

**Himachal Pradesh
Public Service Commission**

No.4-2/2024-PSC (R-III)

Dated: 12.07.2024

Syllabus for Paper-II i.e. Objective Type Subject Aptitude Test (SAT) for the recruitment to posts of Junior Auditor, Class-III (Non-Gazetted) (on contract basis) in HP State Audit Department. The objective type SAT shall be of 02 hours duration having 100 Marks.

Part-I (50 marks) (Common for all candidates)

1. FINANCIAL ACCOUNTING:-

Accounting as an information system, the users of financial accounting information and their needs, An overview of Artificial Intelligence and Data Analytics in Accounting, Qualitative characteristics of accounting, information, Functions, advantages and limitations of accounting, Branches of accounting, Bases of accounting; cash basis and accrual basis, Capital and revenue expenditures and receipts. Events occurring after the balance sheet date, Extraordinary Items, Prior Period Items, Accounting Estimate. Accounting Policies, Fair Value, Meaning, Recognition and Disclosure Requirements of Provision, Contingent Liability and Contingent Asset, The nature of financial accounting principles – Basic concepts and conventions: entity, money measurement, going concern, cost, realization, accruals, periodicity, consistency, prudence (conservatism), materiality and full disclosures, Financial accounting standards: Concept, benefits, procedure for issuing accounting standards in India, Salient features of First- Time Adoption of Indian Accounting Standard (Ind-AS) 101. International Financial Reporting Standards (IFRS):- Need and procedures. Accounting Process: From recording of a business transaction to preparation of trial Balance, Application of Generally Accepted Accounting Principles in recording financial transactions and preparing financial statements and accounting treatment of GST Business Income: Measurement of business income-Net income: the accounting period, the continuity doctrine and matching concept, Objectives of measurement. Revenue recognition: Recognition of expenses, The nature of depreciation. The accounting concept of depreciation, Factors in the measurement of depreciation. Methods of computing depreciation: straight line method and diminishing balance method; Disposal of depreciable assets-change of method, Inventories: Meaning, Significance of inventory valuation. Inventory Record Systems: periodic and perpetual. Methods: FIFO, LIFO and Weighted Average. Salient features of Indian Accounting Standard, (IND-AS): 2 (Theory only) Final Accounts Capital and revenue expenditures and receipts: general introduction only. Preparation of financial statements of non-corporate business entities. Accounting for Dissolution of Partnership Firm: Accounting of Dissolution of the Partnership Firm Including Insolvency of partners, sale to a limited company and piecemeal distribution.

2. BUSINESS LAW:-

The Indian Contract Act, 1872: General Principles of Contract: Contract – meaning, characteristics and kinds, Essentials of a valid contract - Offer and acceptance, consideration, contractual capacity, free consent, legality of objects, Void agreements Discharge of a contract – modes of discharge, breach and remedies against breach of contract, Contingent contracts, Quasi - contracts The Indian Contract Act, 1872: Specific, Contracts Contract of Indemnity and Guarantee, Contract of Bailment and pledge,, Contract of Agency The Sale of Goods Act, 1930 The Sale of Goods Act, 1930, Contract of sale, meaning and difference between sale and agreement to sell, Conditions and warranties Transfer of ownership in goods including sale by a non-owner, Performance of contract of sale Unpaid seller – meaning, rights of an unpaid seller against the goods and the buyer. The Negotiable

Instruments Act, 1881 The Negotiable Instruments Act 1881, Meaning, Characteristics, and Types of Negotiable Instruments : Promissory Note, Bill of Exchange, Cheque, Holder and Holder in Due Course, Privileges of Holder in Due Course, Negotiation: Types of Endorsements, Crossing of Cheque, Bouncing of Cheque Partnership Laws The Partnership Act, 1932, Nature and Characteristics of Partnership, Registration of a Partnership Firms, Types of Partners, Rights and Duties of Partners, Implied Authority of a Partner, Incoming and outgoing Partners, Mode of Dissolution of Partnership, The Limited Liability Partnership Act, 2008: Salient Features of LLP, Differences between LLP and Partnership, LLP and Company, LLP Agreement,, Partners and Designated Partners, Incorporation Document, Incorporation by Registration, Partners and their Relationship, Partners and Designated Partners: Partners and their Relations; Extent and limitation of liability of LLP and partners; Whistle blowing; Conversion into LLP.

