**POORNIMA UNIVERSITY, JAIPUR**

**END SEMESTER EXAMINATION, November 2022**

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|  | **4BT7173** | Roll No. | Total Printed Pages: 2 |
| **4BT7173** |  |
| B. Tech. IV Year VII-Semester (Main/Back) End Semester Examination, November 2022  **(CV)** | |
| **BCV07108: Estimating and Costing** | | | |

# Time: **3** Hours. Total Marks: **60**

Min. Passing Marks: **21**

Attempt **five** questions selecting one question from each Unit. There is internal choice from Unit I to Unit V. Marks of each question or its parts are indicated against each question / parts. Draw neat sketches wherever necessary to illustrate the answer. Assume missing data suitably (if any) and clearly indicate the same in the answer.

Use of following supporting material is permitted during examination for this subject.

# **.------------------Nil-----------------------** **2.------------------Nil-----------------------**

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|  |  | **UNIT-I (CO1)** | **Marks** | **Bloom Level** |
| **Q.1** | **(a)** | What is Estimating? Discuss purpose and importance of estimates. | **(6)** | **Understanding** |
|  |  |  |  |  |
|  | **(b)** | What do you understand by Measurement Sheet and abstract Sheet? Prepare format of Measurement Sheet and abstract Sheet. | **(6)** | **Understanding** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
|  |  |  |  |  |
| **Q.2** | **(a)** | What are the general rules for measurement of work? Explain in detail. | **(6)** | **Remembering** |
|  |  |  |  |  |
|  | **(b)** | Write short notes on followings-  (i) Bill of quantities (ii) Specifications | **(6)** | **Remembering** |
|  |  | **UNIT-II (CO2)** |  |  |
| **Q.3** |  | Explain different types of estimates in detail. | **(12)** | **Remembering** |
|  |  |  |  |  |
|  |  | **OR** |  |  |
| **Q.4** | **(a)** | Define Cost of Works, Discuss factors affecting cost of work. | **(6)** | **Understanding** |
|  |  |  |  |  |
|  | **(b)** | Write short notes in followings-  (i) Contingencies Charges (ii) Work charge establishment  (iii) Overhead charges | **(6)** | **Remembering** |
|  |  | **UNIT-III (CO3)** |  |  |
| **Q.5** |  |  | **(12)** | **Evaluating** |
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|  |  | **Doors : D-1.20 M x 2.10 M Window: W-1.00 M x 1.50 M**  Calculate the quantities of the following items for the Building shown in fig.-1   1. Earthwork in excavation in foundation 2. Cement concrete work in foundation in 1:5:10 3. 1st Class Brick work in 1:6 Cement mortar in Foundation and Plinth 4. 4.0 cm thick damp proof course of 1:2:4 cement concrete at Plinth Level 5. 1st Class Brick work in 1:6 Cement mortar in Superstructure |  |  |
|  |  | **OR** |  |  |
| **Q.6** |  | Estimate the quantity of earthwork for a road with the following data whereas formation width= 10 m, side slope in banking = 2:1; side slope in cutting= 1.5:1, formation level at 25 chainage =52.00 m and then a downward gradient of 1 in 200. Length of Chain is 40m.   |  |  |  | | --- | --- | --- | | **Chainage** | **Distance in Meters** | **R. L. of Ground** | | 25 | 1000 | 51.00 | | 26 | 1040 | 50.90 | | 27 | 1080 | 50.50 | | 28 | 1120 | 50.80 | | 29 | 1160 | 50.60 | | 30 | 1200 | 50.70 | | 31 | 1240 | 51.20 | | 32 | 1280 | 51.40 | | 33 | 1320 | 51.30 | | 34 | 1360 | 51.00 | | 35 | 1400 | 51.60 |   Draw the cross-section and longitudinal Section of road with the help of graph paper. Also estimate the cost of earthwork for a portion of road at the rate of ₹ 575.00 per Cu-m in Banking and ₹ 475.00 per Cu-m in Cutting. | **(12)** | **Evaluating** |
|  |  | **UNIT-IV (CO4)** |  |  |
| **Q.7** | **(a)** | What do you understand by Rate Analysis? Describe the factors affecting the rate analysis of items | **(6)** | **Understanding** |
|  | **(b)** | Analyse the rate for the item “Cement concrete 1:2:4 in foundation or floor with stone ballast 40 mm gauge”: | **(6)** | **Applying** |
|  |  | **OR** |  |  |
| **Q.8** | **(a)** | What is the difference between General overheads and Job overheads? | **(6)** | **Remembering** |
|  | **(b)** | Analyse the rate for the item “20 mm thick external plaster in 1:4 cement mortar including scaffolding.” | **(6)** | **Applying** |
|  |  | **UNIT V (CO5)** |  |  |
| **Q.9** | **(a)** | Define Valuation and write about purpose of Valuation. | **(6)** | **Understanding** |
|  | **(b)** | Write short notes in followings-  (i) Depreciation (ii) Sinking fund (iii) Year’s purchase | **(6)** | **Remembering** |
|  |  | **OR** |  |  |
| **Q.10** | **(a)** | What are the different method of Valuation? | **(6)** | **Remembering** |
|  | **(b)** | Write short notes in followings-  (i) scrap value (ii) Salvage Value (iii) Gross and net income | **(6)** | **Remembering** |