



**Department of Civil Engineering**  
**Academic Year 2021– 2022 (Odd Semester)**

**Degree, Semester & Branch: VII Semester B.E. Civil Engineering**  
**Course Code & Title: CE8701 – Estimation, Costing and Valuation Engineering**  
**Name of the Faculty member (s): Mr.G.Karthikeyan**

**Innovative Practice Description**

- **Unit / Topic: Unit II / Rate Analysis for Building works**
- **Course Outcome: CO2**
- **Topic Learning Outcome: TLO5**
- **Activity Chosen: Open Book Test**
- **Justification:**

The rate analysis gives the clear idea about purchase and use of material, labours and equipment including the process, method of construction for the finished product. It is the basis for arriving at a correct rate per unit work or supply of work specifications such as labor, materials, and equipment. For rate analysis problems students need to refer the current schedule of rates for materials and labor wages. Also make practice to refer this standard schedule of rates for completing the problems.

- **Time Allotted for the Activity: 20 minutes**
- **Details of the Implementation:**
  - i. Problem statement is given to the students for each team (Max. 2 Students)
  - ii. PWD current schedule of rates for the year 2021 – 2022 is shared through CANVAS LMS.
  - iii. Asked to refer the above schedule of rates for 5 minutes
  - iv. Calculate the quantity of materials and solve the problem for the 15 minutes using text book and SOR.
- **CO – PO / PSO mapping:**

| CO  | PO1 | PO2 | PO11 | PO12 | PSO2 |
|-----|-----|-----|------|------|------|
| CO1 | 2   | 3   | 2    | 1    | 1    |

(1 – Low      2 – Moderate      3 – High)

- **PO / PSO mapped:**

| Innovative practice                  | PO1   | PO2   | PO11  | PO12                                    | PSO2   |
|--------------------------------------|---|---|---|---|--|
| <b>Justification for correlation</b> | Apply fundamental knowledge in Quantity Surveying | Using the principles of Engineering mathematics, students will be able to prepare the rate analysis | Understanding the concept for project cost estimate using rate analysis | Latest techniques in Quantity surveying | Modern tools can be used for rate analysis and cost estimation |

• **Images / Screenshot of the practice:**



• **Reflective Critique:**

❖ **Feedback of practice from students and other stakeholders:**

The students felt easy to understand and refer the current SOR for materials and labor for the given problem. From the open book test, it is easy to refer the data and solve the problem.

**Benefit of the practice:** (E.g.: Outcome attainment would have increased due to innovative practice over conventional practice)

- Practiced for Current PWD Standard Schedule of Rates 2021 - 2022
- Easy to solve the problem from the data book and text book.

❖ **Challenges faced in implementation:**

Nil.

**References:**

- B.N. Dutta, “Estimating and Costing in Civil Engineering”, UBS Publishers & Distributors Pvt. Ltd., 2010.
- PWD Standard Schedule of Rates for the year 2021 – 2022