3. PRINCIPLES OF MARKETING:-

Introduction: Nature, scope and importance of marketing; Evolution of marketing; Selling vs Marketing; Marketing mix, Marketing environment: concept, importance, and components (Economic, Demographic, Technological, Natural, Socio-Cultural and Legal), Consumer Behaviour & Market Segmentation: Nature and Importance, Consumer buying decision process; Factors influencing consumer buying behaviour. Concept, importance and bases of market segmentation; Target market selection; Positioning concept, importance and bases; Product differentiation vs. market segmentation, Product Concept and Importance; Product classifications; Concept of product mix; Branding, packaging and labelling; Product-Support Services; Product life-cycle; New Product Development Process; Consumer adoption process, Pricing & Distribution Channels and Physical Distribution: Significance, Factors affecting price of a product. Pricing policies and strategies, Channels of distribution - meaning and importance; Types of distribution channels; Functions of middle man; Factors affecting choice of distribution channel; Wholesaling and retailing; Types of Retailers; e-tailing, Physical Distribution, Promotion & Recent Developments in Marketing: 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, Social Marketing, online marketing, direct marketing, services marketing, green marketing, Rural marketing; Consumerism, Sustainable Marketing.

4. FUNDAMENTALS OF FINANCIAL MANAGEMENT:-

Introduction: Nature, scope and objective of Financial Management, Time value of money, Risk and return (including Capital Asset Pricing Model), Valuation of securities – Bonds and Equities, Investment Decisions The Capital Budgeting Process, Cash flow Estimation, Payback Period Method, Accounting Rate of Return, Discounted payback period, Net Present Value (NPV), Net Terminal Value, Internal Rate of Return (IRR), Modified Internal Rate of Return, Profitability Index, Capital budgeting under Risk – Certainty Equivalent Approach and Risk- Adjusted Discount Rate, Financing Decisions: Cost of Capital and Financing Decision: Sources of long-term financing Estimation of components of cost of capital. Methods for Calculating cost of equity capital, Cost of Retained Earnings, Cost of Debt and Cost of Preference Capital, Weighted Average cost of capital (WACC) and Marginal cost of capital. Leverage- Operating, Financial & Degree of Leverage, Capital structure –Theories of Capital Structure (Net Income, Net Operating Income, Traditional Approach and MM Hypothesis). Overview of contemporary theories of capital structure (Trade off theory and pecking order theory). Determinants of capital structure Dividend Decisions: Theories for Relevance and irrelevance of dividend decision for corporate valuation; Cash and stock dividends; Dividend policies in Practice, Working Capital Decisions: Concepts of working capital, the risk-return trade off, sources

of short-term finance, working capital estimation, cash management, receivables management, inventory management and payables management.

5. INCOME TAX LAW AND PRACTICE:-

Introduction: Basic concepts: Income, agricultural income, person, assessee, assessment year, previous year, gross total income, total income, maximum marginal rate of tax; Permanent Account Number (PAN) Residential status; Scope of total income on the basis of residential status, Exempted income under section 10, Learning lessons from Kautilya's Taxation Policy; Computation of Income under different heads-1 Income from Salaries, Income from house property Computation of Income under different heads-2 Profits and gains of business or profession Capital gains Income from other sources Computation of Total Income and Tax Liability : Income of other persons included in assessee's total income; Aggregation of income and set-off and carry forward of losses; Deductions from gross total income; Rebates and reliefs, Computation of total income of individuals and firms; Tax liability of an individual and a firm; Five leading cases decided by the Supreme Court.

