Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 31018

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2013.

Seventh Semester

30th AN

Civil Engineering

080100049 — ESTIMATION AND VALUATION

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State the Unit of measurement for sanitary fittings and floor finishing.

2. When are revised estimates prepared?

3. What are the various types of arches?

4. Distinguish between Load bearing structures and framed structures?

5. With a neat sketch show the essential components of a septic tank used for a small household.

6. What do you understand by economical depth?

7. State the use of the Standard data book?

8. What is meant by Schedule of rates?

9. Define "Depreciation"

10. Write short notes on Mortgage value?

PART B — (5 × 16 = 80 marks)

11. (a) Calculate the quantities of the following works for the foundation shown in Fig.11(a).

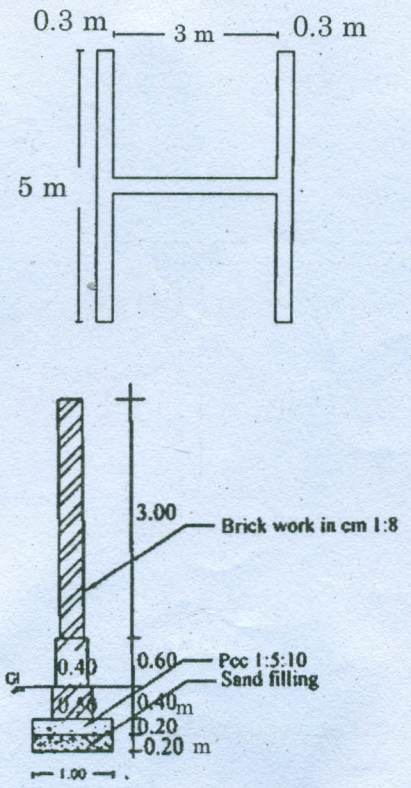


Fig. 11(a) Foundation Plan and Section.

(i) Earthwork excavation

(ii) Brick work in CM 1:8.

(iii) Sand filling for foundation

(iv) Plain cement concrete 1:4:8 for foundation. (4 × 4)

Or

(b) (i) The actual cost of a building having a plinth area of 105 m^2 and height 5m is 8.50 lakhs. It is proposed to construct another similar building in the same locality with a plinth area of 150 m^2 and height 4.50m. Estimate the approximate amount required for the proposed building. Assuming the increase in the cost of materials and labour as 30%.

(ii) List out the different types of estimate and explain each one. (8+8)

12. (a) Calculate the wood required for a fully panel in detail door of size 1.00 × 2.10m (Double leaf)

Size of post and head	: 100×75mm (rebate 15mm)
Size of lock rail	: 150×40mm
Size of bottom rail	: 200×40mm
Size of styles & other rails	: 90×40mm
Number of panels	: 6
Thickness of panels	: 25mm

(16)

Or

(b) Calculate the quantities of the following works for the residential building as shown in fig.12(b).

