QUANTITATIVE ANALYSIS FOR BUSINESS DECISION

Course Objective: To understand the statistical tools for analysis & interpretation of qualitative & quantitative data for Business Decisions.

Course Outcomes: Students will be able to understand a) Conceptual overview of Statistics b) To apply, analyze various simple & advanced statistical tools c) To interpret data through statistical tools.

Unit-I

Functions, Types of functions, limit and continuity, Elementary differential, Partial differential (first order and second Order), Theory of Maxima and minima for single and two variables, Business applications of differential, Matrices and determinants, solution of simultaneous linear equation up to 3 variables.

Unit-II

Statistics: Meaning and Applications of Statistics in business decision making and research. Collection, Tabulation and presentation of data. Measures of central tendency: Mean, Median and Mode. Measures of dispersion.

Unit-III

Correlation: Karl Pearson's coefficient of correlation, Rank, Probable error and coefficient of determination.

Unit-IV

Regression Analysis: Regression Lines, Equations and Coefficients. Analysis of Time Series and Business Forecasting: Components, Moving Averages, Exponential smoothing and Least Squares Method.

Unit-V

Index numbers: Simple and Weighted, WPI and CPI. Elementary Probability Theory. Normal, Binomial and Poisson Distribution. Elementary Sampling Theory, Estimation Theory, Hypotheses, Large and small samples

Text Books:

1. Kapoor, V. K, Sancheti, D.C, Business Mathemetics.
2. Levin Richard I. & Rubin, David S, Statistics for Management, Prentice Hall Of India, New Delhi.
3. Gupta S.P Gupta M P, Business Statistics, Sultan Chand.

Reference Books:

1. Bhardwaj, R.S, Mathemetics for Economics and Business.
2. Terry, Sineich, Business Statistics by Examples, Collier McMillan Publisher.
3. Gupta S.P, Statistical Methods, Sultan Chand.

ENTREPRENEURSHIP

Course Objective: To understand, what is entrepreneurship and its importance.

Course Outcomes: Students will be able to understand a) Conceptual overview of entrepreneurship b) To apply, analyze various business ideas and plans

Unit I:
Entrepreneurship – Entrepreneurship and its Relationship with the Economic Development, Barriers to Entrepreneurship (Factors affecting Growth of Entrepreneurship), Theory of Achievement Motivation, McClelland's Experiments, Women Entrepreneur's. Entrepreneurship Development in India: Issues and Opportunities, Small-Scale Sector in India.

Unit II:
Entrepreneurship Trends - Forms of Ownerships, Franchising, Types of Entrepreneurship, Career Planning, Choice of Entrepreneurship as a Career, Cases from Indian Industry. The ED Cycle, Identifying & Developing Entrepreneurial Potential, Techno economics innovation and entrepreneurship, Socio-psychological factors influencing entrepreneurship development.

Unit III:
Business Idea and Business Plan -, Creativity and Innovation, Business Ideas Generation Process, Evaluation of Business Idea. Building the Business Plan, Venturing an Enterprise, Financial Considerations (Cash Flow Management, Financial Plan, Business Plan). Role of chamber of commerce, industries associations and other bodies like, FICCI, CII, TIE, DICCI etc.

Unit IV:
Registration of new venture and Support Systems - Steps and processes involved in setting up a manufacturing unit and a service unit. Process of registration and formalities; Activities of SIDBI, EDI, NIESBUD, DIC, NABARD Government policy, Agency supporting entrepreneurial development Industrial estates. Role of MSME, MITCON, MIDC and MCED.

Unit V:
The Industry and Ancillarization: Role of Intrapreneurship in Indian industry; Success cases, Ancillarization, Ancillarization in India, Ancillaries & Industrial Development, Ancillary Opportunities in different Economic Sectors: Agro Industries, Logistics, BPO, Banking and Finance, Sub-contracting System, Supplier Organization Network Global Aspect of Entrepreneurship. NGOs and entrepreneurship.

Suggested Readings:

1. Entrepreneurship (6th Edition) – Robert D Hisrich, Tata McGraw Hill
2. Entrepreneurship: A Contemporary Approach – Kuratko, Thomson Learning Books
3. Small Scale Industries and Entrepreneurship (2003) – Vasant Desai, Himalaya Publishing House
4. Entrepreneurial Development – S.S. Khanka, S. Chand & Co

TOTAL QUALITY MANAGEMENT

Course Objective: To understand the basics and importance of Quality Management.

