

GOVERNMENT POLYTECHNIC JAJPUR

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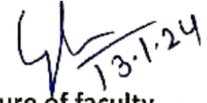
DEPARTMENT OF MECHANICAL

LESSON PLAN (2023-24)

Discipline: MECHANICAL	SEMESTER: 6TH	Name of the Teaching faculty GITANJALI SETHI
SUBJECT: IEM (TH-1)	No of Days/Week class allotted: 4	Semester starts from Date: 16.01.2024 To Date: 26.04.2024 No of weeks: 15
1st	1st	(CH-1) PLANT ENGINEERING
		1.1 Selection of Site of Industry
	2nd	1.2 Define plant layout
		1.3 Describe the objective and principles of plant layout.
	3rd	1.4 Explain Process Layout
2nd	4th	Explain Product Layout
	1st	Explain Combination Layout.
		1.5 Techniques to improve layout
	2nd	1.6 Principles of material handling equipment.
	3rd	Principles of material handling equipment.
3rd	4th	1.7 Plant maintenance
		1.7.1 Importance of plant maintenance.
	1st	1.7.2 Break down maintenance.
		1.7.3 Preventive maintenance.
	2nd	1.7.4 Scheduled maintenance. REVISION
4th	3rd	(CH-2) OPERATIONS RESEARCH
	4th	2.1 Introduction to Operations Research and its applications.
		Introduction to Operations Research and its applications.
	1st	2.2 Define Linear Programming Problem
	2nd	Define Linear Programming Problem
5th	3rd	2.3 Solution of L.P.P. by graphical method.
	4th	Solution of L.P.P. by graphical method.
	1st	2.4 Evaluation of Project completion time by Critical Path Method
	2nd	Evaluation of Project completion time by PERT Method
	3rd	Simple problems
6th	4th	2.5 Explain distinct features of PERT with respect to CPM, REVISION
	1st	(CH-3) INVENTORY CONTROL
		3.1 Classification of inventory.
	2nd	3.2 Objective of inventory control.
	3rd	3.3 Describe the functions of inventories.
7th	4th	3.4 Benefits of inventory control.
	1st	3.5 Costs associated with inventory.
	2nd	3.6 Terminology in inventory control
	3rd	3.7 Explain and Derive economic order quantity for Basic model.
	4th	Solve numerical

8th	1st	3.8	Define and Explain ABC analysis.	
	2nd		Explain ABC analysis. REVISION	
	3rd		(CH-4) INSPECTION AND QUALITY CONTROL	
		4.1		Define Inspection and Quality control.
4th	4.2		Describe planning of inspection.	
9th	1st	4.3	Describe types of inspection.	
	2nd	4.4	Advantages and disadvantages of quality control.	
	3rd	4.5	Study of factors influencing the quality of manufacture.	
	4th	4.6	Explain the Concept of statistical quality control	
10th	1st		Control charts (X, F, P and C - charts).	
	2nd	4.7	Methods of attributes.	
	3rd	4.8	Concept of ISO 9001-2008.	
	4th	4.9.1	Quality management system, Registration /certification procedure.	
11th	1st	4.9.2	Benefits of ISO to the organization.	
	2nd	4.9.3	JIT, Six sigma	
	3rd		7S, Lean manufacturing	
	4th	4.9.4	Solve related problems.	
12th	1st		Solve related problems. REVISION	
	2nd		(CH-5) PRODUCTION PLANNING AND CONTROL	
		5.1		Introduction
		5.2		Major functions of production planning
4th	5.2		Major functions of production control	
13th	1st	5.3	forecasting & Methods of forecasting	
	2nd	5.3.1	Routing	
	3rd	5.3.2	Scheduling	
	4th	5.3.3	Dispatching	
14th	1st	5.3.4	Controlling	
	2nd	5.4	Production & Types of production	
	3rd	5.4.1	Mass production	
	4th	5.4.2	Batch production	
15th	1st	5.4.3	Job order production	
	2nd	5.5	Principles of product planning.	
	3rd		Principles of process planning.	
	4th		REVISION	

Learning Resources:			
M. No.	Name of Authors	Title of the Book	Name of the Publisher
1	O.P. KHANNA	INDUSTRIAL ENGINEERING & MANAGEMENT	DEANPATRAI & SONS
2	MARLAND HUSANG	INDUSTRIAL ENG & PRODUCTION MANAGEMENT	S. CHAND
3	M. MAHAJAN	STATISTICAL QUALITY CONTROL	DEANPATRAI & SONS
4			


 13.1.24
 Signature of faculty
 Sr. Lect. Mech.