L. D. COLLEGE OF ENGINEERING, AHMEDABAD (GTU)

8th Semester Civil Engineering - PDDC 2013 Batch

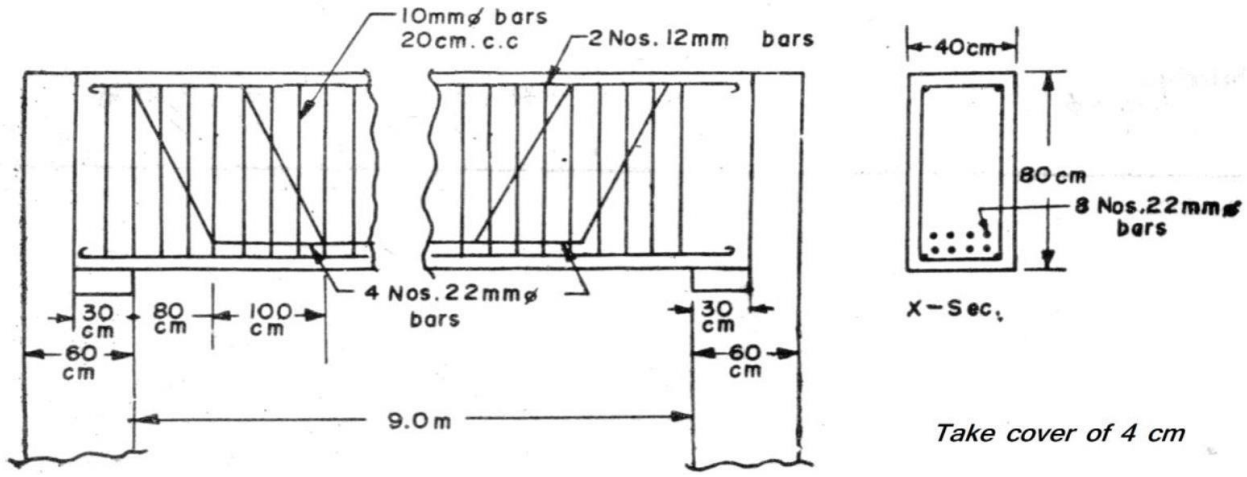
Subject Code & Name : X80601 - Professional Practice & Valuation

Assignment - 1 (Introduction and Building Estimate)

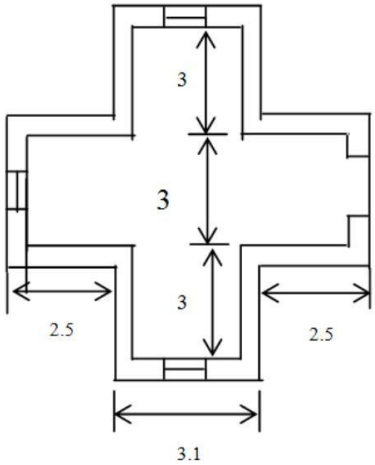
Date : 13-02-2017

Theory & Example:

1. Give the units of measurement of the following: sawing of timber, barbed wire fencing, silt clearance, R.B. work, Steel girders, A.C. sheet roofing, supply of cement, GI fencing, sawing of timber, cornice, internal wall painting 6 inches wide.
2. Enumerate and discuss various types of estimates.
3. Calculate the quantity of brickwork in a segmental circular arch of 2.20 meter span 50 cm rise and 30cm thick the width of the wall is 30 cm.
4. Calculate the quantity of arch work in flat arch over a door 1 meter wide, thickness of arch is 30- cm and width of wall is 30 cm. The arch subtends an angle of 60 degree at the centre to form equilateral triangle
5. Estimate the quantity of earthwork in footing, lime concrete in footing and earth work in foundation refill for a singled room servant's quarter having internal dimensions 3.5 m x 4.5 meter, walls 0.3 meter thick above plinth level, 0.4 m thick below plinth level with one footing 0.5 meter wide 0.2 meter deep over 0.8 m wide 0.3 m deep lime concrete layer. Foundation is 0.8 m wide and 1.10 m deep below ground level.
6. Prepare detailed estimate of quantity of RCC beam as mentioned in below fig, and show the bar bending schedule.

