

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.ARCH - SEMESTER-6 EXAMINATION – WINTER 2022

Subject Code:2X65005

Date:16-12-2022

Subject Name:Estimating And Costing

Time:02:30 PM TO 04:30 PM

Total Marks:50

Instructions:

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1 (a)** What is Rate analysis. State the factors that affect rate analysis. **05**
- (b)** Write the importance and purpose of specifications. **05**
- Q.2 (a)** List out different types of Detailed estimate. Explain any one. **05**
- (b)** Give the rules for deductions in brick masonry. **05**
- Q.3 (a)** Explain the detailed specification for 1st class brick masonry in C.M. 1:6. **05**
- (b)** Give measurement units for following materials used in construction. **05**
i) D.P.C ii) Skirting iii) G.I. Pipe iv) Cement v) Sand
- Q.4 (a)** Write the formula for volume and surface area for the following shape: **05**
i. Cuboid
ii. Sphere
iii. Hemisphere
iv. cylinder
- (b)** What is task work. State the factors that affect task work. **05**
- Q.5 (a)** Find the rate of cement concrete (1:4:8) in foundation per cu.m. by rate analysis. Assume suitable rates of material and labour. **05**
- (b)** Give the market rates for following materials. **05**
i) Bricks
ii) Sand
iii) Mosaic tiles
iv) White cement
- Q.6** Fig.1 shows the details of RCC beam. Calculate the following quantities. **10**
A. Total quantity of steel bars
B. Quantity of form work
C. Number of cement bag required
D. Quantity of concrete work
- Q.7** Fig.2 shows details of a residential building. Calculate the quantities of the following items. **10**
A. Earthwork in excavation for foundation
B. BBCC work for foundation (1:4:8)
C. Brick masonry up to plinth in c.m. 1:6.

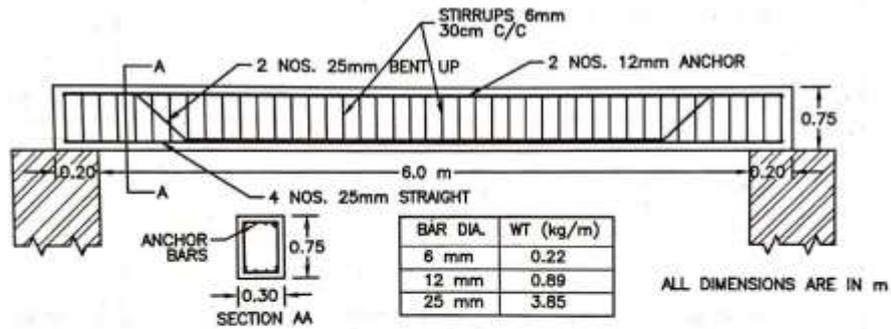


Figure-1

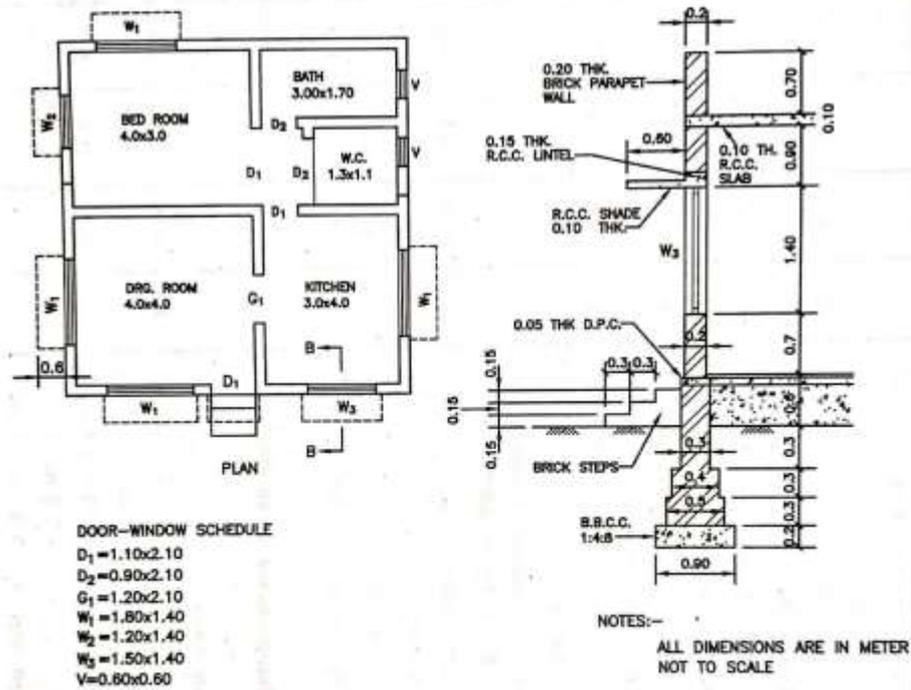


Figure - 2