

Code No: RT42011

R13

Set No. 1

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2018

ESTIMATING, SPECIFICATIONS & CONTRACTS

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B

Answer any THREE questions from Part-A

Part-B is compulsory

PART-A (3x14=42 Marks)

1. a) Differentiate between detailed estimate and abstract estimate [7]
b) Explain the use of approximate estimate in civil engineering [7]
2. a) Explain steps needed for carrying out rate analysis for a typical item in civil Works. [7]
b) What is the need for contingent charges in estimate and how you make provision for the same? [7]
3. Calculate the quantity of earthwork in embankment for a portion of channel with the following data:
Bed width = 3.75 m
Free Board = 40 cm
Side slope of banking = 1:1
Full supply depth = 1 m
Top width of both banks = 1.2 m

Distance (m)	0	30	60	90
Ground Level (m)	225.24	224.8	224.43	224.12
Proposed bed level (m)	224	223.94	223.88	223.82

 [14]
4. What are the different types of valuations? Explain in detail. [14]
5. Give standard specifications for the items in the construction of class 'B' residential building: (a) Footing and plinth. (b) Super structure. (c) Roofs. (d) D.P.C [14]
6. With an example, prepare a detailed estimate of a RCC Rectangular beam including centering and shuttering and steel reinforcement. Also prepare schedule of bars [14]

PART-B (1x28 = 28 Marks)

7. Enumerate detailed specifications for the following items as shown in figure.1:

- Random Rubble Masonry in Sub structures.
- Plastering of walls.
- Painting to wood works.
- Painting to Iron Works.

[28]

