

CBCS Scheme

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15ENG4.6

Fourth Semester B. Arch Degree Examination, June/July 2017

Specification, Quantity and Costing of Buildings

Time: 3 hrs.

Max. Marks: 100

Note: Answer FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. What is estimation? Explain the need for estimation and costing. (10 Marks)
b. Write a note on detailed estimate. (10 Marks)

OR

- 2 Write the detailed specifications for the following:
a. Earthwork in excavation for foundation in hard soil.
b. Providing and laying PCC roof slab with CC 1:1.5:3
c. First class brickwork in CM 1:6 in super structure
d. Providing and laying plastering to internal walls in CM 1:6. (20 Marks)

Module-2

- 3 a. What is tender? What are the contents of a tender? (08 Marks)
b. Write short notes on the following :
i) Administrative sanction and technical sanction
ii) Security retention and earnest money deposit
iii) Measurement book and its importance
iv) Valuation and different methods of valuation. (12 Marks)

OR

- 4 a. Explain at least three standard test results considered as a part of specification and their inclusion in the Bill of quantities. (12 Marks)
b. Write a note on material security and workers safety considered in specification. (08 Marks)

Module-3

- 5 a. What is rate analysis? Describe the factors affecting rate analysis of an item. (10 Marks)
b. Write short note on
i) Schedule of rates
ii) Unit rate and lump sum rate (10 Marks)

OR

- 6 Carry out rate analysis for the following Given: cement = ₹ 320/bag, sand = ₹ 120/m³ and coarse aggregate = ₹ 750/m³.
a. Cement concrete Of 1:5:10 for bed in foundation
b. Random rubble masonry in CM in 1:6 in foundation
c. Brick masonry in CM in 1:6 in super structure
d. 12mm thick cement plastering 1:3 on RCC ceiling. (20 Marks)

Module-4

- 7 Prepare a detailed estimate for a residential building as shown in Fig.Q7 for the following items of work.
- a. Earthwork in excavation @ the rate of ₹ 100/m³. (06 Marks)
 - b. SSM in CM 1:5 in foundation at the rate of ₹ 2150/m³ (06 Marks)
 - c. 1st class brick work in super structure in CM 1:6 at the rate of ₹ 3700/m³. (08 Marks)

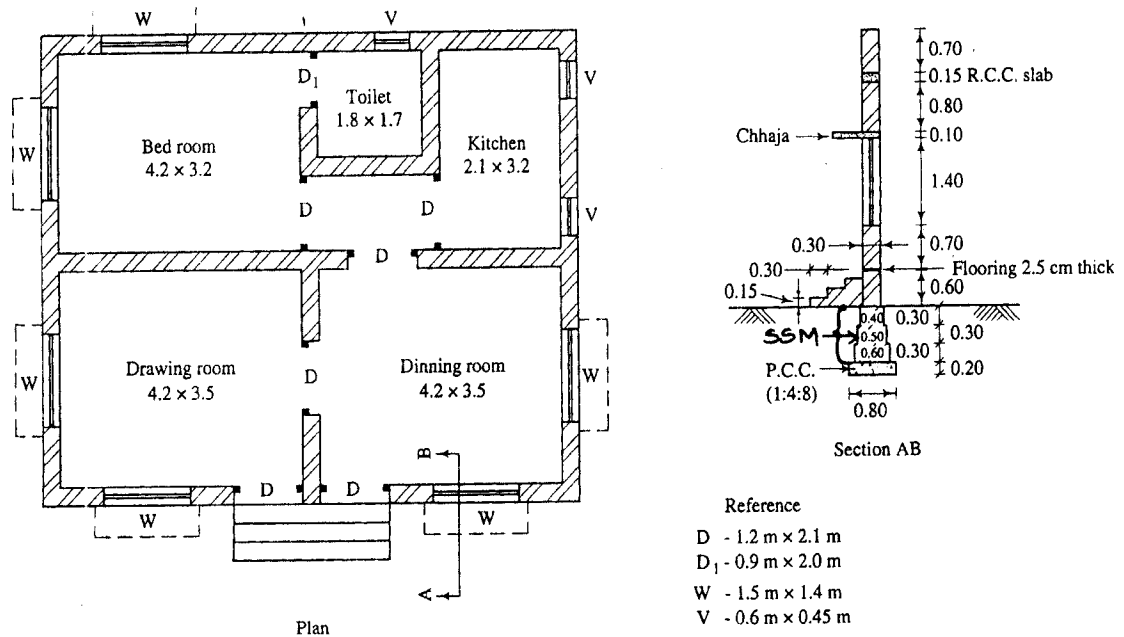


Fig.Q7

OR

- 8 Prepare a detailed estimate for a office room of size 6m×8m for the following items of work.
- a. Providing and laying flooring using modular tiles of size 0.6m×1.2m in CM 1:6 on a bed of PCC 1:4:8. (07 Marks)
 - b. Providing and laying false ceiling. (06 Marks)
 - c. Providing and laying two coats of plastic emulsion for internal walls over a coat of primer and putty. (07 Marks)

