



--	--	--	--	--	--	--	--	--	--

17CT73

Seventh Semester B.E. Degree Examination, Jan./Feb. 2021
Estimation and Costing

Time: 3 hrs.

Max. Marks:100

- Note:** 1. Answer any **THREE** questions by selecting any **TWO** full questions from **PART-A** and **ONE** from **PART- C**.
2. **PART-B** is compulsory.
3. Missing data, if any may be suitably assumed.

PART - A

- 1 a. Mention the necessity of estimate. What are the types of estimate and explain any two. (10 Marks)
b. Explain briefly :
i) Procedure for recording and checking measurement
ii) Nominal muster roll and measurement books. (10 Marks)
- 2 a. What is meant by specification? Explain briefly the types of specification. (10 Marks)
b. Explain briefly :
i) Definition and purpose of rate analysis
ii) Security deposits and EMD. (10 Marks)
- 3 Write specification for the following :
i) BBM in CM 1:6
ii) RCC roof slab with CC 1:1½ : 3
iii) Size stone masonry in CM 1:6 for basement
iv) Ceiling plastering in CM 1:4
v) Painting work. (20 Marks)
- 4 Carryout the rate analysis for the following :
i) PCC 1:3:6 for foundation using 20mm down size aggregates
ii) 1st class brick masonry for superstructure CM 1:4
iii) 12mm thick plastering for walls with CM 1:6
iv) CC of 1:2:4 for bed in foundation
v) 6mm thick cement plastering 1:3 to RCC ceiling. (20 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.

PART - B

- 5 The dimensions of a residential building as shown in the Fig Q5 with the following details. Workout the various quantities of item of work and prepare an abstract estimate cost of building.

- Earthwork excavation for foundation @ Rs 250/cum
- SSM in CM 1:6 for foundation and basement @ Rs 2150/cum
- Internal walls painting @ Rs 60/sqm
- Mosaic tile flooring @ Rs 600/sqm
- PCC bed concrete 1:4:8 @ Rs 3000/cum

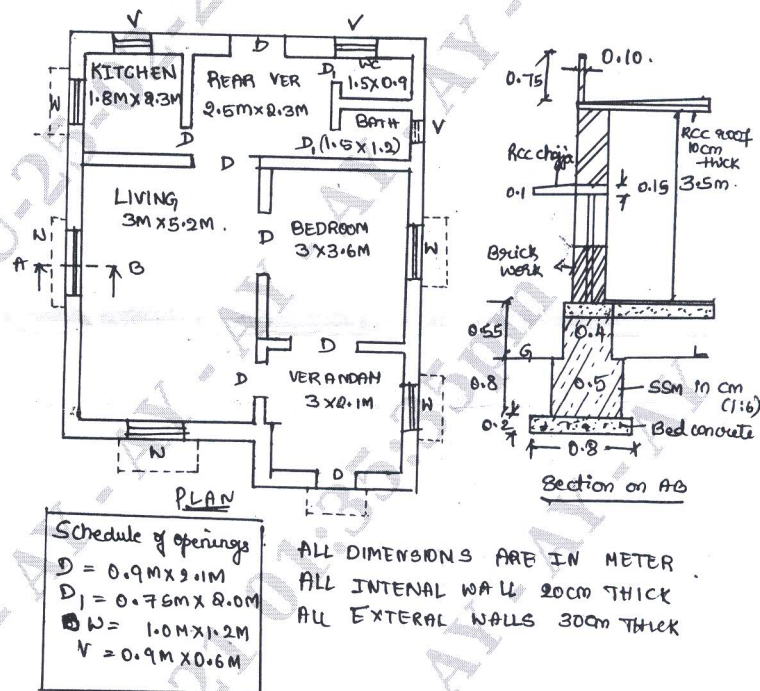


Fig Q5

(40 Marks)

PART - C

- 6 Prepare a detailed estimate of manhole from the given drawing (Fig Q6) and the abstract for the following works :

