

FC : 502 : Operations Management (Foundation Course)

Theory : Credit : 4 (100%)

Total Marks : 100

Unit	Topics Covered	Wt.
1.	Introduction Meaning and Functions of Production Management, Role and Responsibility of Production Function in Organization, Types of Production System- Continuous Intermittent, Job Shop etc Plant Layout - Objectives, Types, Materials Flow Pattern. Safety Considerations and Environmental Aspects.	(15%)
2.	Production Planning and Control Meaning, Objectives, Scope, Importance & Procedure of Production Planning, Routing scheduling Master Production Schedule, Production Schedule, Dispatch, Follow up, Production Control-Meaning, objectives, Factors affecting Production Control.	(15%)
3.	Methods Study, Work Study and Time Study Methods Study- Concept, Questioning Techniques, Principles of Motion Economy, flow Process Chart, Multiple Activity Chart, SIMO Chart, Travel Chart. Work Study - Concepts, Scope and Applications, Work Study and Production Improvement. Time Study –Routing Concepts, Stopwatch Study, Allowance, PMTS Systems (Concepts Only) Activity Sampling. Productivity Meaning, Importance, Measurement, Techniques, Factors affecting Productivity, Measures to boost Productivity- ISO 9000 to ISO 2000, Quality Control, Quality Circles, Effects of Globalization on Business.	(25%)
4.	Materials Planning – Introduction to Planning, Definition, Advantages; Bills of Materials; Introduction to Material Requirement Planning (MRP). Purchasing – Objectives, Parameters, Procedure; Selection of Suppliers; Impact of MRP on Purchasing and Supply. Inventory Management – Need for Inventory, Right Quantity, Different Functions and Types; Inventory Control – Benefits, Techniques; ABC Analysis; Economic Order Quantity (EOQ) Concept; Just-in-Time (JIT) Inventory System.	(25%)
5.	Definition, Importance, Work and Rest Cycles, Biomechanical Factors, Effects of Factors such as Light, Ventilation, Noise, Heat on Performance. Importance, Safe Practices in handling Chemicals, Gases, Bulk Materials, Safety with cargo handling equipment, Safety equipments and Devices, Statutes Governing Safety.	(20%)

Reference Books:

- *Production and Operations Management – K. Ashwathappa; HPH*
- *Production and Operations Management – E.E. Adam, R.J. Ebert; PHI*
- *Purchasing and Supply Management – D.W. Dobler, D.N. Burt.*
- *Purchasing and Materials Management – P. Gopalkrishnan; Tata McGraw Hill.*
- *Production & Operations Management, Alan Muhlemann and Others, Macmillan*
- *Production & Operation Management, Adam & Elebert, Prentice Hall*
- *Operations Management and Control, Biswajit Banerjee, S.Chand*
- *Production & Operation Management, Adam & Elbert, Prentice Hall*
- *Project Preparation Appraisal & Implementation, Prasanna Chandra, Tata McGraw Hill*
- *Project Management, S.Chaudhary, Tata McGraw Hill*