

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF
ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN
Session-2024-2025

Semester: 6th Discipline: Mechanical Engineering Engg.

Subject: Industrial Engineering and Management

Name of the Teaching Faculty: Dr Subrat Kumar Pradhan



Subject: IEM No. of Days/per week class allotted: 04

Semester From Date: 04/02/2025 To Date: 17/05/2025 No. of Weeks: 12

Week	Class Day	Theory /Practical Topics
1	01	
		Selection of site of Industry. Define Plant Layout
	02	
		Describe the objectives and Principles of Plant Layout
	03	
		Explain Process Layout
	04	
		Product Layout and Combination Layout
2	01	
		Techniques to improve Layout
	02	
		Principles of material handling equipment
	03	
		Plant maintenance
	04	
		Break down maintenance
03	01	
		Importance of plant maintenance
	02	
		Preventive maintenance
	03	
		Scheduled maintenance
	04	
		5 explain distinct features of PERT with respect to CPM



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Subject: IEM No. of Days/per week class allotted : 04
 Semester From Date : 04/12/2025 To Date: 17/05/2025 No. of Weeks : 12

Week	Class Day	Theory / Practical Topics
04	01	
	02	Introduction to operations Research and its applications
	03	Define Linear Programming Problem
	04	3 solution of L.P.P. by graphical method Evaluation of Project Completion time by Critical Path Method and P.E.R.T (Simple Problem)
05	01	
	02	Classification of Industry
	03	Objective of Inventory Control
	04	Describe the Functions of Inventories
	01	Benefits of Inventory Control.
06	02	Cost associated with inventory.
	03	Terminology in inventory Control.
	04	Define and Explain ABC analysis Explain and Derive economic order quantity for basic method (Solve numerical)



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Week	Class Day	Theory / Practical Topics
07	01	
	02	Define Inspection and quality Control.
	03	Describe Planning of Inspection
	04	Describe Types of Inspection
		Advantages and Disadvantages of quality Control.
08	01	
	02	Study of factors influencing the quality of manufacture Explain the Concept of statistical quality Control (Control) charts (X, R, P. and C charts)
	03	methods of attributes Concept of ISO 9001-2008
	04	Quality management system, Registration/ Certification procedure.
09	01	Benefits of ISO to the organisation
	02	JIT, Six Sigma, 7S, Lean Manufacturing
	03	Solve related Problems
	04	Introduction Major Functions of Production Planning and Control.

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Week	Class Day	Theory/Practical Topics
10	01	Methods of Forecasting
	02	Routing
	03	Scheduling
	04	Dispatching
11	01	Controlling
	02	4 types of Production
	03	Mass Production
	04	Batch Production
12	01	Job order Production
	02	Principles of Product
	03	Progress Planning
	04	



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