6. E-COMMERCE:-

Introduction: Meaning, nature, concepts, advantages, disadvantages and reasons for transacting online, types of E-Commerce, e-commerce business models (introduction, key elements of a business model and Categorizing major E-commerce business models), forces behind e-commerce, E-Commerce Applications: Internet Banking, Insurance, payment of utility bills and Online Shopping. Technology used in E-commerce: The dynamics of world wide web and internet(meaning, evolution and features) ; Designing, building and launching e-commerce website (A systematic approach involving decisions regarding selection of hardware, software, outsourcing vs. in-house development of a website), Security and Encryption & IT Act 2000 and Cyber Crimes: Need and concepts, the e-commerce security environment (dimensions, definition and scope of e-security), security threats in the E-commerce environment (security instructions and breaches, attacking methods like hacking, sniffing, cyber-vandalism etc.), technology solutions (Encryption, security channels of communication, protecting networks and protecting servers as well as clients), IT Act 2000: Definitions, Digital signature, Electronic governance, Attribution, acknowledgement and dispatch of electronic records, Regulation of certifying authorities, Digital signatures certificates, Duties of subscribers, Penalties and adjudication, Appellate Tribunal, Offences and Cyber-crimes E-payment System Models and methods of e-payments (Debit Card, Credit Card, Smart Cards, e-money), digital signatures (procedure, working and legal position), payment gateways, online banking (meaning, concepts, importance, electronic fund transfer, automated clearing house, automated ledger posting), risks involved in e-payments, UPI Apps, Aadhar-Enabled Payment Systems, BHIM App. On-line Business Transactions: Meaning, purpose, advantages and disadvantages of transacting online, E-commerce applications in various industries like {banking, insurance, payment of utility bills, online marketing, e-tailing (popularity, benefits, problems and features), online services(financial, travel and career), auctions, online portal, online learning, publishing and entertainment} Online shopping (amazon, snapdeal alibaba, flipkart, etc.).

7. BANKING AND INSURANCE:-

Introduction: Origin of banking: definition, banker and customer relationship, General and special types of customers, Types of deposits, Origin and growth of commercial banks in India. Financial Services offered by banks, changing role of commercial banks, types of banks, Cheques and Paying Banker: Crossing and endorsement - meaning, definitions, types and rules of crossing. Duties, Statutory protection in due course, collecting bankers: duties, statutory protection for holder in due course, Concept of negligence, Banking Lending: Principles of sound lending, Secured vs. unsecured

advances, Types of advances, Advances against various securities, Internet Banking: Meaning, Benefits, Home banking, Mobile banking, Virtual banking, E-payments, ATM Card/ Biometric card, Debit/Credit card, Smart card, NEFT, RTGS, ECS (credit/debit), E-money, Electronic Purse, Digital Cash, Insurance: Basic concept of risk, Types of business risk, Assessment and transfer, Basic principles of utmost good faith, Indemnity, Economic function, Proximate cause, Subrogation and contribution, Types of insurance: Life and Non-life, Re-insurance, Risk and return relationship, Need for coordination, Power, functions and Role of IRDA, Online Insurance.

8. FUNDAMENTALS OF INVESTMENT:-

The Investment Environment: The investment decision process, Types of Investments –Commodities, Real Estate and Financial Assets, Difference between investment, speculation, and gambling, the Indian securities market, the market participants and trading of securities, security market indices, sources of financial information, Concept of return and risk, Impact of Taxes and Inflation on return, Fixed Income Securities: Bond features, types of bonds, estimating bond yields, Bond Valuation types of bond risks, default risk & credit rating, Approaches to Equity Analysis: Introductions to Fundamental Analysis, Technical Analysis and Efficient Market Hypothesis, dividend capitalization models, and price-earnings multiple approach to equity valuation, Portfolio Analysis and Financial Analysis: Portfolio and Diversification, (Markowitz Theory; Capital Asset Pricing Model.) Portfolio Risk and Return; Mutual Funds - concept, classification and valuation; Introduction to Financial Derivatives; Financial Derivatives Markets in India - Forward, Future, Option and Swaps, Investor Protection: Role of SEBI and stock exchanges in investor protection; Investor grievances and their redressal system, insider trading, investors' awareness and activism.

