

UMA CHARAN PATNAIK ENGINEERING SCHOOL, BERHAMPUR

DEPARTMENT OF MECHANICAL ENGINEERING (2024-2025)

LESSON PLAN

Discipline: Mechanical engg.	Semester: 6th	Name of the Teaching faculty: DEBASHISH BISI
Subject: INDUSTRIAL ENGG.AND MANAGEMENT (Th-1)	No of Days /Week class allotted:4	No of weeks: 15
1ST	1st	1. PLANT ENGINEERING (Chapter-1): Selection of Site of Industry.
		1.2 Define plant layout.
	2nd	1.3 Describe the objective and principles of plant layout.
		1.4 Explain Process Layout, Product Layout and Combination Layout.
		1.5 Techniques to improve layout.
2ND	4th	1.6 Principles of material handling equipment.
	1st	1.7 Plant maintenance.
	2nd	1.7.1 Importance of plant maintenance.
		1.7.2 Breakdown maintenance.
	3rd	1.7.3 Preventive maintenance.
3RD	4th	1.7.4 Scheduled maintenance.
	1st	Class test-1
	2nd	2. OPERATIONS RESEARCH: (chapter-2) Introduction to Operations Research and its applications.
	3rd	2.2 Define Linear Programming Problem,
4TH	4th	2.3 Solution of L.P.P. by graphical method.
	1st	2.3 Solution of L.P.P. by graphical method.
	2nd	2.4 Evaluation of Project completion time by Critical Path Method
	3rd	Solve numerical
5TH	4th	2.4 Evaluation of Project completion time by PERT (Simple problems)-
	1st	Solve numerical
	2nd	2.5 Explain distinct features of PERT with respect to CPM.
	3rd	Class test-2
	4th	4. INVENTORY CONTROL: (chapter-3)

		Classification of inventory.
6TH	1st	3.2 Objective of inventory control.
	2nd	3.3 Describe the functions of inventories.
	3rd	3.4 Benefits of inventory control.
		3.5 Costs associated with inventory
	4th	3.6 Terminology in inventory control
7TH	1st	3.7 Explain and Derive economic order quantity for Basic model
		Solve numerical
	2nd	3.8 Define and Explain ABC analysis
	3rd	Class test-3
		4. INSPECTION AND QUALITY CONTROL: (chapter-4)
	4th	Define Inspection and Quality control.
8TH	1st	4.2 Describe planning of inspection
	2nd	4.3 Describe types of inspection.
	3rd	4.3 Describe types of inspection.
	4th	4.4 Advantages and disadvantages of quality control.
9TH	1st	4.5 Study of factors influencing the quality of manufacture.
	2nd	4.6 Explain the Concept of statistical quality control,
	3rd	Control charts (X, R, P and C - charts).
	4th	4.7 Methods of attributes
10TH	1st	4.8 Concept of ISO 9001-2008.
	2nd	4.9.1 Quality management system, Registration/certification procedure.
	3rd	4.9.2 Benefits of ISO to the organization.
	4th	4.9.3 JIT,
11TH	1st	4.9.3 Six sigma, 7S, Lean manufacturing
	2nd	4.9.4 Solve related problems.
	3rd	Class test-4
	4th	PRODUCTION PLANNING AND CONTROL (chapter-5)

		Introduction
12th	1st	Major functions of production planning and control
	2nd	5.3Methods of forecasting
	3rd	5.3.1Routing
	4th	5.3.2Scheduling
13th	1st	5.3.3Dispatching
	2nd	5.3.4Controlling
	3rd	5.4Types of production
	4th	5.4.1Mass production
14th	1st	5.4.2Batch production
	2nd	5.4.3Job order production
	3rd	5.5Principles of product and process planning.
	4th	Class test-5
15th	1st	Doubt clearing class.
	2nd	Doubt clearing class.
	3rd	Previous year question discussion
	4th	Previous year question discussion