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IV-II QUESTION BANK   **ACDAMIC YEAR 2018-19**

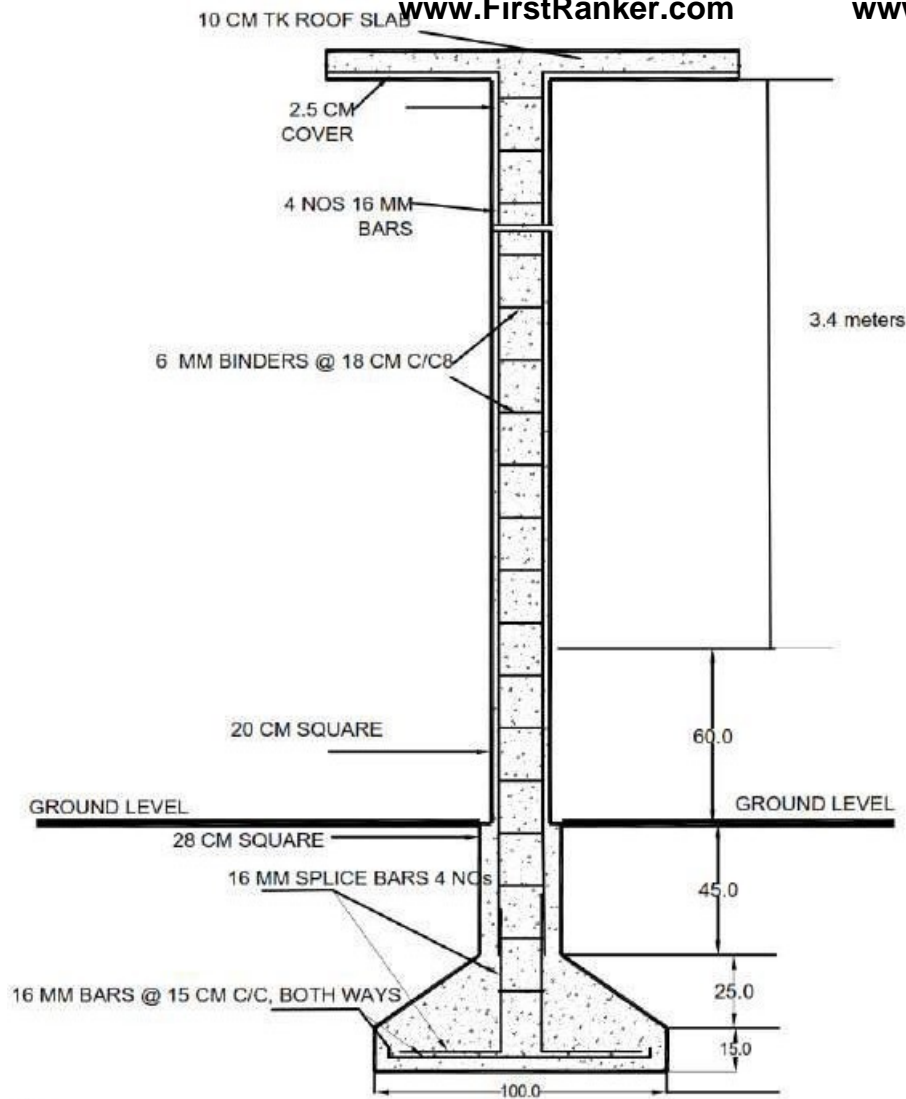SUBUECT**: ESTIMATION SPECIFICATION AND COSTING**

UNIT-1

1.a) State different types of approximate estimate. Illustrate any one with example.

   b) State the different types of detailed estimates and their use.

2.a) Differentiate between detailed estimate and abstract estimate

   b) Explain the use of approximate estimate in civil

3.a) List the major information/data needed for enabling preparation of estimate for a building.

   b) Discuss the various units of measurement used for estimation of civil works.

4.a) What is approximate estimate and explain the importance?

   b) What is accuracy in estimate preparation?

