

# **JAIPUR NATIONAL UNIVERSITY, JAIPUR**



**Post Graduate Diploma**

**in**

**Operation Management**

**SYLLABUS  
FOR DISTANCE EDUCATION**

## **COURSE STRUCTURE**

<b>Paper Code</b>	<b>Paper Title</b>	<b>Examination Duration</b>	<b>Maximum Marks</b>	<b>Term-End Exam</b>	<b>Assignment Marks</b>
PGDOM – 101	Business Environment	3 Hrs	100	70	30
PGDOM – 102	Organization Behaviour	3 Hrs	100	70	30
PGDOM – 103	Managerial Economics	3 Hrs	100	70	30
PGDOM – 104	Production Planning & Control	3 Hrs	100	70	30
PGDOM – 105	Total Quality Management	3 Hrs	100	70	30
PGDOM – 106	Purchase & Material Management	3 Hrs	100	70	30
PGDOM – 107	Inventory Management	3 Hrs	100	70	30
PGDOM – 108	Technology Management	3 Hrs	100	70	30

## **PGDOM – 101: Business Environment**

**Max. Marks: 70**

**Time: 3 Hrs.**

Business Environment- Nature, components and significance. Factors effecting environment of Business. Economic factors its components. Cultural, Political, Social, Sovereignty, Technological factors and their impact on business. Legal environment and external factors influencing Business environment. International Business Environment, challenges.

Indian Economic Systems - Assessing current state of business environment in India, Economic planning with reference to public, private and cooperative sectors. Various Industrial Policies of India with special emphasis on new industrial policy with various amendments. Foreign Trade Policy, Fiscal Policy and Tax System in India, Monetary policies.

Economic Reforms: Liberalisation, Privatisation and globalization and their Impact. Competition Act and its impact on Indian business. Foreign Direct Investment in India, Impact of WTO in India, Public Sector s: Rationale and Role played by them since independence. Disinvestment- Meaning and various loopholes in and challenges to disinvestment programme, Multi National Enterprises and their role in India.

Small Scale Enterprises: Meaning, Importance to the Indian economy, problems and various incentives given to these.

International Trade: Various Trade Reforms announced in India in recent times. Balance of Payments, Foreign Direct Investment- Importance, policy and current position of India. EXIM Policy. World Trade Organisation and its impact on Indian Business.

## **PGDOM – 102: Organization Behaviour**

**Max. Marks: 70**

**Time: 3 Hrs.**

Management: Basic Concept, Nature, purpose and scope of management, Functions of Management, Managerial Skills and roles, Levels of Managers, Evolution of Management, Historic foundation of Management, Scientific, Administrative and Bureaucratic Management, Global Management, Henry Fayol's 14 principles

Planning: purpose, Types of plans, planning process, Management by objectives, Strategic Management, premising and forecasting; Decision-Making, Global planning

Organizing – Nature, Organizational design and structure, Departmentation, Coordination, differentiation and integration, centralization and de-centralization, Delegation, Global Organizing, Co-ordination functions in Organization, Authority & power – concept & distinction, Line and staff organizations.

Controlling: Concept, process of controlling, planning-control relationship, Types of Control, Control Techniques, Staffing: Human Resource Management and Selection  
Global Controlling and Global Challenges – Direction Function – Significance

Organisational Behaviour: - History, evaluation, The nature and determinants of organisational behaviour, need for knowledge of OB, contributing disciplines to the field, OB Model, Organizational Behavior responses to Global and Cultural Diversity

Individual Behaviour: Biographical characteristics, Ability, Learning, Values, attitudes & Job satisfaction, Personality, Personality Formation, Locus of control, perception, Myers Briggs Type Indicator, Emotions, Affective events theory, Emotional Intelligence, Emotional Intelligence as a managerial tool, Attribution theory

Work Motivation : Early Theories (Mc. Gregory's Theory X & Y, Abraham Maslow's Need Hierarchy Theory Herzberg's Two Factor Theory) & Contemporary Theories (Mc. Clelland's 3 Needs Theory, Alderfer's ERG Theory, Adam's Equity Theory & Vroom's Expectancy Theory, Goal Setting Theory) & Application of Motivation Theories.

Group Behaviour : Groups in Organisations, Formal Group & Informal Group, Stages of Group Development, Group Cohesiveness, Group Decision Making, Group Effectiveness, Understanding Teamwork : Types of Teams, Creating Effective teams, Current issues in organizational communication

Leadership: Basic Approaches, Contemporary Issues in Leadership. Transactional Analysis, conflict, power and politics.

