bearing and framed structures – Calculation of quantities of brick work, RCC, PCC, Plastering, white washing, colour washing and painting / varnishing for shops, rooms, residential building with flat and pitched roof – Various types of arches – Calculation of brick work and RCC works in arches – Estimate of joineries for panelled and glazed doors, windows, ventilators, handrails etc.

Q.No	QUESTIONS	BT	COMPETANCE
1	What are the methods used to estimating the quantities?	BT-1	Remember
2	Define estimate.	BT-1	Remember
3	What is a detailed estimate?	BT-1	Remember
4	Name the types of estimate.	BT-1	Remember
5	What are the different types of Approximate Estimate?	BT-1	Remember
6	What is Long wall and short wall method?	BT-1	Remember
7	Differentiate between Revised & Supplementary Estimate.	BT-2	Understand
8	Summarize the advantages of centre line method over long wall and short wall method.	BT-2	Understand
9	Classify the type of arches.	BT-2	Understand
10	Explain out to out and in to in method used in taking building quantities?	BT-2	Understand
11	Outline the recommendations for degree of accuracy on measurements.	BT-2	Understand
12	Identify various types of paneled and glazed doors.	BT-3	Apply
13	What is mean by prime cost?	BT-3	Apply
14	Define the term plinth area rate & schedule of rate	BT-1	Remember
15	An arch of 2.5m span subtends an angle of 800at the center. The thickness of arch is 30cm and the breadth of the wall is 40cm. calculate the quantity of arch work.	BT-3	Apply
16	What is Plinth area and Plot area?	BT-1	Remember
17	Generalize the duties of quantity surveyor.	BT-2	Understand
18	Determine the methods to be adopted for volume calculating?	BT-3	Apply
19	Name the unit of measurements for earth work, D.P.C and brick work.	BT-1	Remember
20	Define the term out turn of works?	BT-1	Remember
21	Simplify the concept carpet area and super built up area.	BT-2	Understand
22	Recall how the quantities of masonry work in arch is calculated.	BT-1	Remember

23	Briefly explain about preliminary estimate.	BT-2	Understand
24	Mention the units of measurement for Steel reinforcement, plastering, flooring and painting.	BT-1	Remember
25	What is the difference between floor area and built up area?	BT-1	Remember

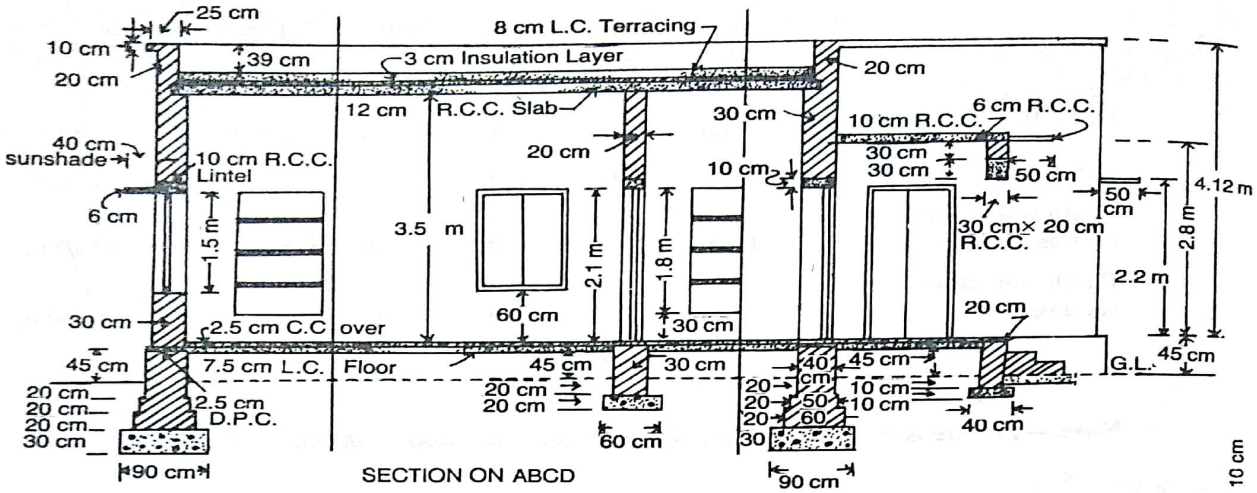
PART –B

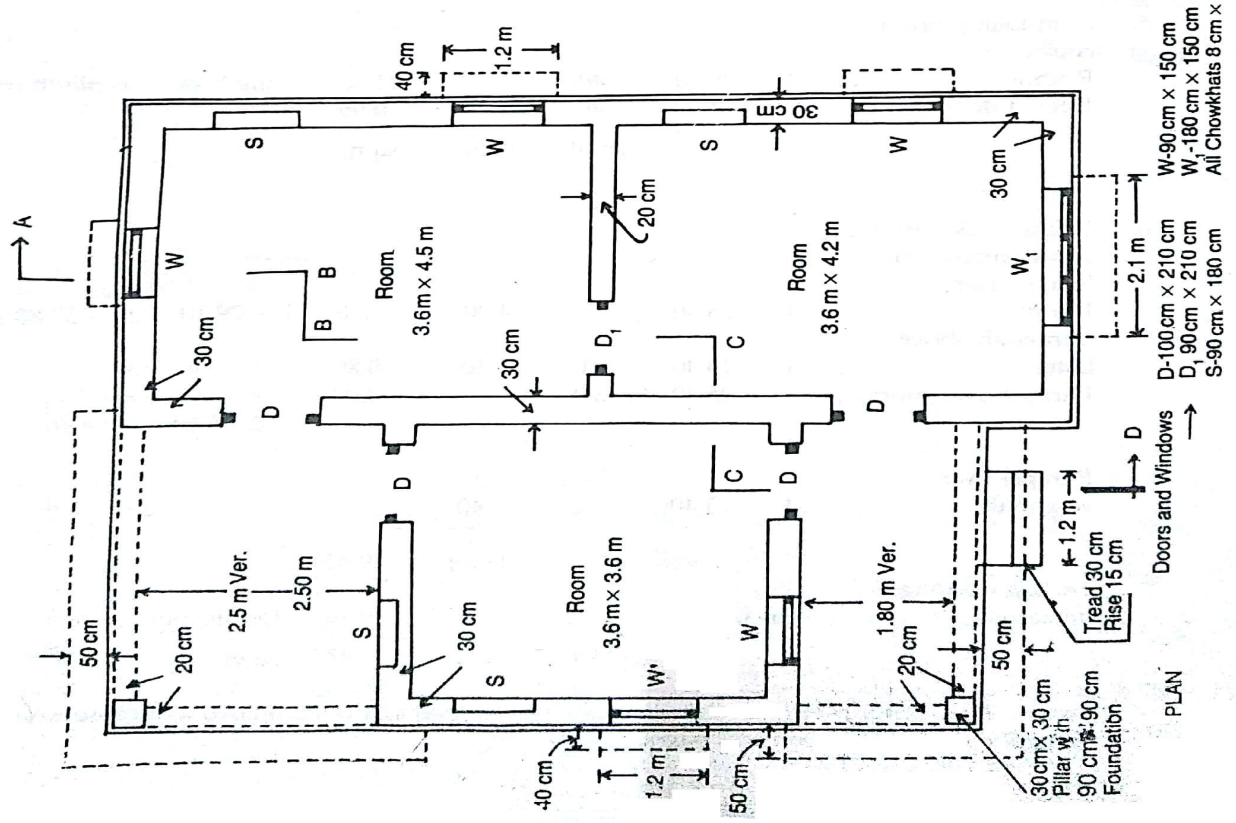
1.	Calculate a detailed estimate for the following works in Fig-1 (i) Earthwork for excavation (4) (ii) Lime concrete for foundation (4) (iii) 1st Class Brick work in foundation (5)		
2.	Calculate a detailed estimate for the following works in Fig-1 (i) Earth filling for flooring (3) (ii) Concrete for flooring (3) (iii) 1st Class Brick work in Super Structure (7)		



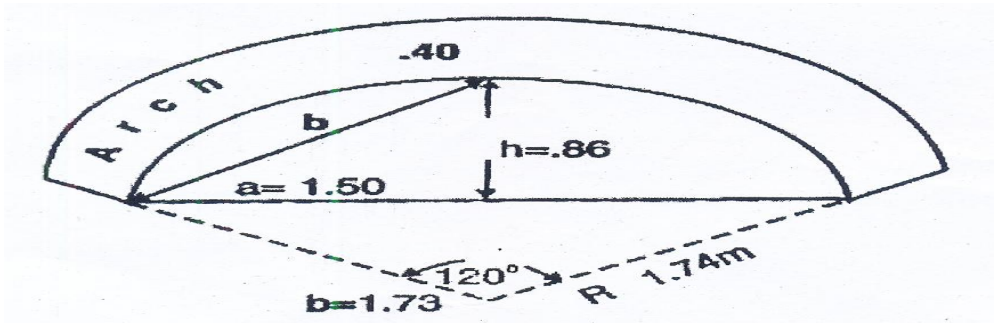
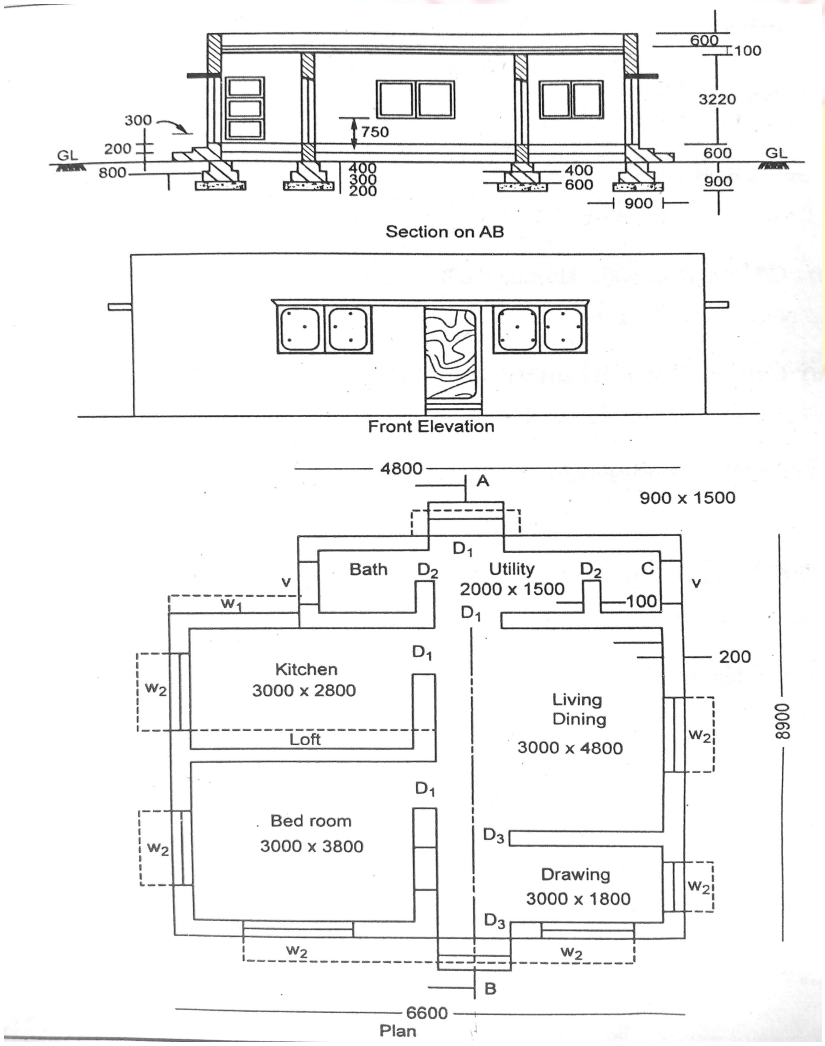
3.	Find the Detailed Estimate for the following items of works are given in Fig-2 (i) Earth work excavation in foundation (5)		

