Code No:157BM **R18**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech IV Year I Semester Examinations, February/March - 2022
ESTIMATION, COSTING AND PROJECT MANAGEMENT
(Civil Engineering)

Time: 3 Hours **Max. Marks: 75**

Answer any five questions
All questions carry equal marks
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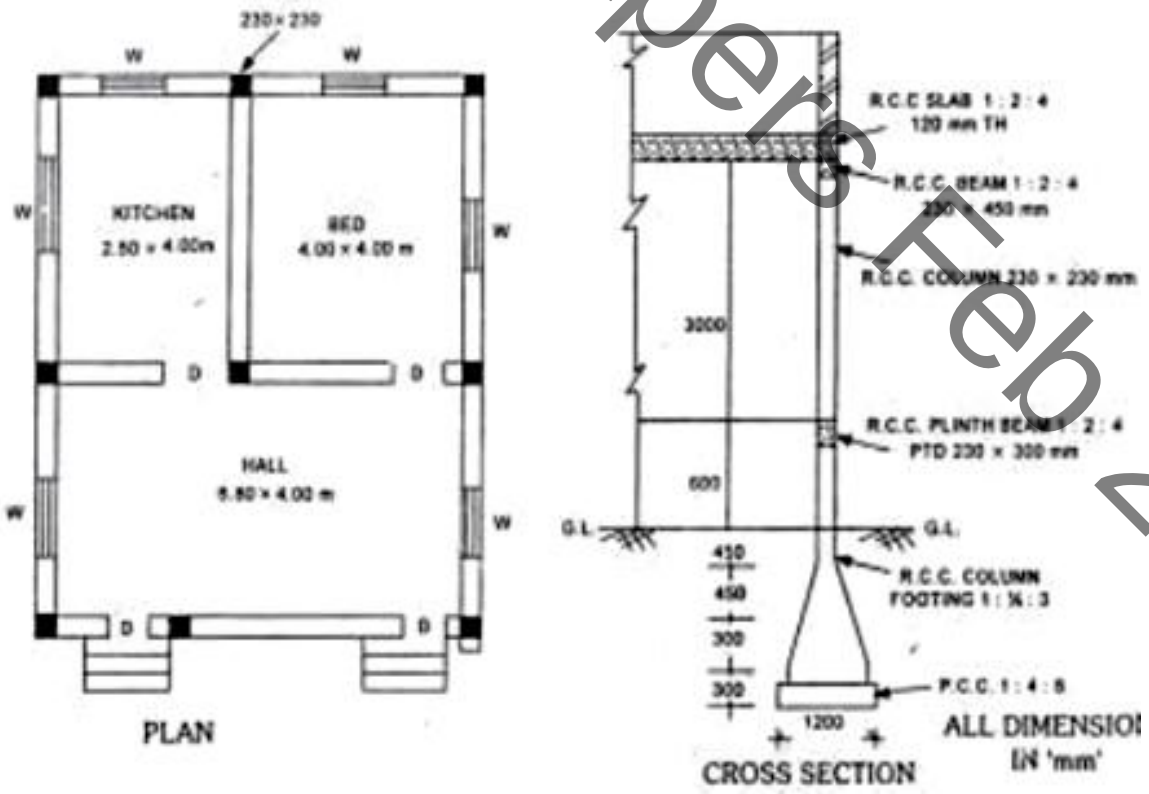
1. Prepare the approximate cost of building project (group Houseing)
   a) No.of houses = 150
   b) Plinth area of each dwelling = 600m^2
   c) Plinth area rate = Rs. 5,000/-per m^2
   d) Cost of water supply & sanitary arrangements @12½%
   e)Electrification at 7½% of cost of builing.
   f) Cost of roads & Lawns @5%
   g) Cost of P.S.& contingencies @4%. [15]

2. Repare the detailed estimate for the following items of work for the building shown in figure. a) R.C.C. (1:1.5:3) in columns upto ground level only. b) R.C.C. (1:2:4) in plinth Bleams. [15]



3. Calculate the volume of earth work for part of a road from the following data: [15]

Chainage in mts	600	630	660	690	720	750	780	810	840	870	900
RL in mts	61.20	61.25	60.90	61.25	60.80	60.45	60.20	60.35	59.10	59.45	59.7
FL in mts	60.00	← Upward gradient 1 in 200 →									
		60.15	60.30	60.45	60.60	60.75	60.90	61.05	61.20	61.35	61.50

4. A RCC beam of 8m length, 0.35m breadth and 0.45m depth is reinforced with 2No.of diameter 12mm @ top, 4No. of diameter 20mm @ bottom, stirrups 2L diameter 8mm @ 175mm c/c is provided throughout its length. Estimate the cost of RCC beam. [15]

5. Calculate the quantity of materials for the following items.
a) C.M. (1:4) for $1m^3$ of work
b) CM (1:6) for $1m^3$ of work. [7+8]

6. Calculate the quantity of Cement required in bags for the following items of work.
a) C.C. (1:4:8) usy 40mm HBG metals for $30m^3$ of work
b) RR masanry in CM(1:5) very $0.34m^3$ of CM for $1m^3$ of masanry for 20m of work.[7+8]

7. Explain the terms a) Administrative Approval b) Technical sanction c) Budget provision d) Expenditure sanction. [15]

8. An equipment that was purchased at a cost of Rs 20 lakhs, six years age is considered for replacement. The existing equipment can be sold at a price of Rs. 5 lakhs and if kept for another six years will have salvage value of Rs. 1 lakh. The challenger has annual operating cost of Rs. 50000/- and its salvage value is Rs. 5 lakhs at the end of 12 years. Rate of interest is 10%. Decide whether to continue services of existing equipment or replace it. [15]

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