BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – Dip.CE-2022
Course Name – Estimating, Costing and Valuation
Course Code - DCEPC502
(Semester V)

Full Marks : 60 **Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question) 1 x 15=15

1. *Choose the correct alternative from the following :*

(i) Identify the primary purpose of estimating in civil engineering.
a) To determine the cost of a project b) To provide technical specifications
c) To enhance project quality d) To schedule project timelines

(ii) Select the type of estimate needed for obtaining administrative approval.
a) Supplementary Estimate b) Approximate Estimate
c) Repair and Maintenance Estimate d) Renovation Estimate

(iii) Select the approximate estimate type most suitable for a water supply project.
a) Per meter run method b) Cubic rate method
c) Lump sum method d) Unit rate method

(iv) Classify the approximate estimating method used for small structures.
a) Cube rate method b) Unit rate method
c) Quantity survey method d) Lump sum method

(v) Select the cost component typically included in an approximate estimate for roads.
a) Excavation cost b) Reinforcement cost
c) Bituminous work d) Tile flooring

(vi) Identify the typical use of the unit rate method in construction projects.
a) Estimating minor repairs b) Evaluating major projects
c) Calculating exact dimensions d) Preparing schedules

(vii) Select the estimate type used to determine the feasibility of a proposed project.
a) Detailed estimate b) Approximate estimate
c) Revised estimate d) Supplementary estimate

(viii) Choose the element that requires a bar bending schedule.

a) Lintel
b) Foundation soil
c) Site survey
d) Project timeline

(ix) Identify a provision included in a detailed estimate.

a) Site layout design
b) Work charged establishment
c) Building aesthetics
d) Safety regulations

(x) Select the term used for estimated costs related to site-specific activities.

a) Prime cost
b) Provisional sum
c) Provisional quantities
d) Site items

(xi) List the method(s) for calculating quantities for canals.

a) Mean sectional area method
b) Center line method
c) Diagonal method
d) Grid method

(xii) State the purpose of using the trapezoidal formula method in earthwork estimation.

a) To calculate the cost of labor
b) To estimate excavation volumes
c) To measure the quantity of materials
d) To determine project duration

(xiii) Identify the detailed estimate requirement for a septic tank.

a) Soil test report
b) Capacity and dimensions
c) Project timeline
d) Safety regulations

(xiv) State the component not included in the detailed estimate for a community well.

a) Water quality tests
b) Well casing and cover
c) Site landscaping
d) Drilling costs

(xv) Classify the type of analysis used for calculating the cost of machinery hire.

a) Rate analysis
b) Equipment hire analysis
c) Budget analysis
d) Project cost analysis

Group-B

(Short Answer Type Questions) 3 x 5=15

2. List the components described in the PWD/DSR for building items. (3)
3. Explain how the plinth area method is used for approximate estimation of a building. (3)
4. Differentiate between the service unit method and the unit base method in approximate estimation. (3)
5. State the data required to prepare a detailed estimate, including civil cost and GST. (3)
6. Select the appropriate method for estimating the earthwork quantity of an embankment. (3)

OR

Summarize the role of computer software in the preparation of detailed estimates for civil engineering projects. (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Define estimating and costing in civil engineering. Explain their significance in project management. (5)
8. Discuss the data required for preparing a detailed estimate, highlighting the significance of including civil cost, GST, contingencies, supervision charges, and agency charges. (5)
9. Examine the procedure for calculating the number and types of labor required for specific items of work, such as masonry or roofing, and how this affects cost estimation. (5)
10. Summarize the procedure for preparing a rate analysis for road construction, including factors such as material cost, labor rates, and equipment charges. (5)

11. Select the overhead charges applicable to a construction project and analyze their role in determining the overall project cost. (5)
12. Select the appropriate definition of rate analysis and explain its purpose in civil engineering projects. (5)

OR

Select the most important factors that influence the need for rate analysis and describe their impact on project cost estimation. (5)

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