Code No:**R42011** **R10** **Set No. 1**

IV B.Tech II Semester Regular/Supplementary Examinations, April- 2015
ESTIMATION, SPECIFICATIONS & CONTRACTS
(Civil Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any Three Questions Part A
Answer any One Question in PART- B
Questions in part A carry 15 marks and Questions in Part B carry 30 marks
****

PART – A

1 a) List the major information/data needed for enabling preparation of estimate for a building. [8]
b) Discuss the various units of measurement used for estimation of civil works. [7]

2 a) Discuss the circumstances under which rate analysis is required to be carried out even if SRR is available. [8]
b) List the components to be considered for Rate analysis of Brick Masonry work [7]

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.* [15]

4 a) What do you understand by General Conditions of Contract (GCC) in tender document? [7]
b) Explain Cost plus percentage contract. [8]

5 Write the specifications for marble flooring in a residential building. [15]

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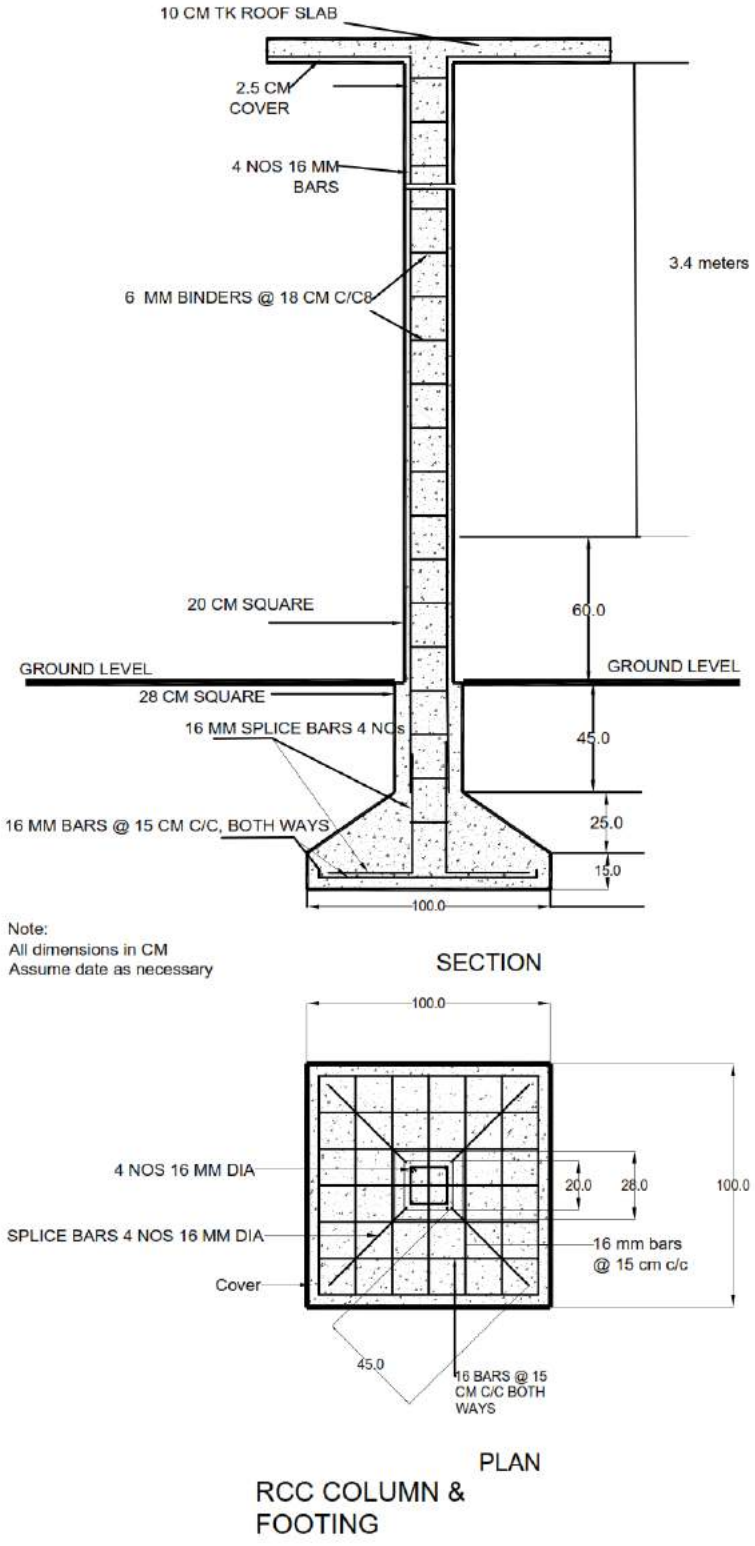

Figure 3

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PART - B

6 Calculate quantity of following items of work and enter the same in standard format of measurement sheet with brief description of item (refer fig 6.):

(i) Excavation for wall foundation

(ii) Brick works

Note: Make suitable assumptions where necessary.

