

BACHELOR OF ARCHITECTURE THIRD YEAR SECOND SEMESTER -2025
QUANTITY SURVEYING & SPECIFICATIONS

Time : 3:00 Hrs.

Full Marks: 100

Answer any Four**No code or Guidelines or any other documents is allowed in the examination hall**

1. (a) Define Specification. (b) What are the different type of specifications used in construction industry? (c) Explain the principles of writing specification of any item of work. (d) Specify- First-class Brick, Cement and the storage and handling of those materials in short. $3+4+10+(2 \times 4) = 25$
2. (a) What are the sub-heads to be estimated to calculate the rate per unit of an item? (b) Calculate the required materials for 10 cu.m. volume of M20 grade cement concrete and find Dry quantity of Stone chips in Cum, Cement in Bags & Sand in Cum. (c) What is the purpose of estimating? (d) What are different types of estimates are there in the industry?
 (e) Prepare a preliminary estimate of a G+3 building in Table format. Given –
 - (i) Built-up area of typical floor is 440 sq m.
 - (ii) Built-up area rate for ground floor (excluding foundation) = Rs 24,500/- per sq m.
 - (iii) Build-up area rate for 1st. & 2nd, floor = Rs. 25,500/- per sq m. & for 3rd. floor = 26,000/- per sq m.
 - (iv) Extra for foundation = 18% of super-structure cost.
 - (v) Extra for special Architectural treatment = 2% of Building cost.
 - (vi) Extra for Water supply and sanitary = 7% of Building cost.
 - (vii) Extra for Electrical installation = 8% of Building cost.
 - (viii) Extra for Contingencies = 4% of Overall cost.
 - (ix) Extra for Work Charged establishment = 10% of Overall cost.
 - (x) Extra for other source = 5% of Building cost. $4+5+4+4+8 = 25$
3. (a) It is proposed to have ceramic tile flooring in a room having internal clear dimension of 1.5m x 2.4m. Tile sizes are 300mm x 300mm. The door opening is 900 mm and the door is flushed with the internal face of the wall. The height of internal wall cladding is 2100mm. How many number of ceramic tiles are required for internal flooring and cladding? (b) What are the different components of a Complete Estimate for a Building Project in a Site of 2 acres (approx.) at Durgapur, West Bengal? Show in chart format.
 (c) Also write down different 'Items of work' (Heads & Sub-heads) which are required for Detailed Quantity Estimate of the Building (as stated above) in Table format. $6+8+11 = 25$

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4. Study the Plan, Section & brief specifications of the building as given below in the Fig.- 01 (All dimensions are in mm unless otherwise mentioned. Find the quantities (in CuM/SqM/M) of the 'Item of works' showing every details of measurements following the standard measurement rules as written below - (a) Earthwork in excavation, (b) Earthwork in filling, (c) Cement concrete (1:3:6), (d) Brickwork in cement mortar (1:4) in foundation & Plinth, (e) 2.5 cm thick D.P.C (1:2:4), (f) Brickwork in superstructure, (g) RCC work excluding reinforcement & shuttering. (h) Prepare a summary table showing quantity with appropriate unit (in CuM/ SqM/RM) of all 7 items. $4+3+3+3+2+4+3+3 = 25$



