

**GANAPATI INSTITUTE OF ENGINEERING AND
TECHNOLOGY(POLYTECHNIC),JAGATPUR,CUTTACK**

LESSON PLAN

Discipline: MECHANICAL ENGG	Semester: 6TH	Name of the Teaching Faculty: PRAVAT KUMAR SWAIN
Subject: INDUSTRIAL ENGG. & MANAGEMENT(TH-1)	No. of days/per week class allotted: 04	Semester From date: 22.12.2025 To Date: 18.04.2026 No. of Weeks: 15
Week	Class Day	Theory Topics
1ST	1ST	CHAPTER-1 Selection of site of industry
	2ND	Introduction to Plant location Layout
	3RD	Describe the objectives & the principles of a plant layout
	4TH	Explain process & product layout ,product layout, combination layout, Techniques to improve layout
2ND	1ST	Principal of material handling equipment
	2ND	Plant maintenance
	3RD	Importance of plant maintenance
	4TH	Breakdown maintenance
3RD	1ST	Preventive maintenance
	2ND	Scheduled maintenance
	3RD	CHAPTER-2 OPERATION RESEARCH Introduction to operation research and its application
	4TH	Define linear programming problem
4TH	1ST	Solved numerical
	2ND	Solved numerical
	3RD	Solution of LPP by graphical method
	4TH	Solved numerical
5TH	1ST	Solved numerical
	2ND	Evaluation of project completion time by CPM and PERT
	3RD	Explain features of PERT with respect to CPM
	4TH	Class Test-1
6TH	1ST	CHAPTER-3 INVENTORY CONTROL -Classification of inventory
	2ND	Objective of inventory control
	3RD	Describe the functions of inventory
	4TH	Benefits of inventory control
7TH	1ST	Costs associated with inventory control
	2ND	Terminology in inventory control
	3RD	Explain and derive economic order quantity for basic model
	4TH	Solve numerical
8TH	1ST	Solve numerical
	2ND	Define and explain ABC analysis
	3RD	CHAPTER-4 INSPECTION AND QUALITY CONTROL Define inspection and quality control
	4TH	Describe planning inspection
9TH	1ST	Describe types of inspection
	2ND	Advantage and dis-advantage of quality control.
	3RD	Study of factors influencing the quality of manufacture
	4TH	Explain the concepts of statistical quality control

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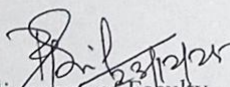
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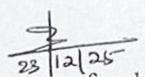
10 TH	1 ST	Control charts(X,R,P,C)
	2 ND	Method of attributes
	3 RD	Concepts of ISO 9001-2008
	4 TH	Quality management system
11 TH	1 ST	Registration/certificate procedure
	2 ND	Benefits of ISO to the organization
	3 RD	JIT, SIX sigma
	4 TH	7s, lean manufacturing
12 TH	1 ST	Solve related problems
	2 ND	Probable question answer discussion
	3 RD	CHAPTER-5 PRODUCTION PLANNING AND CONTROL Introduction
	4 TH	Major function s of production planning and control
13 TH	1 ST	Methods of forecasting
	2 ND	Routing
	3 RD	Scheduling
	4 TH	Dispatching
14 TH	1 ST	Controlling
	2 ND	Types of production
	3 RD	Mass production
	4 TH	Batch production
15 TH	1 ST	Job order production
	2 ND	Principles of product and process planning
	3 RD	Probable question answer discussion
	4 TH	Class Test-2

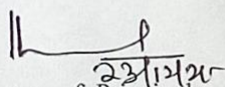
Learning Resources:

Sl. No.	Name of Authors	Title of the Book	Name of the Publisher
1	O.P.KHANNA	INDUSTRIAL ENGINEERING & MANAGEMENT	DHANPAT RAI & SONS
2	MARTAND TELSANG	INDUSTRIAL ENGG & PRODUCTION MANAGEMENT	S.CHAND
3	M.MAHAJAN	STATISTICAL QUALITY CONTROL	DHANPAT RAI & SON

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