Question Bank

UNIT-I

Short Questions

1. What is meant by estimating and costing and state its need?
2. Write a short note on types of estimates and their purpose?
3. What is specification and mention its necessity.
4. State the methods of arriving quantities with brief notes?
5. Write short notes on units of calculation?
6. Distinguish between detailed and abstract estimates.

Long Answer Questions

1. Estimate the quantities of the following items of a two roomed building from the given plan and section given in figure below. Calculate the 1)Earthwork in excavation in foundation 2) Lime concrete in foundation 3) 1st class brick work in foundation and plinth 4)2.5cm D.P.C 5) 1st class brick work in Superstructure. By using the Centre Line Method.
2. Using Long wall & Short wall method estimate the quantities of the following items of a two roomed building from the given plan and sections using same above figure. Calculate the 1)Earthwork in excavation in foundation 2) Lime concrete in foundation 3) 1st class brick work in foundation and plinth 4)2.5cm D.P.C 5) 1st class brick work in Superstructure.

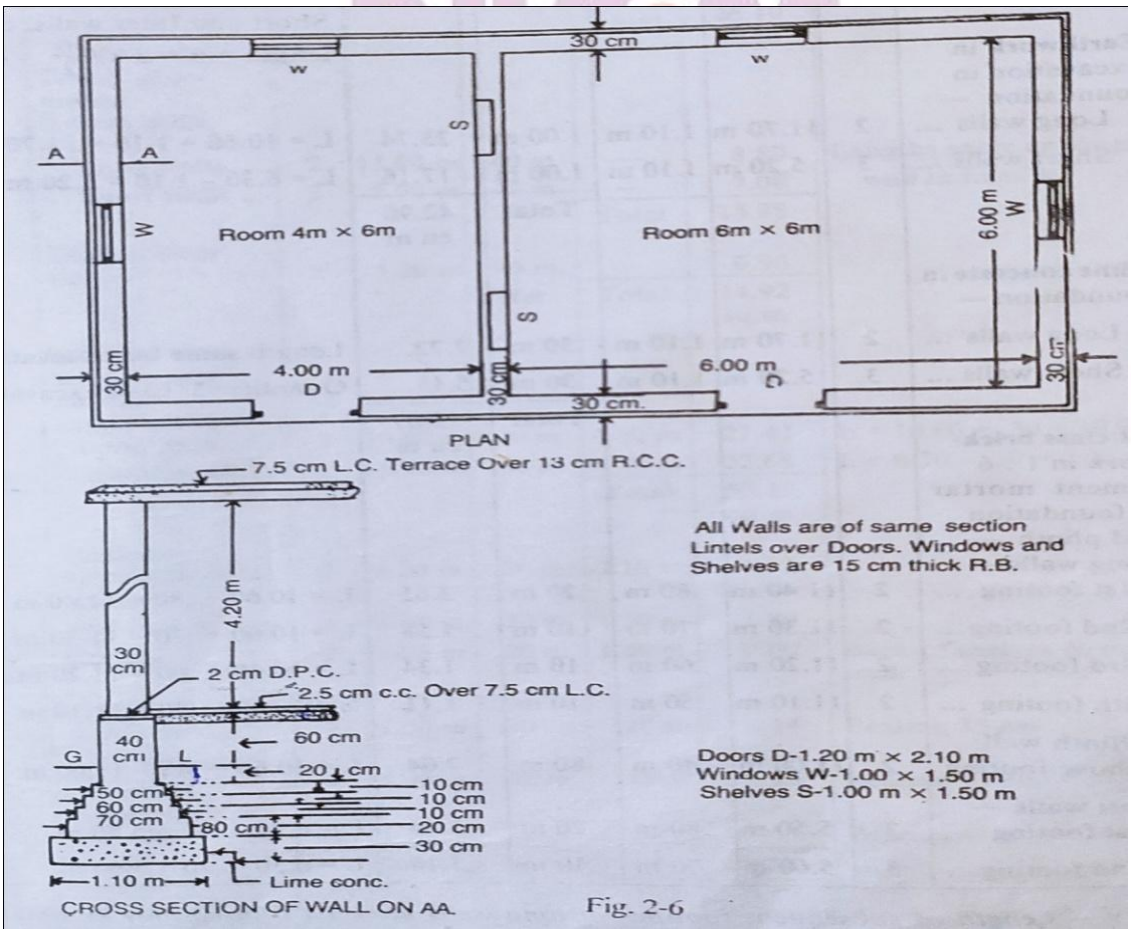

Fig. 2-6

3. Explain principal units for various items of work.
4. List out limits of measurement and degrees of accuracy in estimating.
5. (a) What is approximate estimate and explain the importance of approximate estimate.
   (b) Enumerate purpose of an approximate estimate.
6. List out general items of work for building estimates in detail.
7. Explain the following general items of work involved in the estimation for a building along with the process of calculations. (a) Earthwork in excavation. (b) Earthwork in filling. (c) Brick at soling. (d) Cement concrete in foundation. (e) Masonry work in foundation. (f) Damp proof course. (g) Masonry work in superstructure. (h) 10 cm thick brickwork

UNIT II

Short Questions

1. Define and explain regarding Earth work embankment
2. Define and explain regarding Earthwork cutting
3. Define and explain regarding Lead
4. Define and explain regarding Lift
