

# L\_6\_General\_Ed\_Commerce\_Stream

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## I BUSINESS MATHEMATICS

Expected Learning Outcomes: The student would acquire fair degree of proficiency in formulating and solving diverse problems related to business and economics with the help of mathematical tools.

### Unit – 1

#### Matrices and Determinants

1.1 Algebra of matrices. Inverse of a matrix.

1.2 Solution of system of linear equations (having unique solution and involving not more than three variables) using matrices, Input Output Analysis.

### Unit – 2

#### Calculus I

2.1 Mathematical functions and their types- linear, quadratic, polynomial, exponential, logarithmic and logistic function. Concepts of limit, and continuity of a function.

2.2 Concept and rules of differentiation, Maxima and Minima involving second or higher order derivatives.

### Unit –3

- Calculus II
- Partial Differentiation. Partial derivatives up to second order. Homogeneity of functions and Euler's theorem. Total differentials. Differentiation of implicit functions with the help of total differentials.
- Maxima and Minima in cases of two variables involving not more than one constraint including the use of the Lagrangean multiplier.
- Integration. Standard forms. Methods of integration – by substitution, by parts and by use of partial fractions. Definite integration. Finding areas in simple cases.

### Unit- 4

- Mathematics of Finance
- Rates of interest-nominal, effective– and their inter-relationships in different compounding situations.
- Compounding and discounting of a sum using different types of rates.
- Types of annuities, like ordinary, due, deferred, continuous, perpetual, and their future and present values using different types of rates of interest. Depreciation of Assets.

Valuation of simple loans and annuities. Sinking funds. (*General annuities to be excluded*)

#### Unit- 5

- Linear Programming
  - Formulation of linear programming problems (LPP). Graphical solution to LPPs. Cases of unique and multiple optimal solutions. Unbounded solutions and infeasibility, and redundant constraints.
  - Solution to LPPs using Simplex method – maximization and minimization cases. Shadow prices of the resources. Identification of unique and multiple optimal solutions, unbounded solution, infeasibility and degeneracy.
  - The dual problem. Formulation of the Dual. Primal-Dual solutions: (excluding solution of dual problem when the primal problem involves mixed constraints) Economics interpretation of the dual
  - In addition the students will work on a software package for solving linear programming problems and analyze the results obtained there from. This will be done through internal assessment.
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## II INCOME TAX LAW AND PRACTICE

Unit I Basic concept: Income, agricultural income, person, assessee, assessment year, previous year, gross total income, total income, maximum marginal rate of tax.

Unit II Residential status

2.2 Scope of total income on the basis of residential status

2.3 Exempted income under section

Unit III Computation of income under different heads - Salaries

3.2 - Income from house property

3.3 - Profits and gains of business or profession

3.4 - Capital gains

3.5 - Income from other sources

Unit IV Total income and tax computation- Income of other persons included in assessee's total Income

4.2 - Aggregation of income and set-off and carry forward of losses

4.3 - Deductions from gross total income

4.4 - Rebates and reliefs

4.5 - Computation of total income of individuals and firms

4.6 -Tax liability of an individual and firm

4.7-Five leading cases of Supreme Court

## Unit V

5.1 Preparation of return of income: PAN - Manually

5.2 - On-line filing of Returns of Income & TDS.

5.3 - Provision & Procedures of COMPULSORY ONLINE filing of returns for specified assesses.

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## III MACRO ECONOMICS

### Unit-I

1. Introduction – concepts and variables of macroeconomics, income, expenditure and the circular flow, components of expenditure. Static macro economic analysis short and the long run – determination of supply, determination of demand, and conditions of equilibrium.

### Unit-II

2. Economy in the short run – IS–LM framework, fiscal and monetary policy, determination of aggregate demand, shifts in aggregate demand, aggregate supply in the short and long run, and aggregate demand- aggregate supply analysis.

### Unit-III

Inflation, causes of rising and falling inflation, inflation and interest rates, social costs of inflation. Unemployment – natural rate of unemployment, frictional and wait employment. Labour market and its interaction with production system. Phillips curve, the trade-off between inflation and unemployment, sacrifice ratio, role of expectations adaptive and rational.

### Unit-IV

3. Open economy – flows of goods and capital, saving and investment in a small and a large open economy, exchange rates, Mundell – Fleming model with fixed and flexible prices small open economy with fixed and with flexible exchange rates, interest-rate differentials case of a large economy.

### Unit-V

4. Behavioral Foundations- Investment –determinants of business fixed investment, effect of tax, determinants of residential investment and inventory investment.

Demand for Money – Portfolio and transactions theories of demand for real balances, interest and income elasticities of demand for real balances. Supply of money.

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## **IV PRINCIPLES OF MARKETING**

### **Unit – I**

1. Introduction: Nature, scope and importance of marketing; Evolution of marketing concepts; Marketing mix, Marketing environment.
2. Consumer Behavior – An Overview: Consumer buying process; Factors influencing consumer buying decisions.