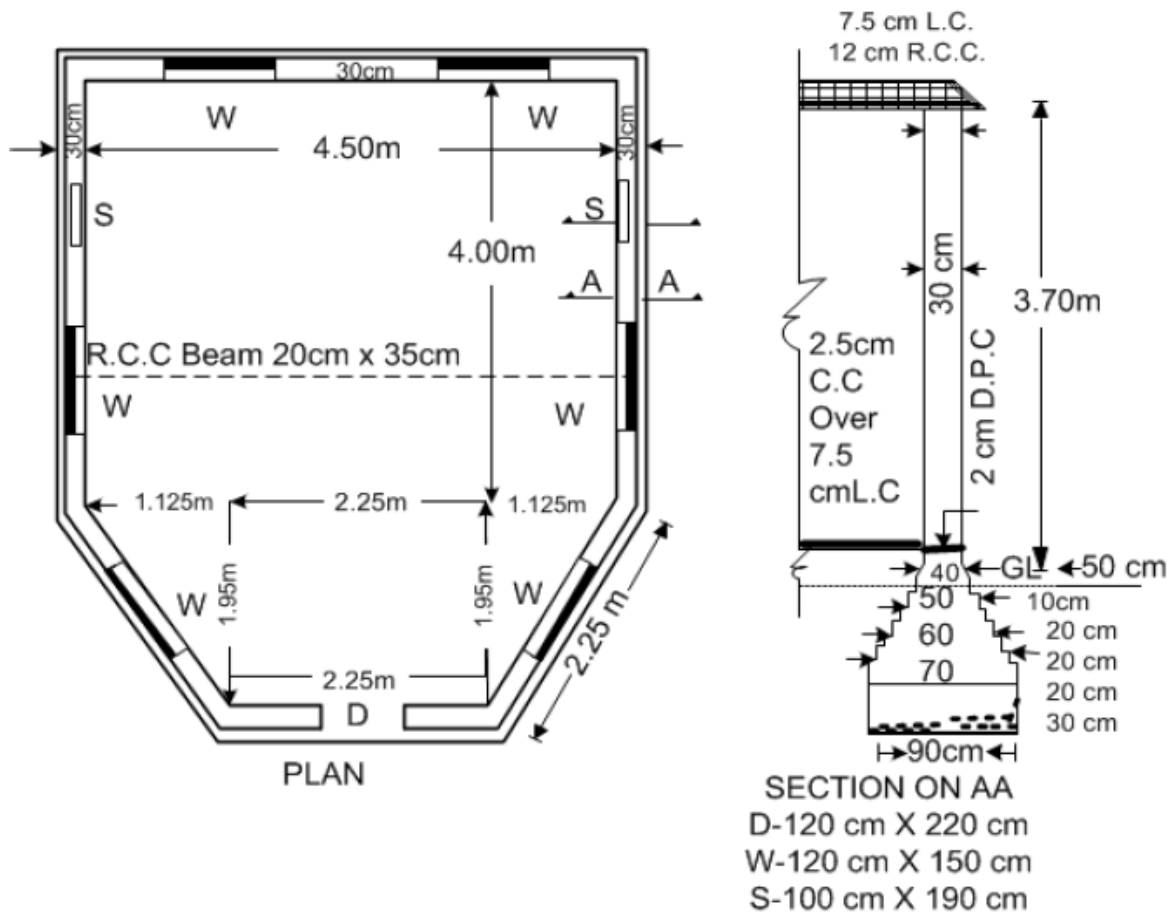


Figure.1

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Set No. 2

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2018

ESTIMATING, SPECIFICATIONS & CONTRACTS

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B

Answer any THREE questions from Part-A

Part-B is compulsory

PART-A (3x14=42 Marks)

1. a) List the major information needed for enabling preparation of estimate for a building. [7]
b) Explain about plinth area method of estimation. [7]
- 2 Give methods for calculation of earth work and explain them? [14]
- 3 a) Calculate the Cement contents for the following
(i) C.C. (1:5:10) using 40mm H.B.G Metal for 25m³ work
(ii) Brick work in CM (1:6) using country Bricks for 15m³ of work if 0.38m³ of CM (1:6) is required for 1m³ of brick work [7]
b) Explain method of valuation based on profit with an illustrative example. [7]
- 4 Estimate the quantity of steel for a foundation with column and tabulate the bar bending schedule with neat sketch. [14]
- 5 a) Explain the standard specification of class 'B' type buildings with different item of works in construction. [8]
b) Write on work order and scrap value. [6]
- 6 Write in detail about the specifications of following items of work
(a) Earth work in exaction in foundation
(b) I Class Brick work
(c) Painting and Polishing [14]

PART-B (1x28 = 28 Marks)

7. Prepare detailed estimate for the building using center line method as shown in figure (1). Assume necessary data if needed.