9. FUNDAMENTAL OF MANAGEMENT & ORGANIZATIONAL BEHAVIOUR:-

Conceptual framework:- Management: Meaning, Significance, Managerial Function-An overview, Indian Philosophy of Management: The Gita and Management, Management lesson from Ramayana; Gandhian Philosophy, Emerging issues in Management, Evolution of Management Thought: Classical Approach -Taylor, Fayol, Neo-Classical and Human relations approaches –Mayo, Hawthorne experiments, Behavioural approach, Systems approach ,contingency approach, MBO- Peter F. Drucker, Planning & Control: Overview of Planning: Types of Plans & the Planning Process; Decision making Process, Types and Techniques of Control, Control Process, Organizing: Principles of Organizing : Common Organization Structures : Delegation and Decentralization : Factors affecting the extent of Decentralization, Process and Principles of Delegations, Organization Behaviour: an Introduction, Importance of Organization Behaviour; Features of Organization Behaviour, Perception and attribution: Concept, Nature, Process, Personality, Motivation and Leadership: Motivation: concepts and their application, need, content and Process theories, Contemporary leadership issues: Charismatic, Transformational leadership, Emotional intelligence, Group Dynamics & Transactional Analysis: Groups and Teams: Definition, Difference between Groups and Teams, Stages of Group Development, Group Cohesiveness, Analysis of Interpersonal Relationship: Transactional Analysis, Johari Window, Organizational Conflicts: Concept, Sources, Types, stages of conflict, management of conflict, organizational change resistance to change, managing resistance to change.

10. HUMAN RESOURCE MANAGEMENT:-

Human Resource Management: Concept, Functions, roles, skills & competencies. The changing environment of HRM – globalization, cultural environment, technological advances, workforce diversity, corporate downsizing, changing skill requirement, HR role in strategy formulation & gaining competitive advantage, Human Resource Planning: Process, Forecasting demand & supply,

Skill inventories, Job analysis – Uses, methods, Job description & Job specifications. Recruitment, Selection & Orientation: internal & external sources, e- recruitment, selection process, orientation process, Training: Concept, Needs, Systematic approach to training, Methods of training. Performance management system: concept, uses of performance appraisal, factors that distort appraisal, Compensation: Steps of determining compensation, job evaluation, components of pay structure, factors influencing compensation levels, wage differentials & incentives, profit sharing, gain sharing, employees' stock option plans. Brief introduction of social security; health, retirement & other benefits, Industrial Relations: Introduction to Industrial Relations, Trade unions role, types, functions, problems, industrial dispute- concept, causes & machinery for settlement of disputes- grievance, concepts, causes & grievance redressal machinery, discipline-concept, aspect of discipline & disciplinary procedure, Collective bargaining- concept, types, process, problems, essentials of effective collective bargaining .

11. MARKETING: CONSUMER BEHAVIOUR:-

Consumer Behaviour: Nature, scope & application: Importance of consumer behaviour in marketing decisions, characteristics of consumer behaviour, role of consumer research, consumer behaviour-interdisciplinary approach, Consumer Needs & Motivation: Characteristics of motivation, arousal of motives, self- concept & its importance, types of involvement, Trait theory: Theory of self-images; Role of self-consciousness, Consumer Perception: Concept of absolute threshold limit, differential threshold limit & subliminal perception: Perceptual Process: selection, organization & interpretation. Learning & Consumer Involvement: Importance of learning on consumer behaviour, Consumer Attitudes: Formation of attitudes, functions performed by attitudes, Group Dynamics & consumer reference groups: Different types of reference groups, factors affecting reference group influence, reference group influence on products & brands, application of reference groups, Family & Consumer Behaviour: Consumer socialization process, consumer roles within a family, purchase influences and role played by children, family life cycle, Social Class & Consumer behaviour: Determinants of social class, measuring & characteristics of social class, Diffusion of Innovation: Definition of innovation, product characteristics influencing diffusion, resistance to innovation, adoption process, Consumer Decision making process: Process- problem recognition, pre-purchase search influences, information evaluation, purchase decision (compensatory decision rule, conjunctive decision, rule, Lexicographic rule, affect referral, disjunctive rule), post-purchase evaluation; Situational Influences.

