(Pages : 4) **H – 3263**

Reg. No. : .....

Name : .....

Eighth Semester B.Tech. Degree Examination, November 2019

08.804 : QUANTITY SURVEYING AND VALUATION (C)

(2008 Scheme)

Time : 3 Hours Max. Marks : 100

Assume any missing data.

Answer **all** question from Part A. Answer **one** questions from **each** Module in Part B :

PART – A

1. Define the term estimate and state the difference between cost and estimate.
2. Prepare a bar bending schedule for a typical RCC rectangular column.
3. Explain how depreciation is building is worked out.
4. Define Sinking fund and capitalized value.

(4 × 5 = 20 Marks)

PART – B

Module – I

5. (a) Explain detailed specification for RCC with M20 concrete and Fe4 15 steel used in residential building. **5**

   (b) Work out the unit rate for the following work in m^3. **10**

   Brick work in C.M 1:6 with first class country burnt bricks grade of available and approved size of 22.9 cm × 11.2 cm × 7 cm.

Material	Qty	Unit	Rate Rs.	Unit
Country burnt bricks	0.460	1000 Nos	4312.00	1000 Nos
Dry Sand	0.240	m^3	3346.00	m^3
Cement	0.058	Tonne	6263.00	Tonne

P.T.O.

Material	Qty	Unit	Rate Rs.	Unit
Labour :				
Brick Mason	0.700	Nos	471.00	Each
Man	0.30	Nos	377.00	Each
Women	0.700	Nos	377.00	Each

OR

6. (a) Write the detailed specification for PCC 1:4:8 used in flooring of 10 cm thick. **5**

(b) What do you mean by estimates, and state what data is necessary to prepare an estimate for building works? **5**

(c) Compare centre line method and long wall methods of estimation. **5**

(1 × 15 = 15 Marks)

Module – II

7. Obtain the quantity for the following items for fig. 1 and also prepare an abstract of estimate with given rates. Assume suitable missing data. **50**

(a) Earth work in excavation – rate – Rs. 400/m^3. Excavation depth 0.9 m from ground level, width 0.9 m.

(b) RRM in foundation and basement – rate – Rs. 8,000/m^3 – RRM using cm 1:6, 70 cm width 80 cm depth in foundation and basement 45 cm wide and 45 cm height.

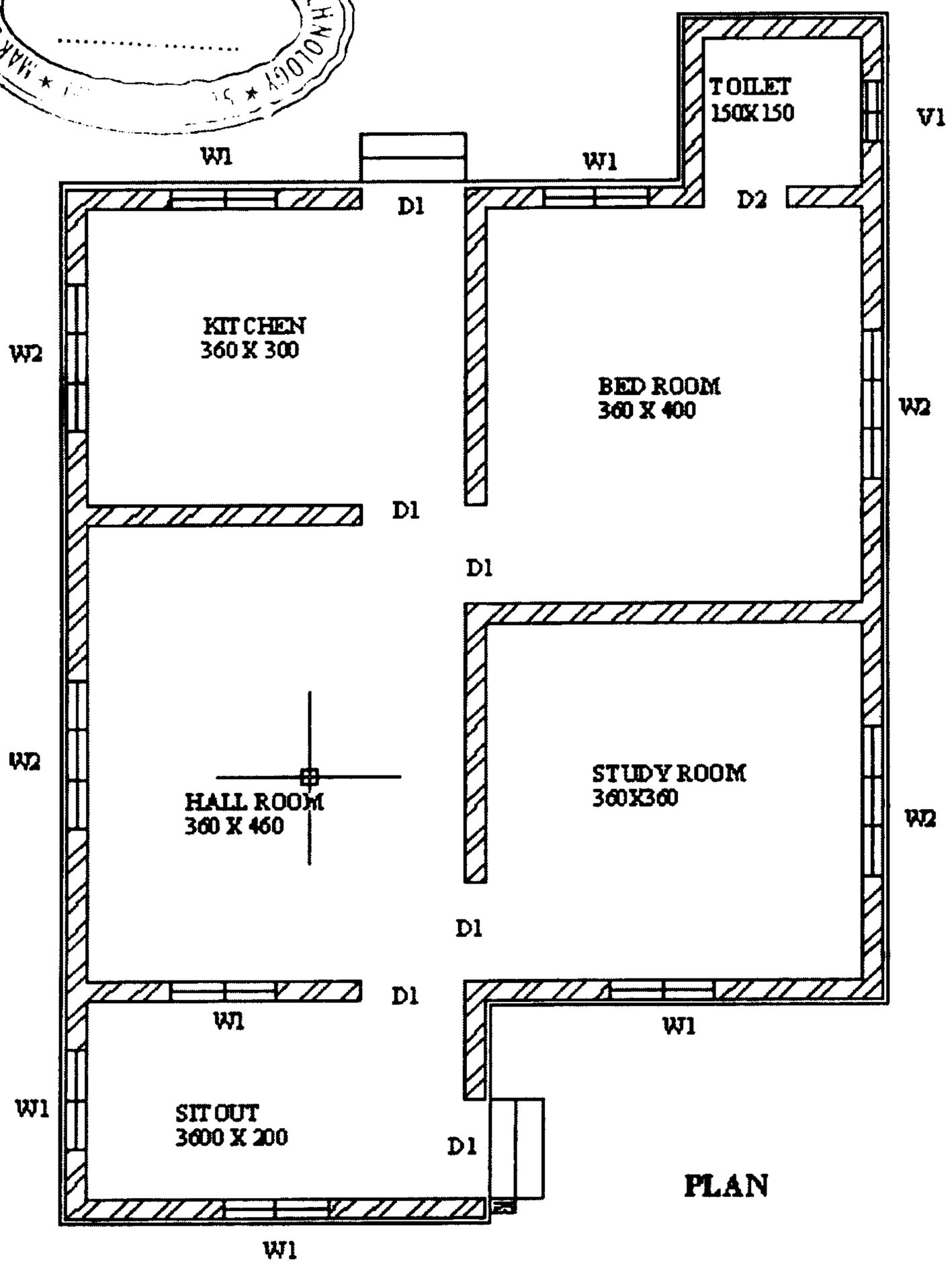
(c) Brick work – rate – 6000/m^3 – Brickwork using country burnt bricks and cm 1:4. 20 cm thick and 3m height.