Organisation culture, Organisational Change, Issues in Organisation Behaviour and Management, Ethics in Organisation Multiculturalism and Cross Culture & Stress Management: Stress - Nature, sources, Effects, influence of personality, managing stress

## **PGDOM – 103: MANAGERIAL ECONOMICS**

**Max. Marks: 70**

**Time: 3 Hrs.**

Definition, scope and nature of Managerial Economics, Methods of economic study, Central problems of an economy. Market Structure – Meaning, Classification and characteristic of market.

Demand and supply: Meaning and determinants of demand, Law of demand and elasticity of demand: Price, income and cross elasticity, Theory of consumer's behaviour: Marshallian approach and Indifference curve. Meaning and determinants of supply; Law of supply and elasticity of supply, relation between price and quantity supplied.

Theory of production and cost: Meaning and factors of production; Law of production: law of variable proportions and returns to scale, Concepts of costs: Short run and long run cost, Average and marginal costs, total, fixed and variable costs, Pricing practices and strategies, Price and output determination under: Various forms of markets; Perfect competition, Monopoly, Monopolistic competition and Oligopoly; Price determination in these markets. Price discrimination, transfer price, price war.

Concepts of National Income, Different methods of measuring national income, National Income in India, Growth of national income and per capita income in various plans. Expenditure methods, Agriculture, Industry and Services role in the development of the Indian Economy, their problems and growth. Indian Economy: Different aspects, Population, Poverty, Unemployment, And Infrastructure: Energy, communication, transportation, Health and Education. Inflation, Budget and Fiscal deficits.

Economic Reforms in India: Features of economic reforms since 1991, Privatization, Liberalization , Globalisation and Disinvestment. Meaning of Money and its functions, Banking: Reserve Bank of India: Role and functions, Monetary Policy in India. Functions and Role of Commercial Banks.

## **PGDOM – 104: Production Planning & Control**

**Max. Marks: 70**

**Time: 3 Hrs.**

**Production Planning & Control:** Role of Industrial Revolution, Scientific Management, Human Relation Movement, Computers & Advance Technology in Production Process, Definitions of Production Management and Production Planning, Objectives, Scope, and Importance of Production Planning and Control, Limitations of Production Planning and Control, Comparing Production Planning with Production Control, Establishing a Production Planning and Control Department

**Production Procedure:** Introduction, Methods of Production, Types of Production Procedures, Process Production, Selection of Manufacturing Process

**Plant Layout and Production Planning and Control:** Principles of Plant Layout, Factors affecting Plant Layout, Types of Layout

**Production Order:** Concept, Objectives and Functions, Tools of the Production Order, Process Analyses Charts, Charts for the Analysis of Equipment Utilization, Master Scheduling

**Master Materials Planning:** Definition of MRP, Demand Dependency, Objectives & Limitations, Evaluation of MRP, System Components

**Production Scheduling:** Definition of Production Scheduling, Objectives of Scheduling, Scope & Types, Techniques of Scheduling, Gantt Chart, Forward & Backward Scheduling, The Run Out Approach, requirement of Scheduling, Inputs of Scheduling, Loading and Scheduling Devices, Gantt Charts, Techniques of Scheduling

**Quality Control:** Definition of Quality Control, Objectives and Advantages of Quality Control, Statistical Quality Control (SQC), Control Chart, Types of Control Chart

**Maintenance Management:** Types, Breakdown or Corrective Maintenance Management, Preventive Maintenance, Routine Maintenance, Predictive Maintenance, Planned Maintenance, Total Productive Maintenance (TPM), **Inspection:** Definition, Objectives, Its Steps, Functions & Types, Inspection Vs. Quality Control, Centralized or Crib Inspection, Decentralized or Floor Inspection

**Measurement of work:** Definition of Work Measurement, Objectives, Elements of Work Measurement, Types of Elements, Benefits of Work Measurement, Techniques of Work Measurement: Time Study, Time Study Method, Synthesis method of Work Measurement, Predetermined Motion Time Systems (PMTS), Analytical Estimating, Work Sampling.

## **PGDOM – 105: Total Quality Management**

**Max. Marks: 70**

**Time: 3 Hrs.**

Introduction to Quality Control - Concept of total Quality, Cost of Quality, Evolution of total Quality management, Components of Total Quality loop, principles of TQM, organizational changes for adopting TQM.

Concepts on Statistical Quality Control, Theory of Sampling Inspection, Methods of Inspection and Quality appraisal.

Quality Management Systems, Lead Assessment, Selection of ISO and Model and Implementation of ISO9000 standards, Basic approach of ISO 9000 and TQM principles and objectives Applicability and areas of coverage of ISO - 9000 standards.

Strategic tools and techniques for TQM, Quality function Deployment (QFD), Failure Mode and Evaluation analysis (FMEA), Quality circle, Zero-defect programme, concurrent engineering, Taguchi's Quality loss function Affinity Diagram K J method, Q-7 tools, bench marking, Business programme reengineering, principles and tools, six-sigma.

