

DEPARTMENT OF CIVIL ENGINEERING

VII SEMESTER

CE 6704 - ESTIMATION AND QUANTITY SURVEYING

UNIT - I

1. What are methods to be adopted for volume calculating?
2. Define analysis of rates.
3. Define a tender.
4. Define contract.
5. What are the types of culvert?
6. What are the methods of estimate?
7. What are the types of estimate?
8. Briefly explain about preliminary Estimate.
9. Estimate the quantities of brickwork and plastering required in a wall 4m long, 3m high and 30 cm thick. Calculate also the cost if the rate of brickwork is Rs.32.00 per cu.m and of plastering is Rs. 8.50 per sq.m
10. Define detailed estimate
11. Define Abstract estimate
12. Define quantity surveyor
13. Write the duties of quantity surveyor.
14. Write the essential qualities of a good surveyor.
15. What are the main components of culvert?
16. What are factors to be considered in design of septic tank?
17. Define lead.
18. Define lift.
19. The actual expenditure incurred in the construction of a school building which have a total length of main walls 140m is Rs.4.97lakhs.Estimate the approximate cost of a similar school building which will have 180m length of main walls.
20. Write the formula for Mid ordinate rule and Prismoidal formula Rule.

UNIT - II

21. Define estimate.
22. Write the recommendation for degree of accuracy in measurements.
23. Briefly explain about revised estimate
24. Calculate the quality of brickwork in an arch over a 1.80m span opening. The arch is 40cm. thick and the breadth of a wall is 40 cm.
25. Define Floor area
26. Define Carpet area
27. Define Plinth area
28. What are the methods of taking out estimates?
29. Briefly explain about Out to Out and in to in method.
30. Briefly explain about bay method.
31. Workout the quality of stone metal required for 2Km.Length for wearing coat of a 4m wide road. The thickness of the metal road required is 12cm loose.
32. An approach road 2Km.long is to be constructed. Work out the quantity of materials required i.e. stone metal and bricks. Data is given below.
33. A cement concrete road (1:2:3) is to be constructed over the existing water bound macadam road .The thickness of slab =10cm.The length of the road is one km and the width 3.60m.Calculate the quality of cement concrete and the material required.
34. Calculate the quality of earthwork for the construction of an approach road
35. What are the methods of measurements of earthwork?
36. write the essentials requirements of contract.
37. what are the types of contract?
38. what are the important legal implications of a contract?
39. What is specification?

UNIT - III

40. State the different types of specification.
41. Describe general or brief specification
42. Describe detailed specification

43. What are the types of penalties that are imposed on a contract and why are they imposed?
44. What is arbitration?
45. Why and when the earnest money deposit are collected?
46. Why and when the security deposit are collected?
47. What is a tender notice?
48. What informations should a contract document contain?
49. Define valuation
50. What are the important factors influencing the value of building?
51. What is the purpose of valuations?
52. Define Floor rate.
53. Define Plinth area rate.
54. 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.
55. Find the plinth area required for the residential accommodation for an assistant Engineer in the pay scale of Rs.400.00 to 1,000 per month.
56. 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.
57. An old building has been purchased by a person at a cost of Rs.30,000/- excluding the cost of the land. Calculate 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.



UNIT - IV

58. Write the necessity of valuation.
59. Define the Value
60. Define the Cost:
61. Define the Gross income:
62. Define the Net come:
63. Define the Obsolescence:
64. Define the Scrap Value:

65. Define the Salvage value
66. Define the Capitalized value
67. Define sinking fund.
68. Define Market value
69. Define Book value
70. Write the various methods of valuation.
71. The estimated value of a building is Rs.5,00,000. The carpet area of the building is 70 sq.m If the plinth area is 20% more than this ,what is the plinth rate of the building?
72. The present value of a property is 20000/- Calculate the standard rent. The rate of interest may be assumed as 6%.
74. Write the various methods of depreciation Define the Year's purchase
75. Define the Annuity
76. Define Analysis of work:
77. What is the size of septic tank for 50 users?
78. What is the size of septic tank for 25users?
79. Define contract
80. Define Contractor
81. Define Tender
82. What are the Essentials of contract:
83. What are the type of contract?
84. What are type of termination of contract?
85. What are the conditions of contract?

