

Total No. of Questions : 05

B. Architecture (Sem.-6)
ESTIMATING COSTING & BUILDING ECONOMICS-I
Subject Code : AR-332

Time : 3 Hrs.

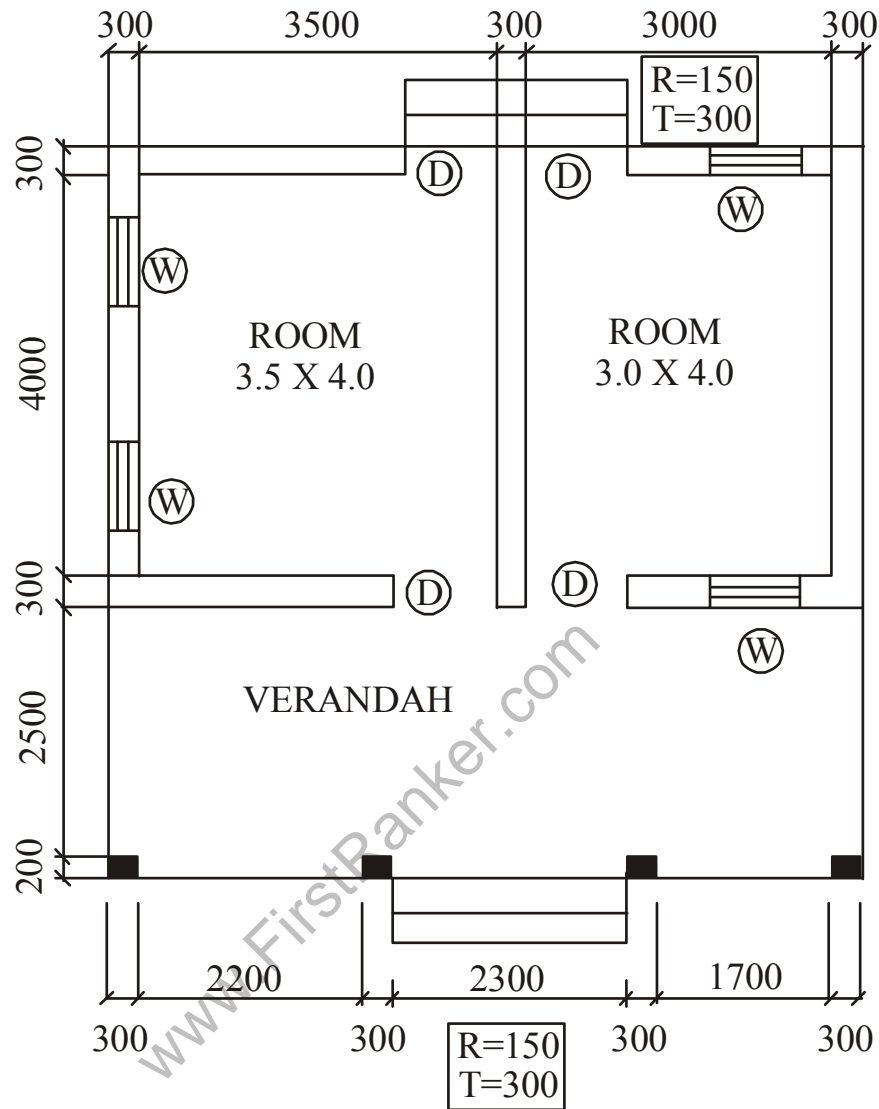
Max. Marks : 50

INSTRUCTIONS TO CANDIDATES :

1. Attempt any THREE Questions in ALL including Question No. 5 which is COMPULSORY
2. Assume any missing data, and mention the same.
3. Support the answer with suitable sketches as per the need.

1. Define Estimate. Discuss, in detail, the various methods of approximate estimation as required for a particular type of building. Discuss the merits and demerits of each method of estimation. (15)
2. Calculate the material requirement i.e. No. of Cement Bags, Sand, Bricks, and Coarse Aggregate for the following items:
 - a) Cement concrete in 1:2:4 for R.C.C. work excluding reinforcement for total 200 cubic meter quantity. (8)
 - b) 230 mm thick first class brick masonry works for the superstructure of 130 cum quantity in cement mortar 1:6. (7)
3. What do you mean by valuation? How it is different from estimation? Discuss the various techniques of valuation. (15)
4.
 - a) *“To finalise the rate of an item, the analysis of rates is must”*. Justify the statement in context of cost estimation of a structure. (7)
 - b) Prepare a preliminary estimate of a building project with a total plinth area of 2500 sq.m. The details are as under :
 - i. Rate for plinth area - Rs. 15,000 per sq.m.
 - ii. Extra for water supply & sanitation -12%
 - iii. Electrification - 8%
 - iv. Contingencies -10% (8)
5. Calculate the bill of quantities for single story house of the following items for a given plan at figure 1. you are required to assume section with the mention of foundation, plinth, parapet etc. by own. (20)

- i. Earth Work in excavation
- ii. PCC under floors
- iii. Brick work in superstructure



GROUND FLOOR PLAN (Not to Scale)

D = 1000 X 2000

W = 900 X 1200

All Dimensions are in mm

FIG. 1

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.