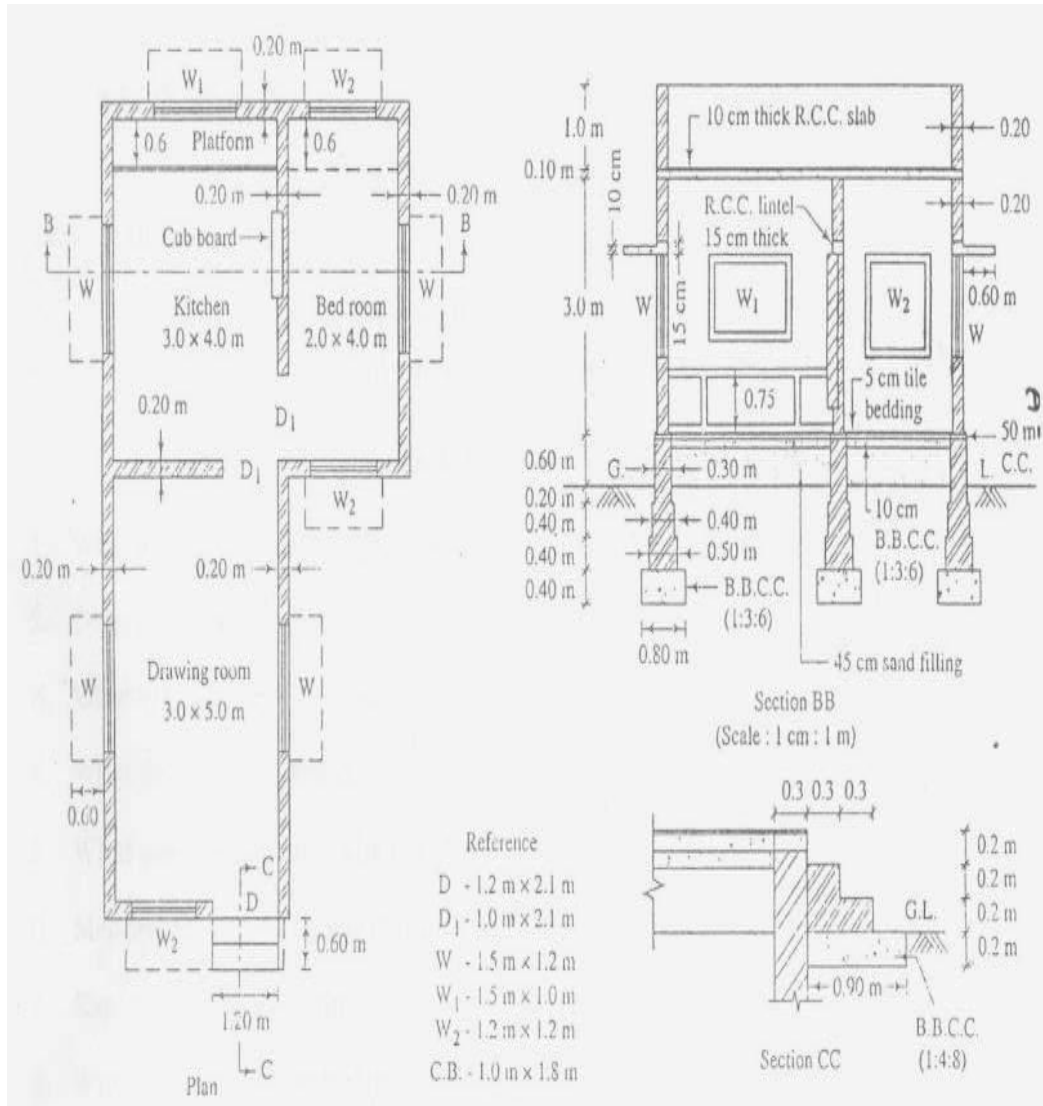


Figure (1)

[28]

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Set No. 3

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2018

ESTIMATING, SPECIFICATIONS & CONTRACTS

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B

Answer any THREE questions from Part-A

Part-B is compulsory

PART-A (3x14=42 Marks)

1. a) Explain the principle units for various items of civil works [7]
b) Explain purposes of preparing estimation for civil engineering works. [7]
- 2 Explain in detail schedule rates. Explain factors affecting schedule rates. [14]
- 3 Estimate the quantity of earthwork for the portion of a road from the following data. Road width at the formation surface 8m. Side slopes 2:1 in banking and 1.5:1 in cutting. Length of chain is 30m. Formation level is 70 and having upward gradient of 1 in 200.

Chainage	20	21	22	23	24	25	26	27	28
Ground Level	71.20	71.25	70.90	71.25	70.90	70.45	69.10	69.45	69.70

 [14]
- 4 List and explain the various types of contracts in detail. [14]
- 5 a) List different types of valuation and explain any one method. [8]
b) Write the various contract conditions. [6]
- 6 Explain the quantity of steel for a slab with an example and mention the bar bending schedule with neat sketch. [14]

PART-B (1x28 = 28 Marks)

7. Prepare a detailed estimate of Building shown in Figure using long wall and short wall method as shown in figure (1). Assume necessary data if needed.

