

Total number of printed pages-5

43(6)6.4

2019

ESTIMATING AND COSTING

Paper : ENG-6.4

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Section-A

1. Mention the unit of measurement of the following items : 10×½=5
- (a) Mild Steel
 - (b) Wash Basin
 - (c) Excavation
 - (d) Flooring
 - (e) Wall construction
 - (f) Railing
 - (g) Water Tank
 - (h) Site clearance
 - (i) Dado
 - (j) Electrical wires.

Contd.

2. Write short notes on the following
(any eight) $8 \times 5 = 40$

- (a) Revised estimation
- (b) Factors affecting rate analysis
- (c) Schedule Rates and Market Rates
- (d) Purpose of approximate estimation
- (e) N.I.T.
- (f) Principles of writing specifications
- (g) Interim and final certificate
- (h) Cubical Contents Method
- (i) Security Money and Earnest Money
- (j) Supplementary Estimate
- (k) Sundries, Tools and Plants.

3. Answer **any one** of the following :

- (a) Explain the term "specification" in terms of Estimating and Costing. Write a detailed specification for "excavation in hard murum". $5 + 10 = 15$
- (b) Explain the "purpose of specification" in Estimating and Costing. Write a detailed specification for "plastering in cement mortar 1:4". $5 + 10 = 15$

Section-B

4. Answer **any one** of the following :

(a) Define and explain "rate analysis" in estimation. Perform a rate analysis for M20(1:2:4) grade concrete for a beam of volume 10 cu. m. $5 + 10 = 15$

(b) What are the factors affecting rate analysis? Write a short note on "labour output constant". Perform a rate analysis for excavation in hard murum of volume 10 cu. m. $5 + 5 + 5 = 15$

For, performing the rate analysis use the rates given below : (Whichever applicable)

Aggregate — ₹ 3,800/cu.m.

Sand — ₹ 2,200/cu.m.

Cement — ₹ 380/bag

MS Bars — ₹ 5,500/quintal

Head Mason — ₹ 700/day

Mason — ₹ 550/day

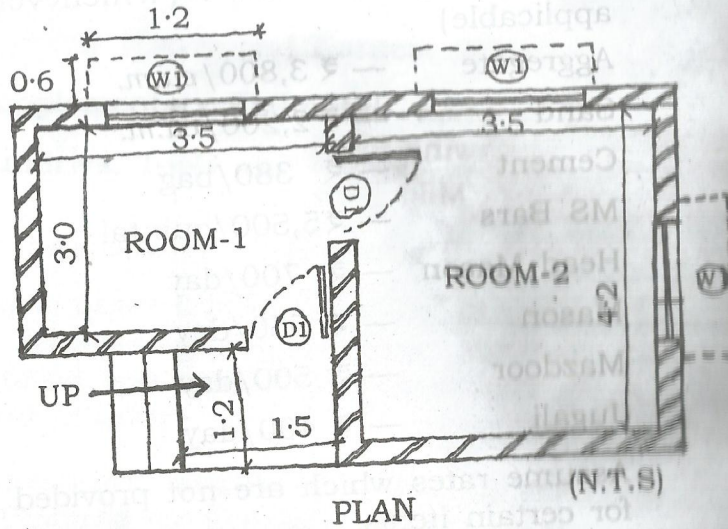
Mazdoor — ₹ 500/day

Jugali — ₹ 400/day

Assume rates which are not provided for certain items.

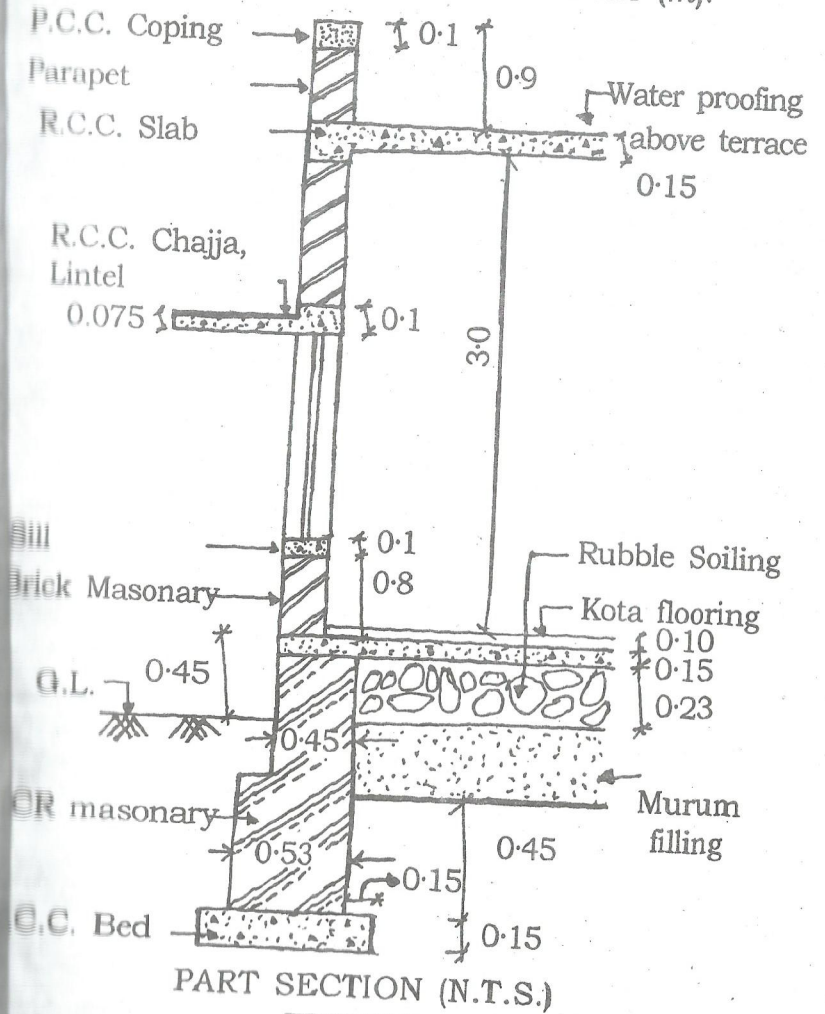
5. Being an architect, you are assigned to estimate the cost of the items mentioned below :

- Excavation in soil.
 - P.C.C. Bed concrete at foundation (1:4:8). Prepare both measurement sheet and abstract sheet including the charges for contingencies, water supply and electrification, consultancy fees.
- Refer the plan and part section for finding out the estimate. Consider your own appropriate data, wherever information is not given.



- All walls are of 230mm thick.
- All windows are placed at the centre of the wall.

- $W1 = 1 \times 1.2$, $D1 = 1 \times 2.1$
- Cost of excavation = ₹ 3,510.23/cu.m.
Cost of P.C.C Bed = ₹ 6,867.26/cu.m.
- All the units are in meter (m).



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