



# Orissa School of Mining Engineering Keonjhar

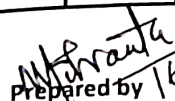
## Department of Mechanical Engineering

<b>Subject: Industrial Engineering &amp; Management</b>			
<b>Discipline: Mechanical Engineering</b>		<b>Name of the Faculty: Dr Niharika Mohanta</b>	
<b>Course Code:</b>	<b>Th1</b>	<b>Semester:</b>	<b>6th</b>
<b>Total Periods:</b>	<b>4P/W</b>	<b>Examination:</b>	<b>2024 SUMMER</b>
<b>Theory Periods:</b>	<b>4P/W</b>	<b>Class Test:</b>	<b>20</b>
<b>Maximum Marks:</b>	<b>100</b>	<b>End Semester Examination:</b>	<b>80</b>

Lesson Plan w.e.f 16.01.2024 TO 26.04.2024

Month	Week	Availability of classes	Class Day	Theory Topics
JANUARY	1 <sup>st</sup>	04	16/01/2024	<b>1.Plant Engineering</b> 1.1 selection of Site of Industry. Describing the features governing plant location.
			17/01/2024	1.2 Plant layout: Definition, 1.3 Describe the objective and principles of plant layout
			18/01/2024	1.4 Product Layout: Definition, Description, advantage, disadvantage Process Layout: Definition, Description, advantage, disadvantage
			19/01/2024	Combination layout: Definition, Description, advantage disadvantage
	2 <sup>nd</sup>	02	24/01/2024	1.5 Techniques for improvement plant layout.
			25/02/2024	1.6 Principles of material handling equipment.
	3 <sup>rd</sup>	04	30/01/2024	1.7 Plant maintenance: Objectives of plant maintenance, 1.7.1 Importance of plant maintenance
			31/01/2024	1.7.2 Types of maintenance, Breakdown maintenance 1.7.3 Preventive maintenance
			1/02/2024	1.7.4 Scheduled maintenance, Predictive maintenance
			2/02/2024	Topic end, Question answer discussion, Assignment 1
FEBRUARY	4 <sup>th</sup>	04	6/02/2024	<b>2.Operations Research:</b> 2.1 Introduction to Operations Research and its applications
			7/02/2024	2.2 Define Linear Programming Problem
			8/02/2024	2.3 Solution of L.P.P. by graphical method
			9/02/2024	Numerical problems related to L.P.P.
	5 <sup>th</sup>	03	13/02/2024	2.4 Evaluation of Project completion time by Critical Path Method(CPM)
			15/02/2024	Numerical problems related to CPM
			16/02/2024	Program Evaluation and Review Technique(PERT) Method
	6 <sup>th</sup>	04	20/02/2024	Numerical problems related to PERT
			21/02/2024	2.5 Distinct features of PERT with respect to CPM
			22/02/2024	Topic end, Question answer discussion, Assignment 2
23/02/2024	<b>Class test-1</b>			
7 <sup>th</sup>	04	27/02/2024	<b>3 Inventory Control:</b>	

MARCH			3.1 Classification of inventory	
		28/02/2024	3.2 Objective of inventory control. 3.3 Describe the functions of inventories.	
		29/02/2024	3.4 Benefits of inventory control 3.5 Costs associated with inventory	
		01/03/2024	3.6 Terminology in inventory control	
	8TH	02	6/03/2024	3.7 What is Economic Order Quantity(EOQ),Derive Economic Order Quantity(EOQ) for Basic model
			7/03/2024	Numerical problems related to EOQ
	9 <sup>th</sup>	04	12/03/2024	3.8 Define and Explain ABC analysis. Assignment 3
			13/03/2024	<b>4. Inspection and Quality Control:</b> 4.1 Define Inspection and Quality control 4.2 Describe planning of inspection(method)
			14/03/2024	4.3 Types of inspection(Explanation)
			15/03/2024	4.4 Advantages and disadvantages of quality control. 4.5 factors influencing the quality of manufacture
	10 <sup>th</sup>	04	19/03/2024	4.6 Concept of statistical quality control(SQC),
			20/03/2024	Control charts (X, R, P and C - charts) (Concepts and significance)
21/03/2024			Numerical problems related to Control charts 4.7 Methods of attributes.	
22/03/2024			4.8 Concept of ISO 9001-2008.	
11 <sup>th</sup>	02	27/03/2024	4.9.1 Quality management system, Registration /certification procedure.	
		28/03/2024	INTERNAL ASSESMENT	
		30/03/2024	INTERNAL ASSESMENT	
APRIL	12 <sup>th</sup>	02/04/2024	INTERNAL ASSESMENT	
		03/04/2024	4.9.2 Benefits of ISO to the organization.	
		04/04/2024	4.9.3 Just In Time (JIT) method, : Concept, Benefits, implementation areas, advantages ,current applications	
		05/04/2024	Six Sigma Technique	
	13 <sup>th</sup>	03	9/04/2024	7S Technique, Lean manufacturing
			10/04/2024	4.9.4 Numerical problems .Topic end, Question answer discussion, Assignment 4
			12/04/2024	Class test -2
	14 <sup>th</sup>	03	16/04/2024	<b>5. Production Planning And Control:</b> 5.1 Introduction
			18/04/2024	5.2 Major functions of production planning and control
			19/04/2024	5.3 Methods of forecasting 5.3.1 Routing 5.3.2 Scheduling
	15 <sup>th</sup>	04	23/04/2024	5.3.3 Dispatching
			24/04/2024	5.3.4 Controlling
25/04/2024			V ST	
26/04/2024			5.4 Types of production 5.4.1 Mass production, 5.4.2 Batch production,5.4.3 Job order production	
		EXTRA CLASS	5.5 Principles of product and process planning	
		EXTRA CLASS	Topic end, Question answer discussion, Assignment 5	
		EXTRA CLASS	Revision.	

  
 Prepared by 16/03/2024  
 Dr Niharika Mohanta