

Lesson Plan

Name of the Faculty : Dr. Rajender Kumar Tayal

Discipline : Mechanical Engineering

Semester : 6th (Section A & B)

Subject : **ESTIMATING & COSTING**

Lesson Plan duration : 15 weeks (from 22nd March, 2021 to 2nd July, 2021)

Work load per week : Lecture – 04, Practical – 00

Week	Theory	
	Lecture Day	Topic (Including assessment/test)
1 st	1 st	1. Introduction: Definition of estimation, Importance, aims and functions of estimating;
	2 nd	cost accounting, purposes of cost accounting, Comparison of estimating and costing,
	3 rd	estimating procedure, cost estimators and their qualifications,
	4 th	types of estimates, constituents of job estimates, cost of production,
2 nd	5 th	selling price, capital investment, rate of return(ROR) on investment
	6 th	2. Elements of Costing: Definitions, objectives, elements of costs
	7 th	components of costs, overhead expenses,
	8 th	factory expenses, depreciation-causes;
3 rd	9 th	methods of calculation of depreciation,
	10 th	obsolescence, interest on capital,
	11 th	idleness costs, repairs and maintenance cost,
	12 th	selling and distribution overheads,
4 th	13 th	methods of allocation of overhead charges, procedure for costing
	14 th	3. Cost Accounting: Objectives of cost accounting,

	15 th	difference between financial accounting and cost accounting,
	16 th	advantages of cost accounting, methods of costing;
5 th	17 th	unit costing, batch costing,
	18 th	departmental costing,
	19 th	process costing,
	20 th	multiple and composite costing
6 th	21 th	1st sessional test (Tentative)
	22 nd	Assessment
	23 rd	4. Fundamentals of Estimating: Objectives of cost estimating,
	24 th	functions of cost estimating, organization of estimating department,
7 th	25 th	principal factors in estimating, miscellaneous allowances,
	26 th	estimating procedures, qualities of estimator.
	27 th	5. Estimation of Material Cost: Estimation of volumes,
	28 th	weights and cost of material for items like pulley,
8 th	29 th	weight and cost of material for spindle
	30 th	weight and cost of material for lathe centre,
	31 st	weight and cost of material for fly wheel,
	32 nd	Weight and cost of material for crank shaft and similar items.
9 th	33 rd	Simple numericals on the above,
	34 th	budgets and types of budgets.
	35 th	6. Estimation of Machine Shop: Set up time, operation time,
	36 th	handling time, machining time,
10 th	37 th	tear down time, allowances; personal, fatigue,
	38 th	tool checking/sharpening/changing, unit operation time,

	39 th	2nd sessional test (Tentative)
	40 th	Assessment
11 th	41 st	cycle time and total time, full depth of cut,
	42 nd	cutting speeds for various operations for different tool materials and product materials,
	43 rd	estimation of time for various machining operations - turning,
	44 th	estimation of time for drilling operation,
12 th	45 th	estimation of time for boring operation,
	46 th	estimation of time for tapping operation,
	47 th	estimation of time for shaping and planing operation,
	48 th	estimation of time for milling and grinding operation.
13 th	49 th	7. Estimation of Other Shops: Estimation of cost of different products produced in gas welding,
	50 th	Estimation of cost of different products produced in electric arc welding,
	51 th	Estimation of cost of different products produced in forging,
	52 nd	Estimation of cost of different products produced in forging,
14 th	53 rd	Estimation of cost of different products produced in foundry shops.
	54 th	Estimation of cost of different products produced in foundry shops.
	55 th	3rd sessional test (Tentative)
	56 th	Assessment
15 th	57 th	Revision
	58 th	Revision
	59 th	Revision
	60 th	Revision