5. State the methods of calculating quality of earthwork

Long Answer Questions

1. Draw the tabular form for the calculation of earthwork with the following methods. (a) Mid – ordinate method and (b) Mean – sectional area method.
2. The formation level at the 10^{th} chainage is 107m and the road is in downward gradient of 1 IN 150 up to the chainage 14 and then the gradient changes to 1 IN 100 upward. Formation width of the road is 10m and the side slopes of banking are 2:1.Lenth of the chain is 30m.Estimate the detailed estimation of earthwork for Roads.

Chainage	10	11	12	13	14	15	16	17	18	19	20
R.L of GL	105	105.6	105.44	105.9	105.42	104.3	105.0	104.1	104.62	104.0	103.3

3. Calculate the volume of earthwork for 100.00m length of road in a uniform ground. Height of the bank at one end is 0.75m and at the other end 1.20m. Formation width is 10.00m and side slopes of embankment are 2:1. Ground does not have any cross slope. Calculate the volume of earthwork by 1. Mid sectional area method 2. Mean sectional area method 3. Trapezoidal method and 4. Prismoidal method.
4. The formation width of a road embankment is 9.0m. The side slopes are 2.5:1. The depths along

the center line of road at 50.0m intervals are 1.2, 1.1, 1.4, 1.2, 0.9, 1.5 and 1.0.m. It is required to calculate the quantity of earthwork by (a) Prismoidal rule. (b) Trapezoidal rule

5. A canal is proposed to be excavated between two points A and B, 120m apart. If the bed width is 10.00m. side slopes 1.5:1 and depth of cutting 1.00m, 2.00m and 3.00m at A, B and C. Calculate the quantity of earthwork excavation by 1. Mid sectional area method 2. Mean sectional area method
6. Calculate the quantity of each work for 100m length for a portion of a road in a uniform ground the heights of banks at the two ends being 1.50m and 2.30m. The formation width is 10 m and side slopes 2.5:1 (H: V). Assume that there is no transverse slope. Use the following methods and justify which method is good. (a) Mid – sectional area method and (b) Prismoidal formula.

