

B.E. CIVIL ENGINEERING EIGHTH SEMESTER
CE801 - QUANTITY SURVEYING AND ESTIMATION

P. Pages : 3

Time : Four Hours

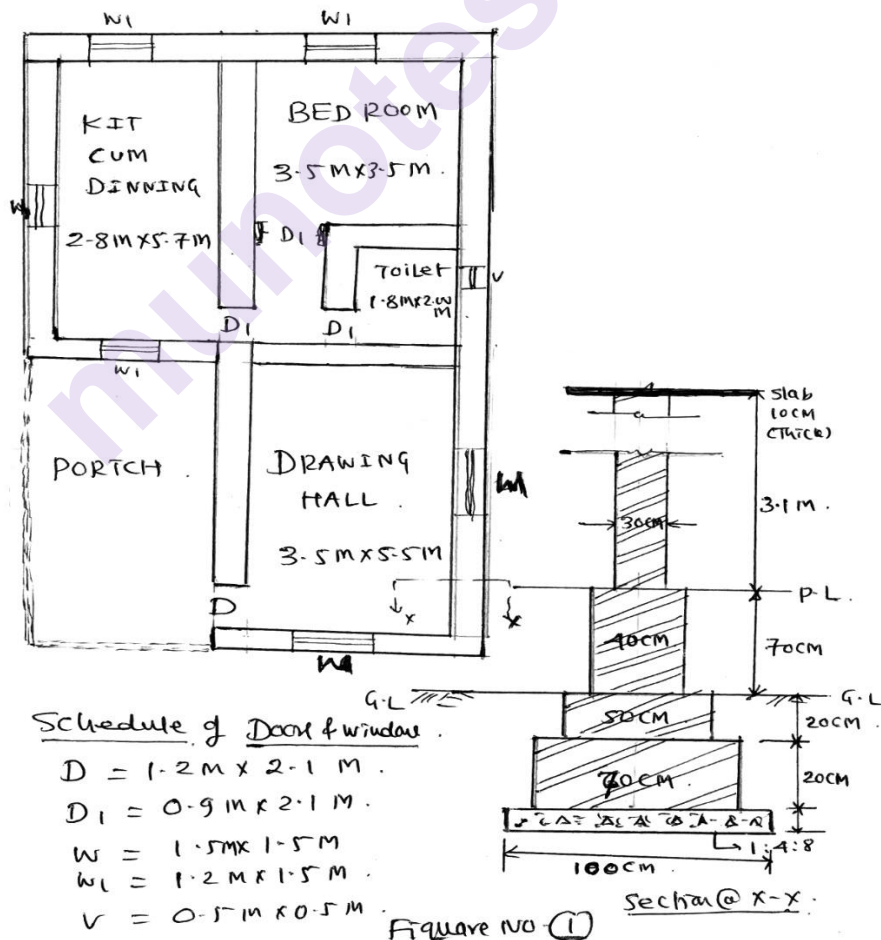


GUG/W/18/1982

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
 2. Q. 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 charts and Refrigeration charts is permitted.
 9. I.S.I. Hand Book for structural steel sections, I.S. Code 8000/1962 or 1964, I.S. 456 (Revised), I.S. 875 may be consulted.

1. Estimate the Quantities for the following items of work for the given Building plan & typical wall section in Figure No. 1.



- | | |
|---|---|
| i) Earthwork in Excavation in Foundation Trenches. | 4 |
| ii) II nd class brick Masonary in C.M. 1:5 in Super-Structure. | 4 |
| iii) 12mm thick internal & external cement plaster in CM 1:4 for ceiling & walls. | 8 |

2. a) Explain the purposes of Quality estimates. 4
- b) Prepare a preliminary estimate of a multistored office building having carpet area 2500 sq.m. 35% of the carpet over will be taken up by carridoors, verandahs, lavatories, staircases etc. & 10% of the plinth area will be occupied by the walls. Assume plinth area rate Rs 5000/- per sq.M. & 30% of total cost for water supply, sanitary fitting & electric installation contingencies & other services are 10% of the total cost. 12

OR

3. a) Define the term "contract". What are the various types of contracts? Explain in brief their advantages & disadvantages. 8
- b) Explain the terms "Administrative Approval" & "Technical Sanction". 8
4. Estimate the Quantity of earthwork of hilly road having formation width as 8m & side slope in banking is 2:1, side slope in cutting is 15:1 The RL of ground & formation RL are given as below: Use mean sectional area method. 16

Chainage	R. L of Ground (M)	Formation R.L. (M)	Transverse Slope
0	150.00	149.20	1 in 50
30	150.60	150.00	1 in 50
60	151.50	150.80	1 in 15
90	150.80	151.60	1 in 15
120	151.50	152.40	1 in 25
150	152.00	153.20	1 in 25

OR

5. A two-way slab $6\text{m} \times 4.5\text{m}$ clear span has the following, details of reinforcement & data. 16
- Thickness of slab = 150mm.
 - Bearing over 30cm thick walls = 150mm
 - Mair reinforcement.
 - Middle Strips - along long & short span = 10mm @ 150mm c/c alternately bent at 800mm from support.
 - Edge strip-along long span = 10mm @ 270mm c/c.
 - Corner mesh - both at top and bottom = 10mm @ 90mm c/c.
- Prepare a bar bending schedule of the above slab reinforcement.
6. a) State & explain all types of specification. 6
- b) Write detailed specifications of the following items **any two**. 10
- Fully panelled teakwood door.
 - Cement concrete 1:2:4 for R.C.C. Work.
 - Oil painting to wall surface.

OR

7. a) Explain in details the following terms: 6
- i) Schedule of rates
 - ii) Market rates
- b) Do the rate analysis for following items **any two**. 10
- i) 12mm thick internal cement plaster in C.M. 1:4.
 - ii) IInd class brick masonry in C.M 1:6 with local brick in super-structure.
 - iii) 40mm thick I.P.S. Cement Concrete (1:2:4) Flooring.
8. a) Define valuation. Describe in brief various method of valuation. 6
- b) A leasehold property is to produce a Net annual income of Rs. 12,000/- for the Next 30 years. The owner expects a return of 8% On his capital & also sets apart a sinking fund installment to accumulate 6% annually to replace the capital. Determine the capitalized value of property. 10

OR

9. Write short notes on the following **any three**. 16
- i) Land act acquisition.
 - ii) Legal aspects of various contract provisions.
 - iii) Arbitration general concept.
 - iv) Outgoing of a property.
 - v) M.A.S. Account.

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