Veer Narmad South Gujarat University

Production Management I

S.Y. B.B.A., Semester 111 Effective from June 2012

Objectives:

To expose students with the basics of Operations Management.. They should understand basic management of manufacturing processes. They must appreciate that fundamentals of Operations Management are also applicable to production of services. They should also understand various aspects of production planning & control techniques. They should know various techniques of optimum utilization of resources like time, inventory , machine etc. They should also be exposed to quality assurance techniques.

Pedagogic Tools:

Lectures, Case studies, Practical examples from corporate & business world, assignments & presentations. Industrial trips

Course Content:

CHAPTER 1. Introduction to Operations Management: (20 %)

Sr. No	Sub Topic
1.	Definition of Production & Introduction to Production Function
2.	Definition of Operations Management. Explanation of appropriateness of term " Operations Management " than " Operations Management "
3.	Scope of Operations Management at macro level. How Operations Management covers manufacture of tangible products & also of services. Difference between tangible products and services.
4.	Scope of Operations Management at micro level or within an organization (Responsibilities of Production Manager)
5.	Importance of Operations Management.
6.	Inter-action of Operations Management with other functional areas viz. Marketing Management, Finance Management, Personnel Management and Quality Assurance department
7.	Types of production systems. Intermittent & continuous production systems & their sub-classes

CHAPTER 2. Plant site Selection (20 %)

Sr. No	Sub Topic
1.	General idea of Plant site / location selection decision
2.	Stages of Plant site selection process
3.	Factors affecting plant site selection
4.	Techniques & models of plant site selection.

5. Industrial concentration & its merits & de-merits. Government measures to control industrial concentration

6. Comparison or Urban sites (Developed areas) & Rural sites (Backward areas)

CHAPTER 3. Design of Plant lay-out & material handling systems (20 %)

Sr. No	Sub Topic
1.	Definition of Plant-layout.
2.	Process of plant lay-out design
3.	Various types of plant lay-outs
4.	Various factors affecting the lay-out
5.	Techniques of plant lay-out design
6.	Definition of material handling. Four functions of material handling.
7.	Factors affecting selection of material handling equipments
8	Different types of material handling equipments.

Chapter 4. Inventory Management: (40 %)

Sr. No	Sub Topic
1.	Definition of Inventory. Types of Inventory
2.	Useful applications of Inventory (Purposes of Inventory)
3.	Definition of Inventory Control
4.	Concept of selective inventory control & ABC analysis. Advantages & Limitations of ABC analysis
5.	VED analysis, FSN analysis & ABC X VED matrix
6.	Various costs associated with acquiring & keeping inventory.
7.	The concept of Economic Order Quantity to minimize total cost of Inventory. Formula of Economic Order Quantity (EOQ) for basic model of Economic Order Quantity
8.	Numerical problems of basic EOQ model
9.	EOQ model with price discounts
10.	Numerical model for EOQ with price discounts
11.	EOQ model with separate consideration for storage cost & interest cost. Need to consider storage cost & interest cost separately.
12.	Need to consider storage cost & interest cost separately. Numerical problems for EOQ model with separate consideration for storage cost & interest cost.
13	EOQ model with shortage cost.
14	Numerical problems for EOQ model with shortage
15.	The concept of Economic Run Length (ERLQ) when item is supplied at uniform rate rather than instantaneous supply in one lot. ERL formula derivation
16	Numerical problems for ERLQ model
17.	The concept of lead time of purchasing. Understanding of Internal & External lead time
18.	Concept of various stock levels viz. Re-Order Level (ROL), Safety stock, Buffer stock, Maximum Level, Minimum Level etc.
19.	Composite numerical problems with practical data. Concept of service level and probabilistic demand. Numerical examples based on these theories.

Note:

From Chapter No. 4 Only numerical problems should be asked in final exam.

Reference Books:

1. Operations Management- By Joseph Monks , McGraw Hill
2. Operations management – By Everett Adams, PHI
3. Operations Management – By Martinich, PHI
4. Operations Management – By Krajewski, PHI
5. Operations Management – By William Stevenson , McGraw Hill
6. Operations Management – By Russell & Taylor