

QP Code : 29899

(OLD COURSE)

(4 HOURS)

[Total Marks:100]

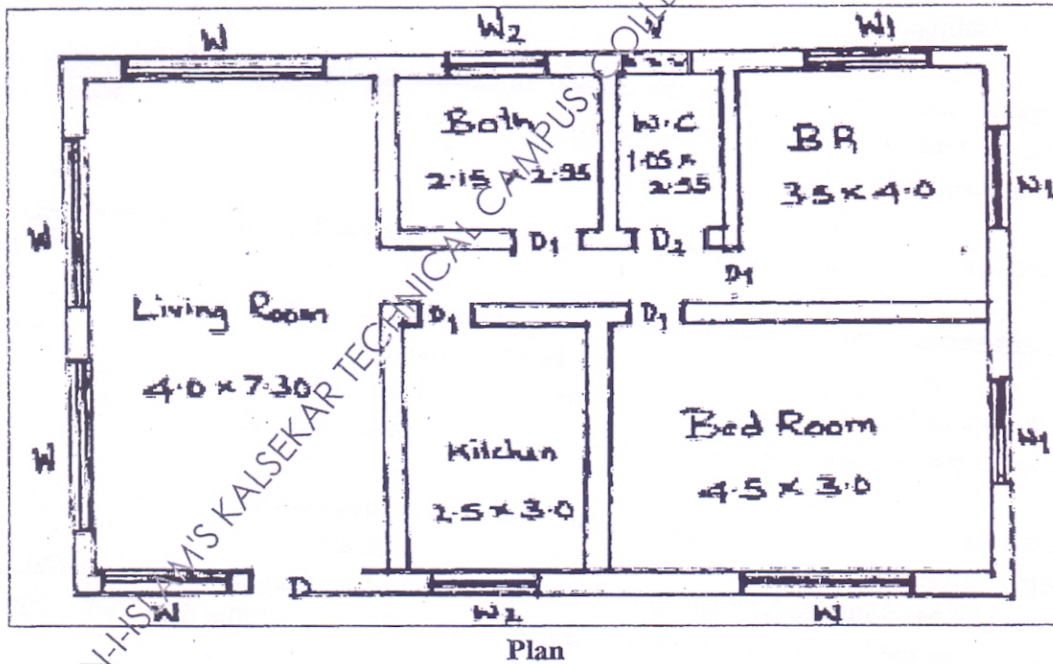
N. B. 1. Question no. 1 compulsory.

2. Answer any four questions out of remaining
3. Assume any data, if required and state them clearly
4. Attempt sub questions in order
5. Illustrate answer with neat sketches wherever required
6. Figures to the right indicate full marks.

1. With reference to the figures given below (Fig. 1), estimate the quantities of the following items of work:

- (a) Earthwork in excavation
- (b) First Class Brickwork in foundation and plinth
- (c) Brickwork in superstructure
- (d) D.P.C

[20]



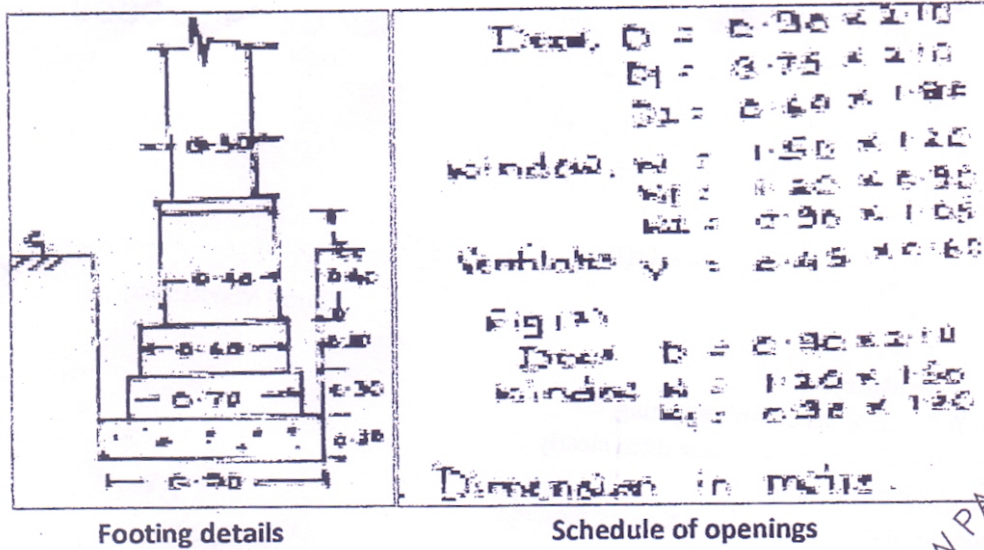


Fig. 1

2. a) Prepare an abstract for the quantities worked out in Question 1. [6]  
 b) Explain the terms: [6]  
 i) Work charged establishment. ii) Contingencies.  
 c) Explain the terms 'Lead' and 'Lift' in estimating. How will you consider it in estimate of an excavation work? Elaborate with an example. [8]
3. a) What is depreciation? State and explain the method for calculating depreciation of a building. [7]  
 b) What is meant by 'General' and 'Special' conditions of contract [8]  
 c) Explain sinking fund and year's purchase. [5]
4. a) State and explain the mode of measurement for plastering of doors and windows between areas 0.5 sq.m. to 3.0 sq.m [6]  
 b) Explain the difference between detailed estimate and approximate estimate. [4]  
 c) Analyse and workout the rate for following items of construction. [10]  
 i) 1<sup>st</sup> class brickwork in cement mortar (1 : 5) in foundation and plinth.  
 ii) 10 mm thickness plastering to internal wall surface with two coats in cm (1 : 3).
5. a) State 4 issues that may be referred to an arbitrator. Discuss the powers of an arbitrator [6]  
 b) Differentiate clearly between item rate contract and lump-sum contract [4]  
 c) A rectangular plot has 35m width along the road and 95 m depth at right angles to the road. Calculate the value of land using method of belting. Assume that cost of the first belt of 20m depth is Rs. 200/- per m<sup>2</sup> [6]  
 d) Discuss the terms Retention money, acceptance of a tender [4]

