ACADEMIC LESSON PLAN FOR SUMMER SEMESTER, FEBRUARY - 2023

Govt. Polytechnic, Balasore.

Name of the Faculty: Udayendu Sahoo, PTGF (Humanities)

INDUSTRIAL ENGINEERING & MANAGEMENT

Theory: 4 Periods per week

Internal Assessment: 20 Marks

Total Periods: 60 Periods

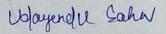
End Sem Exam: 80 Marks

Examination: 3 hours

Total Marks: 100 Marks

Semester: 6th MECH.

Discipline: MECH.	Semester:6 th	Name of the Teaching Faculty: Udayendu Sahoo
Subject: INDUSTRIAL	No. of Days/per	Semester from date: 14/2/2023 To date: 23-5-2023
ENGINEERING & MANAGEMENT	week class allotted: 04 Days	No. of Weeks: 15
Week	Class Day	Theory Topics
1 _{st}	1 _{st}	PLANT ENGINEERING Selection of Site of Industry Define plant layout
	2 _{nd}	Describe the objective and principles of plant layout
	3 _{rd}	Explain Process Layout, Product Layout and Combination Layout
	4 _{th}	Techniques to improve layout
2 _{nd}	1 _{st}	Principles of material handling equipment
	2 _{nd}	Plant maintenance
	3 _{rd}	Importance of plant maintenance
	4 _{th}	Break down maintenance
3 _{rd}	1 _{st}	Preventive maintenance
	2 _{nd}	Scheduled maintenance
	3 _{rd}	OPERATIONS RESEARCH Introduction to Operations Research and its applications
	4th	Define Linear Programming Problem
4 _{th}	1 _{st}	Define Linear Programming Problem



	2 _{nd}	Solution of L.P.P. by graphical method
	3 _{rd}	Solution of L.P.P. by graphical method
	4th	Solution of L.P.P. by graphical method
Sth	1 _{st}	Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)
	2 _{nd}	Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)
	3 _{rd}	Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)
	4 _{th}	Explain distinct features of PERT with respect to CPM
6 _{th}	1 _{st}	INVENTORY CONTROL Classification of inventory
	2 _{nd}	Objective of inventory control
	3 _{rd}	Describe the functions of inventories
	4 _{th}	Benefits of inventory control
7 _{th}	1 _{st}	Benefits of inventory control
	2 _{nd}	Costs associated with inventory
	3 _{rd}	Terminology in inventory control
	4 _{th}	Explain and Derive economic order quantity for Basic model. (Solve numerical)
8 _{th}	1 _{st}	Explain and Derive economic order quantity for Basic model. (Solve numerical)
	2 _{nd}	Define and Explain ABC analysis
	3 _{rd}	INSPECTION AND QUALITY CONTROL Define Inspection and Quality control
	4 _{th}	Describe planning of inspection
9 _{th}	1 _{st}	Describe types of inspection
	2 _{nd}	Advantages and disadvantages of quality control
	3 _{rd}	Study of factors influencing the quality of manufacture

	4 _{th}	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)
10th	1 _{st}	X-Chart
	2 _{nd}	R-Chart
	3 _{rd}	P-Chart
	4 _{th}	C-Chart
11 _{th}	1 _{st}	Methods of attributes
	2 _{nd}	Concept of ISO 9001-2008
	3 _{rd}	Quality management system, Registration /certification procedure
	4 _{th}	Benefits of ISO to the organization
12 _{th}	1 _{st}	JIT, Six sigma,7S, Lean manufacturing
	2 _{nd}	PRODUCTION PLANNING AND CONTROL Introduction Major functions of production planning and control
	3 _{rd}	Major functions of production planning and control
	4 _{th}	Methods of forecasting
13 _{th}	1 _{st}	Routing
	2 _{nd}	Scheduling
	3 _{rd}	Dispatching
	4 _{th}	Controlling
14th	1 _{st}	Types of production
	2 _{nd}	Types of production
	3 _{rd}	Mass production
	4 _{th}	Batch production
15 _{th}	1 _{st}	Job order production
	2 _{nd}	Job order production
	3 _{rd}	Principles of product and process planning
	416	Principles of product and process planning

Udayerdu Sahn