   5 Give at least 4 purposes of preparing estimates for civil works.

6 a) Mention the standard units used in estimation for any 5 items of building works.

   b) Explain briefly the relevance of approximate method of estimate.

UNIT-2

1 a) Through rate analysis, calculate the rate per unit volume of 1:2:4 pcc

   b) Through rate analysis, calculate the rate per unit volume of 1:8 plastering of 10mm thick

2 a) Explain the objective of carrying out Rate Analysis in civil works

   b) List the components to be considered for Rate analysis of Brick Masonry work

3. calculate the rate analysis for 15m2 area of brick masonry of 0.3m thick?

4.Through rate analysis, calculate the rate per unit of 12mm thick cement plastering 1:6.

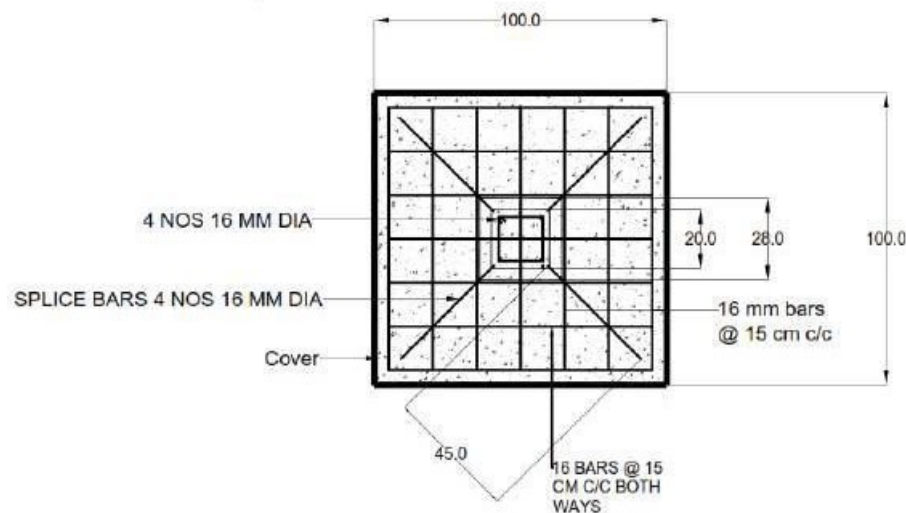5.Explain steps needed for carrying out rate analysis for a typical item in civil works.

UNIT 3

1 a) State any three methods of calculation of earth work for road. Explain any one of them.

   b) Which method is more accurate for calculation of earthwork and why?

2 Work out quantities of earth work for a section of road as given in table. Chainage (meters)
   0 30 60 90 120 150

   Ground Level 110.00 109.00 109.70 108.70 109.80 109.80

   I. Formation level at 0.00 M Chainage = 110.00 M

   II. Gradient of formation line = 1 in 300, upwards

   III.   Top width of formation = 10.00 M

   IV.   Side slope = 2:1

3 Calculate the quantity of steel required for an RCC column with footing shown in figure 3. Also, prepare schedule of bars for the column. *Note: Make suitable assumption as necessary.*

10 CM TK ROOF SLAB

2.5 CM
COVER

4 NOS 16 MM
BARS

3.4 meters

6 MM BINDERS @ 18 CM C/C8

20 CM SQUARE

60.0

GROUND LEVEL

GROUND LEVEL

28 CM SQUARE

16 MM SPLICE BARS 4 NOs

45.0

16 MM BARS @ 15 CM C/C, BOTH WAYS

25.0

15.0

100.0

Note:
All dimensions in CM
Assume date as necessary

SECTION

100.0

4 NOS 16 MM DIA

20.0   28.0   100.0

SPLICE BARS 4 NOS 16 MM DIA

16 mm bars
@ 15 cm c/c

Cover

45.0

16 BARS @ 15
CM C/C BOTH
WAYS

PLAN

RCC COLUMN &
FOOTING

4 The ground levels along the center line of the road are given below Chainage (meters)
0 50 100 150

The road is to be formed in embankment with the formation level at 100.00m throughout the length. If the road width is10.00 m and the side slopes 2:1, calculate the quantity of earthwork required by Trapezoidal rule. Assume transverse slope as level.

