



- Notes :
1. All questions carry marks as indicated.
 2. Solve Question 1 OR Questions No. 2.
 3. Solve Question 3 OR Questions No. 4.
 4. Solve Question 5 OR Questions No. 6.
 5. Solve Question 7 OR Questions No. 8.
 6. Solve Question 9 OR Questions No. 10.
 7. Solve Question 11 OR Questions No. 12.
 8. Due credit will be given to neatness and adequate dimensions.
 9. Assume suitable data whenever necessary.
 10. Illustrate your answers whenever necessary with the help of neat sketches.
 11. Use of non programmable calculator is permitted.

1. a) Discuss the various method for approximate estimate of a residential structure. 6
- b) The ground level at various stations along the centrel line of a proposed road are as under: 7

Station	Distance (m)	R.L. Of Ground at centre(m)
11	0	150.50
12	30	153.36
13	60	155.52
14	90	157.10
15	120	156.50

The ground has uniform cross slope of 1 in 8 the chain is 30m long. The road formation is proposed at uniform gradient passing through the G.L. at end chainage with formation width as 8m and side slope in cutting as 1:1.

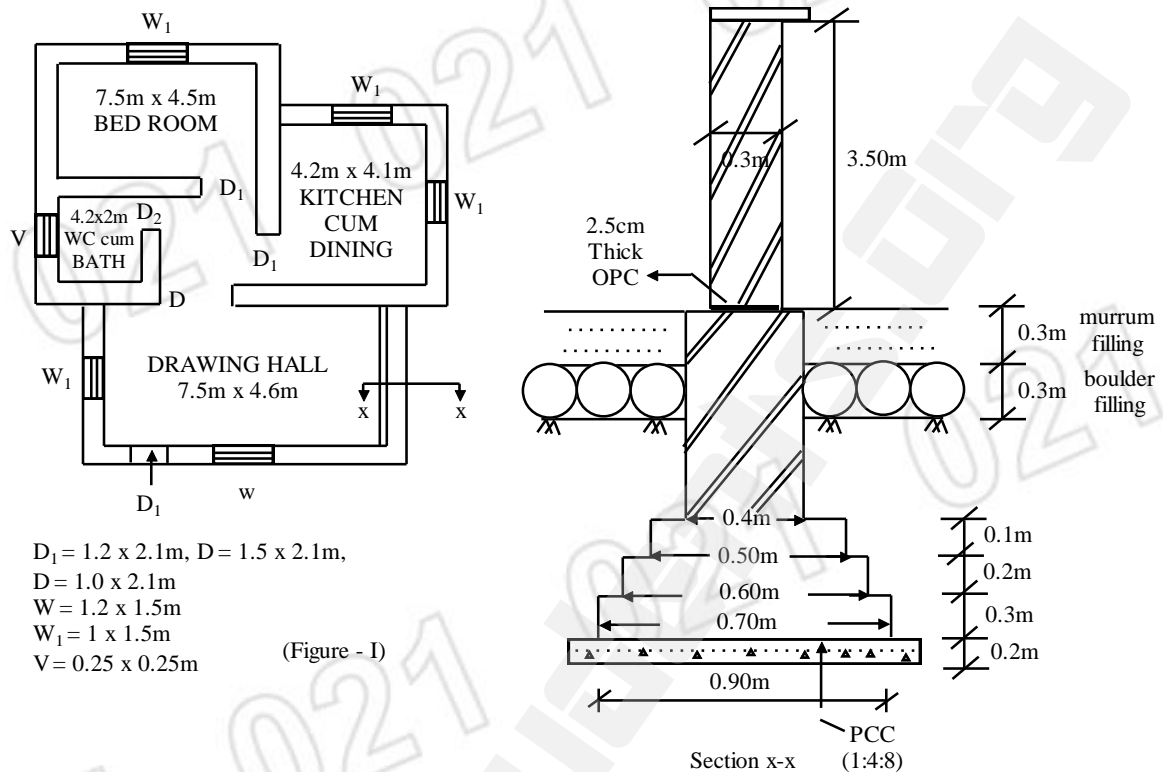
Estimate the quantity of earthwork for the proposed road section.

