

Name of Faculty	BALBIR SINGH	
Discipline	MECHANICAL ENGINEERING	
Semester	VI	
Subject	Estimation and Costing	
Lesson Plan Duration	15 Weeks (20 January-2025 onwards)	
Week	Theory	
	Lecture Day	Topic (Including assignment/test)
I	1	UNIT-1: Introduction : Cost estimation-definition, Importance, purpose,
	2	Elements for estimation, Cost estimation procedure.
	3	Purposes of cost accounting, Case study of any utility item,
II	4	Cost accounting, Comparison of estimating and costing.
	5	Fundamentals of Estimating: Organization of estimating department,
	6	Cost estimator- his essential qualifications, types of estimates,
III	7	Constituents of job estimates, cost of production, selling price,
	8	Capital investment, rate of return (ROR) on investment ,
	9	Principal factors in estimating, miscellaneous allowances,
IV	10	UNIT-II: Elements of Costing: Definitions, objectives, elements of costs,
	11	Components of costs, ladder of cost , overhead expenses: factory expenses,
	12	Depreciation cost-causes; methods of calculation of depreciation,
V	13	Ist Sessional
	14	obsolescence, interest on capital, idleness costs, repairs and maintenance cost,
	15	selling and distribution overheads and methods of allocation of overhead charges,
VI	16	procedure for costing, Methods of costing with example; unit costing, batch costing,
	17	departmental costing, process costing, multiple and composite costing
	18	UNIT-III:Estimation of Material Cost: Estimation of volumes,
VII	19	weights and cost of material for items like pulley, spindle,
	20	lathe centre, fly wheel,crank shaft and similar items.
	21	Simple numerical on the above,
VIII	22	Provision of budgets based on estimates.
	23	UNIT-IV: Estimation of Machine Shop: Set-up time, operation time, handling time,
	24	machining time,tear down time, allowances; personal,
IX	25	2nd Sessional Test
	26	fatigue, tool checking/sharpening/changing, unit operation time,

	27	cycle time and total time, full depth of cut,
X	28	cutting speeds for various operations for different tool materials and product materials,
	29	estimation of time for various machining operations - turning, drilling,
	30	boring, tapping, shaping,
XI	31	planning, milling and grinding.
	32	Estimation of Welding and Plastic Moulding: Estimation of cost of different
	33	products produced in welding- gas and electric welding,
XII	34	Estimating in injection and plastic moulding
	35	UNIT-V: Estimation of Forging and Foundry Shops: Estimating in forging
	36	and foundry shops, various losses.
XIII	37	Die Cost Estimation: Basic approach to cost estimation – pricing history,
	38	work intensity history, additional costs, machinability of materials,
	39	cost of materials, evaluation. Die building estimates.
XIV	40	Process and Job Costing Characteristics -Principles -Procedure for Process costing,
	41	Accounting terminology like -book value Net Present Value-Work in progress-
	42	Gross Domestic Product (GDP)-balance sheet, Introduction to tendering process
XV	43	3rd Sessional
	44	Revision
	45	Revision