12. LEGAL ASPECTS OF BUSINESS:-

The Indian Contract Act 1872: Meaning and Essentials of contract; Kinds of contract-Based on: validity, formation & performance, law relating to offer and acceptance, consideration, competency to contract, free consent, Void agreements, performance of contracts, discharge of contracts, breach of contracts and quasi contract, Special contracts: contract of indemnity and guarantee, bailment and pledge, and agency, Sale of Goods Act 1930: Sale and agreement to sell, implied conditions and warranties, sale by non-owners, rights of unpaid seller, Negotiable Instruments Act 1881: Meaning of negotiable instruments, type of negotiable instruments, promissory note, bill of exchange, cheque, The Companies Act 2013: Meaning and types, Incorporation, Memorandum & Articles of association, Prospectus, Issue of shares and bonus shares, rights issue, sweat equity, role of directors, share qualification, company meetings, Consumer Protection Act 1986: Objectives and machinery for consumer protection, defects and deficiency removal, rights of consumers, The Right to Information Act 2005: Salient features and coverage of the act, definition of terms information, right, record, public authority; obligations of public authorities, requesting information and functions of PIO.

13. BUSINESS POLITY AND STRATEGY:-

Nature & importance of business policy & strategy: Introduction to the strategic management process and related concepts; Characteristics of corporate, business & functional level strategic management decisions. Company's vision and mission: need for a mission statement, criteria for evaluating a mission statement- Goal, Process & Input formulation of the mission statement, Environmental Analysis & Diagnosis: Analysis of company's external environment Environmental impact on organisations policy and strategy, organisations dependence on the environment, Internal analysis: Importance of organisation's capabilities, competitive advantage and core competence, Formulation of competitive strategies: Michael E. Porter's generic competitive strategies, implementing competitive strategies- offensive & defensive moves. Formulating Corporate Strategies: Introduction to strategies of growth, stability and renewal, Types of growth strategies – concentrated growth, product development, integration, diversification, Types of renewal strategies – retrenchment and turnaround. Strategic fundamentals of merger & acquisitions, Strategic Framework: Strategic analysis & choice, Strategic gap analyses, portfolio analyses – BCG, GE, product market evolution matrix, experience curve, directional policy matrix, life cycle portfolio matrix, Behavioural considerations affecting choice of strategy.

14. FINANCIAL INSTITUTIONS & MARKETS:-

Structure of Indian Financial System: An overview of the Indian financial system, financial sector reforms: context, need and objectives; Issues in financial reforms and restructuring; future agenda of reforms; Regulation of Banks, NBFCs & FIs: Salient provisions of banking regulation act and RBI Act; Role of RBI as a central banker, Introduction to Financial Markets in India: Role and Importance of Financial Markets, Financial Markets: Money Market; Capital Market; Factors affecting Financial Markets, Linkages Between Economy and Financial Markets, Integration of Indian Financial Markets with Global Financial Markets, Primary & secondary market. Primary Market for Corporate Securities in India: Issue of Corporate Securities: Public Issue through Prospectus, Green shoe option, Offer for sale, Private Placement, Rights Issue, On- Line IPO, Book Building of Shares, Performance of Primary Market in India, Secondary Market in India: Introduction to Stock Markets, Regional and Modern Stock Exchanges, International Stock Exchanges, Demutualization of exchanges, Comparison between NSE and BSE, Indian Stock Indices and their construction, Bulls and Bears in Stock Markets, Factors influencing the movement of stock markets, indicators of maturity of stock markets, Trading of securities on a stock exchange; Settlement mechanism at BSE & NSE, Money Markets & Debt Markets in India: Money Market: Meaning, role and participants in money markets, Segments of money markets, Call Money Markets, Repos and reverse Repo concepts, Treasury Bill Markets, Market for Commercial Paper, Commercial Bills and Certificate of Deposit. Debt Market: Introduction and meaning, Market for Government/Debt Securities in India.