Unit - V

86. Define Engineer:
87. Define Owner:
88. Define Site
89. Define Drawings.
90. Define work
91. What is called Tender Notice?

- 
92. Define Specification.
 93. What are the objects of specification?
 94. What are the types of specifications?
 95. Define Arbitration
 96. Define Arbitrators
 97. What are the types of Arbitration?
 98. What do you mean by Gross income?
 99. Define Net income
 100. Define Capital cost
- 

16 MARKS

1. Explain various types of estimate .
2. What are the various methods of estimate ?
3. Explain the following area of the building?
 - (i) Plinth area
 - (ii) Carpet area
 - (iii) Circulation area
 - (iv) Floor area
4. Explain any four types of approximate estimates ?
5. Explain the following detailed estimate ?
 - (i) Individual wall method
 - (ii) Centre line method
6. Estimate the following items of works from the figure (Fig-1) given below?
 - (i) Earth work excavation
 - (ii) PCC
 - (iii) Brickwork above & below Ground level
 - (iv) RCC work – Beam , Slab
7. Estimate the following items of works from the figure (Fig-1) given below?
 - (i) Plastering
 - (ii) White washing & painting
8. Estimate the following items of works from the figure (Fig-1) given below?
 - (i) Shuttering work/form work
 - (ii) RCC work – slab & column

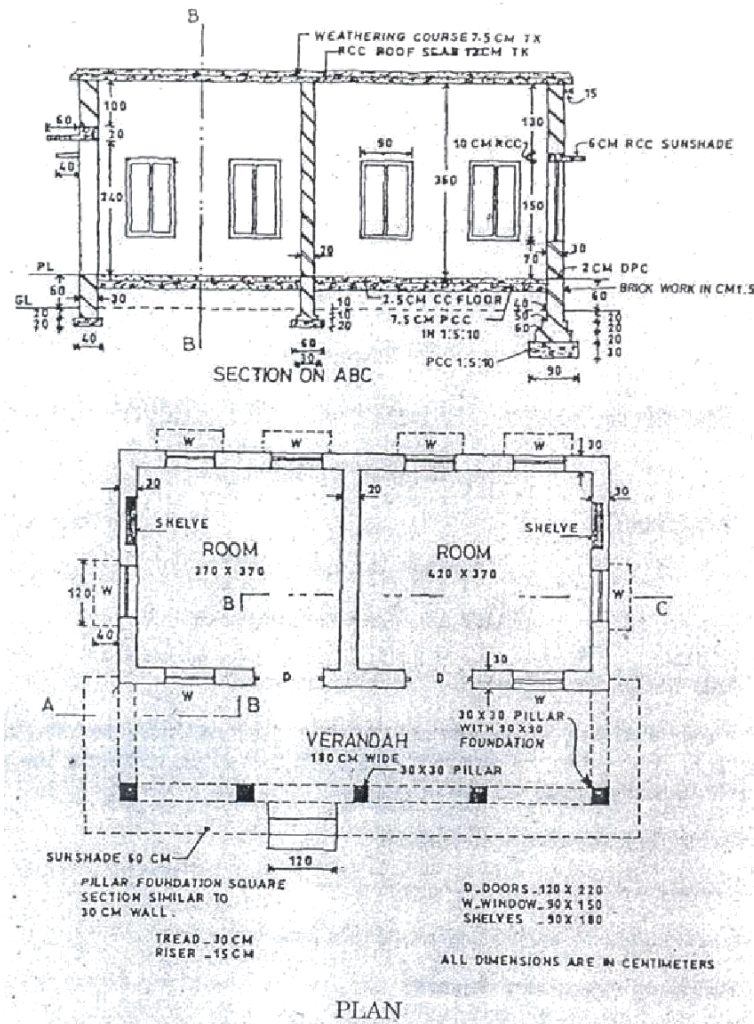
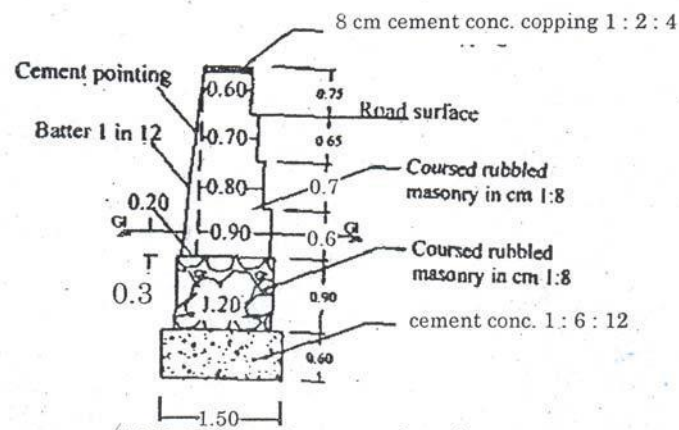


