

# C. V. RAMAN POLYTECHNIC, BHUBANESWAR

## LESSON PLAN

Session (2025-2026)

<b>Discipline:</b> Mechanical Engineering	<b>Semester:</b> 6th Semester, Summer-2026	<b>Name of the Faculty:</b> Dr. Soumya Dash, Assistant Professor <b>Email ID:</b> soumya.dash@cvrp.edu.in
<b>Subject:</b> Industrial Engineering & Management, Theory-1, Course code: <u>Th-1</u>	<b>No. of Days/week:</b> 04	<b>Start Date:</b> 22.12.2025 <b>End Date:</b> 18.04.2026
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Week	Class Day	Theory Topics
1st	1st	<b>PLANT ENGINEERING:</b> Define plant layout, Describe the objective and principles of plant layout
	2nd	Describe the objective and principles of plant layout
	3rd	Explain Process Layout, Product Layout and Combination Layout
	4th	Techniques to improve layout
2nd	1st	Principles of material handling equipment, Plant maintenance
	2nd	Importance of plant maintenance, Break down maintenance
	3rd	Preventive maintenance, Scheduled maintenance
	4th	<b>OPERATIONS RESEARCH:</b> Introduction to Operations Research and its applications
3rd	1st	Define Linear Programming Problem
	2nd	Solution of L.P.P. by graphical method.
	3rd	Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)
	4th	Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)
4th	1st	Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)
	2nd	Evaluation of Project completion time by Critical Path Method and PERT (Simple problems)
	3rd	Explain distinct features of PERT with respect to CPM.
	4th	Explain distinct features of PERT with respect to CPM.

5th	1st	<b>INVENTORY CONTROL:</b> Classification of inventory. Objective of inventory control. Describe the functions of inventories.
	2nd	Benefits of inventory control, Costs associated with inventory, Terminology in inventory control
	3rd	Explain and derive economic order quantity for Basic model. (Solve numerical)
	4th	Explain and derive economic order quantity for Basic model. (Solve numerical)
6th	1st	Explain and derive economic order quantity for Basic model. (Solve numerical)
	2nd	Define and Explain ABC analysis
	3rd	Define and Explain ABC analysis
	4th	<b>INSPECTION AND QUALITY CONTROL-Define</b> Inspection and Quality control
7th	1st	<b>INSPECTION AND QUALITY CONTROL-Define</b> Inspection and Quality control
	2nd	Describe planning of inspection, Describe types of inspection. Advantages and disadvantages of quality control
	3rd	Describe planning of inspection, Describe types of inspection. Advantages and disadvantages of quality control
	4th	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)
8th	1st	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)
	2nd	REVISION
	3rd	Study of factors influencing the quality of manufacture
	4th	Study of factors influencing the quality of manufacture
9th	1st	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)
	2nd	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)
	3rd	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)
	4th	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)
10th	1st	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)
	2nd	Explain the Concept of statistical quality control, Control charts (X, R, P and C - charts)

	3rd	Methods of attributes, Concept of ISO 9001-2008
	4th	Quality management system, Registration /certification procedure
	1st	Benefits of ISO to the organization
11th	2nd	Methods of attributes, Concept of ISO 9001-2009
	3rd	Quality management system, Registration /certification procedure
	4th	Benefits of ISO to the organization
	1st	JIT, Six sigma,7S, Lean manufacturing
	2nd	JIT, Six sigma,7S, Lean Manufacturing-Solve related problems
12th	3rd	<b>PRODUCTION PLANNING AND CONTROL</b>
		Introduction
		Major functions of production planning and control
	4th	Introduction
		Major functions of production planning and control
	1st	Introduction
		Major functions of production planning and control
	2nd	Introduction
		Major functions of production planning and control
13th	3rd	Methods of forecasting
	4th	Routing
	1st	Scheduling, Dispatching, Controlling
	2nd	Types of production
	3rd	Scheduling, Dispatching, Controlling
	4th	Types of production
	1st	Mass production, Batch production
	2nd	Job order production, Principles of product and process planning
	3rd	Mass production, Batch production
	4th	Job order production, Principles of product and process planning
15th		

Concerned Faculty



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