UNIT III

Short Questions

1. Define the term BBR / BBS.
2. Write a short note on sundries.
3. Explain about stacking charges.
4. Write a short note on standard schedule of rates.
5. Calculate the cement content required for Brick masonry in CM 1:6 with country bricks 8.50 cum
6. Determine the quantity of cement required for 5.00 cum of R.C.C 1:2:4.
7. Calculate the quantity of cement bags required for Plastering with CM 1:4, 20mm thick: 40.00sqm
8. Calculate the quantity of cement bags required for Point with CM 1:3 to R.R. Masonry 30.00sqm
9. Calculate the cement content required for Cement concrete 1:4:8 mix with 40mm size HBG metal: 15.00 cum
10. Distinguish between main reinforcement and distribution reinforcement in R.C.C slab
11. Distinguish Straight bar and cranked bar
12. Distinguish main reinforcement and lateral reinforcement in R.C.C column

Long Answer Questions

1. Explain the following (a) Market rate. (b) Work-charged establishment. (c) Lump-sum.
2. (a) What is an Estimate? Draw and explain Flow Chart of Estimation.
   (b) What is Analysis of Rates? What is the Purpose of Rate Analysis?
3. Calculate the quantity of materials and analyze the rate required for lime concrete in foundation with 25mm size stone ballast, lime and sand. Proportions 1:2:4 for 1 cu.m
4. Calculate the quantity of materials for following items: 1. R.C.C (1:2:4) for 20m3 of work 2. R.C.C (1:3:6) for 15m3 of work
5. Calculate the quantity of materials for following items: 1. C.M (1:4) for 1cu.m of work 2. C.M (1:6)

for 1cu.m of work

6. Prepare bar bending schedule and calculate the quantity of reinforcement in a R.C.C (1:2:4) lintel as per data given below: Total Length of the lintel including bearing=1.50 m; Thickness of wall = 400 mm; Thickness of lintel = 150 mm; Main reinforcement 5 bars of 12 mm ø (out of which 2 bars are bent up near support). Top reinforcement 2 bars of 10 mm ø; 6 mm ø, 2 legged stirrups are provided @175 mm c/c uniformly
7. Give the detailed specifications of the following items of works. (a) Color washing (b) Lime concrete in foundation.
8. Give the detailed specifications of the following items of works. (a) Galvanized corrugated sheet roofing. (b) Lime concrete in foundation

UNIT IV

Short Questions

1. What is contract and write about contractor?
2. State the important types of contracts.
3. Write about sub-contractor.
4. Explain the term Earnest money deposit.
5. What is Further security deposit explain with example.
6. Explain the term Add security deposit.
7. State the necessity of composing penalties on contractor.

Long Answer Questions

1. Discuss different categories of contract in detail and differentiate them with respect to their important characteristics.
2. What is contract document and mention the documents to be attached to the contract agreement.
3. Explain the following method of valuation of a building along with an example. (a) Valuation based on cost (b) direct method of valuation. Understand
4. (a) Define valuation and explain the purpose of valuation.
   (b)Explain capitalized value with a simple example.

UNIT V

Short Questions

1. Define valuation of building and its purpose.
2. Explain about Municipal taxes?
3. Write short note on Scrap value
4. Give a shot note on Salvage value

5. Write short note on Market value
6. Explain Book value
7. Write short note on Market value
8. What are the Ratable value & Obsolescence?
9. Define Annuity & Capital cost
10. Write short note on sinking fund.
11. DEFINE CPM & PERT

Long Answer Questions

1. Define the terms: Conditions of contract and Arbitration
2. Explain tender notice and tender documents
3. In a plot of land costing rupees 20,000. A building has been newly constructed at a total cost of 80,000. Including sanitary and water supply works, electrical installations etc. the building consists of 4 flats for 4 tenants. The owner expects 8% returns on the cost of construction and 5% return on cost of land. Calculate the standard rent for each flat of the building assuming 1. The life of the building as 60 years and sinking fund will be created on 4 % interest basis 2. Annual repairs cost at 1% cost of construction 3. Other outgoings including taxes at 30% of the net return of the building
4. a) Explain contracts, types and conditions of contract.
   b) Explain about Network Analysis.
5. a) Explain about Construction project planning and its stages.
   b) Explain Activity list in project management.
7. Calculate the PERT analysis & find critical path, duration of project, variance & standard deviation for the given data.

Event	t_p	t_m	t_p
1-2	6	6	24
1-3	6	12	18
1-4	12	12	30
2-5	6	6	6
3-5	12	30	48
4-6	12	30	48
5-6	18	30	54