5 Calculate the quantity of earthwork in embankment for a portion of channel with the following data:

Bed width = 3 m

Free Board = 44 cm

Slope of dissing = 1:1

Side slope of banking - 1.5:1

Full supply depth – 1 m

Top width of both banks – 1.5 m

Distance (m) 0 30 60 90 120 150

Ground Level (m)

225.24 224.8 224.43 224.12 224.50 224.98

Proposed Bed Level (m)

224 223.94 223.88 223.82 223.76 223.70

UNIT-4

1 Write the detailed specifications for damp proof course (2.5cmthick) C.C 1:1.5:3

2 Write the specifications for marble flooring in a residential building.

3 Distinguish between lump sum contract and item rate contract

4 a) What do you understand by General Conditions of Contract (GCC) in tender document?
   b) Explain Cost plus percentage contract.

5 a) State the purpose of penalties in contract agreements? [7]
   b) What is EMD and when it is forfeited?

6 a) List components of a typical tender notice.
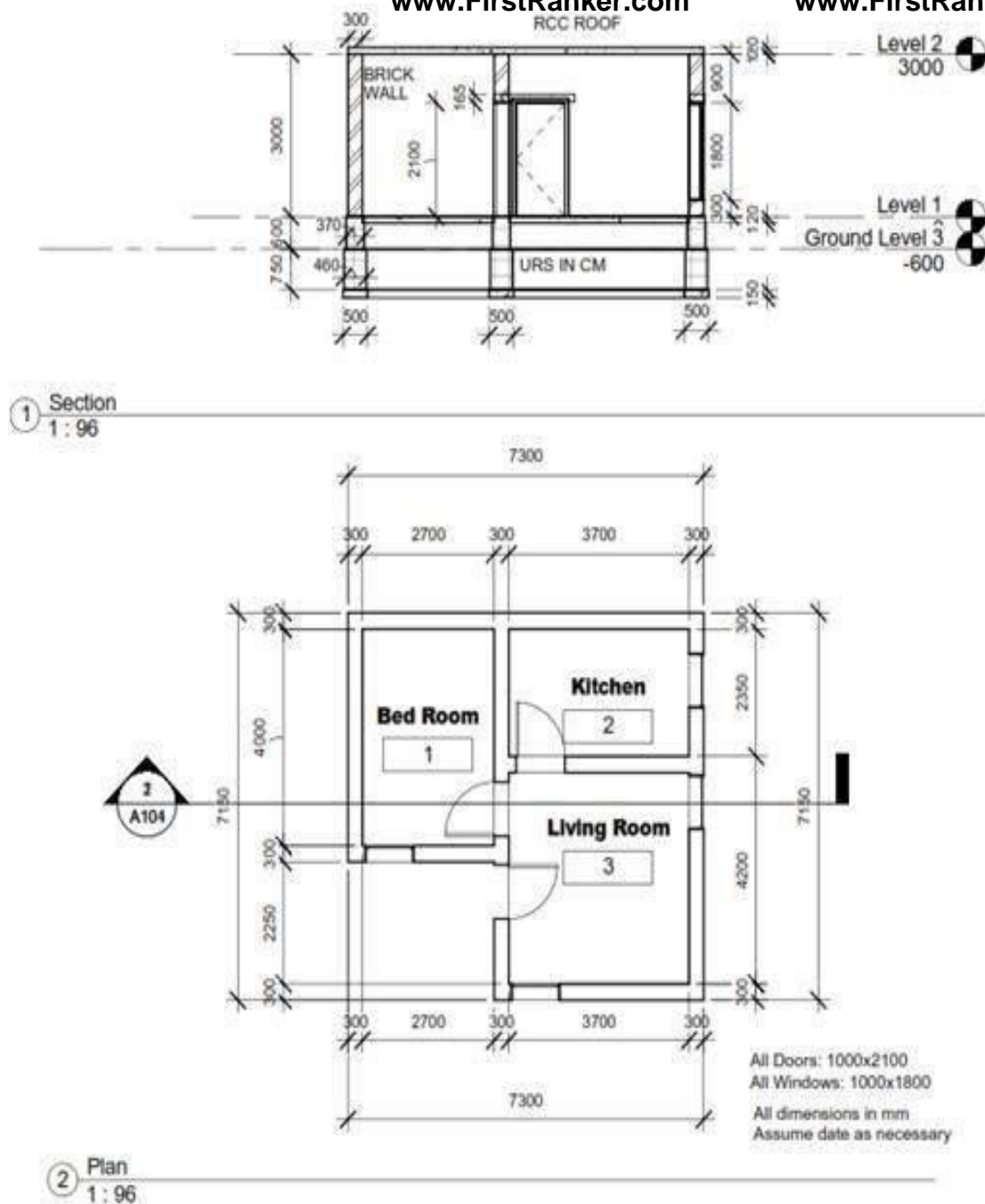   b) Explain the procedure to be followed for opening construction tenders.

