NILASAILA INSTITUTE OF SCIENCE & TECHNOLOGY
SERGARH-756060, BALASORE (ODISHA)
(Approved by AICTE& affiliated to SCTE&VT, Odisha)

LESSON PLAN

SUBJECT: TH-1 (INDUSTRIAL ENGINEERING & MANAGEMENT)

Name of the Faculty- Er.Bishnu Charan Jena

Branch- Mechanical Engineering **Session-**2024-25

Semester- 6th **Examination-**2025(S)

CHAPTER WISE DISTRIBUTION OF PERIODS

Sl.No.	Name of the chapter as per the Syllabus	No. of Periods as per the Syllabus	No. of periods actually needed
1	PLANT ENGINEERING	10	11
2	OPERATIONS RESEARCH	10	11
3	INVENTORY CONTROL	10	11
4	INSPECTION AND QUALITY CONTROL	15	15
5	PRODUCTION PLANNING AND CONTROL	15	15
	Total Period:	60	63

Bishnu Charan Jena 03/02/25
sign of the faculty

Sign of H.O.D

Discipline: MECHANICAL ENGINEERING	Semester: 6th	Name of the Teaching Faculty: Er.Bishnu Charan Jena
		SESSION : 2024-25 EXAMINATION : 2025 (S)
Week	**Class Day**	**Topics to be Covered**
1st	1st	1.1 Selection of Site of Industry.
	2nd	1.2 Define plant layout.
	3rd	1.3 Describe the objective and principles of plant layout.
	4th	1.3 Describe the objective and principles of plant layout.
2nd	1st	1.4 Explain Process Layout, Product Layout and Combination Layout.
	2nd	1.4 Explain Process Layout, Product Layout and Combination Layout.
	3rd	1.5 Techniques to improve layout.
	4th	1.6 Principles of material handling equipment.
3rd	1st	1.7 Plant maintenance.
	2nd	1.7.1 Importance of plant maintenance.
	3rd	1.7.2 Break down maintenance.
	4th	1.7.3 Preventive maintenance. 1.7.4 Scheduled maintenance.
4th	1st	2.1 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.
5th	1st	2.4 Evaluation of Project completion time by Critical Path Method and PERT
	2nd	2.4 Evaluation of Project completion time by Critical Path Method and PERT
	3rd	2.5Explain distinct features of PERT with respect to CPM.
	4th	2.5Explain distinct features of PERT with respect to CPM.
6th	1st	3.1 Classification of inventory.
	2nd	3.3 Describe the functions of inventories.
	3rd	3.3 Describe the functions of inventories.

Week	Class Day	Topics to be Covered
6th	4th	3.4 Benefits of inventory control.
7th	1st	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)
	4th	3.8 Define and Explain ABC analysis.
8th	1st	3.8 Define and Explain ABC analysis.
	2nd	4.1Define Inspection and Quality control
	3rd	INTERNAL ASSESSMENT
	4th	INTERNAL ASSESSMENT
9th	1st	4.4 Advantages and disadvantages of quality control.
	2nd	4.5 Study of factors influencing the quality of manufacture.
	3rd	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 -
10th	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.
11th	1st	4.9.3 JIT, Six sigma,7S, Lean manufacturing
	2nd	4.9.4 Solve related problems.
	3rd	4.9.4 Solve related problems.
	4th	4.9.4 Solve related problems.
12th	1st	5.2 Major functions of production planning and control
	2nd	5.2 Major functions of production planning and control
	3rd	5.3 Methods of forecasting
	4th	5.3.1 Routing

Week	Class Day	Topics to be Covered
13th	1st	5.3.2Scheduling
	2nd	5.3.3 Dispatching
	3rd	5.3.4 Controlling
	4th	5.4 Types of production
14th	1st	5.4 Types of production
	2nd	5.4 Types of production
	3rd	5.4.1 Mass production
	4th	5.4.2 Batch production
15th	1st	5.4.2 Batch production
	2nd	5.4.3 Job order production
	3rd	5.4.3 Job order production
	4th	5.5 Principles of product and process planning.
16th	1st	5.5 Principles of product and process planning.
	2nd	5.5 Principles of product and process planning.
	3rd	5.5 Principles of product and process planning.
	4th	Revision

sign of the faculty 03/02/25

Sign of H.O.D 3/02/25