OR

2. a) Prepare a preliminary estimate of a double storeyed building having carpet area of 2000m². It may be assumed that 30% of the built up area will be considered for corridors and verandahs and 10% of the area to be occupied by walls. 7
- i) Plinth area rate : Rs. 1700 per m².
- ii) Water supply and sanitary work : 5% of building cost.
- iii) Electrical installation : 12.5% of building cost.
- iv) Contingencies : 10%
- b) What are various methods of calculating Detailed estimate? Explain centre line method. 6

3. a) Estimate the quantities for the following items of work for the given building plan and typical wall section of figure (I). 8

- i) Earthwork in excavation in foundation Frenches.
ii) IInd class brick masonry in cm 1:6 in foundation and plinth.



- b) Workout the quantity of steel reinforcement in bar bending schedule for RCC beam of size 230mm x 350mm x 4800mm. It has 2 NOS of 16mm ϕ straight and 2 No's 12 mm ϕ bent up at bottom and 2 No's 10mm ϕ at top M.S. Reinforcement with 6mm ϕ stirrups @200mm c/c. Assume cover as 25mm throughout (top, bottom & side) 6

OR

4. a) The accompanying decurring (Q. 3.a) Shows building plan and typical wall section prepare centre line plan and estimate the quantities of the following item of work. 8
- i) Brick work in super structure.
ii) Internal plaster of wall surface.
- b) A RCC slab overall size 3500mm x 7000mm x 125mm is provided with 12mm ϕ as main steel reinforcement bent up alternately placed @150mm c/c. Alternate bare are bent up at 560 mm from the outer edge of the slab. Distribution steel bars are of 6mm ϕ @200mm c/c. Assume cover as 20mm throughout. Calculate the quantities of steel reinforcement in bar bending schedule. 6
5. a) Enlist the objectives of preliminary estimate and enlist methods for preparing the preliminary estimate. 6

- b) Define the term "Contract" what are the various types of contracts? Explain advantages and disadvantages of any two. 7

OR

6. a) Explain the method of carrying out civil Engg. Works in Govt. Departments. 6
b) Enlist an information to be include while drafting tender notice. 7
7. a) What do you understand by specification. Explain the points and principles to be consider while drafting the detailed specification. 6
b) Draft detailed specification for the following items **any two.** 7
i) Brick Masonry in CM1:6 in superstructure.
ii) 12 mm thick internal cement Plaster to wall surface.
iii) Laying 1:4:8 pcc in foundation trenches.

OR

8. a) Enlist the different types of specification. What are the object of specification. 6
b) Explain 'direct and indirect charges'. 7
9. a) Define Rate analysis. Explain factor affecting it. 6
b) Work out the rate analysis for the following items. 8

OR

10. a) What is task work ? Explain the factor affecting a task work of labour. 6
b) Calculate the rate per unit item of work for any two item of work. 8
i) Brick work in superstructure in CM 1:6 (Brick size 23 Cm x 11cm x 7cm)
ii) R.C.C. (1:2:4) work with 2% steel in beam.
iii) 10 Cm thick cement concrete flooring (1:3:6)
11. a) What is valuation? Explain in brief, the purpose of valuation. 6
b) An RCC framed structure building having estimated future life 80 years, fetches gross annual rent of Rs. 3200/- per month work out it's capitalized value on the basis of 6% rate of interest on capital and rate of interest for sinking fund as 4%. 7

OR

12. Write a short note on **any three.** 13
i) Earnest money deposit and security deposit.
ii) Book value and Market value.
iii) Rent Fixation.
iv) Depreciation & obsolescence.
v) Types of value.