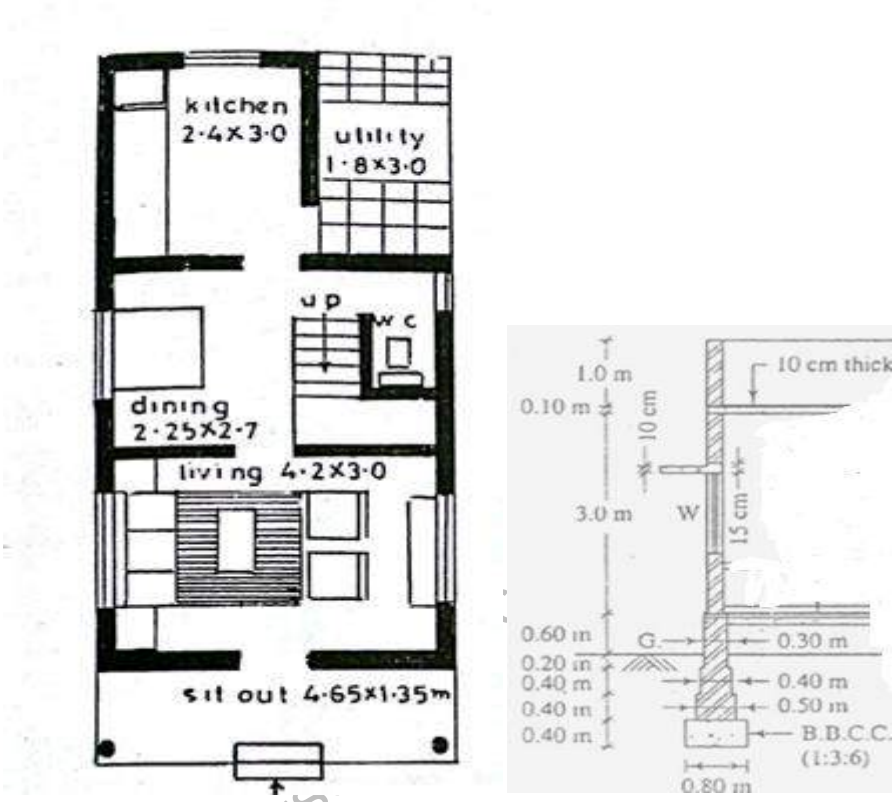
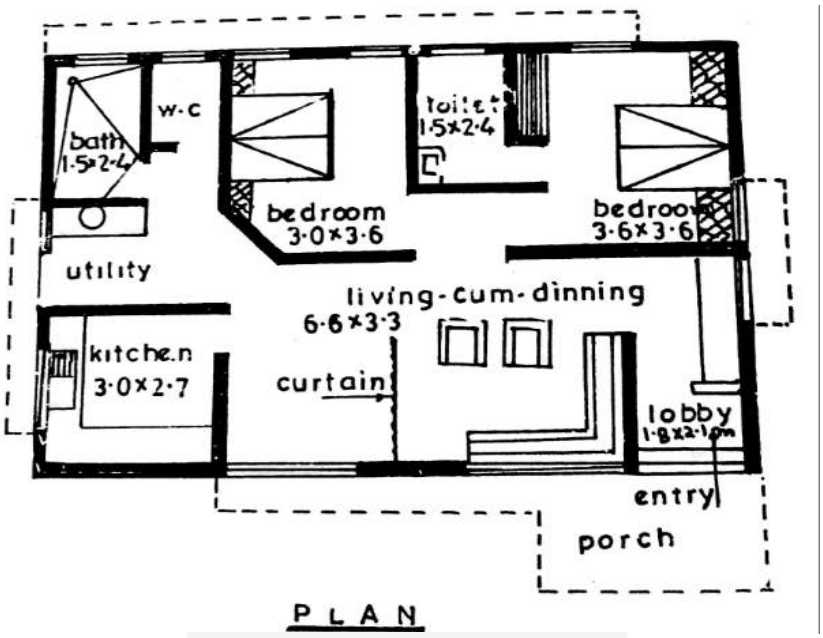


Figure.6

[30]

