

BE Civil VII CBGS
Q SEV

01.12.2016
Q.P. Code : 848402

(Revised Course)
(4 Hours)

[Total Marks : 80

- N.B. : (1) Questions No.1 is compulsory.
(2) Attempt any three questions from the remaining five questions.
(3) Figures to the right indicate full marks.
(4) Assume suitable data, if required but mention it clearly.

1. Write short notes on any four : 20
- (a) Administrative approval
 - (b) CBRI equations
 - (c) Mass Haul Diagram and its importance
 - (d) Freehold and Lease hold property
 - (e) Cross drainage works
2. Determine an approximate cost of a residential building (R.C.C. framed structure) located in Vashi, Navi Mumbai. 20
- (i) Earthwork excavation in foundation 4
 - (ii) Plain cement concrete (1:4:8) in foundation 4
 - (iii) Brick masonry in C.M. 1:5 for sub-structure 4
 - (iv) R.C.C. work in footings, columns, plinth beam, chajjas, roof beams and roof slab 8
3. (a) Carry out the rate analysis for 10
- (i) M 20 grade R.C.C. concrete with 2% steel including formwork and reinforcement.
 - (ii) Internal plastering in C.M. 1:5.
- (b) Draft a tender call notice for the construction of a Water treatment plant in Mumbai. It is estimated to cost 30 crores and is to be completed in 20 calendar months. 10

TURN OVER

4. (a) Prepare an estimate for a residential building in the western suburbs of Mumbai (R.C.C. framed structure) 7
- Plat area – 80m × 50m
 - FSI – 1.5
 - Building is G + 6
 - Consider the foundation cost as 18% of super structure cost
 - Allow 22% of building cost for all services
 - Allow 2.5% of overall cost for consultant fees
 - Consider 5.0% provision for contingencies

- (b) Differentiate between : 5
- Security Deposit and Earnest Money Deposit
 - Day's work and Piece work

- (c) Work out the earthwork quantities in embankment and cutting for a length of 600 m. 8

The particulars are :

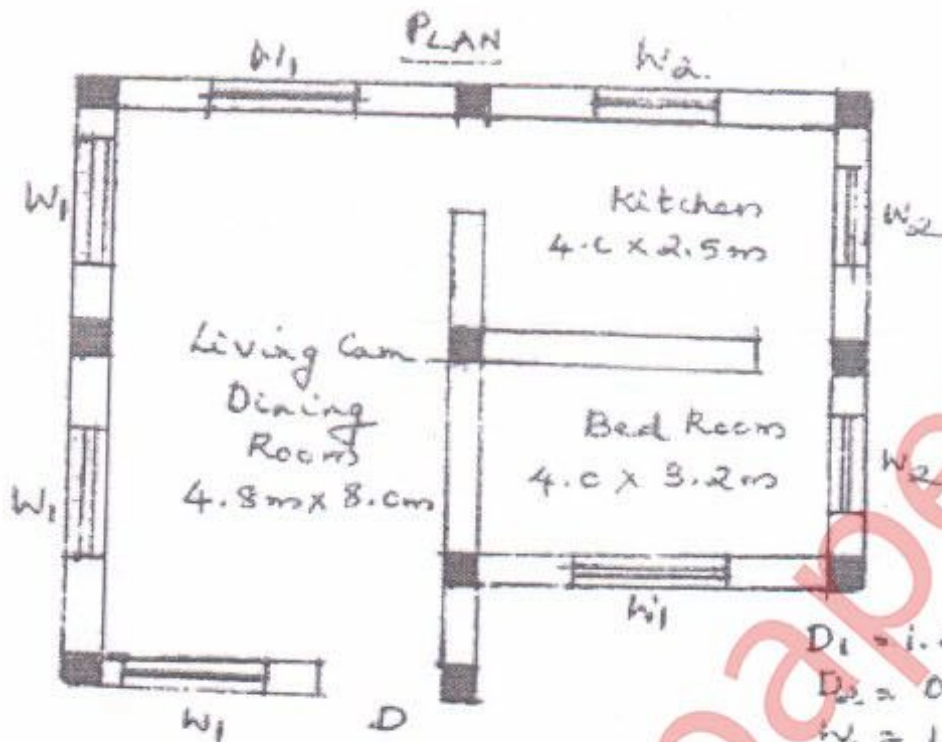
- Formation width = 20m
- Side slopes in embankment = 2:1(H.V.) in cutting = 1.5:1(H.V.)
- There is no transverse slope
- Rising gradient of 1:250 upto 250 m chain age
- Rising gradient of 1:100 upto 600 m chain age