	(ii) Lime concrete in foundation (4) (iii)Damp Proof Course of 2.5 cm (4)		
4.	Explain the Detailed Estimate for the following items of works are given in Fig-2 (i) 1st Class Brick work in Foundation (6) (ii) 1st Class Brick work in Super Structure (7)		
5.	The Plan and sectional elevation of the building are given in Fig-2. Find the Estimate the quantities for the following items of works. (i) Lime concrete and cement concrete for flooring (7) (ii) Ceiling plastering(6)		

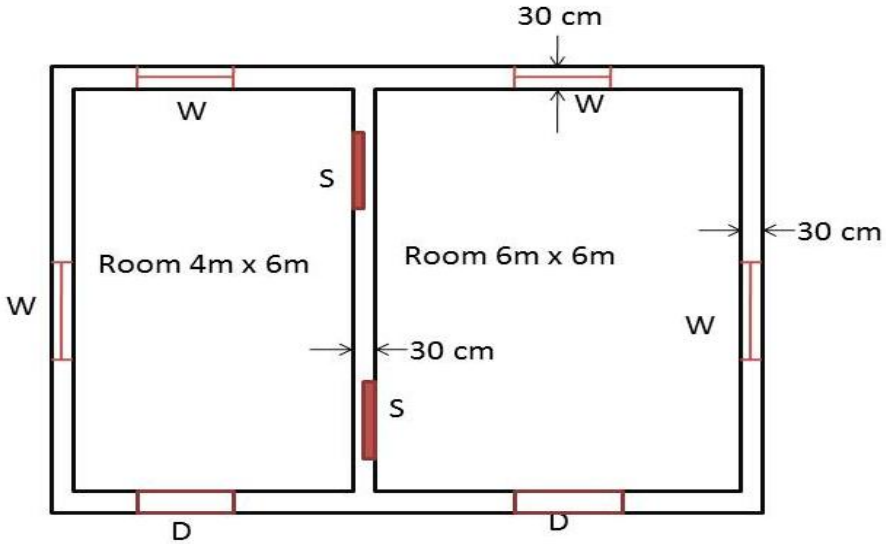


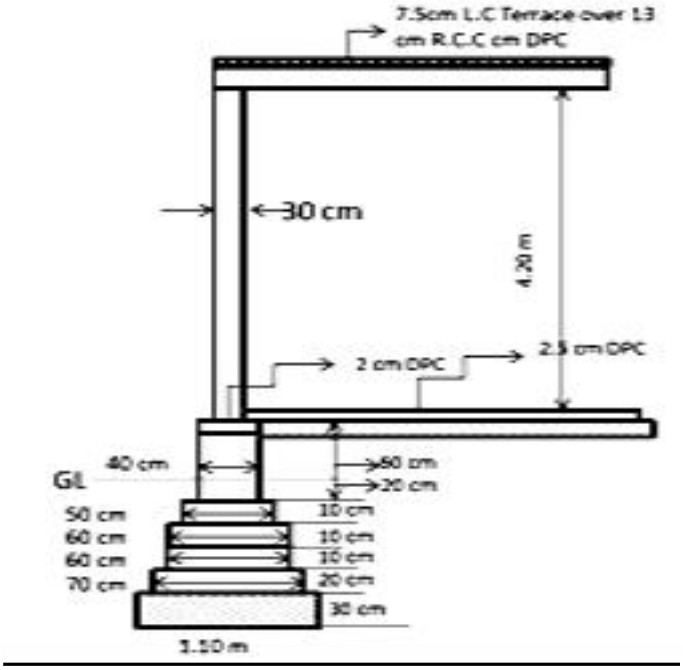


6.	(i) Describe the different types of estimate. (6) (ii) Explain the methods used to find approximate cost of the building (7)		
7.	Work out the brick work and cement plaster to soffit of an arch as per data given in		

	figure below. i) Length of arch from face to face = 11 m ii) Clear span = 3 m iii) Rise = 0.86m and thickness of arch = 0.4m 		
8.	Calculate the quantity of brickwork in a segmental arch of 2.2 m span, 50 cm rise, and 30cm thick. The thickness of wall is 30 cm.		
9.	Find the detailed estimate of masonry works for sub-structure and super-structure figure 9. 		
10.	The Plan and sectional elevation of the building are given in **Fig-2** Find the Estimate for quantities for the following items of works. Assume the joinery details		

	as per standard requirements. (i) Earthwork in Excavation in Foundation (3) (ii) Ist Class brickwork in foundation (5) (iii) Lime Concrete in Foundation (5)		
11.	The Plan and sectional elevation of the building are given in **Fig-2** Find the Estimate the quantities for the following items of works. (i) 1st class brickwork in Super structure CM1:6 (5) (ii) Damp Proof Course(4) (iii) Ceiling plastering(4)		