Code No:**R42011** **R10** **Set No. 1**

7 Prepare detailed estimate for the single room building shown in the sketch plan and section in figure 7.
Note: Make suitable assumptions where necessary. **[30]**



PLAN

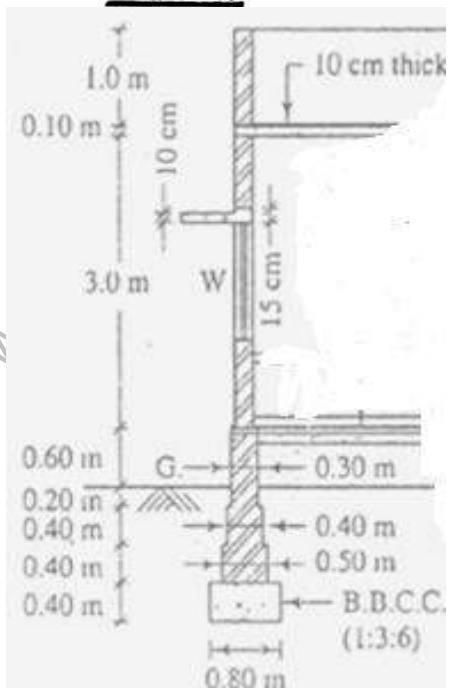


Figure 7

Code No:**R42011** **R10** **Set No. 2**

IV B.Tech II Semester Regular/Supplementary Examinations, April- 2015

ESTIMATION, SPECIFICATIONS & CONTRACTS

(Civil Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any Three Questions Part A
Answer any One Question in PART- B
Questions in part A carry 15 marks and Questions in Part B carry 30 marks

******

PART – A

1 a) What is approximate estimate and explain the importance? [8]

b) What is accuracy in estimate preparation? [7]

2 Through rate analysis, calculate the rate per unit of 12mm thick cement plastering 1:6. [15]

3 The ground levels along the center line of the road are given below

Chainage (meters)	0	50	100	150
RL of Ground	97.00	96.50	96.00	97.50

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. [15]

4 a) Explain the need for negotiation of contract. [8]

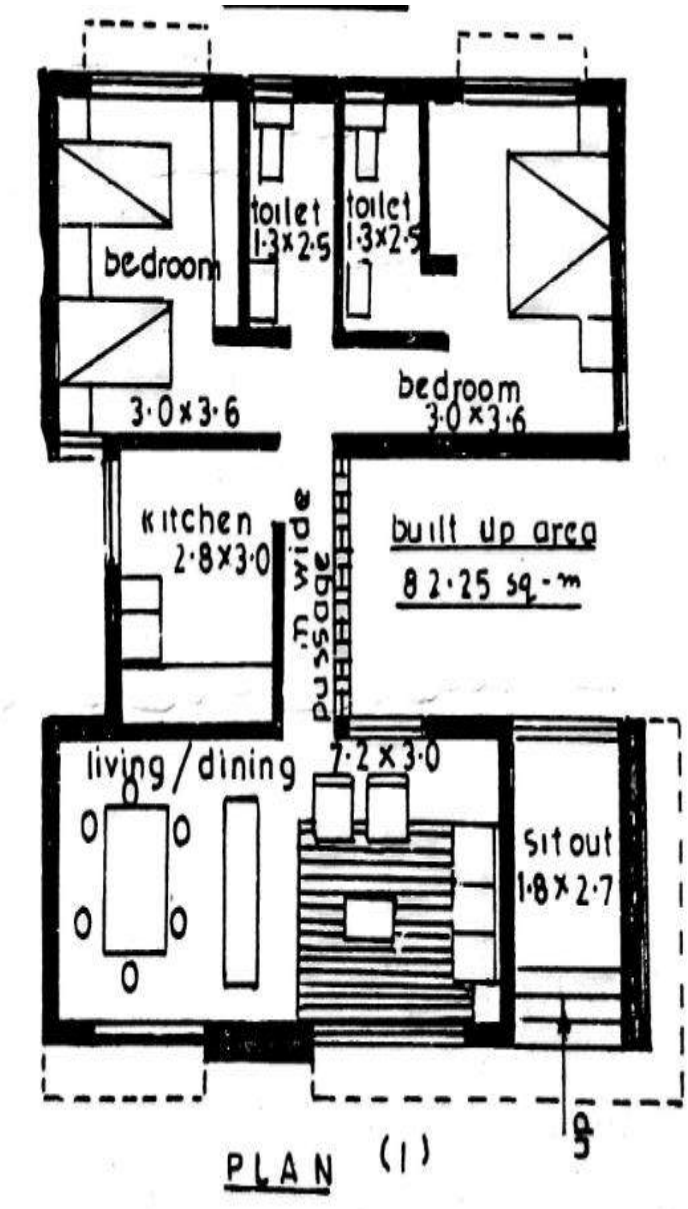
b) Explain labor contract and its role in civil works. [7]

