

# PSIET, KARANDA, DHENKANAL

## LESSON PLAN

Session(2022-2023)

<b>Discipline:</b> Mechanical Engineering	<b>Semester:</b> 6 <sup>th</sup> , Summer/2023	<b>Name of the Teaching Faculty:</b> Rakesh Kumar Bisoi Lecturer
<b>Subject:</b> Industrial Engineering and Management, Theory-01	<b>No. of Days/Week:</b> 04	<b>Start Date:</b> 15/02/2023 <b>End Date:</b> 23/05/2023

Week	Class Day	Theory Topics
1st	1st	<b>PLANT ENGINEERING:</b> Plant and plant location Selection of Site of Industry. Factors governing plant location.
	2nd	Plant layout and their types, The objective and principles of plant layout.
	3rd	Process Layout with relative advantages and disadvantages.
	4th	Product Layout with relative advantages and disadvantages.
2nd	1st	Combination Layout. Techniques to improve layout.
	2nd	Principles of material handling equipment
	3rd	Plant maintenance and its Importance
	4th	i) Breakdown maintenance. ii) Scheduled maintenance.
3rd	1st	iii) Preventive maintenance. iv) Predictive Maintenance
	2nd	<i>Doubt Clearing Class</i>
	3rd	<i>Assignment Evaluation</i>
	4th	<b>INVENTORY CONTROL:</b> Inventory Control and their types, Objective and functions of inventory control.
4th	1st	Benefits of inventory control. Costs associated with inventory.
	2nd	Terminology in inventory control, Concept of Economic order quantity (EOQ Model)

	3rd	ABCAnalysis
	4th	SolvenumericalonEOQ
5th	1st	ConceptofABCAnalysis.
	2nd	<i>DoubtClearingclass</i>
	3rd	<i>AssignmentEvaluation/ClassTest</i>
	4th	<b>OPERATIONSRESEARCH:</b> OperationsResearch, methodsofoperationresearchand its applications.
6th	1st	LinearProgrammingProblemwithitsapplication
	2nd	SolvingL.P.P.bygraphicalmethod.
	3rd	SolvingL.P.P.bygraphicalmethod.
	4th	SolvingL.P.P. bygraphicalmethod.
7th	1st	<b>NETWORKANALYSIS:</b> Network analysis and its related terms such as event, activity,criticalactivity,non-criticalactivity,dummy activityandcriticalpath
	2nd	EST,EFT,LST,LFT,float,totalproject duration
	3rd	EvaluationofProjectcompletiontimebyCriticalPath Method(Simpleproblems)
	4th	EvaluationofProjectcompletiontimebyPERT (Simple problems)
8th	1st	DistinguishbetweenPERTwithrespecttoCPM.
	2nd	Solverelatedproblems
	3rd	Solverelatedproblems
	4th	<i>DoubtClearingClass</i>
9th	1st	<i>AssignmentEvaluation/Quiz Test</i>
	2nd	<b>PRODUCTIONPLANNINGANDCONTROL</b> Productionplanningandcontrol Majorfunctionsofproductionplanningandcontrol
	3rd	Principlesofproductandprocessplanning
	4th	Methodsofforecasting
10th	1st	ConceptofRouting,Scheduling
	2nd	Dispatchingandcontrolling
	3rd	Typesofproductionlike Mass,BatchandJoborder production
	4th	<i>DoubtClearingClass</i>
11th	1st	<i>ClassTest</i>
	2nd	<b>INSPECTIONANDQUALITYCONTROL:</b> InspectionandQualitycontrol.
		Planningofinspection.
	3rd	Typesofinspection.

	4th	QualityControlanddiscussthefactorsinfluencingthe quality of manufacture.
12th	1st	Advantagesanddisadvantages ofqualitycontrol.
	2nd	Conceptofstatisticalqualitycontrol,Controlcharts
	3rd	Methodsofattributes
	4th	Controlcharts(XandRcharts).
13th	1st	Controlcharts(CandPcharts).
	2nd	SolvingRelatedProblems
	3rd	SolvingRelatedProblems
	4th	Qualitymanagementsystem,Registration/certification procedure.
14th	1st	Concept of ISO 9001-2008 BenefitsofISOtotheorganization.
	2nd	ConceptofJIT
	3rd	ConceptofSixsigma,7SandLeanmanufacturing
	4th	AssignmentEvaluation/QuizTest
15th	1st	PracticeTest
	2nd	Revision
	3rd	Revision
	4th	Discussionofpreviousyearquestionpaper

Rakesh Kumar Bisoi  
Signature of the faculty

  
15/12/2023  
Signature of the Principal