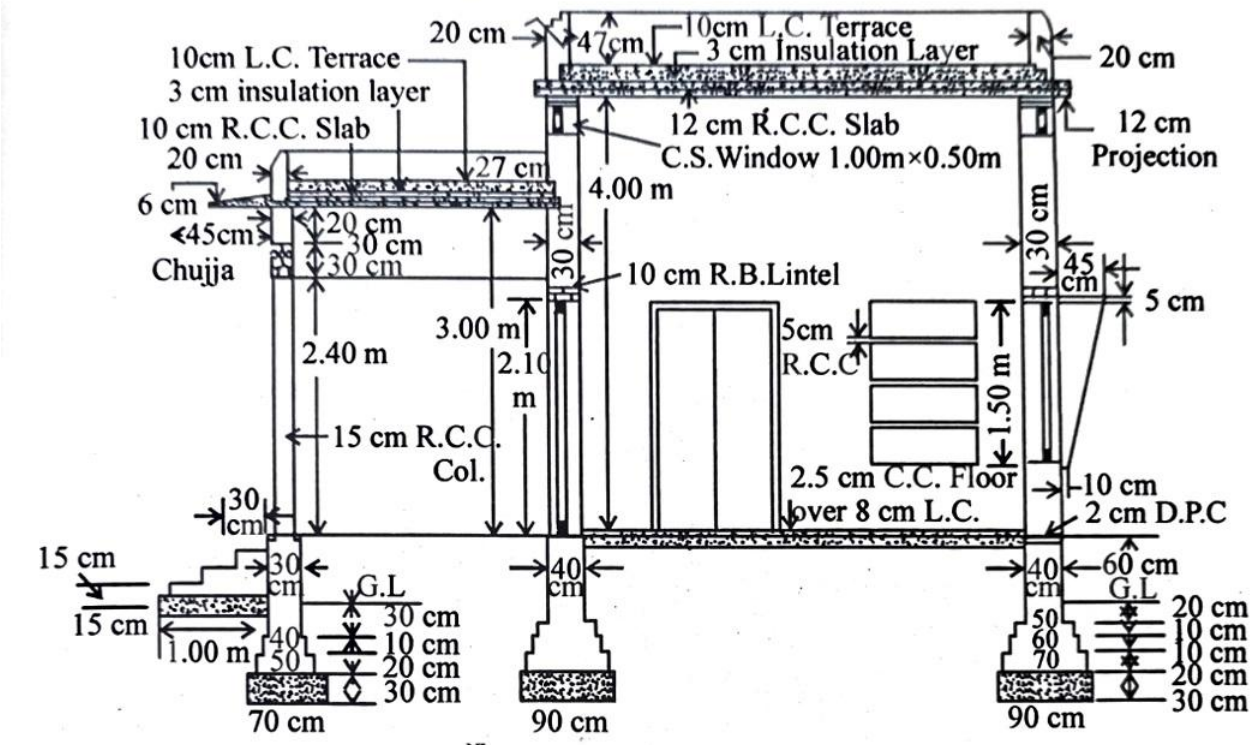




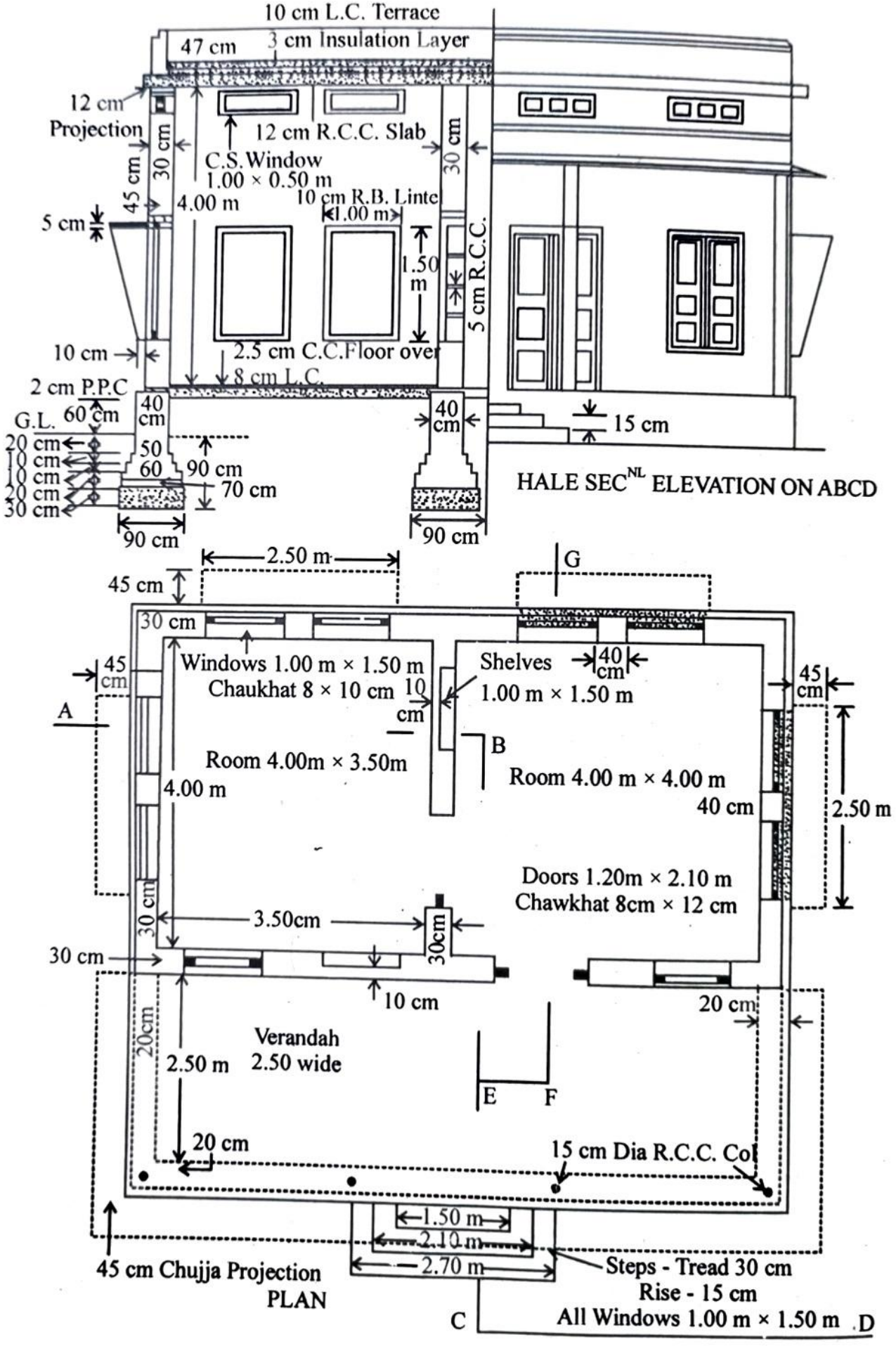
12.	(i) The arch of a culvert subtends an angle of 120^0 at the center. the span of the arch is 5 m and the thickness of the arch is 50 cm. The Length of the arch is from face to face. Calculate the quantities of arch masonry work and cement plastering in the soffit of arch. (6)		

	(ii) An arch of 2.5 m span subtends an angle of 80^0 at the center. The thickness of arch is 30 cm and the breadth of wall is 40 cm. Calculate the quantity of arch masonry work. (7)		
13.	(i) Differentiate Cube rate estimate and item rate estimate (7) (ii) Compare in detail about abstract and detailed estimate (6)		
14.	(i) Explain any four types of approximate estimate? (7) ii) What are the methods to be adopted for volume calculating? (6)		
15.	Write short notes on (i) Flat roofs (3) (ii) Pitched roofs (4) (iii) Parts of arch with neat diagram(6)		
16.	Find the Detailed Estimate for the following items of works are given in Fig-2 (i) Earth work excavation in foundation (5) (ii) Lime concrete in foundation (4) (iii) Damp Proof Course of 2.5 cm (4)		
17.	Explain the Detailed Estimate for the following items of works are given in Fig-2 (i) 1st Class Brick work in Foundation (6) (ii) 1st Class Brick work in Super Structure (7)		

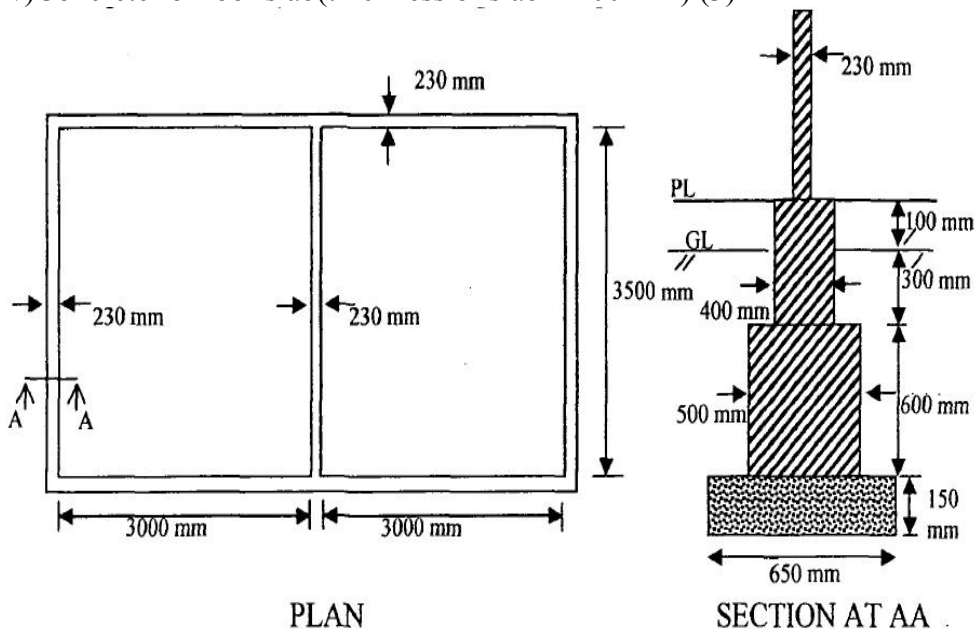
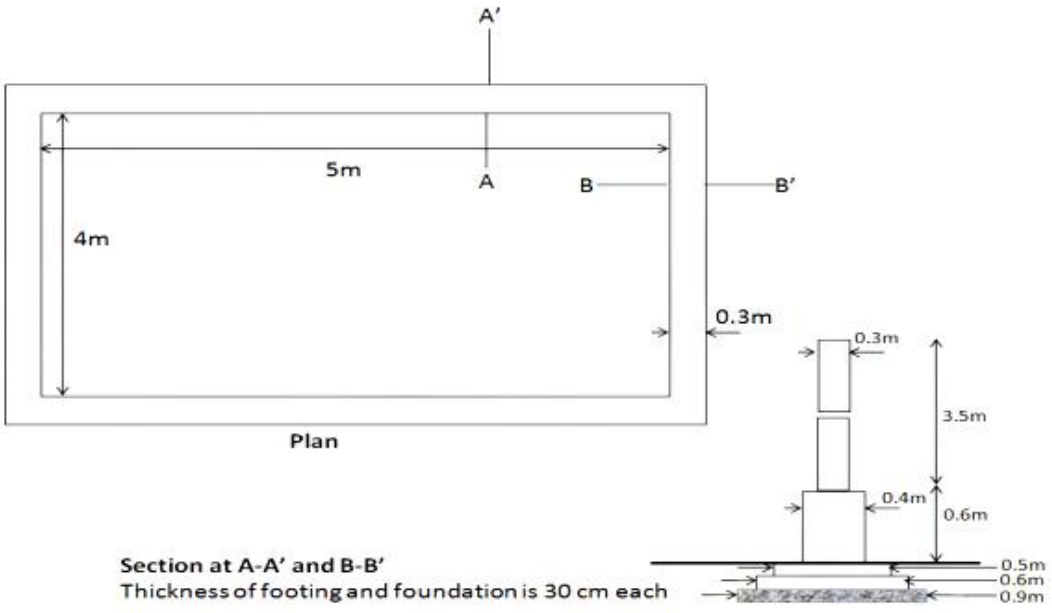
CROSS-SEXTION TWO-ROOMED BUILDING



SEC[NL] ELEVATION ON CEFG


10 cm L.C. Terrace
47 cm
3 cm Insulation Layer
12 cm Projection
12 cm R.C.C. Slab
C.S. Window 1.00 × 0.50 m
10 cm R.B. Lintel
1.00 m
4.00 m
45 cm
30 cm
30 cm
5 cm
1.50 m
5 cm R.C.C.
10 cm
2.5 cm C.C. Floor over
8 cm L.C.
2 cm P.P.C
G.L.
60 cm
40 cm
40 cm
15 cm
20 cm
10 cm
10 cm
20 cm
30 cm
50
60
90 cm
70 cm
90 cm
90 cm
HALE SEC^NL ELEVATION ON ABCD
2.50 m
G
45 cm
30 cm
Windows 1.00 m × 1.50 m
Chaukhat 8 × 10 cm
10 cm
Shelves
40 cm
1.00 m × 1.50 m
45 cm
45 cm
A
B
Room 4.00m × 3.50m
4.00 m
Room 4.00 m × 4.00 m
40 cm
2.50 m
Doors 1.20m × 2.10 m
Chawkhat 8cm × 12 cm
30 cm
3.50cm
30cm
30 cm
10 cm
20 cm
20cm
Verandah
2.50 m wide
2.50 m
E
F
20 cm
15 cm Dia R.C.C. Col
1.50 m
2.10 m
2.70 m
45 cm Chujja Projection
PLAN
Steps - Tread 30 cm
Rise - 15 cm
All Windows 1.00 m × 1.50 m
C
D

PART – C

1	The Plan and sectional elevation of the building are given below Find the Estimate the quantities for the following items of works. (i) Earthwork in Excavation (4) (ii) Plain Cement Concrete for Foundation (4) (iii) Ist class Brickwork for foundation (4) (iv)Concrete for roof slab(thickness of slab = 100 mm) (3)  PLAN SECTION AT AA	BT-4	Analyze
2	Summarize the general rules of Measurement & also explain the deductions and additions to be applied in the case of estimation of plastering.	BT-2	Understand
3	Prepare a detailed estimate of a part of a wall of a building from the given plan and section. Calculate,  Section at A-A' and B-B' Thickness of footing and foundation is 30 cm each (i) Earthwork excavation in foundation(4) (ii)Lime concrete in foundation(3)	BT-4	Analyze