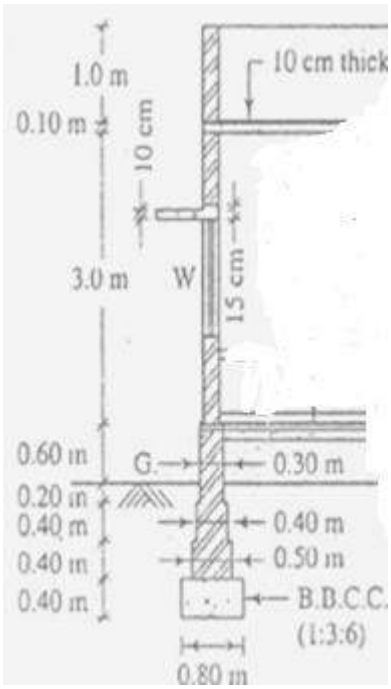
5 Write the specifications for 1st class brickwork in CM for super structure for Ground Floor. [15]

Code No:**R42011** **R10** **Set No. 2**

PART - B

6 Calculate quantity of items of work for Brick Work and enter the same in standard format of measurement sheet with brief description of item (refer fig 6.): *Note: Make suitable assumptions where necessary*. [30]





SECTION

Figure 6

Code No:**R42011** **R10** **Set No. 2**

7 Prepare detailed estimate for the plastering of super structure in CM 1:6 for building in Figure 7.
Note: Make suitable assumptions where necessary. [30]