### **Unit –II**

3. Market Selection: Market segmentation – concept, importance and bases; Target market selection; Positioning concept, importance and bases; Product differentiation vs. market segmentation.
4. Product: Meaning and importance. Product classifications; Concept of product mix; Branding, packaging and labeling; After-sales services; Product life-cycle; New Product Development.

### **Unit –III**

5. Pricing: Significance. Factors affecting price of a product. Pricing policies and strategies.
6. Promotion: Nature and importance of promotion; Communication process; Types of promotion: advertising, personal selling, public relations & sales promotion, and their distinctive characteristics;  
Promotion mix and factors affecting promotion mix decisions;  
Communication planning and control.

### **Unit –IV**

7. Distribution: Channels of distribution - meaning and importance;  
Types of distribution channels; Wholesaling and retailing; Factors affecting choice of distribution channel; Physical Distribution.
8. Retailing: Types of retailing – store based and non-store based retailing, chain stores, specialty stores, supermarkets, retail vending machines, mail order houses, retail cooperatives;  
Management of retailing operations: an overview; Retailing in India: changing scenario.

### **Unit –V**

9. Rural marketing: Growing Importance; Distinguishing characteristics of rural markets; Understanding rural consumers and rural markets; Marketing mix planning for rural markets.
  10. Recent issues and developments in marketing: Social Marketing, Marketing ethics; Recent developments in marketing – online marketing, direct marketing, services marketing, green marketing, sustainable marketing and relationship marketing.
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## V MATHEMATICS

### Unit I: Linear Algebra

Algebra of sets. Finite and infinite sets, examples of countable and uncountable sets. Real line; absolute value, bounded sets.  $\mathbb{R}$ ,  $\mathbb{R}^2$ ,  $\mathbb{R}^3$  as vector spaces over  $\mathbb{R}$  and concept of  $\mathbb{R}^n$ . Standard basis for each of them. Concept of Linear Independence and examples of different bases. Subspaces of  $\mathbb{R}^2$ ,  $\mathbb{R}^3$ . Translation, Dilation, Rotation, Reflection in a point, line and plane, Matrix form of basic geometric transformations. Interpretation of eigenvalues and eigenvectors for such transformations and eigenspaces as invariant subspaces.

### Unit II: Sequences and Series

Sequences to be introduced through the examples arising in Economics and Commerce beginning with finite sequences, followed by concepts of recursion and difference equations. Convergence of a sequence and algebra of convergent sequences. Illustration of proof of convergence of some simple sequences such as  $(-1)^n/n$ ,  $1/n^2$ ,  $(1+1/n)^n$ ,  $x^n$  with  $|x| < 1$ . Concepts, statements, and applications of the following: A necessary condition for convergence of an infinite series. Cauchy convergence criterion for series, positive term series, geometric series, comparison test, limit comparison test, convergence of p-series.

### Unit III: Introduction to Algorithms

Basic concept of Program, algorithm and data structure. Pseudo code – SPARKS. Control Structures. Recursion and Iteration. Binary Search. Analysis of algorithms. Fibonacci numbers, gcd and factorial. Magic squares. Insertion sort and quick sort.

### Unit IV: Graph theory

Graph basics, terminology and modeling. Types of graphs: Simple, Directed, Multi, and Pseudo graph. Special Graphs: Complete Graph, Cycles. Graph Representations – Adjacency matrix and Incidence matrix. Transversal – Breadth First search and Depth First Search. Minimum Cost Spanning Tree. Shortest Path.

### Unit V: Game theory

Theory of Games: Introduction to basic concepts of game theory including strategic games, examples like prisoner's dilemma. Principle of dominance. Notion of Zero sum and non-zero sum games. Formulation and solution of two person zero sum game and strategies.

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## VI INDIRECT TAX

### Unit 1: Service tax

Service tax – concepts and general principles, Charge of service tax and taxable services, Valuation of taxable services, Payment of service tax and filing of returns, Penalties

### Unit 2: VAT

VAT – concepts and general principles, Calculation of VAT Liability including input Tax Credits, Small Dealers and Composition Scheme, VAT Procedures

#### Unit 3: Central Excise

Central Excise Law in brief – Goods, Excisable goods, Manufacture and Manufacturer, Valuation, CENVAT, Basic procedures, Export, SSI, Job Work

#### Unit 4: Customs laws

Basic concepts of customs law, Territorial waters, high seas, Types of custom duties – Basic, Countervailing & Anti- Dumping Duty, Safeguard Duty, Valuation, Customs Procedures, Import and Export Procedures, Baggage, Exemptions

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## **VII CORPORATE ACCOUNTING**

### **1. ACCOUNTING FOR SHARE CAPITAL & DEBENTURES**

Issue, forfeiture and reissue of forfeited shares- concept & process of book building.

Issue of rights and bonus shares. Buy back of shares. Redemption of preference shares. Issue and Redemption of Debentures.

### **2. FINAL ACCOUNTS**

Preparation of profit and loss account and balance sheet of corporate entities, excluding calculation of managerial remuneration. Disposal of company profits.

### **3. VALUATION OF GOODWILL AND VALUATION OF SHARES**

Concepts and calculation - simple problem only.