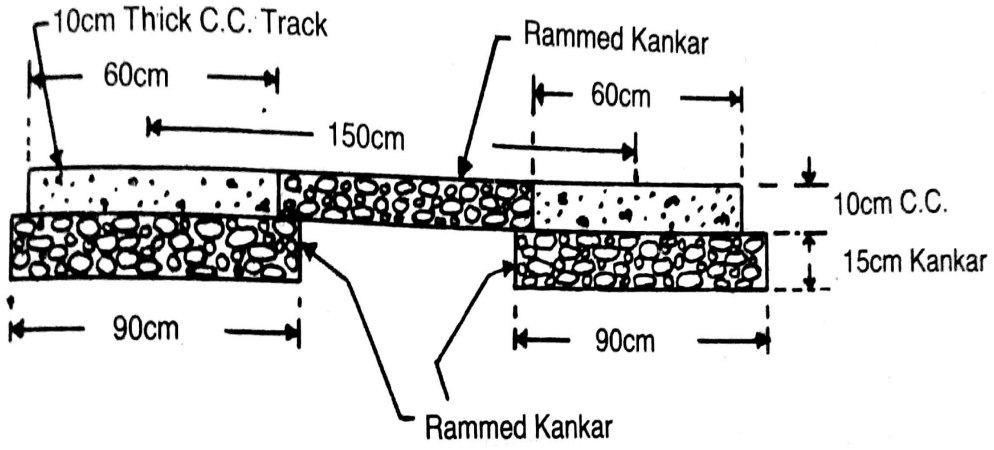
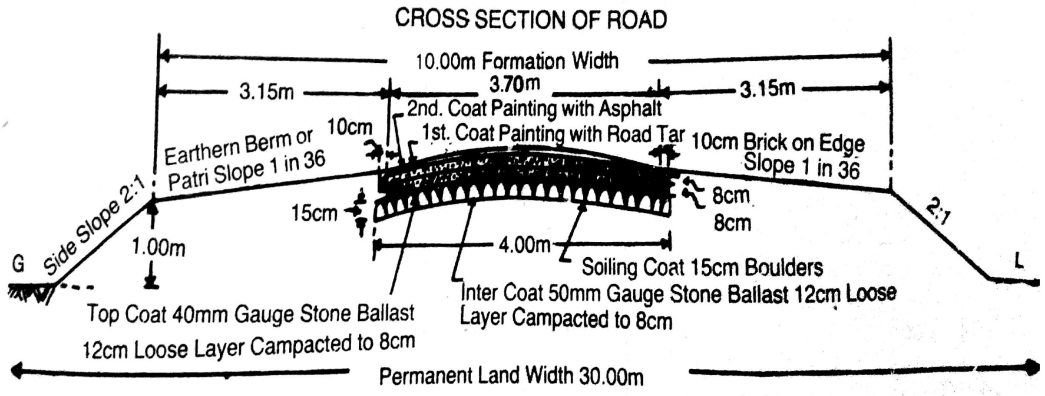
	(iii)First class brickwork in foundation and plinth(4) (iv)Brickwork in superstructure.(4)		
4	Explain in detail about the measurements and estimates for various works in construction.	BT-4	Analyze
5	Discuss in about the types of arch with neat sketch.	BT-2	Understand

UNIT II ESTIMATE OF OTHER STRUCTURES
Estimating of septic tank, soak pit – sanitary and water supply installations – water supply pipe line – sewer line – tube well – open well – estimate of bituminous and cement concrete roads – estimate of retaining walls – culverts – estimating of irrigation works – aqueduct, syphon, fall.

PART-A

1	What are the different types of roads?	BT-1	Remember
2	Define mid-sectional area method.	BT-1	Remember
3	What are factors to be considered in design of septic tank?	BT-1	Remember
4	Define lead & lift	BT-1	Remember
5	What are the needs for retaining wall?	BT-1	Remember
6	What is the role of baffle wall in septic tank?	BT-1	Remember
7	Explain the importance of soak pit	BT-2	Understand
8	Illustrate the methods to determine the area of roads in excavation.	BT-2	Understand
9	Workout the quantity of stone metals required for 2km length of a 4m wide road. The thickness of the metal road required is 12 cm loose.	BT-2	Understand
10	Sketch and show different parts of culvert.	BT-2	Understand
11	A cement concrete road is to be constructed over the existing water bound macadam road. Thickness of slab is 10cm. The length of road is one km and the width 3.60 m. Calculate the quantity of cement concrete and the materials required?	BT-3	Apply
12	What are all sanitary fittings? Illustrate	BT-3	Apply
13	Calculate the size of septic tank for 25 users	BT-3	Apply
14	Classify in detail about prismoidal rule & Mid ordinate rule	BT-2	Understand
15	What is the importance of soak pit? Explain	BT-1	Remember
16	Classify the various types of arches	BT-2	Understand
17	Write down the main components of culvert.	BT-2	Understand
18	Mention and explain few irrigation structures.	BT-1	Remember
19	Write down the various parts of an aqueduct.	BT-2	Understand
20	List the main components of a sewer line.	BT-1	Remember
21	Differentiate tube wells and open wells.	BT-2	Understand
22	Calculate the quantity of earthwork for the construction of an approach road length = 1 km, width of formation = 10 m, Height of embankment = 60 cm, side slope = 1:2	BT-3	Apply
23	An approach road is 2 Km long is to be constructed. Work out the quantity of materials required (stone metal and Bricks). Metal Led width = 3.60 m, soiling of bricks = 10 cm & wearing coat of stone metal = 12 cm.	BT-3	Apply
24	Find the number of standard modular bricks required for flat brick soling for one kilometer length of 4 m wide road.	BT-3	Apply
25	Identify the important parts to be considered in the estimation of Retaining wall.	BT-3	Apply

PART-B

1	Describe in detail the different types of roads.	BT-2	Understand
2	Describe briefly the different types of irrigation structures.	BT-2	Understand
3	Find a detailed estimate for the 'cement concrete road' given in fig 	BT-3	Apply
4	Find a detailed estimate for the 'bituminous road' shown in fig. 	BT-3	Apply
5.	A road is to be constructed in as side long partly in cutting and partly in banking. The formation width of road is 10 m, cross slope of ground is 6:1, side slopes in banking 2:1 and in cutting 1.5:1, depth of cutting at the centre is 45 cm although. Calculate the quantity of earthwork in banking and in cutting for a length of 200m. Estimate the cost of a making the formation of the road if the rate of earthwork is Rs 1,50,000 per cubic metre.	BT-3	Apply
6	Prepare the details of measurement and calculation of quantities of a manhole from the figure 4.	BT-4	Apply

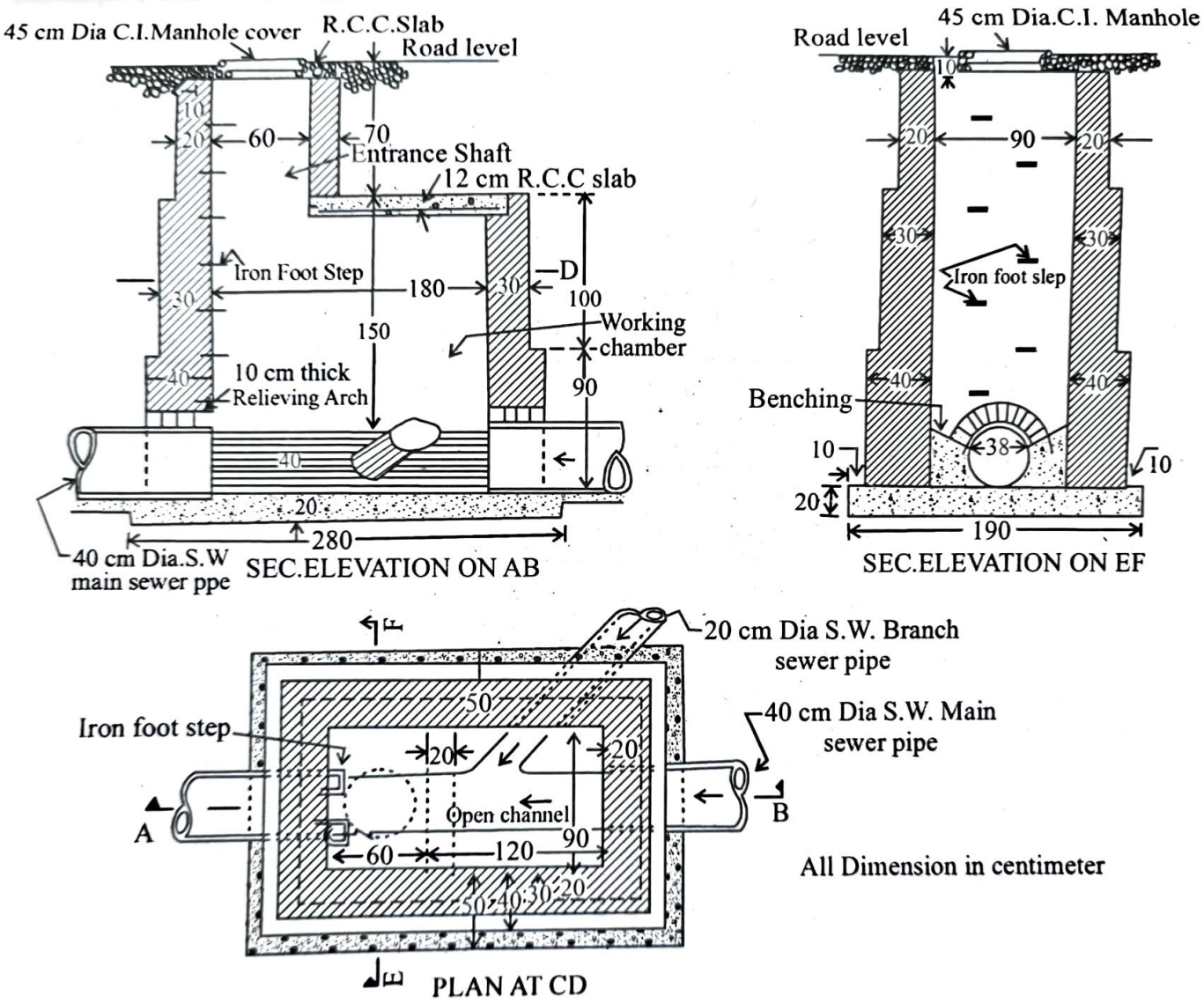


Fig.5

7	Prepare the estimate for the 'Septic Tank' in **fig. 6** (i) Earthwork in Excavation (3) (ii) Ist Class Brickwork in Septic tank & IInd Class Brick work in Soak pit (5) (iii)Precast RCC work, Water proofing Compounds & Brick Aggregate (5)	BT-4	Apply