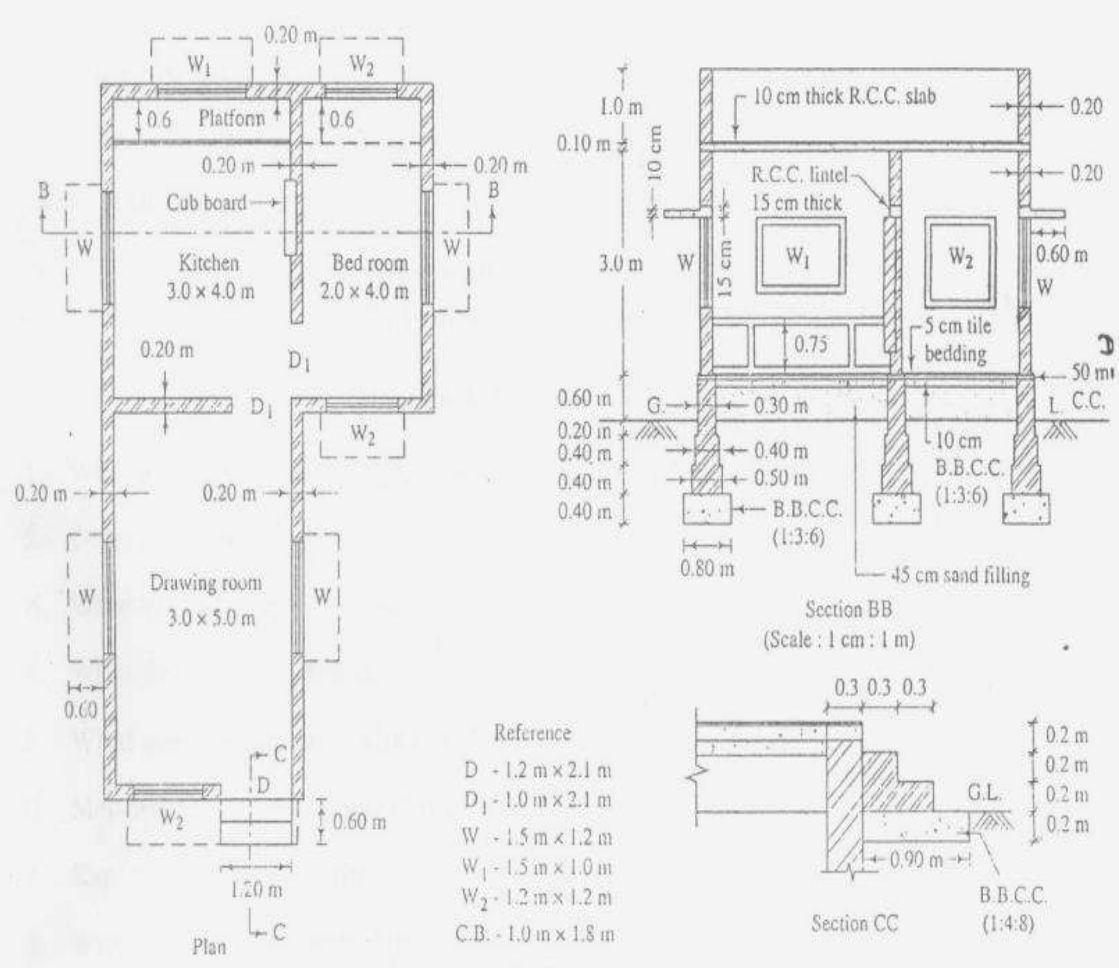


Figure 7

Code No:**R42011** **R10** **Set No.3**

IV B.Tech II Semester Regular/Supplementary Examinations, April- 2015

ESTIMATION, SPECIFICATIONS & CONTRACTS

(Civil Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any Three Questions Part A

Answer any One Question in PART- B

Questions in part A carry 15 marks and Questions in Part B carry 30 marks

******

PART – A

1 a) What is quantity surveying and who is quantity surveyor? [8]

b) Explain the principle units for various items of civil works [7]

2 a) What is analysis of rates and why it is carried out even if valid SSR is available? [8]

b) Explain steps needed for carrying out rate analysis for a typical item in civil works. [7]

3 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

[15]

4 a) State the purpose of penalties in contract agreements? [7]

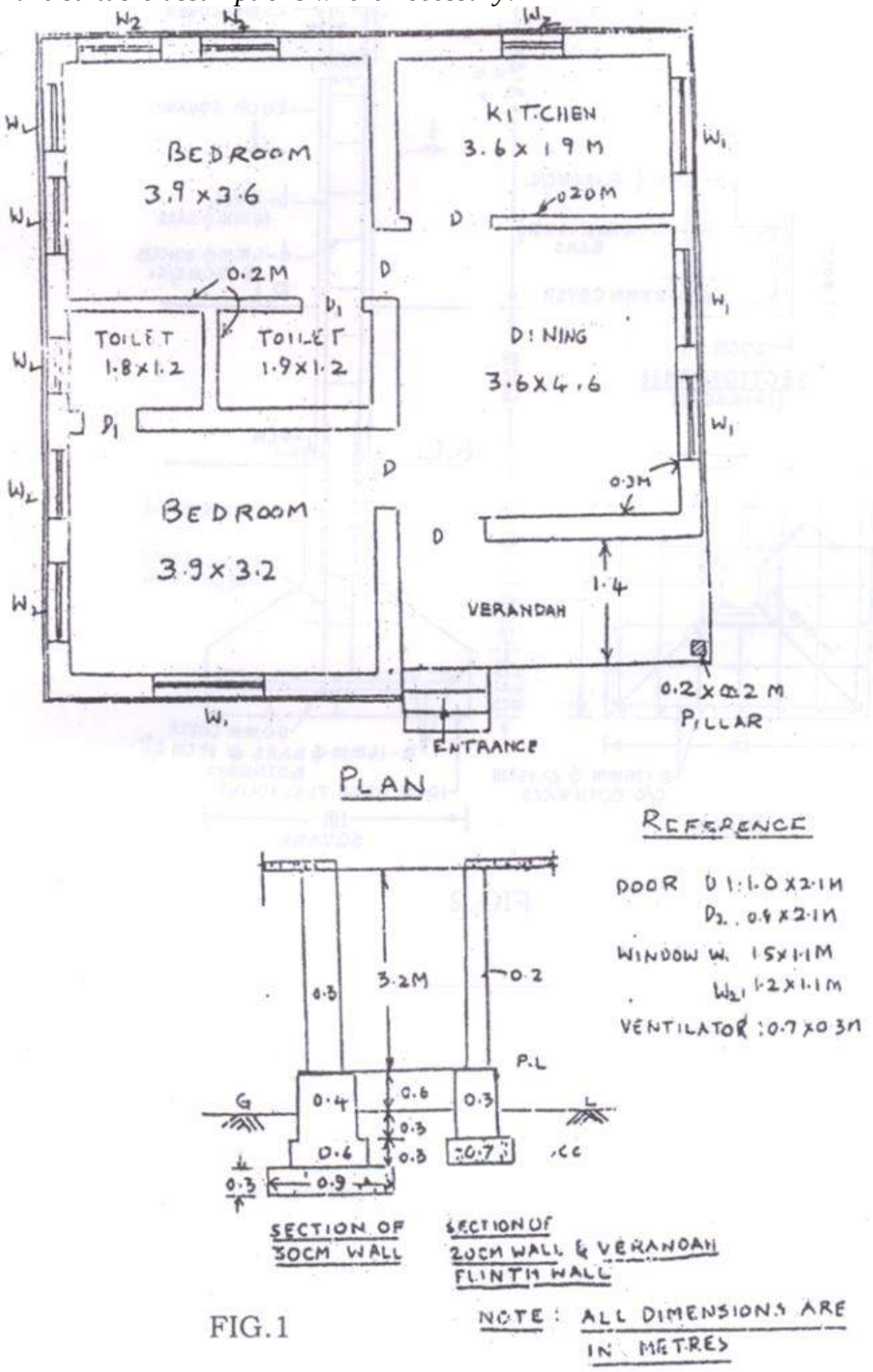
b) What is EMD and when it is forfeited? [8]