15. HUMAN RESOURCE: PERFORMANCE AND COMPENSATION MANAGEMENT:-

Introduction: Concept, Objectives of performance management system; Performance management and performance appraisal; Performance Management process: Performance planning, Process and Documentation of Performance appraisal, Appraisal Interview, Performance Feedback and Counselling, Performance management and reward systems. Performance Coaching, Mentoring and Counselling, Competency development, Use of technology and e-PMS, International Aspects of PMS. Performance systems trends, Ethical Perspectives in performance Appraisal, Introduction to Job Evaluation, Methods of Job Evaluation, Company Wage Policy: Wage Determination, Pay Grades, Wage Surveys, Wage Components. Modern trends in compensation - from wage and salary to cost to company concept, Comparable worth, broad banding, and competency based pay, Incentives plans for

production employees and for other professionals. Developing effective incentive plans, pay for performance. Supplementary pay benefits, insurance benefits, retirement benefits, employee services benefits. Benefits & Incentive practices in Indian industry. Wages in India: Minimum wage, fair wage and living wage. Methods of state regulation of wages, Wage differentials & national wage policy regulating payment of wages, wage boards, Pay commissions, dearness allowances, linking wages with productivity.

16. MANAGEMENT OF GLOBAL BUSINESS: MULTINATIONAL BUSINESS FINANCE:-

Multinational Business Finance – MNCs (Multinational Corporations) and transnational corporations, Difference between domestic and International financial management, International Monetary System - The Gold standard, The Bretton Woods system, the flexible exchange, alternative exchange rate system, the European monetary system, Euro and its implications for Indian banking, International Financial Institutions – International Monetary Fund (IMF), Asian Development Bank (ADB), International Bank for Reconstruction and Development (IBRD), Bank for International Settlement (BIS) and Organization for Economic Cooperation and Development (OECD), The Foreign Exchange Markets: Introduction, types: Global and Domestic market, spot market and forward market; rates: direct and indirect quotations, bid-ask spread; Functions of the Foreign Exchange Markets; determination of forward premiums and discounts, interest arbitrage – covered interest arbitrage and interest parity theory – forecasting of foreign exchange rates, Payment Systems: Payment terms and financing international trade, international flow of funds and portfolio investment in India, FDI (Foreign Direct Investment) vs. FIIs (Foreign Institutional Investors), investment strategies of FIIs in India, FIIs and volatility, impact of FIIs investment on stock markets and public policy. Netting (with numerical), pooling, leading and lagging as international payment settlement. Contemporary Issues in international finance.

17. PRINCIPLES OF MICRO ECONOMICS:-

Introduction: Problem of scarcity and choice: scarcity, choice and opportunity cost; production possibility frontier; economic systems. Demand and supply: law of demand, determinants of demand, law of supply, determinants of supply, market equilibrium, Individual Vs Market, Movement Vs Shift. Applications of demand and supply: consumer surplus, producer surplus, Elasticity: price elasticity of demand, calculating elasticity, measurement of elasticity of demand and supply, determinants of price elasticity, income and cross elasticities, Consumer Theory, Budget constraint, concept of utility, Cardinal Vs Ordinal Utility, diminishing marginal utility, Diamond-water, paradox, indifference curves, ICC and Engels curve, derivation of demand curve from indifference curve and consumes equilibrium; price, income and substitution effects, effect of interest rates on household savings, lump sum subsidy Vs excise subsidy. Production and Costs, Production: behavior of profit maximizing firms, production functions, law of variable proportions, law of returns to scale; choice of technology, isoquant and isocost lines, Isoquants: properties, optimal combination of resources, expansion path and returns to scale, cost minimizing equilibrium condition, Costs: costs in the short run, costs in the long run, revenue and profit, maximizations, minimizing losses, short run industry supply curve, economies and diseconomies of scale Market Structure and Perfect Competition, Market: Meaning, Market structure: Types and Definition, Role of time element: Market Period, Short Period and Long Period, Market Price and Normal Price, Perfect Competition: assumptions: theory of a firm under perfect competition, demand and revenue; equilibrium of the firm in the short run and long run; long run industry, supply curve: increasing, decreasing and constant cost industries, Theory of a Monopoly Firm, Concept of imperfect competition; Monopoly: features, short run and long run price and output decisions of a monopoly firm; concept of a supply curve under monopoly; comparison of perfect competition and monopoly, price discrimination; Dumping; remedies for