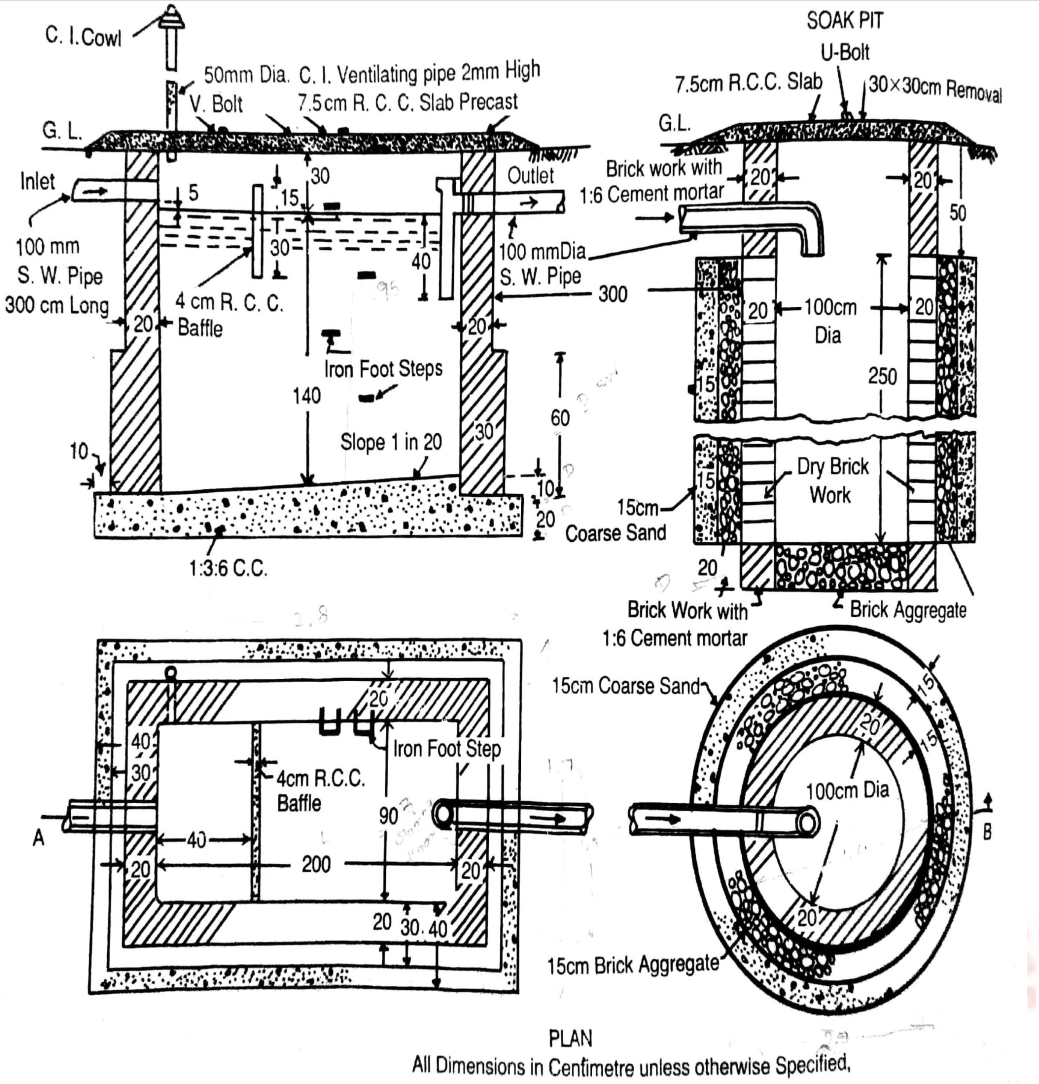
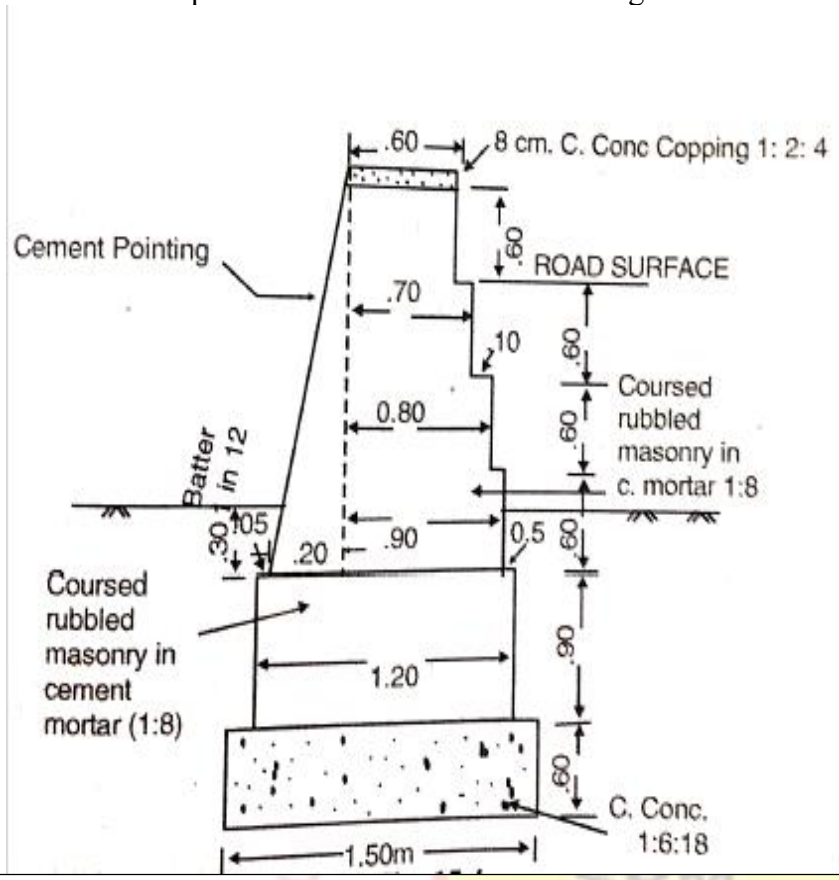
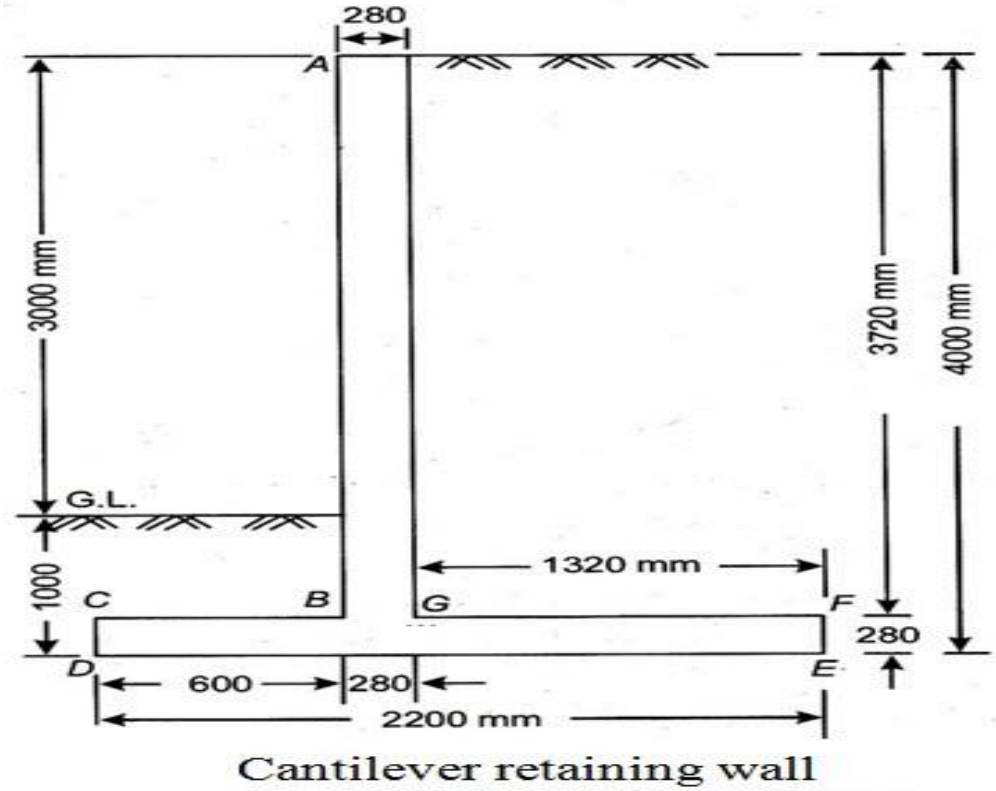


