

# Syllabus

## PRODUCTION & OPERATIONS MANAGEMENT

### Unit- I

**Operations Management:** Concept, Functions, Transformation Process Model: Inputs, Process and Outputs; Classification of Operations; Responsibilities of Operations Manager, Contribution of Henry Ford, Deming, Crosby, Taguchi.

**Facility Location** – Importance, Factors in Location Analysis, Location Analysis Techniques.

**Product Design and Development** – Product Design and its Characteristics, Product Development Process (Technical), Product Development Techniques.

**Process Selection-** Project, Job, Batch, Mass and Process Types of Production Systems. Operations Management in Corporate Profitability and Competitiveness

### Unit- II

**Facility Layout** – Objectives, Advantages, Basic Types of Layouts, Problems in Facility Layout.

**Production Planning & Control (PPC):** –Concepts, Objectives, and Functions, Work Study – Productivity: Method study; Work Measurement.

**Capacity Planning** – Concepts, Factors Affecting Capacity Planning, Capacity Planning Decisions.

### Unit- III

**Quality Management:** Introduction, Meaning, Quality Characteristics of Goods and Services, Juran's Quality Trilogy, Deming's 14 Principles, Tools and Techniques for Quality Improvement, Statistical Process Control Chart, Quality Assurance, Total Quality Management (TQM) Model Concept of Six Sigma and its Application.

**Acceptance Sampling** – Meaning, Objectives, Single Sample, Double Sample and Multiple Sample Plans with Stated Risk, Control Charts for Variables – Averages and Ranges, Control Charts for Defectives – Fraction Defective and Numbers Defective.

### Unit- IV

**JIT and Lean Production System:** JIT Approach, Implementation Requirements, Services, Kanban System.

**Inventory Management:** Concepts, Classification, Objectives, Factors affecting Inventory Control Policy, Inventory Costs, Basic EOQ Model, Re-order Level, ABC Analysis. Logistics and Franchising.

**Purchasing Management** – Objectives, Functions, Methods, Procedure.

**Value Analysis:** Concepts, Stock Control Systems, Virtual Factory Concept and Production Worksheets.

Note : Relevant Case Studies Should be Discussed in Class.