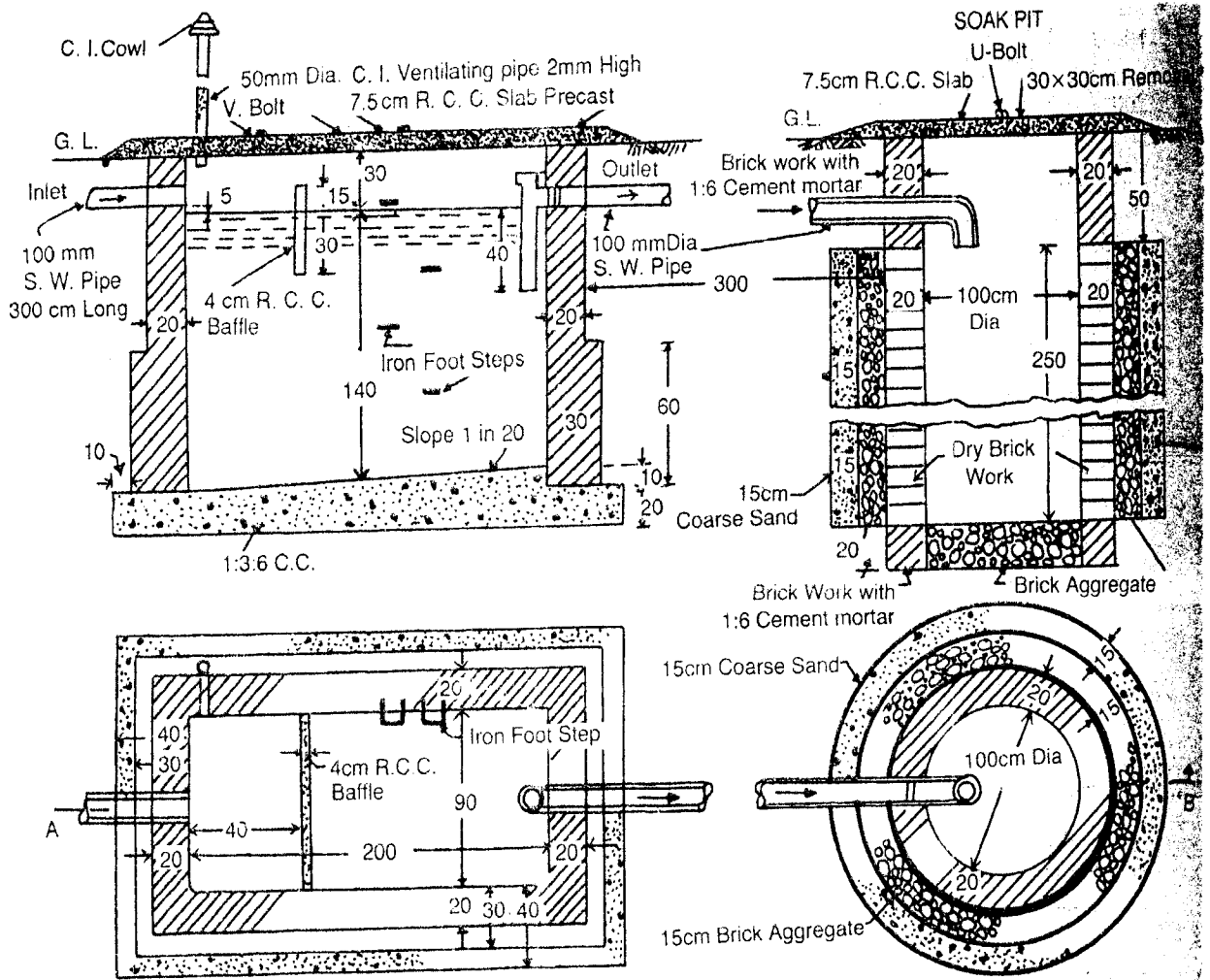
Module-5

- 9 Estimate the earth work for a portion of the road from the following data. Formation width of road is 10m side slopes are 2:1 in filling and 1.5:1 in cutting. Cost of filling is ₹ 200/m³ and cost of cutting is ₹ 140/m³. (20 Marks)

Chainage (m)	0	40	80	120	160	200	220	240
RL of Ground	100.60	100.20	99.80	100.20	100.80	101.90	102.40	102.50
RL of Formation	101.00							
		Raising Gradient of 1 in 400 →						

OR

- 10 Prepare a detailed estimate for a septic tank with soak pit shown in Fig.Q10 for the following items of work.
- a. Earth work in excavation (07 Marks)
 - b. First class brick work (06 Marks)
 - c. 12mm thick plastering for walls using CM 1:6. (07 Marks)



PLAN

All Dimensions in Centimetre unless otherwise Specified,

Fig.Q10