### **4. AMALGAMATION OF COMPANIES**

Concepts and accounting treatment as per Accounting Standard: 14 (ICAI) (excluding inter company holdings). Internal reconstruction: concepts and accounting treatment excluding scheme of reconstruction.

### **5. ACCOUNTS OF HOLDING COMPANIES/PARENT COMPANIES**

Preparation of consolidated balance sheet with one subsidiary company. Relevant provisions of Accounting Standard: 21 (ICAI).

### **6. BANKING COMPANIES**

Difference between balance sheet of banking and non banking company; prudential norms. Asset structure of a commercial bank. Non-performing assets (NPA).

### **7. CASH FLOW STATEMENT**

Concepts of funds. Preparation of cash flow statement as per Accounting Standard (AS): 3 (Revised) (ICAI): Indirect method only.

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## **VIII COST ACCOUNTING**

### Unit I:

1. Introduction: Meaning, objectives and advantages of cost accounting, Difference between cost accounting and financial accounting. Cost concepts and classifications, Elements of cost. Installation of a costing system. Role of a cost accountant in an organization.

### Unit II:

2. Materials: Material/inventory control- concept and techniques, Accounting and control of purchases, storage and issue of materials. Methods of pricing of materials issues – FIFO, LIFO, Simple Average, Weighted Average, Replacement, Standard, Treatment of Material Losses.

### Unit III:

3. Labour: Accounting and Control of labour cost, time keeping and time booking, concept and treatment of idle time, over time, labour turnover and fringe benefits.

### Unit IV:

4. Overhead: Classification, allocation, apportionment and absorption of overhead. Under- and over-absorption. Capacity costs. Treatments of certain items in costing, like interest on capital, packing expenses, debts, research and development expenses, Bad Activity – based cost allocation.

### Unit V:

5. Methods of Costing: Unit costing, Job costing. Contract Costing. Process costing (process losses, valuation of work in progress, joint and by-products) Service costing (only transport).

### Unit VI:

6. Accounting Systems: Integral and non-integral systems, Reconciliation of cost and financial accounts.

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## **IX HUMAN RESOURCE MANAGEMENT**

### Unit-I:

Human Resource Management: Relevance and spectrum, HRD: concept and evolution, Organisation of HR Department, Role, Status and competencies of HR Manager, HR Policies, An overview of Government Policy since 1991 affecting Human Resources.

### Unit -II

Acquisition of Human Resource: Human Resource Planning- Quantitative and Qualitative dimensions; job analysis – job description and job specification; recruitment – Concept and sources; selection – Concept and process; test and interview; placement induction.

### Unit -III

Training and development; concept and importance; identifying training and development needs; designing training programmes; role specific and competency based training; evaluating training

effectiveness; training process outsourcing; management development systems; career development.

#### Unit -IV

Performance appraisal system; nature and objectives; techniques of performance appraisal; potential appraisal and employee counseling; job changes - transfers and promotions.

#### Unit -V

Compensation: concept, policies and administration; job evaluation; methods of wage payments and incentive plans; fringe benefits; performance linked compensation.

#### Unit -VI

Maintenance: employee health and safety; employee welfare; social security; grievance handling and redressal.

#### Unit -VII

Emerging Horizons in Human Resource Management; Human Resource Information System; Downsizing; VRS; empowerment, workforce diversity.

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## **X INDIAN ECONOMY – PERFORMANCE AND POLICIES**

Section 1: Basic Issues in Economic Development: Concept and Measures of Development and Underdevelopment; Human Development.

Section 2: Basic Features of the Indian Economy at Independence: Composition of national income and occupational structure, the agrarian scene and industrial structure.

Section 3: Policy Regimes:

- a) The evolution of planning and import substituting industrialization.
- b) Economic reform and liberalization.

Section 4: Growth, Development and Structural Change:

- a) The experience of Growth, Development and Structural Change in different phases of growth and policy regimes across sectors and regions.
- b) The Institutional Framework: Patterns of assets ownership in agriculture and industry; Policies for restructuring agrarian relations and for regulating concentration of economic power;
- c) Changes in policy perspectives on the role of institutional framework after 1991.
- d) Growth and Distribution; Unemployment and Poverty; Human Development; Environmental concerns.
- e) Demographic Constraints: Interaction between population change and economic development.

Section 5: Sectoral Trends and Issues:

- a) Agriculture: Agrarian growth and performance in different phases of policy regimes i.e. pre green revolution and the two phases of green revolution; Factors influencing productivity and



growth; the role of technology and institutions; price policy, the public distribution system and food security.

b) Industry and Services: Phases of Industrialisation – the rate and pattern of industrial growth across alternative policy regimes; Public sector – its role, performance and reforms; The small scale sector; Role of Foreign capital.

c) The Financial Sector: Structure, Performance and Reforms. Foreign Trade and balance of Payments: Structural Changes and Performance of India's Foreign Trade and Balance of Payments; Trade Policy Debate; Export policies and performance; Macro Economic Stabilisation and Structural Adjustment; India and the WTO.

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