

**GOVERNMENT POLYTECHNIC , KENDRAPARA  
LESSON PLAN**

**Subject- INDUSTRIAL ENGINEERING AND MANAGEMENT**

**Subject no- Th.1**

**Semester- 6<sup>th</sup>**

**Branch-Mechanical Engineering**

**Name of the Faculty- Rabindra Kumar Nayak**

**Academic Session-2022-2023 (summer)**

Sl. No.	Topics to be Covered	Week No.	Dates to be Covered
<b>1.0 PLANT ENGINEERING:</b>			
1.1	Selection of Site of Industry	1st	14/02/23 to 20/02/23
1.2	Define plant layout		
1.3	Describe the Objectives and Principles of plant layout.		
1.4	Explain Process Layout , Product Layout and Combination Layout.	2nd	21/02/23 to 27/02/23
1.5	Techniques to improve layout.		
1.6	Principles of material handling equipment.		
1.7	Plant maintenance and Importance of plant maintenance , Break down maintenance Preventive maintenance and Scheduled maintenance	3rd	28/02/23 to 06/03/23
<b>2.0 OPERATION RESEARCH:</b>			
2.1	Introduction to operation Research and Its applications.	3rd	28/02/23 to 06/03/23
2.2	Define Linear Programming Problem.		
2.3	Solution of L.P.P by graphical method.	4th	09/03/23 to 14/03/23
2.4	Evaluation of Project completion time by Critical path method and PERT.	5th	15/03/23 to 21/03/23
2.5	Explain distinct features of PERT with respect to CPM		
<b>3.0 INVENTORY CONTROL:</b>			
3.1	Classification of Inventory	6th	22/03/23 to 28/03/23
3.2	Objective of inventory control.		
3.3	Describe the Functions of inventories.		

3.4	Benefits of inventory control.	7th	29/03/23 to 08/04/23
3.5	Costs associated with inventories		
3.6	Terminology in inventory control		
3.7	Explain and Derive economic order quantity for Basic model.	8th	10/04/23 to 15/04/23
3.8	Define and Explain ABC analysis.		
<b>4.0 INSPECTION AND QUALITY CONTROL:</b>			
4.1	Define Inspection and Quality control.	8th	10/04/23 to 15/04/23
4.2	Describe planning of inspection.	9th	17/04/23 to 22/04/23
4.3	Describe types of inspection.		
4.4	Advantages and disadvantages of Quality control.	10th	24/04/23 to 29/04/23
4.5	Study of factors influencing the quality of manufacture.		
4.6	Explain the concept of statistical quality control , Control charts ( X , R , P , C- charts )	11th	01/05/23 to 06/05/23
4.7	Methods of attributes.		
4.8	Concept of ISO 9001- 2008	12th	08/05/23 to 13/05/23
4.9	Quality management system, Registration/certification procedure. Benefits of ISO to the organization. JIT , Six sigma , 7S , Lean manufacturing		
<b>5.0 PRODUCTION PLANNING AND CONTROL</b>			
5.1	Introduction	13th	15/05/23 to 20/05/23
5.2	Major functions of production planning and control.		
5.3	Methods of forecasting Routing , Scheduling Dispatching , Controlling	14th	22/05/23 to 27/05/23
5.4	Types of production , Mass production , Batch production , Job order production	15th	29/05/23 to 03/06/23
5.5	Principles of product and process planning		