monopoly: Antitrust laws, natural monopoly. Monopolistic Competition and Oligopoly, Monopolistic competition: Assumptions, short run & long run price and output determination under monopolistic competition, economic efficiency and resource allocation, Oligopoly: Assumptions, oligopoly model: kinked demand curve and price rigidity, cartels and role of government. Market Failure and Factor Pricing, Market Failure: Market adjustment to changes in demand, efficiency of perfect competition; sources of market failure: imperfect markets, public goods, externalities, imperfect information; evaluating the market mechanism, Factor Pricing: Meaning and Types of Distribution, Marginal productivity theory of distribution. Wages: Meaning and Types of Wages, Real and Nominal Wage. Theories of Wages (Classical and Modern), Factor Pricing Rent: Concept of Rent, Ricardian Theory of Rent, Quasi Rent, Modern Theory of Rent, Interest: Classical Theory, Loanable Fund Theory and Keynes's Liquidity Preference Theory, Profit: Gross Profit and Net Profit, Theories of Profit: Dynamic Theory of Profit, Innovation Theory of Profit and Uncertainty Bearing Theory of Profit.

18. PRINCIPLES OF MACROECONOMICS:-

Introduction to Macroeconomics and National Income Accounting, Classical and Keynesian Theory of Macroeconomics, Classical assumptions, Say's Law of Market, Classical theory of employment, output, prices and interest, Limitations of Classical Theories., Keynesian theory of employment: Determination of effective demand ,Comparison and contrast between Classical and Keynesian contribution, Relevance of Keynesian economics to developing countries, What is macroeconomics? Macroeconomic issues in an economy, National Income Accounting: Concepts of GDP and National Income; measurement Consumption, Saving and Investment Functions, Concepts of MPS, APS, MPC, APC, MPI, API Keynes Psychological Law of Consumption, Determinants of Consumption, Saving and Investment: Equality between saving and investment, Factors determining Investment, Marginal Efficiency of Capital (MEC), Business expectations and secular stagnation of national income and related aggregates; nominal and real income; limitations of the GDP concept, Money in a Modern Economy, Concept of money in modern economy; monetary aggregates; demand for money; quantity theory of money; liquidity preference and rate of interest; money supply; Credit creation; monetary policy, AD-AS approach - Determination of aggregate demand, Shifts in aggregate demand, Aggregate supply in the short-run and long-run, Aggregate demand- Aggregate supply analysis. Multiplier and Accelerator, Money multiplier, Investment Multiplier: Its working and leakages, Importance and critique, Acceleration Principle: contribution of Samuelson's and Hicks; Super Multiplier; Basic Concept of Business Cycle (excluding theories). Theories of Money and Inflation, Value of money, Fisher's equation, Cambridge equation, Keynesian theory of money and prices, Milton Friedman's Restatement of Quantity theory of money, Baumol-Tobin Transaction approach, Tobin's Portfolio Balance approach. Supply of money- Measures of money supply by RBI. Inflation and Unemployment: Concept of inflation; determinants of inflation; Demand pull and cost push inflation. Measures to control inflation. Social costs of inflation; relationship between inflation and unemployment: Phillips Curve in short run and Long run. IS-LM Analysis, Equilibrium of monetary and real sector: Classical and Keynesian Dichotomy; Derivation, Properties, Shifts of IS and LM Curves; Simultaneous Equilibrium in Monetary and real sector, Balance of Payments and Exchange Rate Balance of payments: Capital and Current Accounts, Causes and Consequences of Disequilibrium in Balance of Payments, Market for foreign exchange: determination of exchange rate under Fixed and Flexible Exchange Rates, Mundell-Fleming model. Balance of Payments Adjustment under Fixed and Flexible Exchange Rates.