UNIT 5

1 Calculate quantity of following items of work and enter the same in standard format of measurement sheet with brief description of item (refer fig 1.):
   (i) Excavation for wall foundation
   (ii) Brick works
   Note: Make suitable assumptions where necessary.

Section
1 : 96

All Doors: 1000x2100
All Windows: 1000x1800

All dimensions in mm
Assume date as necessary

Plan
2 1 : 96

6 a) The Figure 1 shows 3 roomed building. Estimate the quantities and cost of earth work in excavation for foundation in hard soil @ Rs.140/cum.

Note: make assumptions where necessary.

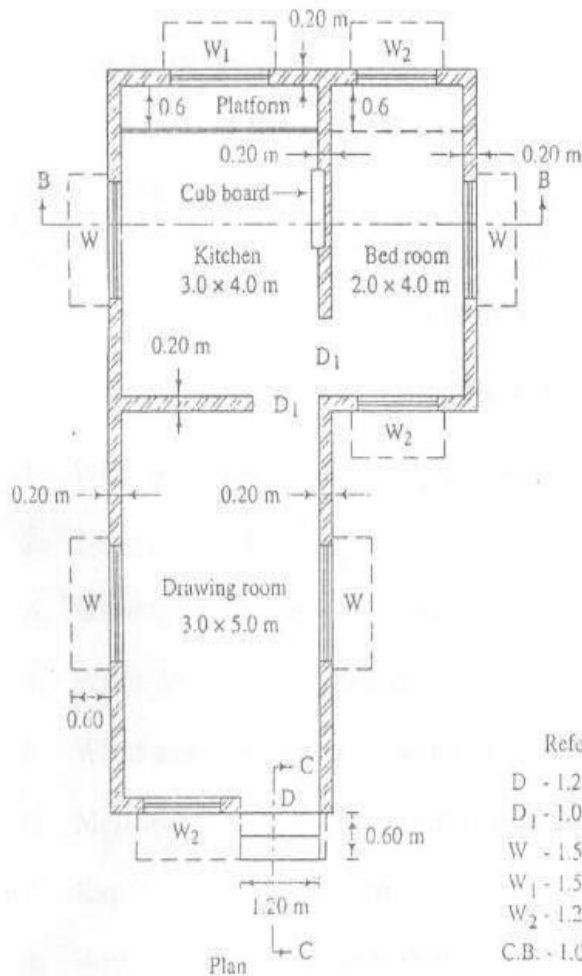b) For the same building estimate the CC bed in 1:4:8 for all walls @ Rs. 2900/cu.m

SECTION ON ABCD

PLAN

UNIT-6

1. Detailed Estimate of a Building by Long wall and short wall method shown in Figure - 2?
Assume suitable data.

2 Prepare detailed estimate for the plastering of super structure in CM 1:6 for building in Figure 2.

Note: Make suitable assumptions where necessary.