Fig-1

9. Estimate the retaining wall quantity for the above figure (Fig-1)?



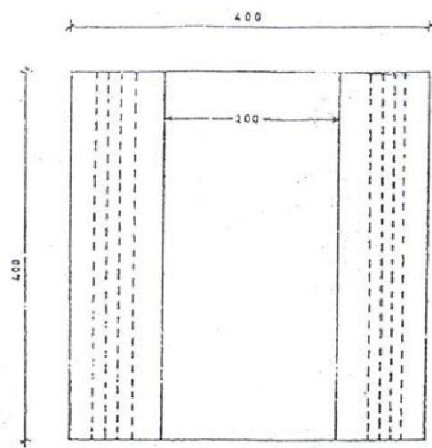
(All dimensions are in m)
Fig 13(a) Retaining wall.

10. Estimate the following quantity for the below figure ?

- (i) Earth work excavation
- (ii) PCC

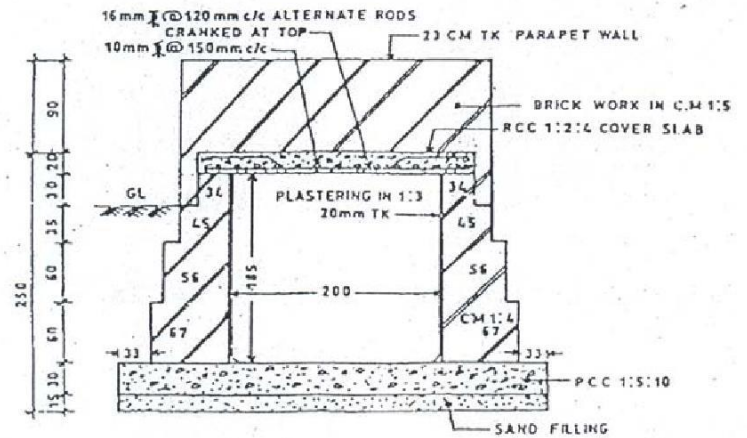
11. Estimate the following quantity for the below figure ?

- (i) Brickwork above & below Ground level
- (ii) RCC work



All dimensions are in cms.

PLAN
Box Culvert



Cross Section of Box Culvert

(fig-2)

