

**GOVT. POLYTECHNIC MAYURBHANJ**

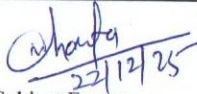
**ACADEMIC SESSION-2025-26**

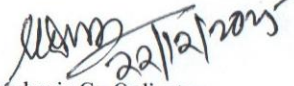
**LESSON PLAN**

<b>Discipline : Mechanical Engg.</b>		<b>Semester: 6th Sem</b>	<b>Name of the Teaching Faculty : Mihir mohanta</b>	
<b>Subject : INDUSTRIAL ENGINEERING &amp; MANAGEMENT(TH.1)</b>		<b>No. of Days / per week class allotted : 04</b>	<b>Semester From date : 22.12.2025 To Date : 18.04.2026</b>	
<b>MONTH</b>	<b>Week</b>	<b>Day</b>	<b>Topics</b>	
<b>DECEMBER</b>	<b>4TH</b>	1ST	<b>1. PLANT ENGINEERING:</b> Selection of Site of Industry	
		2ND	Define plant layout.Describe the objective and principles of plant layout	
		3RD	Explain Process Layout, Product Layout and Combination Layout.	
	<b>5TH</b>	1ST	Techniques to improve layout	
		2ND	Principles of material handling equipment	
		3RD	Plant maintenance ,Importance of plant maintenance, Break down maintenance.	
<b>JANUARY</b>	<b>1ST</b>	1ST	Preventive maintenance.	
	<b>2ND</b>	1ST	Scheduled maintenance	
		2ND	Revision	
		3RD	<b>2. OPERATIONS RESEARCH :</b> Introduction to Operations Research and its applications.	
	<b>3RD</b>	1ST	Define Linear Programming Problem,	
		2ND	Solution of L.P.P. by graphical method. Problem Solve	
		6TH	Problem Solve	
	<b>4TH</b>	1ST	Problem Solve	
		2ND	Problem Solve	
		3RD	Evaluation of Project completion time by Critical Path Method and PERT	
		6TH	Problem Solve	
	<b>5TH</b>	2ND	Problem Solve	
		3RD	Problem Solve	
		6TH	Problem Solve	
		<b>1ST</b>	1ST	Explain distinct features of PERT with respect to CPM.
2ND			Revision	
3RD			<b>3. INVENTORY CONTROL:</b> Classification of inventory ,Objective of inventory control.	
6TH	Describe the functions of inventories ,Benefits of inventory control.			
<b>2ND</b>	1ST	Costs associated with inventory. Terminology in inventory contro		
	2ND	Explain and Derive economic order quantity for Basic model. (Solve numerical)		
	3RD	Problem Solve		
	<b>3RD</b>	1ST	Problem Solve	
		2ND	Define and Explain ABC analysis.	
3RD		Revision		
6TH	<b>4. INSPECTION AND QUALITY CONTROL:</b> Define Inspection and Quality control, Describe planning of inspection.			

	4TH	1ST	Describe types of inspection
		2ND	Advantages and disadvantages of quality control, Study of factors influencing the quality of manufacture
		3RD	Explain the Concept of statistical quality control, Control charts (X, R, charts). Control charts (P and C - charts).
MARCH	1ST	1ST	Problem Solve (X, R, charts).
		6TH	Problem Solve (X, R, charts).
	2ND	1ST	Problem Solve (P and C - charts).
		2ND	Problem Solve (P and C - charts).
		3RD	Methods of attributes, Concept of ISO 9001-2008.
	3RD	1ST	Quality management system, Registration /certification procedure, Benefits of ISO to the organization.
		2ND	JIT, Six sigma,
		3RD	7S
		6TH	Lean manufacturing
	4TH	1ST	Solve related problems
		2ND	Solve related problems
		3RD	Revision
	5TH	1ST	INTERNAL
		2ND	<b>5. PRODUCTION PLANNING AND CONTROL:</b> Introduction, Major functions of production planning and control
	APRIL	1ST	6TH
2ND		1ST	Types of production: Mass production, Batch Production, Job order production
		2ND	Principles of product and process planning
		3RD	Revision
3RD		1ST	Previous year question discussion
		3RD	Previous year question discussion
		6TH	Previous year question discussion

  
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