(d) Cement Plastering – Rs. 300/m^2

Doors and windows – D1 – 1.2 m × 2.1 m, D2 – 1.0 × 2.1 m; W1 – 1.0 × 1.5; W2 – 1.5 × 1.5, V – 0.6 m × 0.45 m.

Lintel – 0.23 × 0.15 m provided over openings with 10 cm projections. Sunshade 60 cm projecting all-around with lintel support.

Assume any missing data.



PLAN

OR

8. (a) Reduced Level (R.L.) of ground along the centre line of a proposed road from chainage 10 to chainage 20 are given below. The formation level at the 10^{th} chainage is 107 m and the road is in downward gradient of 1 in 150 up to the chainage 14 and then the gradient changes to 1 in 100 downward. Formation width of the road is 10 metre and side slopes of banking are 2:1. Length of the chain is 30 metre. Calculate the quantity of earthwork.

Chainage : 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

R.L. of ground : 105.00, 105.60, 105.44, 105.90, 105.42, 104.30 105.00, 104.10, 104.62, 104.00, 103.30

R.L. of formation : 107.00, 106.80, 106.60, 106.40, 106.20,105.90. 105.60, 105.30 105.00 104.70 104.40

Height of bank : 2.00, 1.20, 1.16, 0.50, 0.78, 1.60, 0.60, 1.20, 0.38, 0.70, 1.10. **20**

(b) Prepare a schedule of bars for a slab of clear room size 3m × 6 m. Thickness of wall is 20 cm and thickness of slab 10 cm. Reinforcement consist of Fe 415 bar of 12 mm dia at 15 cm c/c and bent up alternate bar at 1/5 span as main reinforcement, and 8 mm dia at 18 cm as distribution reinforcement. Also determine the quantity of M20 concrete and Fe4 15 steel read for the construction. **30**

(1 × 50 = 50 Marks)

Module – III

9. (a) A residence is to be constructed over a plot of land measuring 600 sq.m. The byelaws permit a 30% of covered area. The constructions to be done is of A class specifications. Also add for services @ 30% of the total cost. The water supply is from a common source. Prepare rental statement. **10**

(b) Distinguish between gross rent and net rent. **5**

OR

10. (a) An R.C.C framed structure building having estimated future life of 80 years, fetches a gross annual rent of Rs. 2,200/- per month. Work out its capitalized value on the basis of 6% net yield. The rate of compound interest for sinking fund may be 4%. The plot measures 400 sq.m. & cost of land may be taken as Rs. 120/- per sq.m. The other out goings are :

(i) Repair and maintenance = 112 of gross income

(ii) Municipal and property taxes = 25% gross income

(iii) Management and miscellaneous = 7% gross income. The plinth area of the building is 800 sq.m. and cost per sq.m. may be taken as Rs. 500/- per sq.m. **10**

(b) Explain the rental method of valuation of land with building. **5**

(1 × 15 = 15 Marks)