Chainage	0	50	100	150	200	250	300	350	400	450	500	550	600
R.L. of Ground	172.0	172.35	172.60	173.80	173.0	172.65	172.20	171.50	171.20	170.65	170.35	170.60	170.75
R.L. of Formation	-	171.60	-	-	-	172.40	-	-	-	-	-	175.40	-

5. (a) What is bar bending schedule? What is its importance? 10
- Prepare a bar bending schedule of the figure shown in Fig. 2. The Roof Slab is 3 metres clear span and 6 metres long. (In plan, top and bent up bars are shown in dotted lines).

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$D_1 = 1.2 \times 2.1m$
 $D_2 = 0.9 \times 2.1m$
 $W_1 = 1.5 \times 1.5m$
 $W_2 = 1.2 \times 1.5m$
 Wall thickness -
 c. 230 throughout

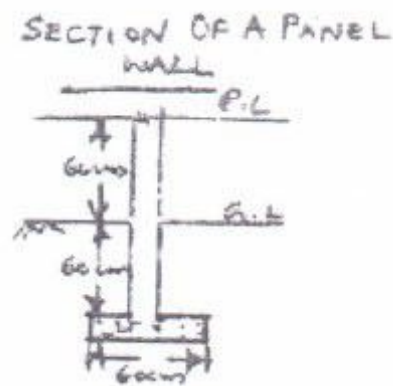
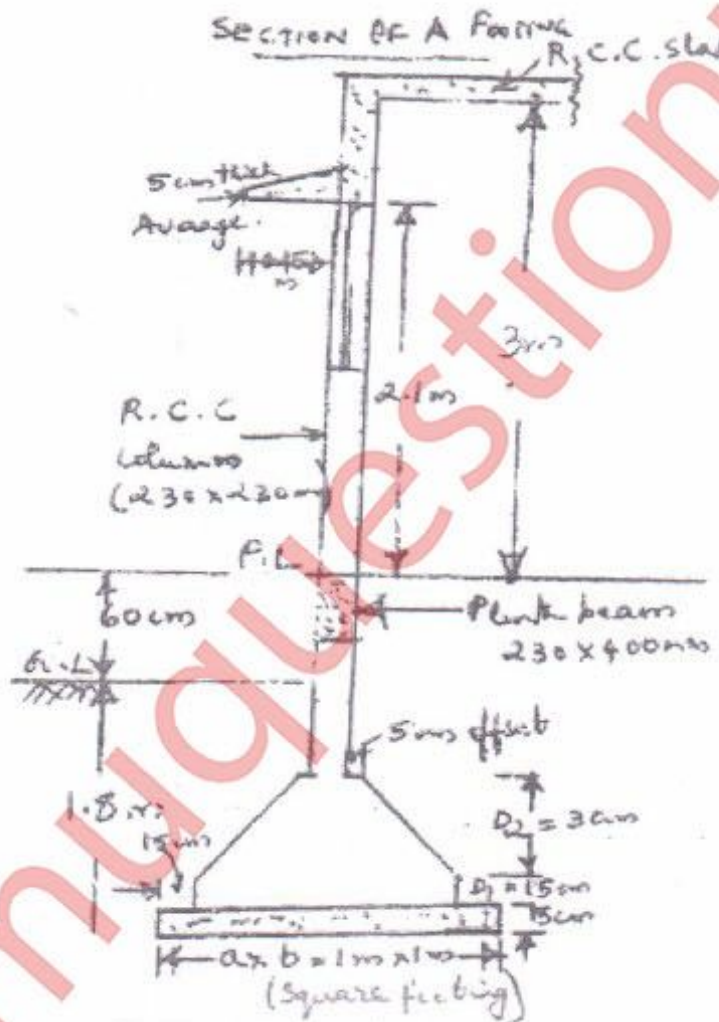


