**Lesson Plan**

Name of the Faculty : Sh. Ishu Monga

Discipline : Mechanical Engg.

Semester : 6th

Subject : Estimating & Costing

|  |  |
| --- | --- |
| Week | Theory |
| Lecture Day | Topic (including assignments /tests) |
| 1st Week | 1st  | **Introduction:** Definition of estimation, Importance, aims and functions of estimating |
| 2nd  | Cost accounting  |
| 3rd | purposes of cost accounting, |
| 4th  | Comparison of estimating and costing |
| Week 2 | 1st  | estimating procedure, |
| 2nd  | cost estimators and their qualifications |
| 3rd | types of estimates, |
| 4th | constituents of job estimates, |
| Week 3 | 1st  | cost of production, selling price |
| 2nd  | capital investment |
| 3rd | rate of return (ROR) on investment |
| 4th | **Elements of Costing:** Definitions, objectives |
| Week 4 | 1st  | elements of costs, components of costs |
| 2nd  | Overhead expenses: factory expenses, |
| 3rd | depreciation-causes; methods of calculation of depreciation, obsolescence, |
| 4th | interest on capital, idleness costs, repairs and maintenance cost |
| Week 5 | 1st  | selling and distribution overheads  |
| 2nd  | methods of allocation of overhead charges |
| 3rd | procedure for costing |
| 4th | Revision |
| Week 6 | 1st  | **Cost Accounting:** Objectives of cost accounting |
| 2nd  | difference between financial accounting and cost accounting |
| 3rd | advantages of cost accounting, methods of costing; unit costing, batch costing, departmental costing, |
| 4th | process costing, |
| Week 7 | 1st  | multiple and composite costing |
| 2nd  | **Fundamentals of Estimating:** Objectives of cost estimating |
| 3rd | functions of cost estimating |
| 4th | organization of estimating department |
| Week 8 | 1st  | principal factors in estimating |
| 2nd  | miscellaneous allowances |
| 3rd | estimating procedures |
| 4th | qualities of estimator |
| Week 9 | 1st  | **Estimation of Material Cost:** Estimation of volumes, weights and  |
| 2nd  | cost of material for items like pulley, spindle, lathe Centre, fly wheel, crank shaft and similar items |
| 3rd | Simple numerical on the above |
| 4th | Simple numerical on the above |
| Week 10 | 1st  | budgets and types of budgets |
| 2nd  | Revision |
| 3rd | **Estimation of Machine Shop:** Set up time, operation time |
| 4th | handling time, machining time, tear down time, |
| Week 11 | 1st  | allowances; personal, fatigue, tool checking/sharpening/changing |
| 2nd  | unit operation time, cycle time and total time |
| 3rd  | full depth of cut |
| 4th | cutting speeds for various operations for different tool materials and product materials |
| Week 12 | 1st  | estimation of time for various machining operations |
| 2nd  | turning |
| 3rd | drilling |
| 4th | boring |
| Week 13 | 1st  | tapping |
| 2nd  | shaping |
| 3rd | planning |
| 4th | milling |
| Week 14 | 1st  | grinding |
| 2nd  | Revision |
| 3rd | **Estimation of Other Shops:** Introduction |
| 4th | Estimation of cost of different products produced in welding:  |
| Week 15 | 1st  | Gas welding |
| 2nd  | Electric welding |
| 3rd | Forging shop |
| 4th | foundry shops |