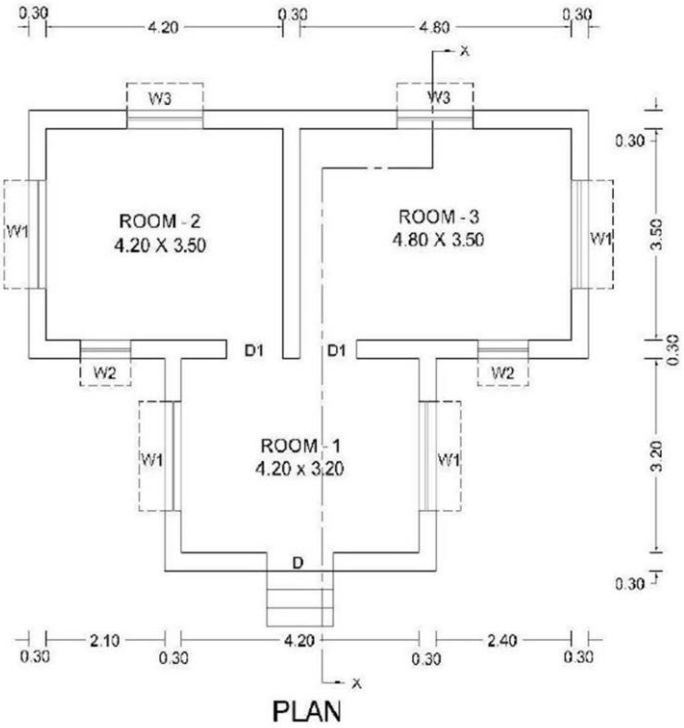


7. Estimate the quantities for: earth work in excavation, foundation PCC 15 cm thick, plinth area, earth required in plinth filling, for the plan given figure.

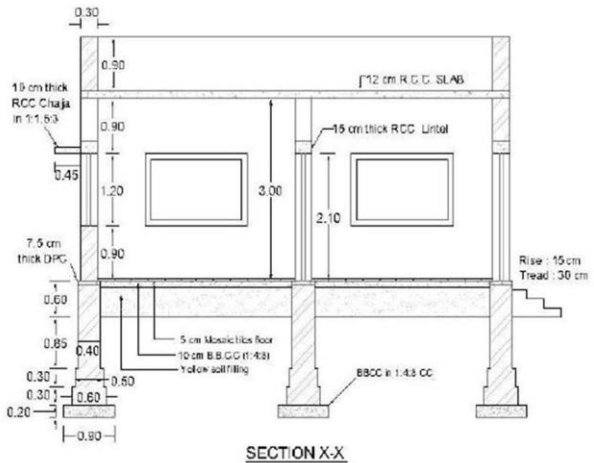


The spread footing foundation for the building is 0.9 meter wide consisting of three lifts of brickwork 0.4, 0.5, 0.6 m wide below the 0.3 meter thick wall and 15 cm thick foundation PCC below lift 3 which is 0.6 meter wide. Each lift is 10 cm thick. Total foundation depth is 0.9 meter. Plinth level is 30 cm high above the existing ground level.

8. Workout the following quantities for residential building as shown in below Fig.
   - First class brick masonry in 1:6 CM for foundation and plinth.
   - Internal plastering in 1:4 CM.
   - First class brick masonry in 1:6 CM for superstructure.
   - RCC in 1:1.5:3 for lintel, Chajja and slab.