Figure 1

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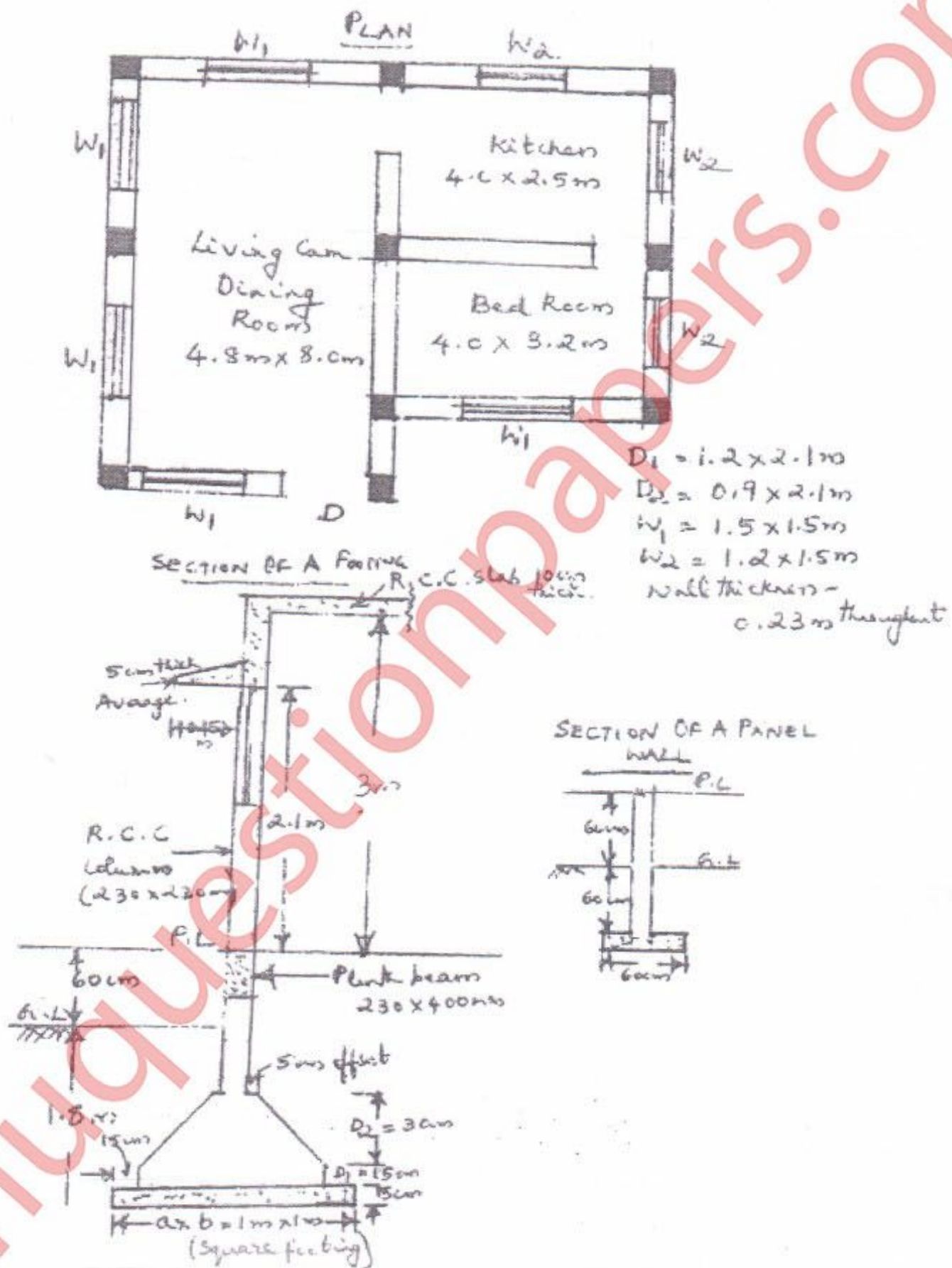