6. a) Explain the terms 'Administrative approval' and 'Technical sanction' for any PWD work [5]

b) What is the unit for measurement of:

(i) Pointing (ii) 10cm brickwork (iii) RCC lintel (iv) Woodwork for doors [4]

c) State true or false with justification: "A lowest tender can be rejected". [5]

d) A billionaire lady wants to construct a bungalow with all possible modern security provisions and facilities in it. Suggest a suitable tendering method she should adopt for inviting tenders for construction of the bungalow. Justify your suggestion. [6]

7. a) A (G+2) building has a carpet area of 800 sqm. In each floor. The area occupied by corridor verandah, staircase etc is 25% and the area occupied by wall, column is 10%, water supply 7.5%, electrification 8.5%, contingency 4%. Prepare a preliminary estimate considering cost of ground floor Rs. 1500/- per sq.m, Rs. 1700/- for 1<sup>st</sup> floor, Rs. 1850/- for 2<sup>nd</sup> floor [10]

b) Figure 2 shows section along the shorter span of a room of size 7m x 12m internal dimension. The thickness of the slab is 15cm. Assume 5 cm end cover and 2.5 cm cover at top and bottom. Draw bar-bending schedule [10]

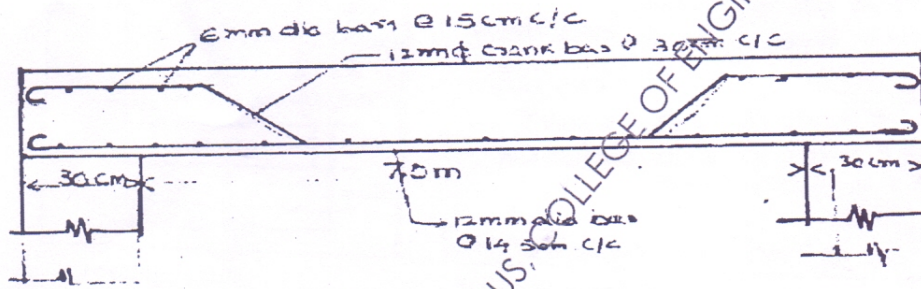
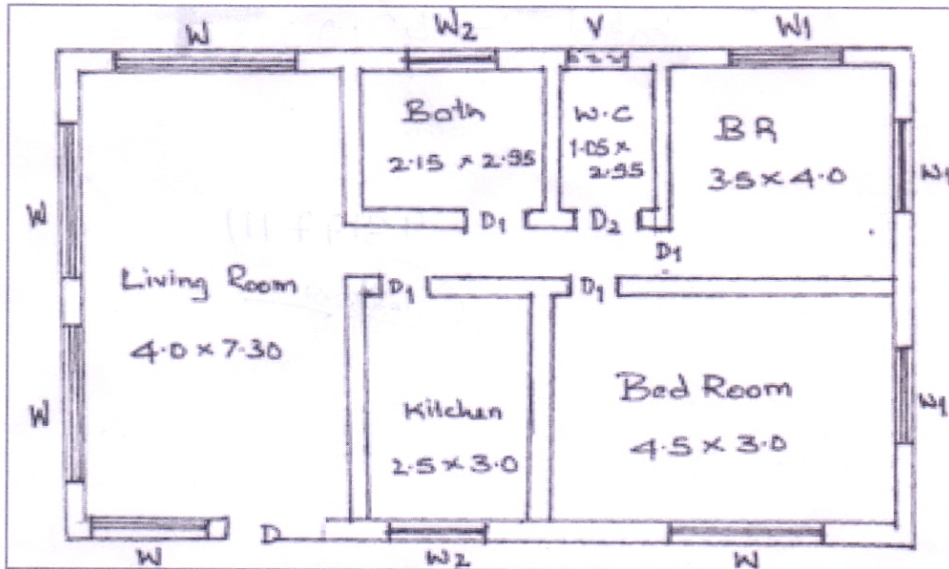


Fig 2: Section for 7b)

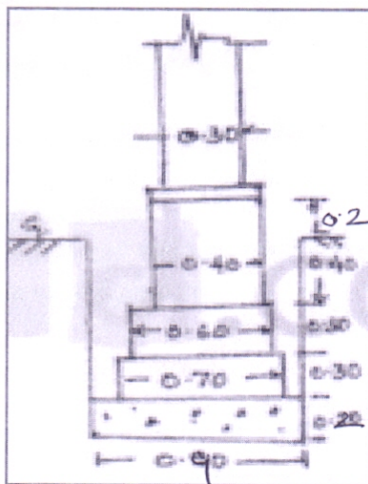
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- (a) excavation
- (b) First Class Brickwork in foundation and plinth
- (c) Brickwork in superstructure
- (d) D.P.C

[20]



Plan



Footing details

Door, D	= 0.90 x 2.10
D1	= 0.75 x 2.10
D2	= 0.60 x 1.80
Window, W	= 1.50 x 1.20
W1	= 1.20 x 0.90
W2	= 0.90 x 1.05
Ventilator, V	= 0.45 x 0.60
Fig (2)	
Door D	= 0.90 x 2.10
Window W	= 1.20 x 1.50
W1	= 0.90 x 1.20

Dimension in metre.

Schedule of openings

Fig. 1

[TURNOVER