CBCS SCHEME

USN | | | | | | | | | | |

17CT73

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022
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   Define Estimate. What are different types of estimates? Explain any four different types of estimates.   **(20 Marks)**

2   Explain briefly:
    i)   Various purpose of Estimating
    ii)   Measurement book and schedule of rates
    iii)   Administrative approval and technical sanction
    iv)   Tender and quotation
    v)   Security deposit and EMD.   **(20 Marks)**

3   Write specifications for the following items of work:
    i)   Reinforced cement concrete
    ii)   Cement plastering
    iii)   BBM in CM 1:6
    iv)   Earthwork excavation
    v)   Painting work.   **(20 Marks)**

4   Carryout the rate analysis for the following:
    i)   BBM for superstructure in CM 1:6
    ii)   CC of 1:2:4 for bed in foundation
    iii)   12mm thick plastering for walls with CM 1:6
    iv)   Coursed rubble masonry in CM 1:6.   **(20 Marks)**

PART – B

5   The plan and cross section of residential building are as shown in Fig.Q.5. Workout the quantities and prepare the cost abstract of the following items of work.

i)   Earthwork excavation for foundation in ordinary soil @ Rs.300/cum.
ii) Plinth concrete of DPC 1:2:4 @ Rs. 4500/cum.
iii) First class brickwork in CM 1:6 for superstructure @ Rs.4000/cum.
iv) Distemper wash for inside and ceiling at Rs.200/sqm.
v)   Wood work for fully panelled teakwood doors @ Rs.6200/sqm and partly panelled and partly glazed windows for ventilators @ 4900/sqm.
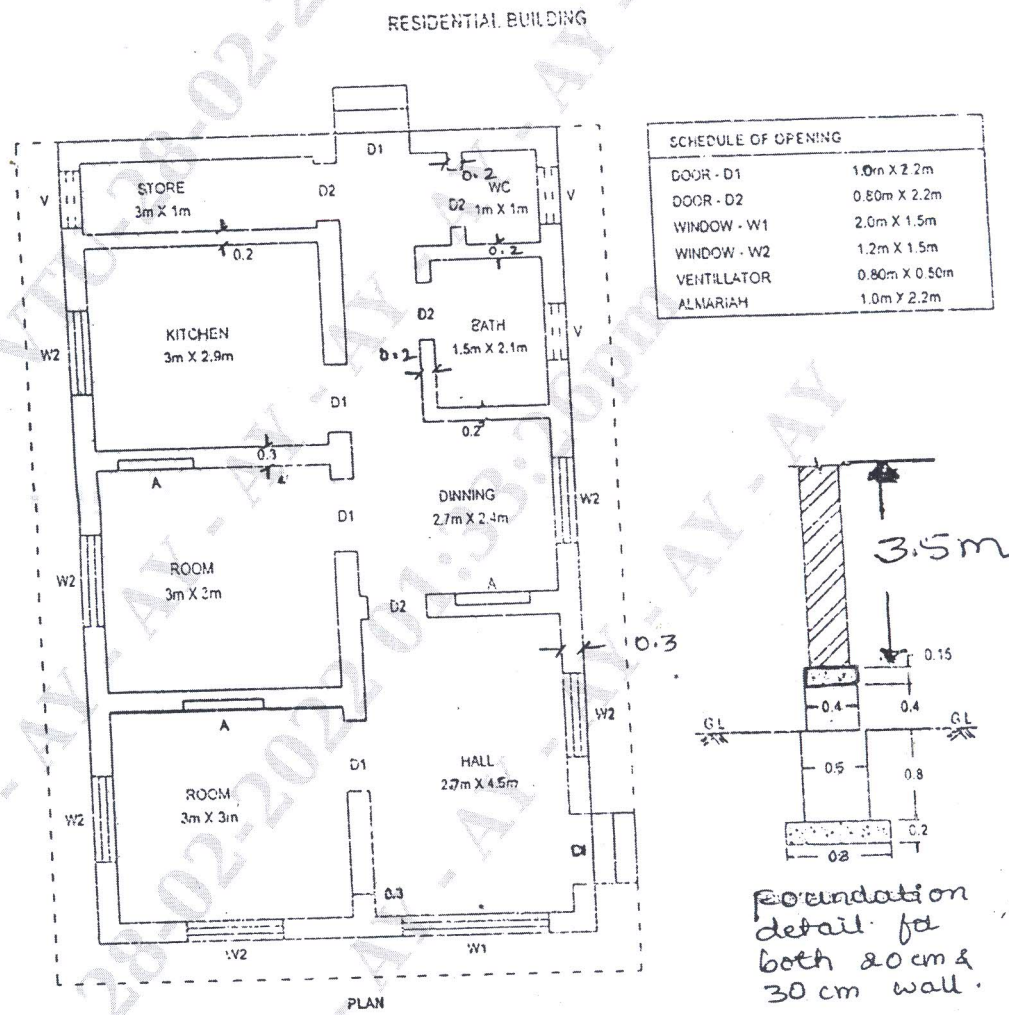
(40 Marks)