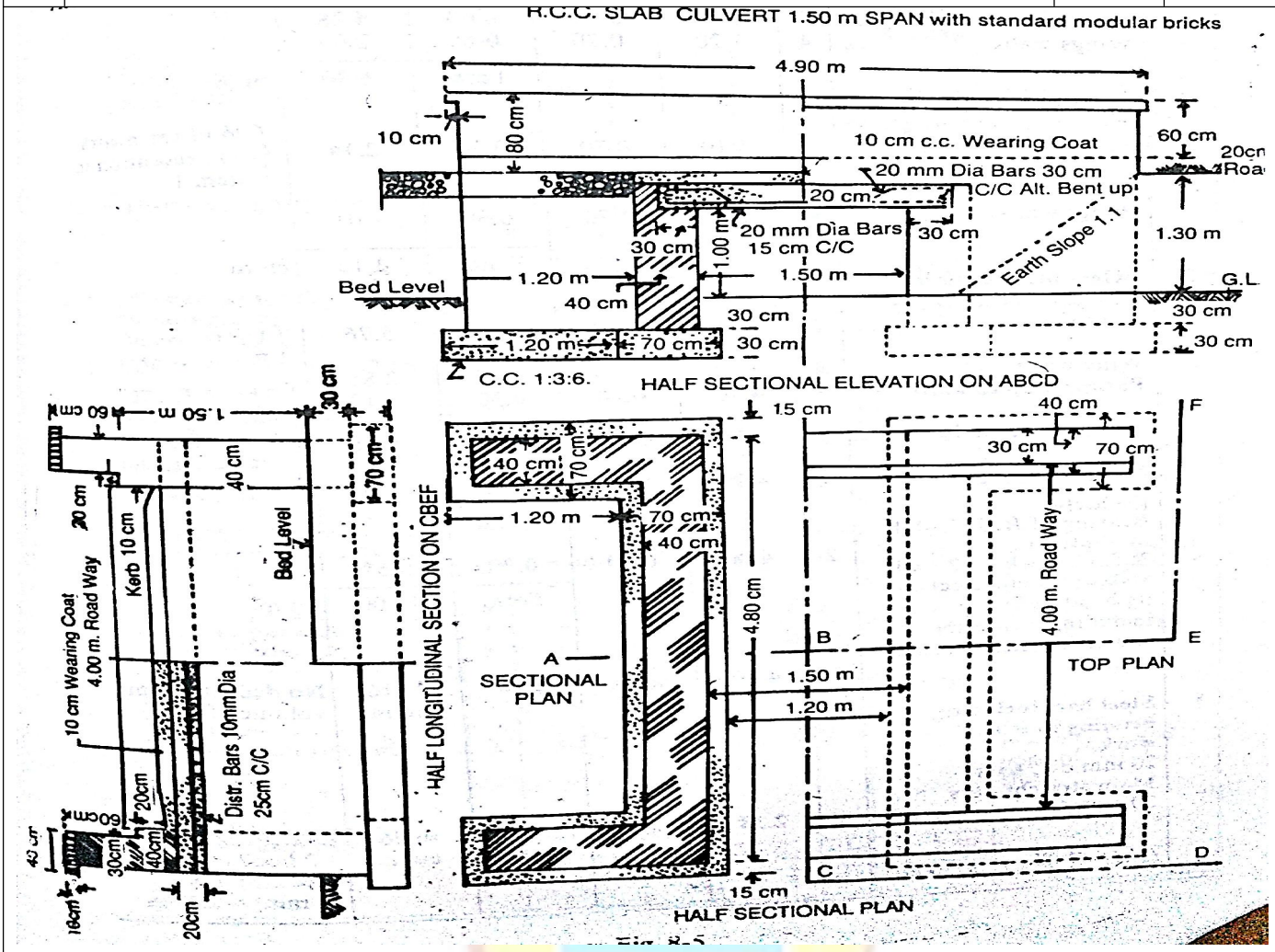
Fig-6

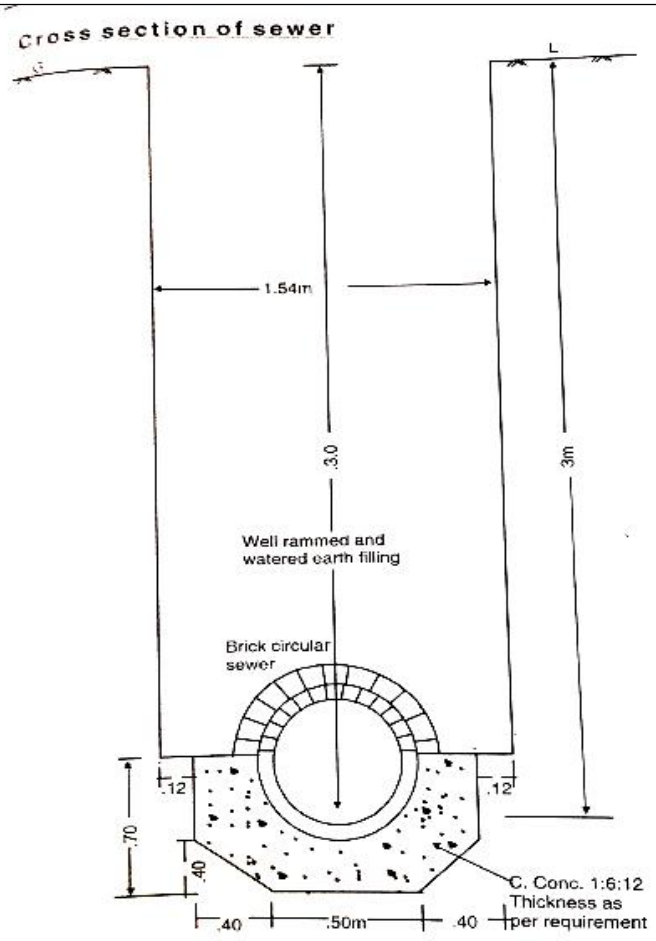
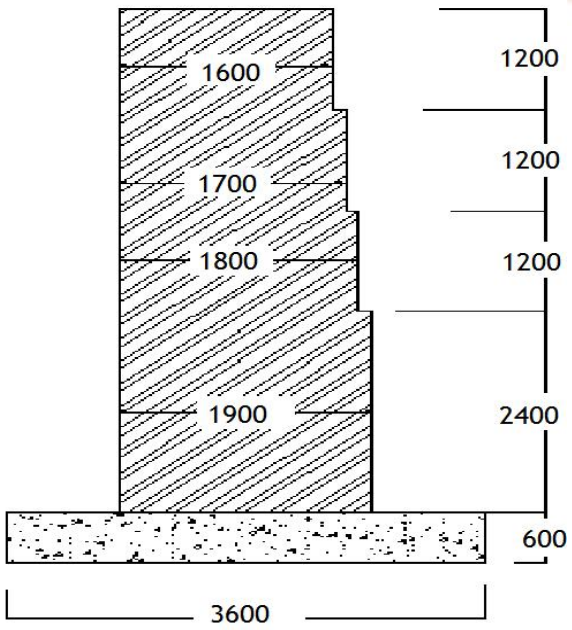
8	Explain in detail the methods of estimation of roads.	BT-2	Understand
9	What are the components of a culvert? Illustrate.	BT-2	Understand
10	Estimate the cost of earthwork for a portion of a road from the following data. Road width at the formation surface is 8m. Side slopes 2:1 in banking and 1.5:1 in cutting. Length of chain is 30m.	BT-3	Apply

Chainage	20	21	22	23	24	25	26	27	28	30
Ground level	71.20	71.25	70.90	71.25	70.80	70.45	70.20	70.35	69.10	69.70
Formation level	70.00	Upward gradient of 1in 200								

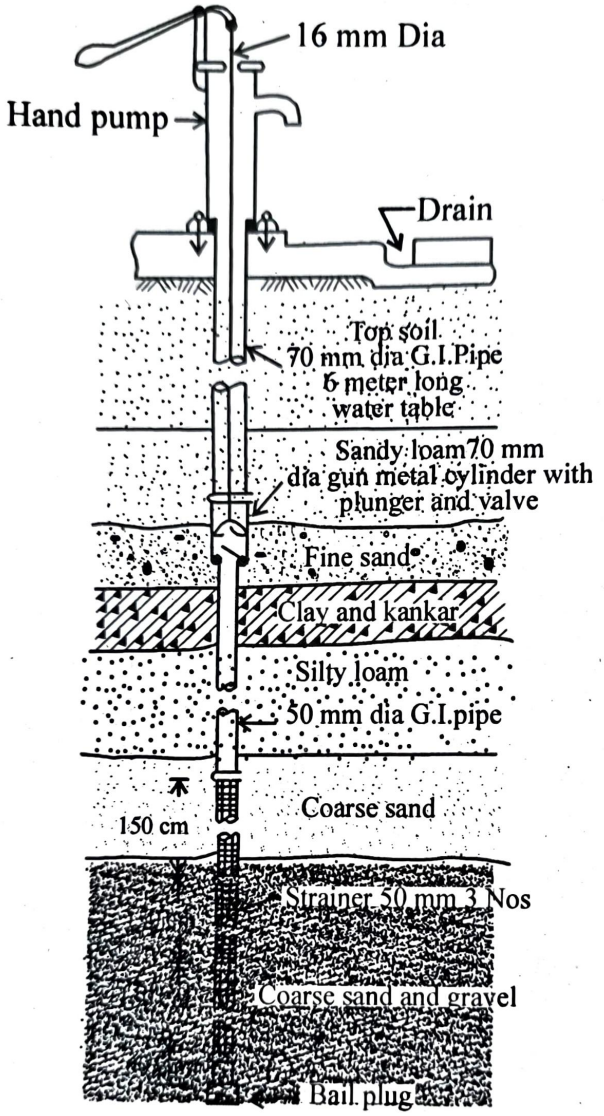
Take the rates of earthwork as Rs.275/percu.m in banking and Rs.350/percu.m in cutting.

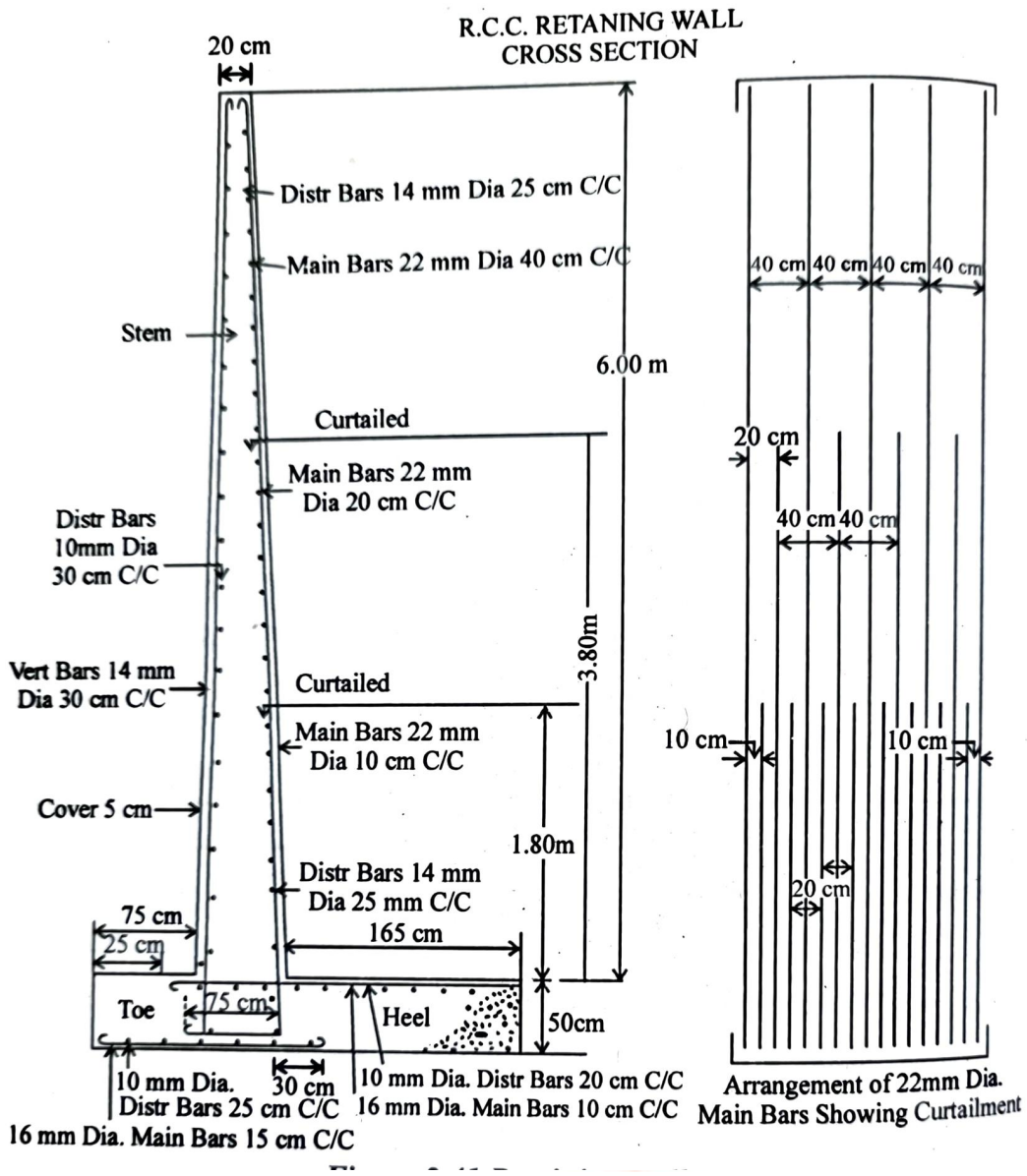
11	Calculate the quantities and estimate the retaining wall shown in figure below 	BT-4	Apply
12	Prepare the estimate for the given one of 100m length.  Cantilever retaining wall	BT-4	Analyze