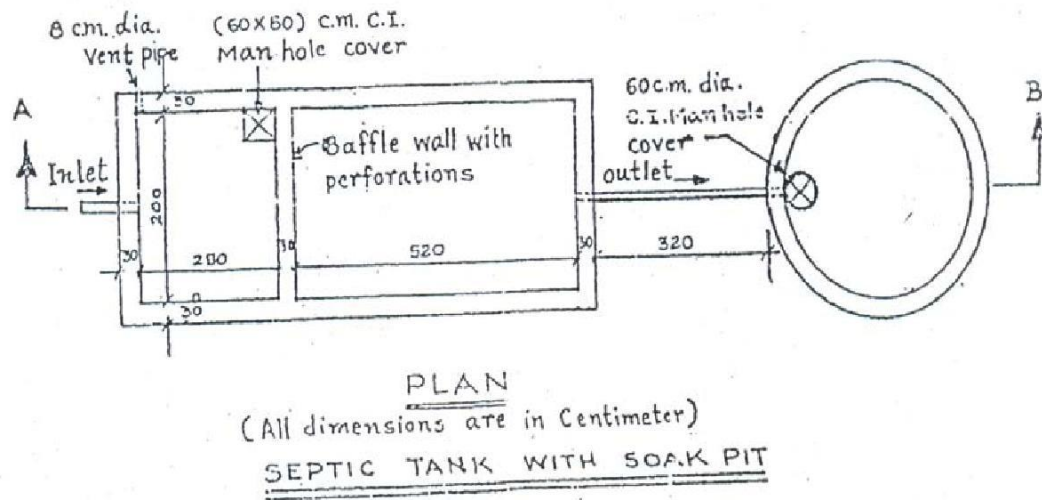
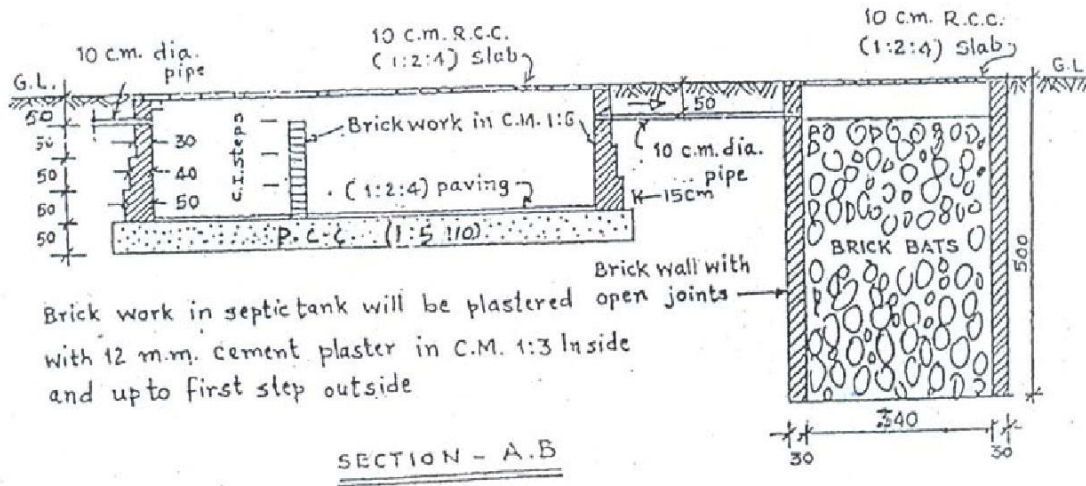
12. What are the methods of estimation of roads ?

13. 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.

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 1 in 200								

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

14. Prepare a detailed estimate of a septic tank with soak pit for the below figure?



15. Estimate the following quantity from the above figure ?

- (iii) Internal Plastering
- (iv) Brickwork in cm 1:6 in septic tank
- (v) RCC slab cover for septic tank & soak pit

16. Analyses the rate of cement concrete of ratio 1:2:4 and 1:3:6

17. Analyses the rate of Reinforced cement concrete beam and column

18. What are the types of contract?

19. Explain about Arbitration

20. Explain the methods of valuation.

21. A plot measure 500sq.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 40 years. The cost of the land is Rs.80/- per sq.m

22. A building is situated on ambala –Kalka road Rs. 38000/-considered its scrap value as 10% of the cost and life as 80years.Find out depreciated value if the the life of the building is 20 year.

23. Calculate the annual rent of a building with the following

data. Cost of land = Rs.20000/-

Cost of building = Rs.80000/-

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

24. 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.

25. Write report on estimate of residential building and culvert

26. What are the procedures to be followed in opening of tender and security of tender?

27. What are the different types of contracts? Explain them briefly.

28. Explain in detail about the penalties to contractors.

29. Explain the procedure of opening the tenders, acceptance of tenders and the execution of agreement for carrying out a work.

30. Write note on
i General or brief specification
ii Detailed specification
iii Standard specification

31. Discuss the purpose of valuation in detail ?

32. Discuss about the necessity of specification in details?


33. Explain the different method of valuation ?

34. Explain in detail about the four methods of calculation depreciation ?

35. Discuss the report on estimation for the construction of a residential building?

36. Explain the report on estimation for construction of culvert?

37. Explain the report on estimation for construction of roads?

- 
38. Explain the report on estimation for construction of Tube well?
 39. Explain the report on estimation for construction of open well?
 40. Explain the report on estimation for construction of water supply & sanitary works?
 41. Explain about the contents of contract document ?
 42. Explain about the contents of Tender notice ?
 43. Explain the general specification for first class buildings?
 44. Explain the detailed specifications for any four items of work?
 45. Explain the different types of estimates & differentiate detailed estimate from cube rate estimate?
- 