Figure 1

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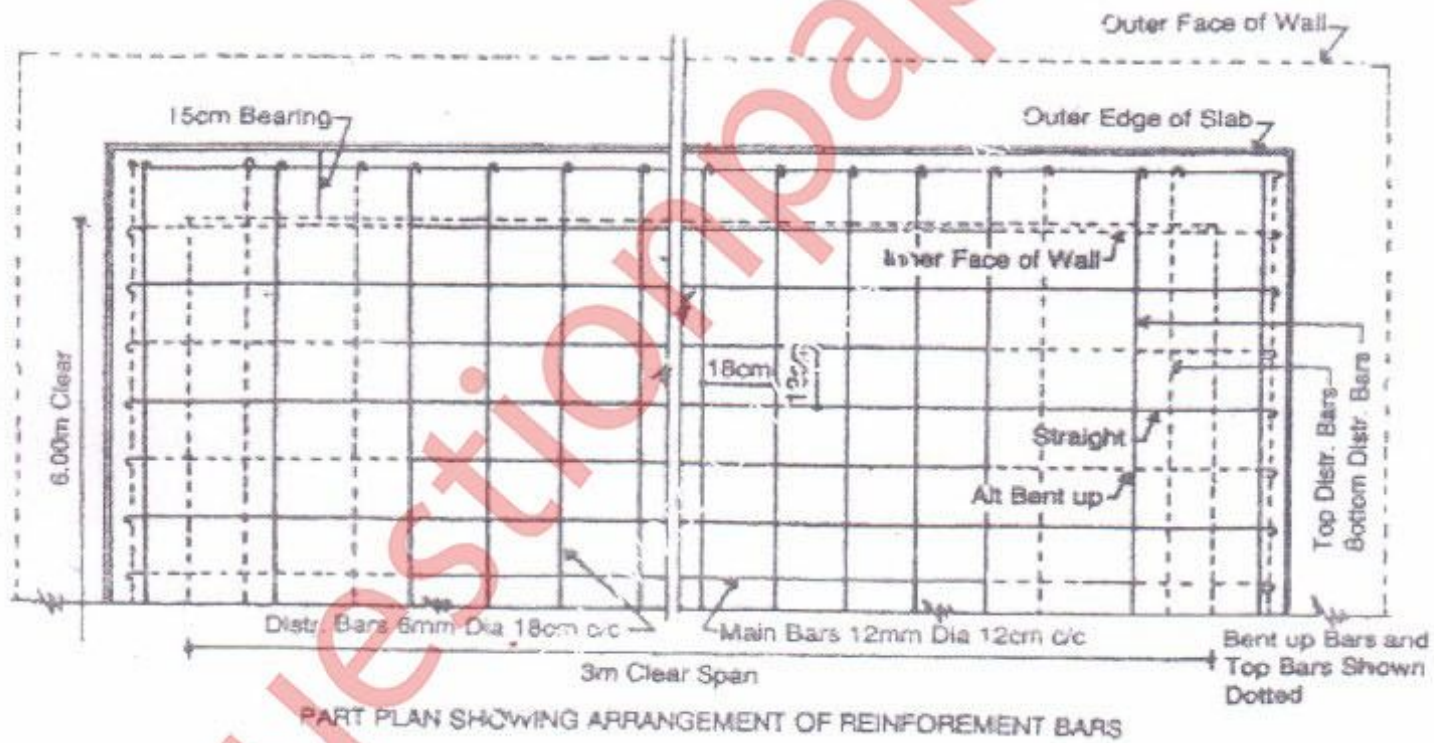


Figure 2