5 Write the detailed specifications for 1st class brickwork in CM 1:6. [15]

Code No:**R42011** **R10** **Set No.3**

PART – B

6 Prepare detailed estimate of brick work and plastering for the building in figure 6.
Note: Make suitable assumptions where necessary.



[30]

Figure 6.

Code No:**R42011** **R10** **Set No.3**

7 Calculate quantity of following items of work and enter the same in standard format of measurement sheet with brief description of item (refer Figure 7.):

(i) Plastering with CM 1:6
(ii) First class Brick works for super structure

Note: Make suitable assumptions where necessary.

[30]

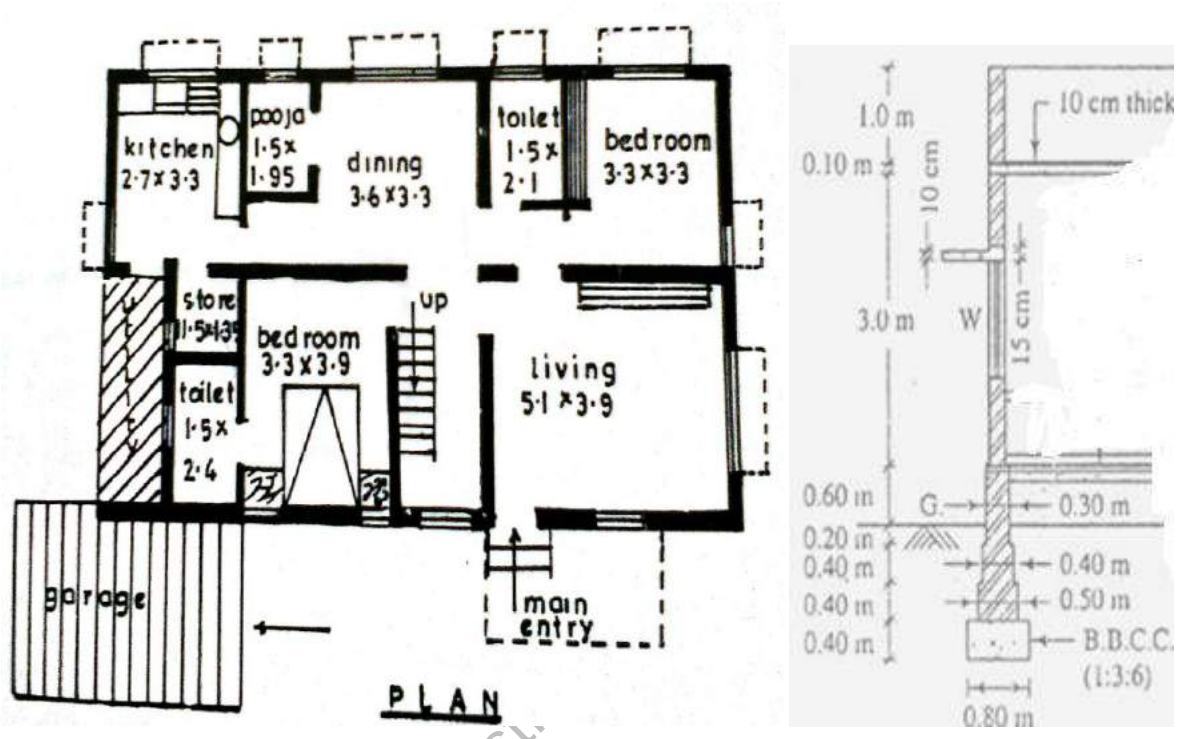


Figure 7.