Functional Linkage of Quality with reliability and maintainability, Failure analysis (FTA /FMEA) optimum maintenance decisions Total Production Maintenance (TPM), quality audits, Performance evaluation of TQM.



## **PGDOM – 106: Purchase & Material Management**

**Max. Marks: 70**

**Time: 3 Hrs.**

INTRODUCTION TO MATERIALS MANAGEMENT: Nature and Scope of Materials Management, Organization of Material function, Materials Planning, Classification, Codification, Standardization, Simplification, Value Analysis/ Value Engineering, Make-or-buy decisions, Quality control

WARE HOUSE MANAGEMENT: Warehousing Management, Purchasing cycle, Purchase budget, purchase research, Materials handling, Vendor rating, Vendor Analysis and Vendor Selection, Contract management, Functions and purchase department.

LEGAL ASPECTS: Legal aspects of Buying, spare parts management, material requirement planning, capacity management, Waste and Scrap disposal

FORECASTING: Forecasting, Product & Processes, Just-in-time Manufacturing, TQM, Incoming material quality.

COST EFFECTIVENES AND PERFORMANCE MANAGEMENT: Cost-effectiveness & performance Management, Material management Information System, Stores Management, Stores organization, Receiving and store keeping, Stock verification, stores layout and location.

## **PGDOM – 107: Inventory Management**

**Max. Marks: 70**

**Time: 3 Hrs.**

Inventory: Introduction, Functions of Inventories, Types of Inventories, Classification of Inventories, Factors affecting Inventory Control, Advantages and Dis-advantages of Inventory.

Inventory Management and Control: Objectives, Inventory Control concept, Inventory Costs concept, Inventory Control Techniques: ABC analysis, HML analysis, FSN, VED Analysis, Material Requirement Planning (MRP), MRP Objectives & Methods, MRP System Components, Limitations and Advantages of MRP.

Requirement of Material: Safety or Buffer Stock, Standard order Quantity, Factors affecting Stock levels, Maximum and Minimum Level, Re-order Level, Perpetual Inventory System, Lead Time, Economic Order Quantity (EOQ) with & without shortage, BASIC EOQ Model, EOQ under Fluctuating Demand, Feedback Inventory Information System, Economic Production Quantity, FOQ and FOC System.

Inventory Control Models: Static and Dynamic control Models, Lead-Time Analysis.

Material Management & Warehouse Management, Equipment choice, Just In Time (JIT) and Inventory Management, Inventory Checking and Accounting, ERP and Inventory Management, Store Management: Objectives, Receiving Procedures and Control, Identification of Materials, Storing of Materials, Stores Location and Layout, Stores Documentation, Preservation, Issue Control, Stock Valuation & Verification.

Operation Research in Inventory Control, Application of Linear Programming, Application of Computers to Inventory Management & Control, Traffic: Transportation cost, Model of transportation, Shipping terms, Transportation Strategy and Cost Reduction, Loss and damage of Freight Demurrage.

## **PGDOM – 108: Technology Management**

**Max. Marks: 70**

**Time: 3 Hrs.**

Introduction to technology management: Basic Concept and meaning of technology, Evolution and growth of technology, role and significance of Technology management, Impact of technology on society and business, Forms of technology: process technology and product technology.

Competitive advantages through new technologies: product development, from scientific breakthrough to marketable product, Science and technology policy statements of government Technology and Socio-economic planning, Role of Government in Technology Development, Linkage between technology, development and competition, Managing research and development (R&D), Managing Intellectual Property.

Technological Forecasting: Need, Role, Methodologies of forecasting, Various Forecasting Methods, Exploratory, Intuitive, Extrapolation, Growth Curves, Technology Monitoring, Normative: Relevance Tree, Morphological Analysis, Mission Flow Diagram.

Technology strategy: concept, types, key principles, framework for formulating technology strategy, Technology Generation, Technology Development.

Technology Assessment Methods: Technology Evaluation, Technology Choice, Technological Leadership and Follower ship, Technology Acquisition. Meaning of Innovation and creativity, innovation management, Mode appropriate Technology, Diffusion of Technology Strategy, Rate of Diffusion, Innovation Time & Cost.

Technology transfer: Technology Transfer processes, Models of Transfer, Modes of Transfer, Search strategy, transfer package, agreements technology absorption, Concepts, Constraints, Management of Absorption, Govt initiatives.

Human Aspects in Technology Management: Integration of People and Technology, Organizational and Psychological Factors, Organizational Structure, Technological Change and Industrial Relations, Technology Assessment and Environmental Impact Analysis.