

April 2024

Time - Three hours
(Maximum Marks: 100)

- [N.B. 1. Answer all questions under Part-A. Each question carries 3 marks.
2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART - A

1. State the necessity of approximate estimate.
2. Write short notes on out turn of works.
3. Write short notes on Schedule of rates.
4. What is Standard data book?
5. Write short notes on Long wall and short wall method.
6. Write short notes on Trade system.
7. What are the advantages of Group system?
8. Prepare detailed quantity for 125mm thick RCC roof slab of room size 5m × 4m by Group system.
9. What are the documents necessary to accompany a report?
10. Write short notes on sinking fund.

PART - B

11. (a) (i) The cost of construction of a polytechnic college building of yearly intake 300 students is found to be Rs.600 lakhs. Allowing 10% increase in the cost of materials and labourers, determine the probable expenditure towards the construction of a new polytechnic college having yearly intake of 180 students. (10)
(ii) Write about plinth area method. (4)
(Or)
(b) Write the general specification for a concrete road project.

[Turn over.....]

12. (a) Prepare the data for plain cement concrete in cement mortar 1:4 using 40mm size hard broken stone-10m³

Materials and Labours Required:

Plain cement concrete in cement mortar 1:4 using 40mm size hard broken stone-10m³

- Broken stone 40 mm size - 9.5 m³
- C.M 1:4 - 3.8 m³
- Mason II class - 1.8 Nos
- Mazdoor category I - 17.7 Nos
- Mazdoor category II - 14.1 Nos
- Cost of Labours:
- Mixing charges - Rs.50/m³
- Mason II class - Rs.660 each/day
- Mazdoor category I - Rs.583 each/day
- Mazdoor category II - Rs. 565 each/day

Cost of materials and Lead particulars:

Material	Unit	Cost (Rs)	Lead (km)	Rate for lead/km (Rs)	Handling charges (Rs)
Cement	1 bag	390	5	8	6
Sand	1m ³	210	12	4	30
Broken stone 40mm	1m ³	1075	18	9	35

(Or)

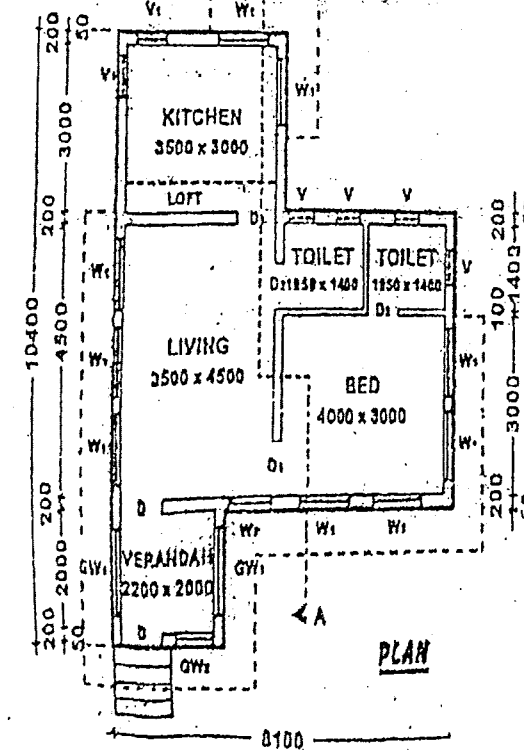
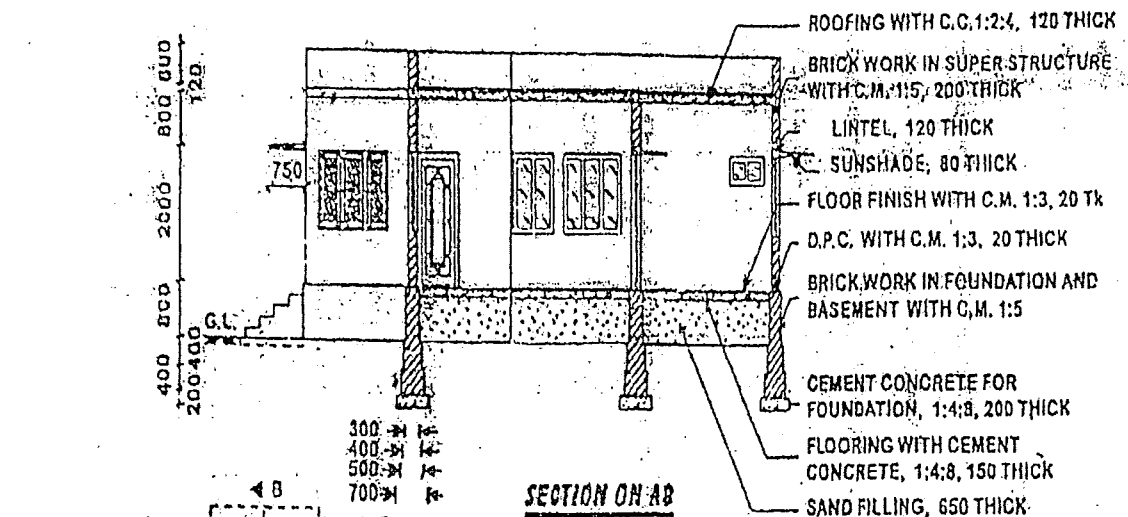
- (b) Prepare the data for White washing with two coats of shell lime - 10 m²

- Shell lime - 0.07 m³
- Mason I class - 1.60 Nos
- Mazdoor I class - 0.50 Nos
- Mazdoor II class - 2.70 Nos
- Gum, water, brush etc - L.S

Cost of materials and labour at site :

- Shell lime - Rs. 600 /m³
- Mason I class - Rs. 400 each per day
- Mazdoor I class - Rs. 350 each per day
- Mazdoor II class - Rs. 250 each per day
- Gum, brush - Rs. 100/100 m³

SKETCH-2



REFERENCE	
DOORS	D - 1000 x 2000, FULLY PANELLED D ₁ - 900 x 2000, FULLY PANELLED D ₂ - 750 x 2000, FULLY PANELLED
WINDOWS	W ₁ - 1200 x 1200, FULLY GLAZED W ₂ - 900 x 1200, FULLY GLAZED
GRILL WINDOWS	GW ₁ - 1500 x 1200, GW ₂ - 900 x 1200,
VENTILATOR	V - 750 x 450, FULLY GLAZED V ₁ - 900 x 450, FULLY GLAZED
STEPS	WIDTH - 1400, (1000 + 2 x 200)
TREAD	300
RISE	180
	LOFT - 600

TWO ROOMS WITH R.C.C. ROOF
ALL DIMENSIONS ARE IN M.M.