

LESSON PLAN-6TH SEMESTER (2021-2022)

Subject- INDUSTRIAL ENGINEERING & QUALITY CONTROL (MET-501)

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MONT H	MODULE/U NIT	COURSE TO BE COVERED	CLASSES REQUIRED	REMARKS (IF ANY)
	Module-1	Plant location and Layout	10	
		Selection of Site of Industry & Define plant layout.	1	
		Describe the objective and principles of plant layout	1	
		Explain Process Layout, Product Layout and Combination Layout	1	
		Techniques to improve layout	1	
		Principles of material handling equipment	1	
		Plant maintenance	1	
		Importance of plant maintenance.	1	
		Breakdown maintenance.	1	
		Scheduled maintenance.	1	
		Predictive maintenance.	1	
	Module-2	Operations Research	10	
		Introduction to Operations Research and its applications	2	
		Define Linear Programming Problem, Solution of L.P.P. by graphical method	2	
		Evaluation of Project completion time by Critical Path Method and	3	
		PERT (Simple problems)- Explain distinct features of PERT with respect to CPM	3	
	Module-3	Inventory Control	10	
		Classification of inventory	1	
		Objective of inventory control	1	
		Describe the functions of inventories.	1	
		Benefits of inventory control.	1	
		Costs associated with inventory.	1	
		Terminology in inventory control	2	
		Explain and Derive economic order quantity for Basic model. (Solve numerical)	2	
		Define and Explain ABC analysis	1	
	Module-4	Inspection and Quality Control	15	
		Define Inspection and Quality control	1	
		Describe planning of inspection	1	
		Describe types of inspection.	1	
		Advantages and disadvantages of quality control.	1	
		Study of factors influencing the quality of manufacture.	1	
		Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)	2	
		Methods of attributes.	1	
		Concept of ISO 9001-2008.	2	
		Quality management system, Registration /certification procedure.	1	
		Benefits of ISO to the organization	1	
		JIT, Six sigma,7S, Lean manufacturing	2	
		Solve related problems.	1	
	Module-6	PRODUCTION PLANNING AND CONTROL	15	
		Introduction	1	
		Major functions of production planning and control	1	
		Methods of forecasting	2	
		Routing	1	

		Scheduling	1	
		Dispatching	1	
		Controlling	1	
		Types of production	2	
		Mass production	1	
		Batch production	1	
		Job order production	1	
		Principles of product and process planning.	2	