

15CV81
Eighth Semester B.E. Degree Examination, November 2020 Quantity Surveying and Contract Management

Time: 3 hrs .

Max. Marks: 80

Note: Answer any FIVE full questions irrespective of modules.

1 The details of a residential building is shown in Fig.Q1. Estimate the quantities and cost of each item of works.
(i) Earthwork in excavation for Foundation in hard soil @ Rs. $380 / \mathrm{m}^{3}$.
(ii) Plain cement concrete $1: 3: 6$ for bed of the foundation @ Rs. $3000 / \mathrm{m}^{3}$.
(iii) Size stone masonry with CM 1:6 for footings and basement @ Rs. $2200 / \mathrm{m}^{3}$
(iv) First class Brickwork with burnt brick masonry CM 1:6 in super structure @ Rs. 4500/-

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Fig.Q1
(16 Marks)

2 Explain the purpose of estimation. List any two types of estimates and explain. (16 Marks)

## Module-2

3 The details of septic tank are shown in Fig.Q2. Estimate the quantities of follows item and cost.
(i) Earth work in excavation @ Rs. $380 / \mathrm{m}^{3}$
(ii) P.C.C. 1:3:6 for bed @ Rs. 3000/m ${ }^{3}$
(iii) BBM in CM 1:4 for all walls @ $4500 / \mathrm{m}^{3}$
(iv) R.C.C. $1: 1.5: 3$ for cover of the tank @ Rs. $5500 / \mathrm{m}^{3}$.

(16 Marks)

4 Reduced levels of ground along a proposed road is given in the table the formation level at $1^{\text {st }}$ chain is 108 and the road is in downward gradient of 1:150 up to the chainage four and then gradient changes to $1: 100$ downward formation width of road is 10 m side slopes $2: 1(\mathrm{H} ; \mathrm{V})$ Length of chain 30 m . Estimate the quantities of earthwork.

| Chainage | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RL of <br> ground | 106 | 106.6 | 106.44 | 106.9 | 106.42 | 105.3 | 106 | 105.1 | 105.62 | 105 | 104.3 |

## Module-3

5 Write detailed specifications for following:
(i) Plain cement concrete in bed of foundation
(ii) Size stone masonry in CM 1:6
(iii) Reinforced cement concrete $\mathrm{M}_{20}$ grade ( $1: 1 \frac{1}{2}: 3$ )
(iv) Painting plastered surface including preparation of surface.
(16 Marks)

6 Carry out the Rate Analysis for
(i) Plain cement concrete $1: 3: 6$
(ii) Burnt Brick Masonry in CM $1: 6$.
(iii) Plastering with cement mortar CM $1: 4$
(iv) Painting the cement plastered walls with 2 coats putty and 2 coats paint.

## Module-4

7 What is Tender? Explain the departmental procedure of tendering civil works.

8
Explain (i) Prequalification
(ii) Bid submission and Evaluation process
(iii) Law of contract
(iv) Contract forms.

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## Module-5

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Explain (i) Mobilization and equipment advance
(ii) Secured advance
(iii) Liquidated damages and bonus
(iv) Dispute resolution mechanism.

10 What is valuation? Explain the methods of valuation of buildings.