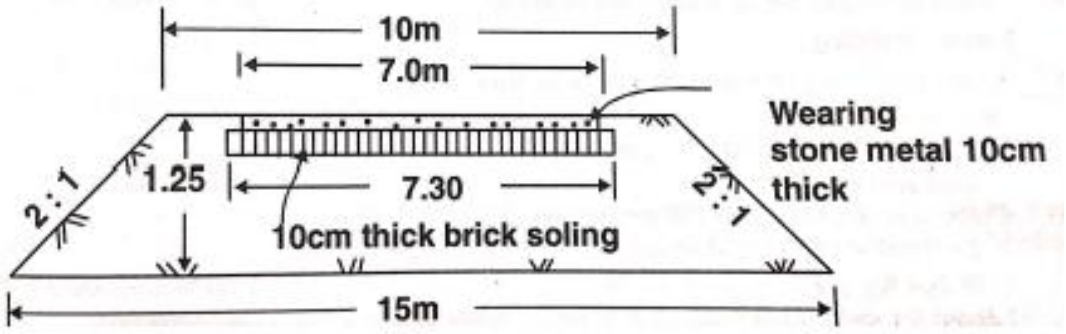
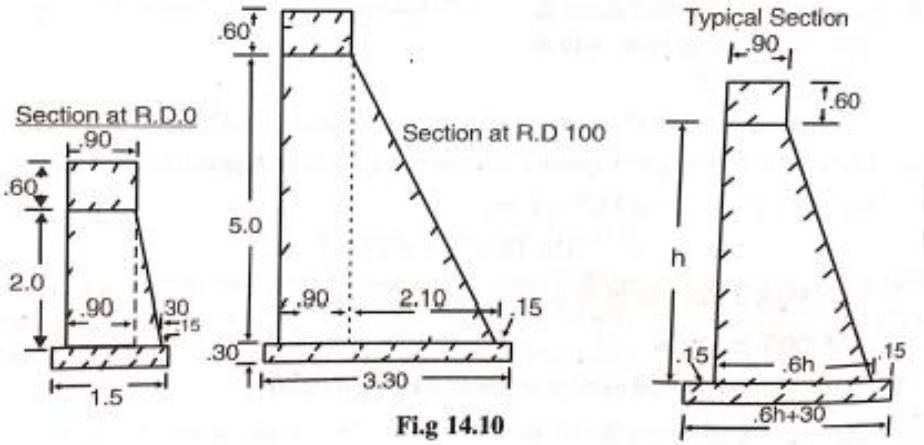
13	Prepare an estimate for the 'box culvert' shown in fig	BT-3	Apply
			
14	Explain a detailed procedure for estimation of open well and tube well.	BT-2	Understand
15	A portion of National Highway is to be metalled with the following data. Water Bound Macadam specifications are: Length = 1.5 km Metalled width = 8 m Soling Coat = Flat brick with brick on end edging Wearing Coat = 8 cm thick of stone metal Surface is to be finished off with two coats of bitumen using 1.65 Kg. binder and 0.02 cu.m of stone aggregate per sq.m of road area. Find out the following items (i) Stone metal (ii) No. of bricks (iii) Binder		
16	Figure shows section of a circular brick sewer. Prepare detailed estimate for a length of 30 m	BT-3	Apply

			
17	Prepare the detailed estimate of quantities for the following items of a 100m length retaining wall shown in figure 1. i. Brick work in CM 1:4 ii. Plain cement concrete 1:4:8 iii. Number of bricks iv. Number of cement bags  Figure 11 (All dimensions in mm)	BT-2	Understand

Part- C

1	Summarize in detail about the steps in the estimation of water supply Installations	BT-2	Understand
2	Prepare an estimate of 50 mm diameter, tube well 100 m deep with deep well pump from the drawing shown below. The strainer will consists of 3 pieces of 1.5 m each. The housing pipe consists of 70 mm diameter, G.I. pipe 6m in length assume suitable rates.  	BT-4	Analyze
3	Prepare a detailed estimate of a R.C.C retaining wall of 25m in length whose cross section is given below. Steel bars in reinforcement shall have to be taken separately.	BT-5	Evaluate

			
4	Estimate the cost of construction of a metalled road from the following data : Length = 1609 m Height of Embankment = 1.25 m Side slope of banks = 2:1 Formation width = 10 m Metalled width = 7 m Soling of Bricks = 10 cm thick Wearing of Stone metal = 10 cm thick Surface to be finished off with 2 coats of bitumen using 264 Kg of bitumen and 1.98 cu.m per % square metres of road area	BT-3	Apply

			
5	The road formation in a hilly tract runs at raising gradient of 1 in 50 for 100 metres length. The ground is almost uniformly falling at the rate of 1 in 100. The height of filling at the commencement of this filling is 2 metres. If there is no cross slope in the ground, estimate the quantity of Dry stone masonry walls on both sides of the Road. A typical section of the wall is given in the sketch.  **Fig 14.10**	BT-3	Apply

UNIT III SPECIFICATION AND TENDERS
Data – Schedule of rates – Analysis of rates – Specifications – sources – Preparation of detailed and general specifications – Tenders – TTT Act – e-tender – Preparation of Tender Notice and Document – Contracts – Types of contracts – Drafting of contract documents – Arbitration and legal requirements.

PART-A

1	State the importance of rate analysis.	BT-1	Remember
2	What is over head cost?	BT-1	Remember
3	Identify the content of tender.	BT-3	Apply
4	List the qualities of an arbitrator.	BT-1	Remember
5	Illustrate the requirements of a contract.	BT-2	Understand
6	Differentiate the types of termination of contract	BT-2	Understand
7	The actual expenditure incurred in the construction of school building which have a total length of main walls140m is Rs. 14.97 Lakhs. Estimate the approximate cost of a school building which will have 180 m length of main walls.	BT-3	Apply
8	What do you infer from schedule of rates ?	BT-2	Understand
9	Differentiate between detailed specification and general specification	BT-2	Understand

10	How will you analyze a rate of particular item?	BT-2	Understand
11	Classify and explain the types of penalties that are imposed on a contract and why are they imposed?	BT-2	Understand
12	What are the information should a contract document contain?	BT-1	Remember
13	Compare the types of contract.	BT-2	Understand
14	Explain TTT Act.	BT-2	Understand
15	Examine the qualification of contractor.	BT-1	Remember
16	Elaborate the important legal implications of a contract.	BT-2	Understand
17	Illustrate the term arbitration.	BT-2	Understand
18	What is a tender notice?	BT-1	Remember
19	Justify the objective of specification	BT-3	Apply
20	Formulate the reason for rejection of all tender.	BT-3	Apply
21	List the important content in contract documents	BT-1	Remember
22	Write out the specification for second class Brickwork.	BT-2	Understand
23	Write the general specification for Cement Concrete Floor.	BT-2	Understand
24	What are the specifications for White lime mortar?	BT-1	Remember
25	Define Detailed specification.	BT-1	Remember

PART-B (16 Marks)

1	List and explain the different forms of contracts with respect to suitability advantage and disadvantages.	BT-3	Apply
2	Brief the general specification for first class buildings	BT-2	Understand
3	Demonstrate the processes "Opening and scrutiny of tender"	BT-2	Understand
4	Write down the detailed specification of the following (i) Cement concrete in foundation (ii) Plastering in cement mortar 1:6	BT-2	Understand
5	Explain the various types of contract system	BT-2	Understand
6	Write down the general specifications of a residential building.	BT-2	Understand
7	Write the following in brief i) General or brief specification (5) ii) Detailed specification (4) iii) Standard specification (4)	BT-2	Understand
8	Select the content in specifications for a septic tank and explain it.	BT-3	Apply
9	Write a detailed specification of super structure.	BT-2	Understand
10	Mention and describe the general specifications of a bituminous road.	BT-1	Remember
11	Describe the detailed specification of earth work.	BT-5	BT-3
12	Analyze the contents of contract document and explain the each quantity.	BT-4	Analyze
13	Write the important particulars in tender documents and describe about it?	BT-2	Understand
14	Analyse the rate for cement concrete in foundation 1:4:8 for 10 cu.m	BT-4	Analyze
15	Find out the quantity of cement and sand required for one square metre of cement plaster 1:6, 1.25 cm thick	BT-3	Apply
16	Analyse the rate of First class brick in lime mortar in Foundation and plinth. Take 10 cu.m	BT-4	Analyze

17	Explain the following (i) Penalty (4) (ii) Compensation for delay in completion (4) (iii)Damages(5)	BT-2	Understand

PART- C

1	Explain in detail about the preparation of tender notice and document	BT-2	Understand
2	Describe the detailed specification of various items of works for the following (i) RCC (4) (ii) Color washing (4) (iii) Brick I Class (4) (iv) Plastering cement Mortar or lime mortar (3)	BT-2	Understand
3	(i) Describe about arbitration and tender (7) (ii) Explain the principle of specification writing.(8)	BT-5	Evaluate
4	(i) Explain E-tendering-Digital signature certificates (7) (ii) Explain the principle of specification writing.(8)	BT-4	Analyze
5	Write detailed specifications for (i) Cement Concrete road (8) (ii) Retaining wall(7)	BT-2	Understand

UNIT – 4 VALUATION

Necessity – Basics of value engineering – Capitalized value – Depreciation – Escalation – Value of building – Calculation of Standard rent – Mortgage – Lease.