PLAN

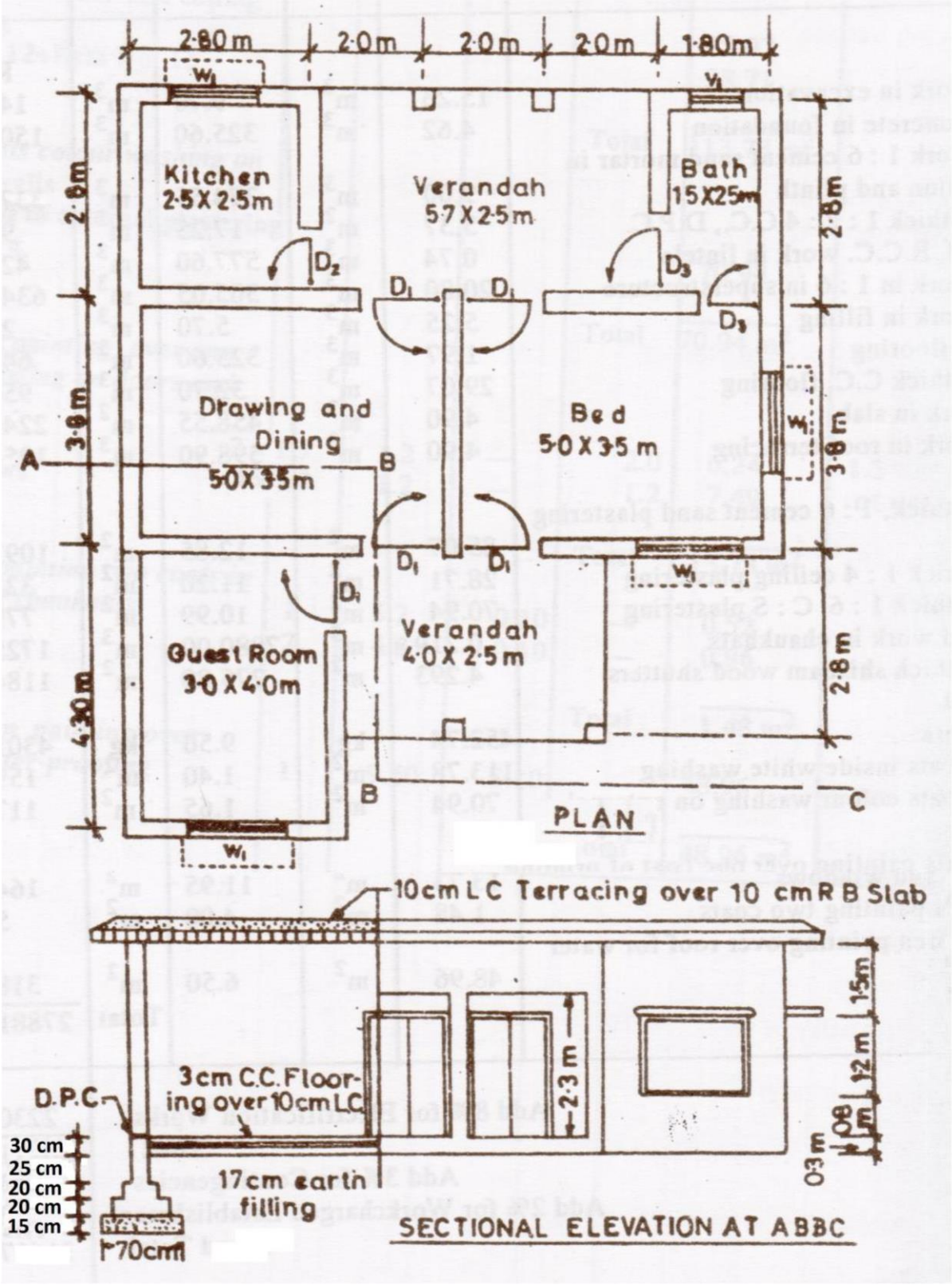


SECTION X-X

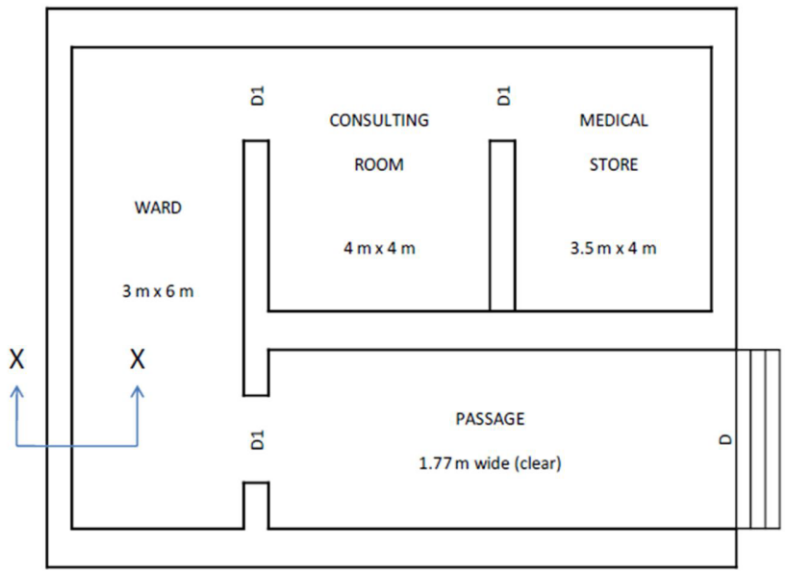
NO.	DETAILS	SYMBOL	SIZE
1	DOOR	D	1.20 x 2.10
2	DOOR	D1	1.00 x 2.10
3	WINDOW	W1	1.20 x 1.20
4	WINDOW	W2	0.90 x 1.20
5	WINDOW	W3	1.20 x 1.20

Note: All dimensions are in 'm' if not specified.

9. From the given plan and details mentioned in fig, work out the quantities for the following items of work; (i) Excavation for foundation. (ii) Cement concrete in foundation (iii) Earth work in plinth filling in rooms



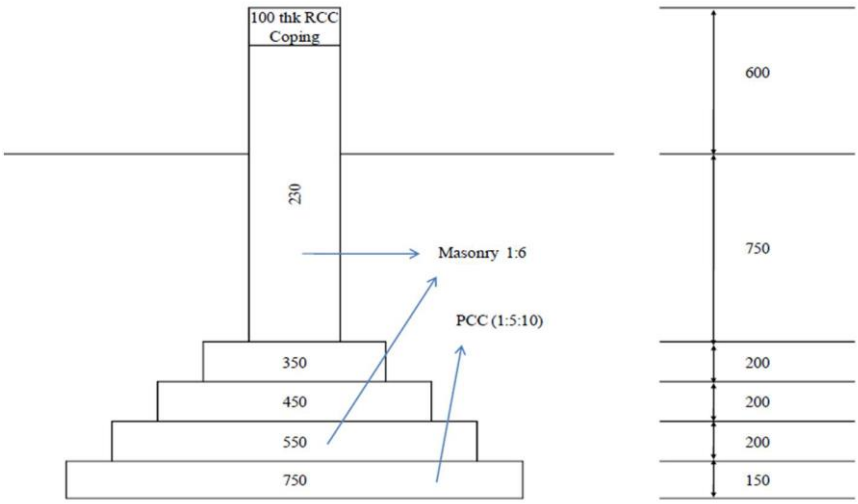
10. Plan and section for the clinic building is shown in fig. given below. Estimate the quantities of the following items. Assume that steps are to be constructed in 1:6 masonry and rest on 300 mm BBCC foundation below ground level.
    - Earthwork in excavation
    - PCC (1:5:10) in foundation
    - Masonry up to plinth level
    - RCC Coping



RISER = 0.15 m D 1.77 x 2.1 m

TREAD = 0.30 m D1 1.20 x 2.1 m

Fig. 1 PLAN FOR CLINIC



Section:-X-X

All dimensions are in mm

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