UTKALMANI GOPABANDHU INSTITUTE OF ENGINEERING

DEPARTMENT OF MECHANICAL ENGINEERING (2023-2024)

LESSON PLAN

Discipline: mechanical engg.	**Semester: 6TH**	**Name of the Teaching faculty: AMIT KUMAR MARANDI**
Subject: INDUSTRIAL ENGG. AND MANAGEM ENT	**No of Days /Week class alloted: 4**	**Semester from Date: 16/01/2024** **To Date: 26/04/2024** **No of weeks: 13**
1ST	**1st**	• PLANT ENGINEERING **(Chapter-1)**: • Selection of Site of Industry.
		1.2 Define plant layout.
	2nd	1.3 Describe the objective and principles of plant layout.
		1.4 Explain Process Layout, Product Layout and Combination Layout.
		1.5 Techniques to improve layout.
		1.6 Principles of material handling equipment.
		1.7 Plant maintenance.
2ND	**1st**	1.7.1 Importance of plant maintenance.
	2nd	1.7.2 Break down maintenance.
		1.7.3 Preventive maintenance.
	3rd	1.7.4 Scheduled maintenance.
	4th	Class test -1
3RD	**1st**	• OPERATIONS RESEARCH: **(chapter-2)** • Introduction to Operations Research and its applications.
	2nd	2.2 Define Linear Programming Problem,
	3rd	2.3Solution of L.P.P. by graphical method.
	4th	2.3Solution of L.P.P. by graphical method.

4TH	**1st**	2.4 Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)-
	2nd	2.4 Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)-
	3rd	2.5 Explain distinct features of PERT with respect to CPM.
	4th	Class test - 2

5TH	**1st**	• INVENTORY CONTROL: **(chapter-3)** • Classification of inventory.
	2nd	3.2 Objective of inventory control.
	3rd	3.3 Describe the functions of inventories.
	4th	3.4 Benefits of inventory control.
6TH	**1st**	3.5 Costs associated with inventory 3.6 Terminology in inventory control
	2nd	3.7 Explain and Derive economic order quantity for Basic model. (Solve numerical)
	3rd	3.7 Explain and Derive economic order quantity for Basic model. (Solve numerical)
		3.8 Define and Explain ABC analysis
	4th	Class test-3
7TH	**1st**	• INSPECTION AND QUALITY CONTROL: **(chapter-4)** • Define Inspection and Quality control. 4.2Describe planning of inspection
		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.
		4.6 Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts).
	4th	4.6 Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts).
8TH	**1st**	4.7 Methods of attributes
	2nd	4.8 Concept of ISO 9001-2008.
	3rd	4.9.1 Quality management system, Registration /certification procedure.
	4th	4.9.2 Benefits of ISO to the organization.
	1st	4.9.3 JIT, Six sigma,7S, Lean manufacturing
	2nd	4.9.4 Solve related problems.
	3rd	Class test-4

9TH	**4th**	• PRODUCTION PLANNING AND CONTROL **(chapter-5)** • Introduction • Major functions of production planning and control
10TH	**1st**	5.3 Methods of forecasting
	2nd	5.3.1 Routing
	3rd	5.3.2Scheduling
	4th	5.3.3 Dispatching
11TH	**1st**	5.3.4 Controlling
	2nd	5.4 Types of production
	3rd	5.4.1 Mass production
	4th	5.4.2 Batch production
12TH	**1st**	5.4.3 Job order production
	2nd	5.5 Principles of product and process planning.
	3rd	Class test-5
	4th	Doubt clearing class.

13TH	**1st**	**Previous year questions solving class.**
	2nd	**Previous year questions solving class.**
	3rd	**Previous year questions solving class.**
	4th	**Previous year questions solving class.**

Signature of faculty