PART –A

1	List the different methods of depreciation?	BT-1	Remember
2	Define valuation?	BT-1	Remember
3	What is obsolescence?	BT-1	Remember
4	Find the plinth area required for the residential accommodation for an assistant Engineer in the pay scale of Rs.36100 to 47500 per month.	BT-3	Apply
5	Define the Gross income:	BT-1	Remember
6	What is scrap value?	BT-1	Remember
7	Summarize why we calculate standard rent of building?	BT-2	Understand
8	Define Gross income	BT-2	Understand
9	What is mean by Net income?	BT-2	Understand
10	A property fetches a net income of Rs.900.00 deducting all outgoings. Workout the capitalized value of the property if the rate of interest is 6% per annum.	BT-3	Apply
11	What is the meaning of salvage value?	BT-1	Remember
12	Define Annuity	BT-1	Remember
13	Define book value	BT-1	Remember
14	Differentiate between market value and book value.	BT-2	Understand
15	Point out factors influencing valuation.	BT-2	Understand

16	A pumping set with a motor has been installed in a building at a cost Rs.2500.00.Assuming the life of the pump as 15 years, workout the amount of annual installment of sinking fund to be deposited to accumulate the whole amount of 4% compound interest.	BT-3	Apply
17	An old building has been purchased by a person at a cost of Rs.30,000/- excluding the cost of the land. Evaluate the amount of annual sinking fund at 4% interest assuming the future life of the building as 20 years and scarp value of the building as 10% of the cost of purchase.	BT-3	Apply
18	Sinking fund method of depreciation is more reliable" - Justify	BT-1	Remember
19	Write the necessity of valuation.	BT-1	Remember
20	Write short note on Escalation?	BT-1	Remember
21	What are the different methods of valuation?	BT-1	Remember
22	Define differed Annuity.	BT-1	Remember
23	What is capital cost?	BT-1	Remember
24	Describe about Capitalized Value?	BT-2	Understand
25	List the various Outgoing consider for a building estimates.	BT-1	Remember

PART –B

1	Define the following: (i) Type of lease (5) (ii) Mortgage (4) (iii) Escalation (4)	BT-1	Remember
2	State the following terms: (1) Scrap valve (3) (2) Salvage valve (3) (3) Book Valve (3) (4) Market valve (4)	BT-1	Remember
3	In a plot of land costing Rs.20,00,000 a building has been newly constructed at a local cost of Rs.80,00,000 including sanitary and water supply works, electrical installation, etc . The building consists of four flats of four tenants. The owner expects 8 % return on the cost of construction and 5 % of return on the land. Calculate the standard rent for each flat of the building assuming. (i) The life of the building is 60 yrs and the sinking fund will be created on 4% interest basis (ii)Annual repair cost 1% of the cost of construction (iii) Other outgoings including taxes at 30% of the net return on the building?	BT-3	Apply
4	(i) Explain differ forms of valve (6) (ii) Discuss about a freehold property (7)	BT-1	Remember
5	Discuss the following terms: (i) Methods of Depreciation (5) (ii) Built up Area (4) (iii) Plinth Area (4)	BT-2	Understand
6	Explain the terms clearly: (i) Annuity Head rent (4) (ii) Deferred income (3) (iii) Deferred annuities (3) (iv) Single rate Y.P. (3)	BT-2	Understand

7	Calculate the annual rent of a building with the following data. Cost of land = Rs.20,000/- Cost of building = Rs.80,000/- Estimate life = 80years Return expected = 5% on land 6% on building Annual repairs are expected to be 0.7% of the cost construction and other out goings will be 25% of the gross rent. There is no proposal to set up a sinking fund	BT-3	Apply
8	The capitalized cost of a building is Rs.one lac, including all fittings of first class construction. If the rate of interest is 6%, Calculate net return from the property. Assume out goings as 15% on gross income.	BT-4	Analyze
9	A plot measure 800sq.m.the built up area rate of this 1st class building is Rs.600/-per sq.m this rates includes cost of water supply, sanitary and electric installations. The age of the building is 50 years. The cost of the land is Rs.1800/- per sq.m Calculate the standard rent for a building located in CMA assuming the required parameters	BT-4	Analyze
10	An Owner occupied property is required to be valued for the wealth tax purpose of land and building. The following particulars are available. Evaluate the present value of the property Value of the land = Rs4,00,000.00 Cost of the building to put up such a building present =Rs10,00,000 Age of the building = 40 year Estimate cost of repair =Rs.50,000.00 Depreciation to be allowed for the building = 0.75% per annum	BT-4	Analyze
11	Differentiate clearly between the following: (i) Capitalized value and year's purchase (5) (ii) Freehold property and leasehold property (4) (iii) Depreciation and obsolescence.(4)	BT-2	Understand
12	What are the various methods of calculations for Depreciation and explain?	BT-2	Understand
13	Explain in detail about various methods of Valuation.	BT-2	Understand
14	Write Short note on the following terms: (i)Sinking fund (4) (ii)Outgoings (3) (iii)Capitalized value (3) (iv)Price and Cost (3)	BT-2	Understand
14	What will be the annual sinking fund @ 5% net, necessary to replace 50,000/- capital at the end of 10 years?	BT-4	Analyze
16	The value of a building is 80,000. It is 30 years old and is in good condition. If the life of the structure is 100 years what is its present day value for acquisition?	BT-4	Analyze
17	What are the factors affect the market value?	BT-2	Understand
18	What do you understand by a Standard rent and how it is calculated	BT-2	Understand

PART - C

1	Describe briefly about (i) Rental method of valuation (4) (ii) Valuation based on profit and cost (4) (iii) Development method of valuation (4) (iv) Depreciation method of valuation (3)	BT-5	Evaluate

2	(i) Explain the purposes of valuation. (7) (ii) Write short notes on compound interest factor and discount factor.(6)	BT-2	Understand
3	Explain the procedure to work out the value of a property by rental method of valuation.	BT-2	Understand
4	(i) Discuss about free hold property. (7) (ii) Outcome of valuation.(6)	BT-5	Evaluate
5	Calculate the Standard rent of a building with the following data. Cost of land = Rs.40,000/- Cost of building = Rs.50,000/- Estimate life = 60years Return expected = 5% on land 8% on building Annual repairs = 10 % on the cost of building Sinking fund = 30% of return from building	BT-4	Analyze

UNIT V REPORT PREPARATION
Principles for report preparation – report on estimate of residential building – Culvert – Roads – Water supply and sanitary installations – Tube wells – Open wells

1	Define Report	BT-1	Remember
2	List the documents that accompany a report.	BT-1	Remember
3	Define Analysis of work	BT-1	Remember
4	What are the importance of report preparation	BT-1	Remember
5	List the factors involved in locating a site?	BT-1	Remember
6	What are the set of drawings required for preparing a report?	BT-1	Remember
7	Discuss Measurement Book	BT-2	Understand
8	Discuss obsolescence.	BT-2	Understand
9	What is are the points to be considered in report preparation?	BT-2	Understand
10	Discuss Drawings.	BT-2	Understand
11	What is book value of property	BT-1	Remember
12	Write short note on Revenue income?	BT-3	Apply
13	Why valuation is necessary?	BT-3	Apply
14	Define work	BT-1	Remember
15	Define Site	BT-1	Remember
16	Differentiate Open well and Tube well	BT-2	Understand
17	State any two principles for the preparation of Water supply schemes?	BT-1	Remember
18	State any two principles for the preparation of residential building?	BT-1	Remember
19	Write the estimate for the sanitary installation?	BT-2	Understand
20	Write the estimate for the Water supply?	BT-2	Understand
21	What are the different area consider in the irrigational report?	BT-1	Remember
22	Estimate the material requirement on Plinth Area basis for single storey Building-Brick, Cement, Mild Steel and coal(Burning Bricks)	BT-3	Apply
23	List the major Parameters considered for a report in a design of RCC Beam	BT-1	Remember
24	What is Time of Execution?	BT-1	Remember

25	What are the different methods for calculating the discharge in a bridge or culvert	BT-2	Understand

PART –B

1	(i) Define the Procedure for preparation for preparation of reports? (6) (ii)State how will you prepare a report on estimate of Box culvert?(7)	BT-2	Understand
2	Describe the following in Report Preparation? (i) Definition of reports (5) (ii) Types of reports (4) (iii) Necessity of report(4)	BT-2	Understand
3	Prepare a report on estimate for the following items in Single storey Residential building ((i) Sub structure (7) (ii) Super Structure(6)	BT-5	Evaluate
4	Explain the report on estimation for construction of bituminous roads	BT-2	Understand
5	Write a report on estimate for construction of cement concrete roads	BT-2	Understand
6	Explain the report on estimation for construction of Water bound macadam roads	BT-2	Understand
7	(i) List out the points to be considered while writing technical report? (7) (ii) Differentiate Administrative report and technical report?(6)	BT-2	Understand
8	Discuss the report on estimation for the construction of a multi storey building for the following (i) Sub structure? (6) (ii) Super Structure(7)	BT-3	Apply
9	Write the report on estimate for construction structures: (i) Tube well (7) (ii) Open well(6)	BT-4	Analyze
10	Write the report on estimation for construction of Small bridge	BT-4	Analyze
11	Write the report on estimation for construction of water supply & sanitary work	BT-4	Analyze
12	Prepare the report on estimation for construction of following culverts (i) Bridge culvert (6) (ii) Arch culvert(7)	BT-5	Evaluate
13	Prepare the report on estimation for construction pipe line culvert	BT-5	Evaluate
14	(i) Summarize the documents to be attached with a report (7) (ii) Explain about Status report (6)	BT-2	Understand
15	Discuss the report on estimation for construction of bridge culverts and arch culvert.	BT-2	Understand
16	Summarize the general principles for report preparation also explains the structure of report.	BT-2	Understand
17	What are the features consist in a project or scheme of work?	BT-2	Understand

PART – C

1	Write a report to accompany an estimate for a residential for a executive engineer	BT-4	Analyze
2	Prepare a estimate on estimate for the construction of a road on national highways	BT-5	Evaluate
3	Briefly explain the report preparation for estimation of residential building.	BT-3	Apply
4	(i) Outline a report to accompany a water supply scheme for a village (7)	BT-3	Apply

	(ii) Explain in detail how will you work out standard rent of a government building. (8)		
5	Write the reports on the estimate for the construction of a distributary-irrigational channel.	BT-4	Analyze