

Lesson Plan on Estimation Practice II (5TH Sem/W-23)

Total Contact Hours: 45 Hours

Weekly Duration: 3 Hours/Week

Total Weeks: 15 Weeks

Faculty- Soubhagya Ranjan Mohanty

| Week | Hours | Topic / Practical Work | Details of Activities |
|--------|-------|---|--|
| Week 1 | 3 Hrs | Introduction to Detailed Estimation | Introduction to estimation, types of estimates, preparation of detailed estimate, units of measurement, rate analysis, study of drawings and specifications. |
| Week 2 | 3 Hrs | RCC Slab Culvert – Study of Drawing & Data Collection | Study of RCC slab culvert drawing with right angled wing walls, identification of components, dimensions, specifications and measurement procedure. |
| Week 3 | 3 Hrs | Detailed Estimate of RCC Slab Culvert | Preparation of quantity calculation for earthwork, PCC, RCC slab, reinforcement, shuttering and other items. |
| Week 4 | 3 Hrs | Bar Bending Schedule (BBS) of RCC Slab Culvert | Preparation of reinforcement details, cutting length, bending schedule, steel quantity calculation and cost estimation. |
| Week 5 | 3 Hrs | RCC Hume Pipe Culvert | Study of RCC Hume pipe culvert with splayed angled wing walls, preparation of measurements and detailed estimate. |
| Week 6 | 3 Hrs | Estimation of Irrigation Structures – Vertical Fall | Study of simple vertical fall structure, drawing interpretation, calculation of quantities for masonry, concrete, earthwork and finishing works. |
| Week 7 | 3 Hrs | Detailed Estimate of Drainage Siphon | Preparation of detailed estimate of drainage siphon as per given specifications including earthwork, RCC, masonry and other components. |

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| Week 8 | 3 Hrs | Water Bound Macadam (WBM) Road Estimate | Study of road cross-section, preparation of detailed estimate for WBM road including earthwork, sub-base, WBM layers and surface finishing. |
| Week 9 | 3 Hrs | Flexible Pavement Estimate in Cutting | Preparation of estimate for flexible pavement in cutting condition, calculation of excavation, pavement layers, materials and quantities. |
| Week 10 | 3 Hrs | Flexible Pavement Estimate in Filling | Estimation of embankment formation, filling material, compaction, pavement layers and cost calculation. |
| Week 11 | 3 Hrs | Septic Tank and Soak Pit Estimate | Study of septic tank and soak pit for 50 users, preparation of measurements, quantity calculation and detailed cost estimate. |
| Week 12 | 3 Hrs | Tube Well Estimate | Study of tube well components, preparation of detailed estimate including drilling, casing, pipe installation and related works. |
| Week 13 | 3 Hrs | Pile and Pile Cap Estimate | Preparation of detailed estimate of pile foundation and pile cap including reinforcement details, concrete quantity and BBS. |
| Week 14 | 3 Hrs | Isolated and Combined Footing Estimate | Preparation of detailed estimate of isolated and combined footing including excavation, PCC, RCC, reinforcement and shuttering. |
| Week 15 | 3 Hrs | Revision, Practice & Final Submission | Complete estimation practice, checking of calculations, preparation of final estimate sheets, viva and record submission. |

Faculty Civil: _____

[Signature]
11/7/23

HOD Civil: _____

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01/11/23