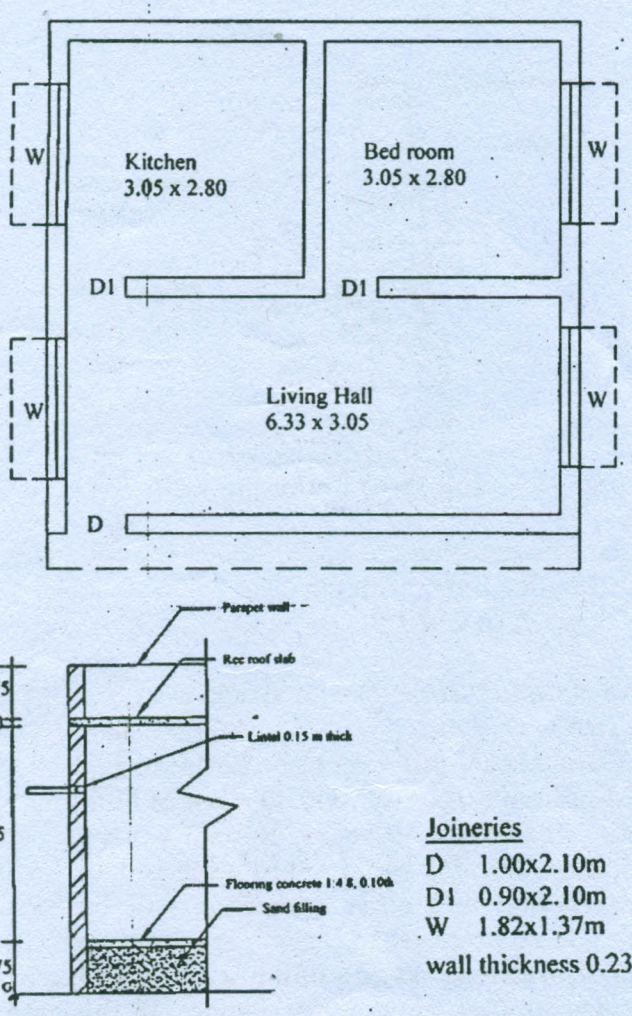


Fig. 12b Foundation Plan and Section

(i) Ceiling plastering in CM 1:4
(ii) Brick work in CM 1:8 above ground level.
(iii) Reinforced cement concrete 1:2:4
(iv) Inner wall plastering in cm 1:6. (4 × 4)

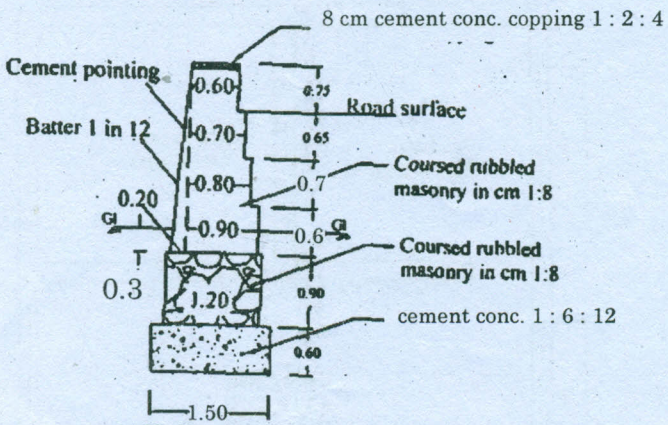
13. (a) Estimate the cost of construction of a metalled road from the following data

Length	: 1515m
Formation width	: 12.5m
Height of embankment	: 1.75m
Metalled width	: 9.5m
Side slope of banks	: 2:1
Soling of bricks	: 10cm thick
Wearing of stone metal	: 15cm thick

Surface to be finished off with 2 coats of bitumen using 264 kg of bitumen and 1.98 m^3 of bajri per m^2 of road area. (16)

Or

(b) Calculate the quantities of all items of work for the construction of Retaining wall for a length of 45m. Fig. 13(a). (16)



(All dimensions are in m)

Fig 13(a) Retaining wall.

14. (a) Write down the detailed specifications of the following

(i) Painting for inner wall surface

(ii) Brick work in CM 1:8. (8+8)

Or

(b) Prepare a detailed data for the Brick work in CM 1:5 using grade 7.5 bricks – $1m^3$. (16)

15. (a) (i) Calculate the annual rent of a building with the following data. (10)
Cost of land = Rs. 4,50,000.00, Cost of building = Rs. 7,75,000.00. Estimated life = 80 years, Return expected = 4% on land, 8% on building. Annual repairs are expected to be 0.9% of the cost of construction and other outgoings will be 35% of the gross rent. There is no proposal to setup a sinking fund.

(ii) The capitalized cost of a building is Rupees 2.50 lakhs, including all fittings of first class construction. If the rate of interest is 8%, calculate the net return from the property. Assume outgoings as 17.5% on gross income. (6)

Or

(b) Briefly explain the various methods of valuation. What is the necessity of valuation? (16)