

- Q2** (a) Prepare an Abstract of cost for all items in Question Number 1 **8**
- (b) Prepare the Bar bending schedule of a simply supported R.C.C. Lintel from the following **12**
specification:
Size of lintel 300 mm wide 200 mm depth.
Main bars in tension zone of Fe 250 (grade I) 3 bars of 16 mm dia., one bar is cranked through 450 at 170 mm from each end 2 No. anchor bars at top 8 mm dia.
Two legged stirrups @ 150mm c/c of 6mm dia. throughout.
Clear span of the lintel is 1150 mm. Bearing on either side is 150 mm.

- Q3** (a) What are the points to be observed while framing the specification of the items? Draft the detailed specification for three coat internal plastering with synthetic enamel paint **8**
- (b) Estimate the quantity of earthwork for a portion of a road to be constructed by **Mid Sectional Area Method** from the following data. **12**
Formation width = 10 m. Side slope in banking = 2:1, and in cutting 1:1.
Downward gradient 1 in 120 from chainage 0 to 120 while it remains in same formation level from 120 to 180 chainage and have again upward gradient 1 in 90 from 180 to 300 chainage.
Formation level at zero chainage is 210.5 m.
Chainage and corresponding ground levels are given below.

0	30	60	90	120	150
210.5	200.85	199.9	198.65	196.4	199.3
180	210	240	270	300	
198.1	196.33	197.26	196.55	197.28	

- Q4** (a) Prepare an Approximate Estimate for Residential Building in western suburbs of Mumbai (RCC framed structure). **10**
- Plot Area- 60 m x 30 m
 - FSI- 1.5
 - Building is G + 6
 - Consider foundation cost as 20 % of superstructure cost.
 - Allow 20% of building cost for all services.
 - Allow 2.5% of overall cost for consultant fees.
 - Consider 5 % provision for contingencies.

b) i) Draft a tender notice for a construction of a library building by CIDCO, Navi Mumbai with an estimated cost of Rs. 12,54,67,475 and duration of project is 12 months. **5**

ii) Write short notes on Mass Haul Diagram **5**

Q5 (a) Prepare Rate Analysis for **12**

- a) RCC Work 1:1.5:3 for beam with 2% steel
- b) 1st Class Brickwork in Superstructure with CM 1:6

(b) A person has purchased a plot of land costing of Rs. 120000 and has constructed a building there on at a cost of Rs. 500000 including w/s. Sanitary and Electrical installations. Allowing a net return @ 7% cost of construction and 5 % net return on cost of land. Work out the standard rent of the property with the following data. **8**

- i) Sinking Fund on 4% basis for the future life of 70 years = 0.0022
- ii) Annual maintenance @ 0.5% cost of construction
- iii) Municipal taxes and other outgoings 28% of Gross rent.

Q6 Write short notes on any **FOUR** of the following: **20**

- a) IS 1200
 - b) Price Escalation clause of Contract
 - c) Earnest Money Deposit
 - d) Easement Rights
 - e) Factors affecting Rate Analysis
 - f) Valid, Void and Voidable Contracts
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