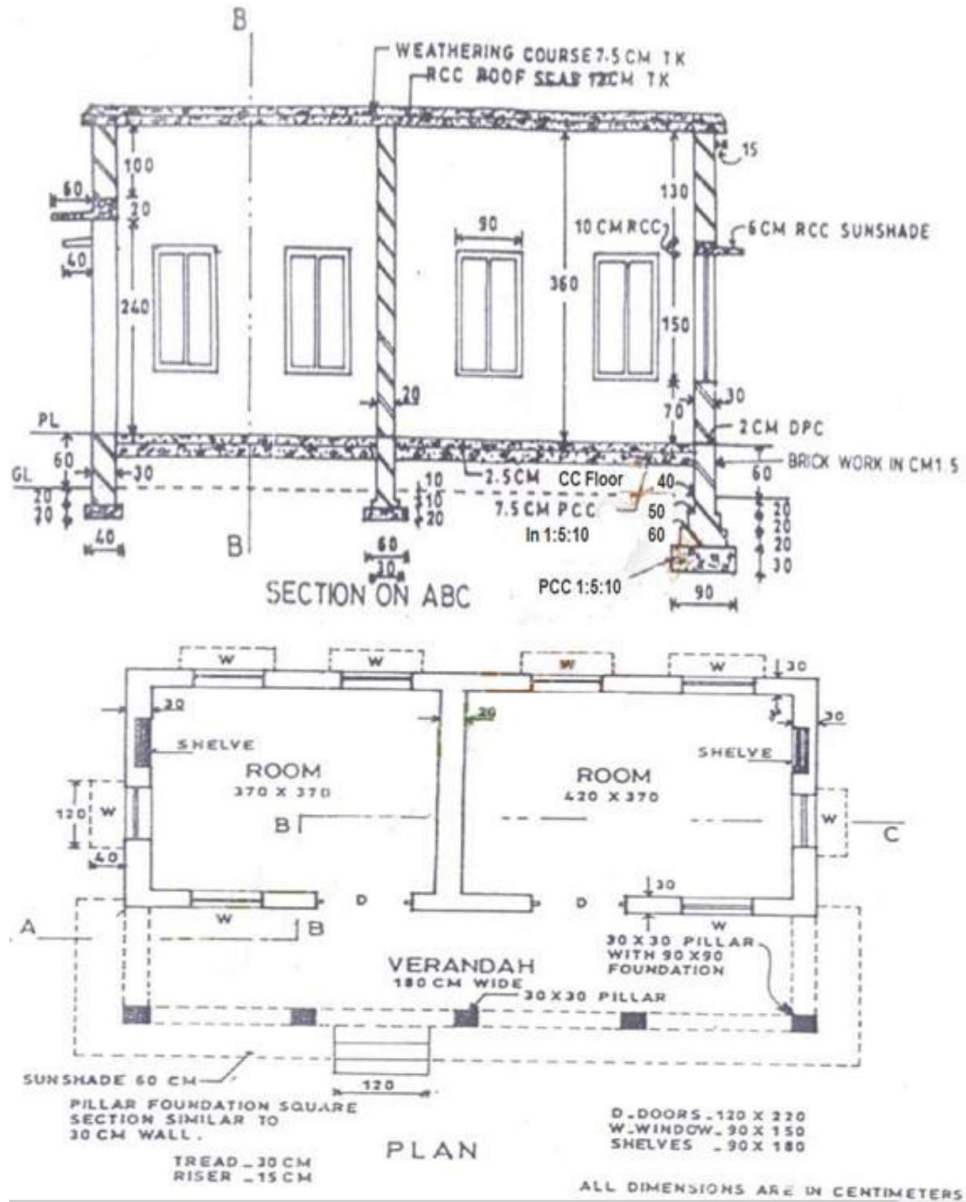


Figure (1)

[28]

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Set No. 4

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2018

ESTIMATING, SPECIFICATIONS & CONTRACTS

(Civil Engineering)

