**LESSON PLAN**

**Name of Faculty: Deepak Puniya Discipline: Mechanical Engg.**

**Semester: 6th Subject: Estimating & Costing**

**Lesson Plan Duration: 15 Weeks**  **Work Load: Theory-** 4 Lectures/Week

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| **WEEK** | **LECT.NO.** |  **TOPIC** | **COVERED ON DATE** |
| **1** | **1** | **1. Introduction** (06 Periods)Definition of estimation, Importance, aims and functions of estimating;  |  |
| **2** | cost accounting, purposes of cost accounting, Comparison of estimating and costing,  |  |
| **3** | estimating procedure,  |  |
| **4** |  cost estimators and their qualifications, types of estimates |  |
| **2** | **5** | constituents of job estimates, cost of production, selling price,  |  |
| **6** | capital investment, rate of return(ROR) on investment |  |
| **7** | **2. Elements of Costing** (08 Periods)Definitions, objectives, elements of costs, components of costs,  |  |
| **8** | overhead expenses: factory expenses,  |  |
| **3** | **9** | depreciation-causes; methods of calculation of depreciation,  |  |
| **10** | obsolescence, interest on capital, idleness costs, repairs and maintenance cost,  |  |
| **11** | selling and distribution overheads and  |  |
| **12** | methods of allocation of overhead charges, procedure for costing |  |
| **4** | **13** | Numerical Problems |  |
| **14** | Numerical Problems |  |
| **15** | **3. Cost Accounting** (05 Periods)Objectives of cost accounting, advantages of cost accounting,  |  |
| **16** | difference between financial accounting and cost accounting |  |
| **5** | **17** | methods of costing; unit costing, batch costing,  |  |
| **18** | departmental costing, process costing, |  |
| **19** | multiple and composite costing |  |
| **20** | **4. Fundamentals of Estimating** (06 Periods)Objectives of cost estimating, functions of cost estimating,  |  |
| **6** | **21** | organization of estimating department, |  |
| **22** | principal factors in estimatin |  |
| **23** | miscellaneous allowances |  |
| **24** | estimating procedures,  |  |
|  |
| **7** | **25** |  qualities of estimator |  |
| **26** | **5. Estimation of Material Cost** (10 Periods)Estimation of volumes, weights  |  |
| **27** | Numerical Problems |  |
| **28** | cost of material for items like pulley, spindle |  |
| **8** | **29** | cost of material for lathe centre,  |  |
| **30** | Numerical Problems |  |
| **31** | cost of material for fly wheel  |  |
| **32** | Numerical Problems |  |
| **9** | **33** | cost of material for crank shaft and similar items  |  |
| **34** | Numerical Problems |  |
| **35** | budgets and types of budgets. |  |
| **36** | **6. Estimation of Machine Shop** (12 Periods)Set up time, operation time, handling time, machining time, tear down time,  |  |
|  **10** | **37** | allowances; personal, fatigue, tool checking/sharpening/changing,  |  |
| **38** | unit operation time, cycle time and total time,  |  |
| **39** | Feed, depth of cut, cutting speeds for various operations for different tool materials and product material |  |
| **40** | estimation of time for machining operations - turning,  |  |
| **11** | **41** | estimation of time for machining operations -drilling,  |  |
| **42** | estimation of time for machining operations - boring, tapping,  |  |
| **43** | estimation of time for machining operations -shaping,  |  |
| **44** | estimation of time for machining operations -planning,  |  |
| **12** | **45** | estimation of time for machining operations- milling  |  |
| **46** | and estimation of time for machining operations -grinding. |  |
| **47** | Numerical problems |  |
| **48** | **7. Estimation of Other Shops** (09 Periods)Estimation of cost of different products produced in welding- gas and electric welding,  |  |
| **13** | **49** | Numerical problems |  |
| **50** | Numerical problems |  |
| **51** | Forging shop- forging operations |  |
| **52** | Estimation of forging cost- estimation of weight,losses,Time |  |
| **14** | **53** | Numerical problems |  |
| **54** | Foundry Shop- Estimation of foundry cost |  |
| **55** | Numerical problems |  |
| **56** | Numerical problems |  |
| **15** | **57,58****59,60** | **Revision ,**Special Test |  |