Code No:**R42011** **R10** **Set No. 4**

IV B.Tech II Semester Regular/Supplementary Examinations, April- 2015

ESTIMATION, SPECIFICATIONS & CONTRACTS

(Civil Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any Three Questions Part A

Answer any One Question in PART- B

Questions in part A carry 15 marks and Questions in Part B carry 30 marks

******

PART – A

1 a) Give at least 4 purposes of preparing estimates for civil engineering works. [8]

b) Discuss accuracy in estimation of civil works. [7]

2 a) What is the need for contingent charges in estimate and how you make provision for the same? [8]

b) Explain the procedure of Rate Analysis and situations when Rate Analysis is needed to be carried out for items in public works. [7]

3 Work out quantities of earth work for a section of road as given in table.

Chain age (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 Chain age = 110.00 M

ii). Gradient of formation line = 1 in 300, upwards

iii). Top width of formation = 10.00 M

Side slope = 2:1 [15]

4 a) List components of a typical tender notice. [7]

b) Explain the procedure to be followed for opening construction tenders. [8]

5 Write the detailed specifications for damp proof course (2.5cmthick) C.C 1:1.5:3 [15]

Code No:**R42011** **R10** **Set No. 4**

PART – B

6 Calculate quantity of following items of work and enter the same in standard format of measurement sheet with brief description of item (refer figure 6): [30]

(iii) Excavation for wall foundation

(iv) Brick works

Note: Make suitable assumptions where necessary.