RESIDENTIAL BUILDING

SCHEDULE OF OPENING	
DOOR - D1	1.0m X 2.2m
DOOR - D2	0.80m X 2.2m
WINDOW - W1	2.0m X 1.5m
WINDOW - W2	1.2m X 1.5m
VENTILLATOR	0.80m X 0.50m
ALMARIAH	1.0m X 2.2m

STORE 3m X 1m
WC 1m X 1m
KITCHEN 3m X 2.9m
BATH 1.5m X 2.1m
DINNING 2.7m X 2.4m
ROOM 3m X 3m
ROOM 3m X 3m
HALL 2.7m X 4.5m

3.5m

Foundation detail for both 20 cm & 30 cm wall.

PLAN

Fig.Q.5

PART – C

6   Prepare a detailed estimate of a manhole in Fig.Q.6 for the following and the abstract.
   i)   Earthwork excavation @ Rs.450/cum
   ii)   Cement concrete 1:3:6 @ Rs.600/cum
   iii) I-class brickwork in 1:4 cement mortar @ Rs.500/cum
   iv)   Cement pointing @ Rs.10/sqm.   **(20 Marks)**
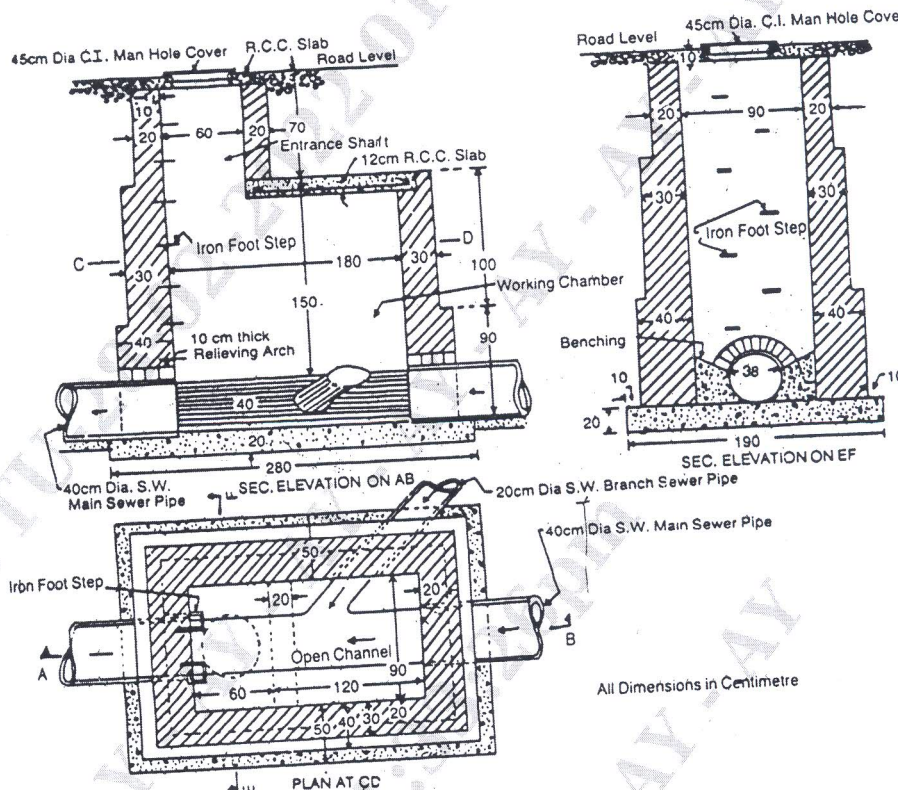

Fig.Q.6

7   Estimate the cost of earthwork for a portion of a road from the following data. Road width at the formation level surface is 8 meter. Side slopes 2:1 in banking and 1½ :1 in cutting. Length of chain is 30 meter.

Chainage	20	21	22	23	24	25	26	27	28	29	30
Ground level	71.20	71.25	70.90	71.25	70.80	70.45	70.20	70.35	69.10	69.45	69.70
Formation level	70.00	Upward gradient of 1 in 200									

Take the rates of earthwork as Rs.400 per cum in banking and Rs.600/- per % cum in cutting.
                                                                                  (20 Marks)

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