- Earthwork excavation @ Rs 465/cum
- Cement concrete 1:3:6 @ Rs 420/cum
- I class brickwork in 1:4 cement @ Rs 450/cum
- Cement pointing 1:2 @ Rs 12/sqm

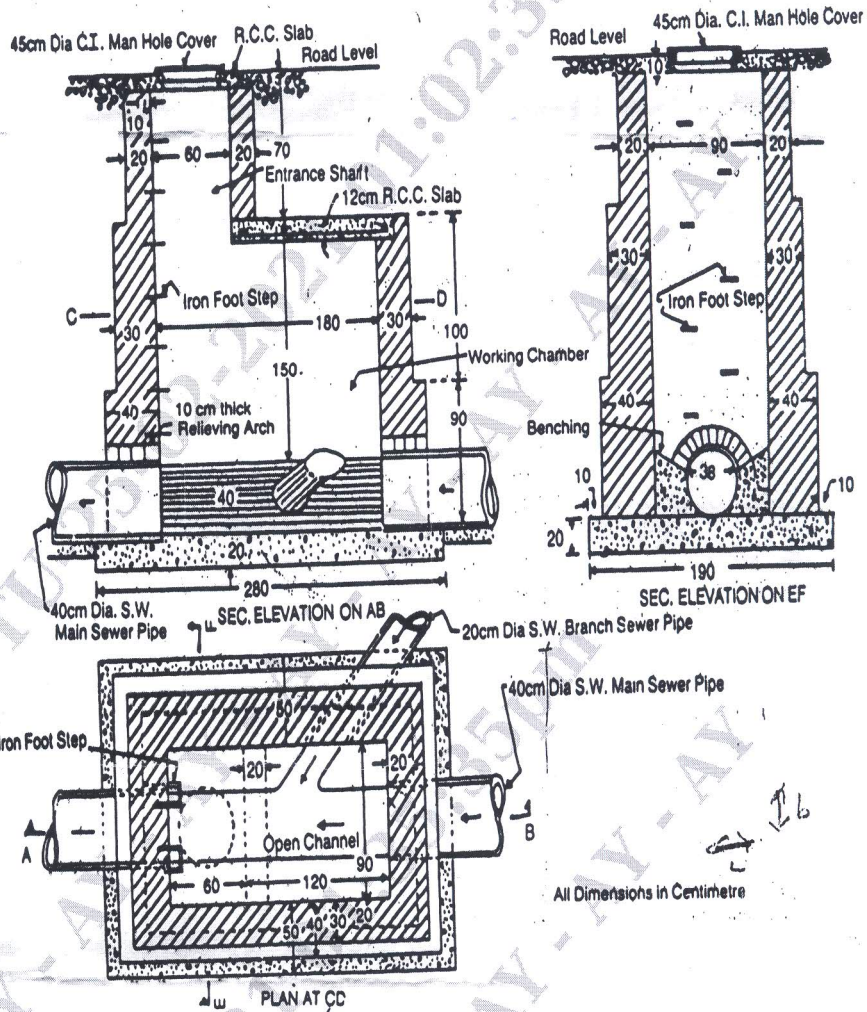


Fig Q6

(20 Marks)

7. Reduced Levels (RL) of ground along the centre line of a proposed road from chainage 10 to chainage 20 are give below. The formation level at the 10th chainage is 107 and the road is in downward gradient 1 in 150 up to the chainage 14 and then gradient changes to 1 in 100 downward. Formation width of road is 10 meter and side slopes of banking are 2:1 (H:V), length of the chain is 30m. Prepare an estimate of earthwork at the rate of Rs350% cum by mid sectional area method.

Chainage	10	11	12	13	14	15	16	17	18	19	20
RL of ground	105	105.60	105.44	105.90	105.42	104.30	105.00	104.10	104.62	104	103.3
RL of formation	107.00										
Gradient	← Downward gradient 1 in 150 →					← Downward gradient 1 in 100 →					

(20 Marks)
