B.E.(with Credits)-Regular-Semester 2012 - Civil Engineering Sem. VIII

CE801 - Quantity surveying and Estimation

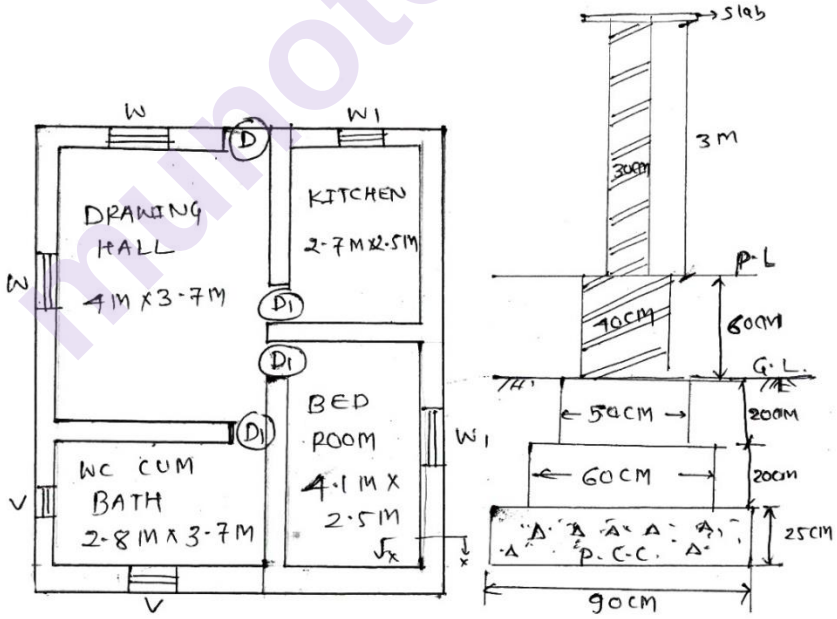
P. Pages : 2 **GUG/W/16/7017**

Time : Four Hours * 4 8 0 5 * Max. Marks : 80

Notes :
1. All questions carry equal marks.
2. Question No. **1** is compulsory.
3. Due credit will be given to neatness and adequate dimensions.
4. Assume suitable data wherever necessary.
5. Diagrams and Chemical equation should be given wherever necessary.
6. Retain the construction lines.
7. Illustrate your answers wherever necessary with the help of neat sketches.
8. Use of slide rule, Logarithmic tables, Steam tables, Mollier's chart, Drawing instruments, Thermodynamic tables for moist air, Psychrometric chart and Refrigeration charts is permitted.
9. I.S.I. Hand Book for structural steel section, I.S. Code 8000/1962 or 1964, I.S. 456 (Revised), I.S. 875 May be consulted.

1. The following drawing (FIGUARE I) with sections, shows a small Residencial Building calculate the Quantity of the following items of work shown below use standard tabular form. **16**

i) Earth wave in excavation.
ii) Cement concrete 1:4:8 mix.
iii) Brick masonry in 1:6 cm in fou. & plinth.



$D = 1.2M \times 2.1M$ $W = 1.5M \times 1.5M$ Sect^{n} @ X – X

$D_1 = 0.9M \times 2.1M$ $W_1 = 1.2M \times 1.5M$

$V = 0.9M \times 0.9M$ Figure (I)

2. a) Discuss the various methods for approximate estimate of a Residential building. **8**

b) Explain the purposes of Quality Estimate. **8**

OR

3. a) List the documents included in a construction contract. **8**

b) Explain the suitability of the following steps of contract. **8**

i) lump sum contract.

ii) Negotiated contract.

4. a) What are various methods of detailed estimate? Explain the long wall & short wall method. **8**

b) Estimate the quantity of earthwave for an embankment of 180 m long & 10 m wide at crest & where slope side is 2:1. The central height from 0 to at every 30 m chainage are 0.70, 1.40, 1.75, 2.0, 1.6 M, 1.5M & 1.2M using. **8**

i) Trapezoidal formula.

ii) Prismoidal formula.

OR

5. A R.C.C. slab of clear size 3.15 m x 6.5 m is Reinforced with 12 mm $\overline{\phi}$ bars with a spacing of 120 mm c/c alternate bars beat up. Distribution bars are 6 mm ϕ with a spacing of 130 mm c/c. Thickness of slab 130 mm. bearing of slab is 150 mm each side. Calculate the total quantity of steel reinforcement. Also prepare schedule of bar. **16**

6. a) Briefly describe the principles object of specification writing. **6**

b) Write detailed specification for the following items. **10**

i) Providing C.C. 1:2:4 for columns & Beams.

ii) Providing & louring 40 mm thick IPS. Cement concrete flooring over 150 mm thick P.C.C.

OR

7. a) Define Rate Analysis. Discuss the factors affecting rate analysis. **6**

b) Analyses the rate for following items. **10**

i) 20 mm thick external cement Plaster using water proofing compound 2%

ii) IInd class brick masonry in cm 1:6 with local brick in super structure.

8. a) Describe the points to be covered while drafting a tender notice. **8**

b) Explain the reasons for rejection of the lowest tender. **8**

OR

9. Write short notes on:- **16**

i) mortgage

ii) Valuation of open land.

iii) Depreciation.

iv) Book value & market value.

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