Course Outcomes: Students will be able to understand a) Conceptual overview of tools and techniques of Total Quality Management b) To apply tools and techniques to improve the quality.

Unit I:
Understanding Quality and Quality Philosophies - Definition of Quality, Dimensions of Quality, Quality Planning, Quality costs, Quality Philosophy of Deming, Joseph Juran, Philip Crosby, Genich Taguchi.

Unit II:
TQM Principles - What is TQM?, What Does TQM Cover?, Guiding Principles of TQM, Managerial Perspective to TQM

Unit III:
Statistical Process Control (SPC) and Other Quality Improvement Techniques – Process Control Charts, Control Charts for variables and attributes, Pareto Diagrams, Scatter Diagrams, Run Charts, Cause and Effect Diagrams, Concept of six sigma.

Unit IV:
TQM Tools - Benchmarking – Reasons to Benchmark, Benchmarking Process, Quality Function Deployment (QFD), QFD Process, Benefits, Taguchi‘s Quality Loss Function, Total Productive Maintenance (TPM) – Concept, Improvement Needs, FMEA – Stages of FMEA.

Unit V:
Quality Improvement Systems - Kaizen, Lean, Poka-Yoke, 5S, 3M, Quality Circles, Value Analysis and Value Engineering.

Suggested Readings:

1. Dale H.Besterfiled, et at., Total Quality Management, Pearson Education Asia, 1999. (Indian Areprint 2002).
2. James R.Evans & William M.Lidsay, The Management and Control of Quality, (5th Edition), South-Western (Thomson Learning), 2002
3. Oakland.J.S. “Total Quality Management Butterworth – Hcinemann Ltd., Oxford. 1989.

PRODUCTION AND OPERATIONS MANAGEMENT

Course Objective: To understand the concepts of production and operations management in an organization and analytical methods.

Course Outcome: Students will be able to understand
a) Concepts of Operations management
b) Product & process design, analysis
c) Plant location and layout
d) Scheduling and Material Management.

UNIT - I: Introduction to Operations Management: Functional Subsystems of Organization, Definition, Systems Concept of Production, Types of Production Systems – Flow, Job Shop, BatchManufacturing and Project, Strategic Operations Management – Corporate Strategic, Genericcompetitive Strategies, Functional Strategies, Productivity, World Class Manufacturing.

UNIT - II: Product Design and Analysis: New product development -its concepts, Steps of Product Design, Process Planning and Design- Selection of Process, Responsibilities of Process Planning Engineer, Steps in Process Planning. Process Design - Process Research, Pilot Plant Development,Capacity Planning, Enhanced Capacity using Optimization. Value Analysis/Value Engineering –Value Analysis application, Value Engineering Procedure, Advantages and Application Areas. Ergonomic considerations in Product Design. Standardization: Standardization Procedure, Advantages of Standardization, Application of Standardization.

UNIT- III: Plant Location & Plant Layout: Factors Influencing Plant Location, Break-even Analysis. Single Facility Location Problem, Multi facility Location Problems – Model for Multi facility Location Problem, Model to Determine X- Coordinates of New Facilities, Model to Determine Y-Coordinate, **Plant Layout -** Plant layout introduction, Classification of Layout, Advantages and limitations of Product Layout, Advantages, and limitations of Group Technology Layout, Layout Design Procedures.

UNIT - IV: Scheduling: Introduction, Johnson's Algorithm, Extension of Johnson's rule. Job Shop Scheduling: Introduction, Types of Schedules, Schedule Generation, heuristic Procedures, Priority Dispatching Rules. Two Jobs and m Machines Scheduling. Quality control concepts

UNIT - V: Materials Management: Integrated Materials Management, Components of Integrated Materials Management- Materials Planning, Inventory Control, Purchase Management, Stores Management, EOQ, Models of Inventory, Operation of Inventory Systems, Quantity Discount, Implementation of Purchase Inventory Model– Incoming Materials Control, Obsolete Surplus and Scrap Management, ABC Analysis, XYZ Analysis, VED Analysis, FSN Analysis, SDE Analysis.

Suggested Readings:

1. Panneerselvam, Production and Operations Management, PHI, 2012.
2. K. Ashwathappa, Sridhar Bhatt, Production and Operations Management, Himalaya Publishing House, 2012
3. Ajay K. Garg, Production and Operations Management, TMH, 2012
4. B. Mahadevan, Operations Management: Theory and Practice, Second Edition, Pearson, 2010.