Time: 3 hours

Max. Marks: 70

Question paper consists of Part-A and Part-B

Answer any THREE questions from Part-A

Part-B is compulsory

PART-A (3x14=42 Marks)

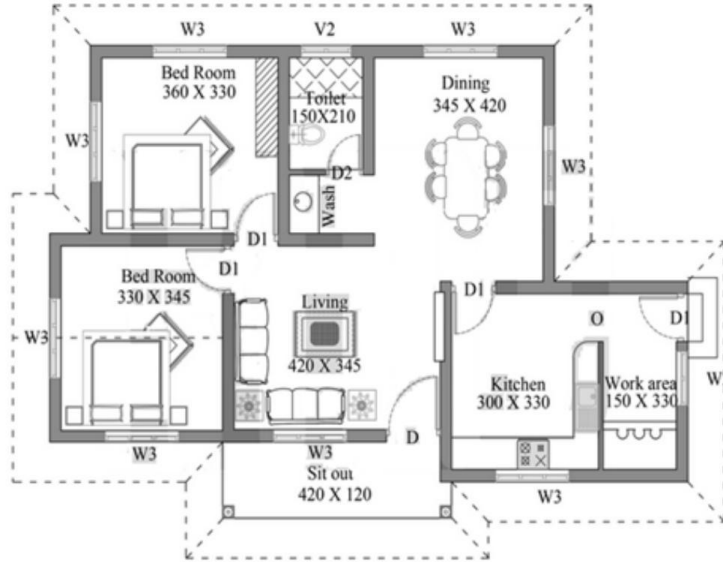
1. a) Explain in detail about all available estimates for a civil engineering structures. [7]
b) Discuss the various units of measurement used for estimation of civil works. [7]
- 2 Explain in detail about the three cases of canal structures with neat sketches. [14]
- 3 Calculate the materials, labour etc. required and work out the rate analysis for following items.
(a) RCC work in beams, slabs etc. 1:2:4 per 1 m³
(b) I class brickwork in foundation and plinth with 20×10×10 cm bricks with 1:6 cement sand mortar per 1 m³ [14]
- 4 a) Explain the standard specification of class 'A' type of building. [7]
b) Explain capitalized value of building considering sinking fund. [7]
- 5 Estimate the quantity of earthwork for the portion of a road from the following data. Road width at the formation surface 8m. Side slopes 2:1 in banking and 1.5:1 in cutting. Length of chain is 30m. Formation level is 70 and having upward gradient of 1 in 200.

Chainage	22	23	24	25	26	27	28	29	30
Ground Level	70.90	71.25	70.80	70.45	70.20	70.35	69.10	69.45	69.70

 [14]
- 6 Write in detailed specifications of the following items of work.
(a) Cement concrete and RCC work
(b) Farm work [14]

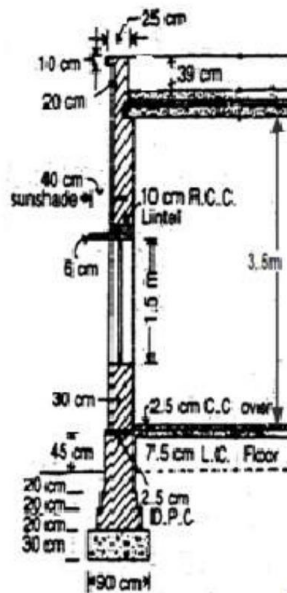
PART-B (1x28 = 28 Marks)

7. Give a detailed estimate of a Building given in Figure 1 using centre line method as shown in figure (1).
Assume necessary data if needed



GROUND FLOOR PLAN

Plinth Area 92.17 M²



- Index:**
 Doors : D = 100 cm x 210 cm
 D1 = 90 cm x 210 cm
 Windows : W2 = 100 cm x 100 cm
 W3 = 150 cm x 150 cm
 Ventilator : V2 = 60 cm x 30 cm

Figure 1
Figure (1)

[28]