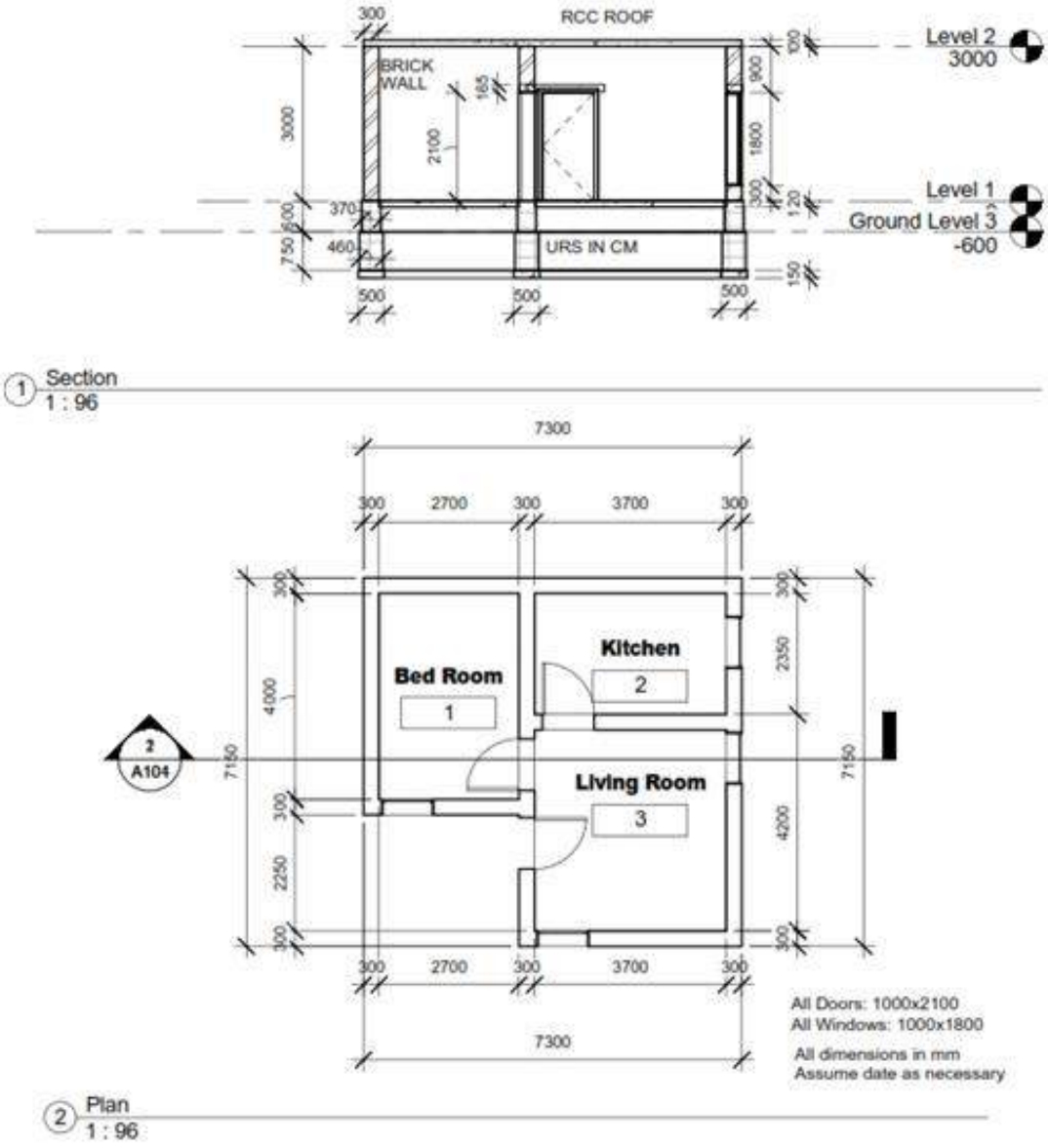


Figure 6.

Code No:**R42011** **R10** **Set No. 4**

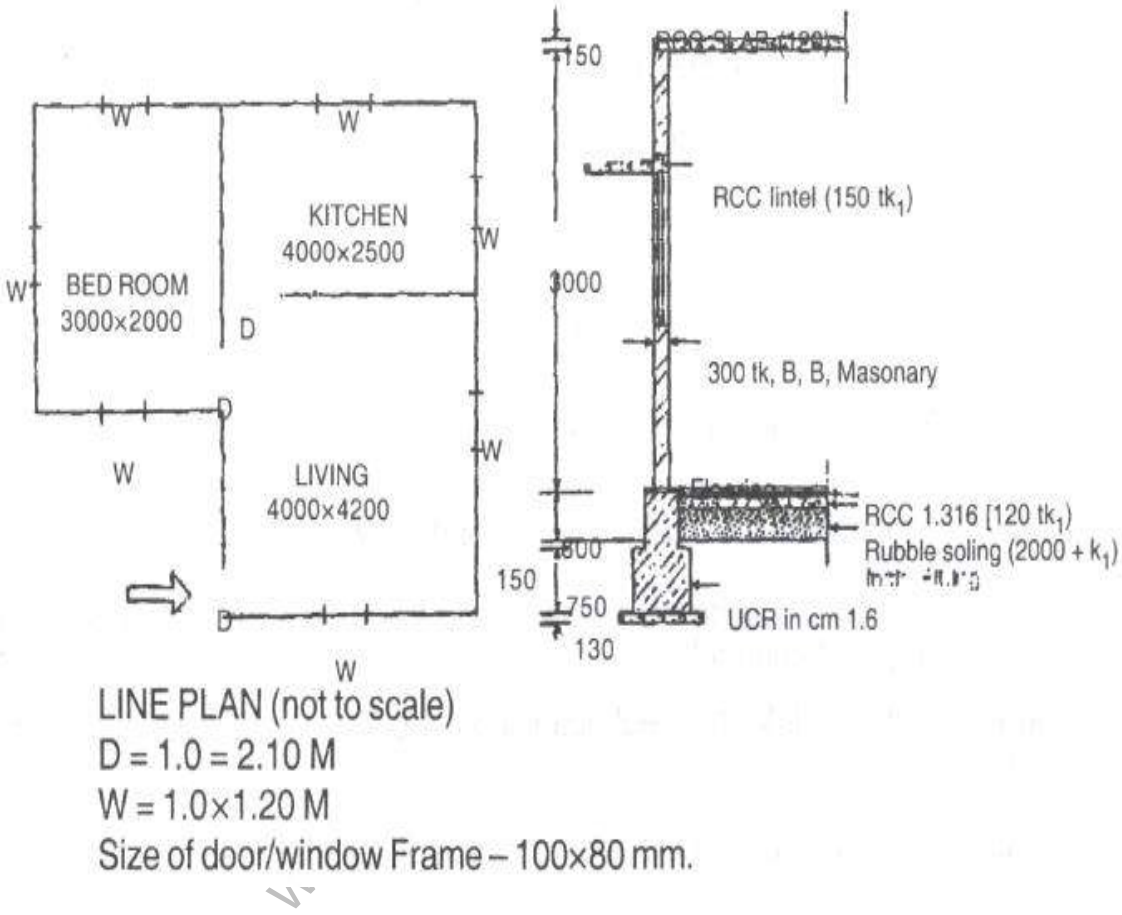
7 Calculate the quantities for the following items of work in standard format with description of each item (figure 7):

(a) Excavation for foundation

(b) UCR Masonry in foundation and plinth

Note: Make suitable assumptions where necessary.

[30]



LINE PLAN (not to scale)
D = 1.0 = 2.10 M
W = 1.0×1.20 M
Size of door/window Frame – 100×80 mm.

Figure 7.