Part-II (50 marks) (Subject specific)

Part-II (A) (Commerce)

1. COMPANY LAW:- Introduction: Administration of Company Law [including National Company Law Tribunal (NCLT), National Company Law Appellate Tribunal (NCLAT), Special Courts]; Characteristics of a company; lifting of corporate veil; types of companies including one-person company, small company and dormant company; association not for profit; illegal association; formation of company, on-line filing of documents, promoters, their legal position, pre-incorporation contract; on-line registration of a company, Documents: Memorandum of association, Articles of association, Doctrine of constructive notice and indoor management prospectus-shelf and red herring prospectus, Misstatement in prospectus, GDR; Book building; Issue, allotment and forfeiture of share, Sweat Equity, ESOPs, Transmission of shares, Buyback and provisions regarding buyback; Issue of bonus shares, Demat System. Management: Classification of directors, women directors, independent director, small shareholder's director; Disqualifications, director identity number (DIN); Appointment; Legal positions, powers and duties; removal of directors; Key managerial personnel, managing director, manager, Meetings of shareholders and board; Types of meeting, convening and conduct of meetings, postal ballot, meeting through video conferencing, e-voting; Committees of Board of Directors- Audit Committee, Nomination and Remuneration Committee, Stakeholders Relationship Committee, Corporate Social Responsibility Committee, Dividends, Accounts, Audit: Provisions relating to payment of Dividend, Provisions relating to Books of Account, Provisions relating to Audit, auditor's qualification and disqualifications, Auditors' Appointment, Rotation of Auditors, Auditors' Report, Secretarial Audit. Winding Up, Insider Trading, Whistle Blowing: Concept and modes of Winding Up Insider-Trading; meaning and legal provisions of winding up under Insolvency and Bankruptcy Code 2016; Whistle blowing:- Concept and Mechanism.

2. CORPORATE ACCOUNTING:- 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, Underwriting of Shares and Debentures. [In reference to Relevant Accounting Standards (AS and Ind AS) and Guidance Notes as applicable] Final Accounts, Valuation of Goodwill and Valuation of Shares Preparation of profit and loss account and balance sheet of corporate entities, excluding calculation of managerial remuneration, Disposal of company profits, Concepts and calculation of valuation of goodwill and shares: simple problems only, Value Added Statement, Economic Value Added, Market Value Added, Shareholder Value Added. Amalgamation of Companies Concepts and accounting treatment as per Accounting Standard: 14 (ICAI) (excluding intercompany holdings), Internal reconstruction: concepts and accounting treatment excluding scheme of reconstruction, Accounting of Holding Companies Preparation of consolidated balance sheet with one subsidiary company; Relevant provisions of Accounting Standard: 21 (ICAI). Preparation of cash flow statement as per Indian Accounting Standard (Ind- AS).

3. AUDITING AND CORPORATE GOVERNANCE:-

Corporate Governance: Evolution of Corporate Governance; Developments in India, Regulatory Framework of Corporate Governance in India, SEBI Guidelines on Corporate Governance; Reforms in Companies Act, Clause 49 and Listing Agreement. Corporate management vs. Governance; Internal constituents of the Corporate Governance, Theories & Models, "KAUTILYA'S 'art of governance' in ARTHASHASTRA"; Board structure and Directors; Role of Board; Broad

Committees; Insider Trading; Whistle Blowing; Shareholders Activism; Role of institutional investors; Class Action suits. CSR and Corporate Governance. “Gandhian Trusteeship”; Major Corporate Scandals in India and Abroad- Relevant case Studies; Common Governance Problems Noticed in various Corporate Failures. Codes & Standards on Corporate Governance, Business Ethics: Introduction to Business Ethics: The concept, nature and growing significance of Ethics in Business, Ethical principles in Business, Ethics in Management, Theories of Business Ethics. Codes of ethics, ethics committee Morality and ethics, business values and ethics, Ethical Issues in Business: Ethics in various Functional Areas of Business: Ethics in Finance, Ethics in HRM, Ethics in Marketing, Environmental Ethics, Corporate Social Responsibility (CSR): Concept of CSR, Corporate Philanthropy, CSR and Corporate Sustainability; CSR and Business Ethics, CSR provisions under the Companies Act 2013; CSR Committee; CSR Models, Codes, and Standards on CSR. Rating Agencies; Green Governance; Concept of Whistle blower, Introduction to Auditing: Introduction, Meaning, Objectives, Basic Principles and Techniques; Classification of Audit, Audit in computerised environment, Audit Planning, Internal Control – Internal Check and Internal Audit; Audit Procedure – Vouching and verification of Assets & Liabilities, Company Audit & Special Areas of Audit: Audit of Limited Companies:- Company Auditor- Qualifications and disqualifications, Appointment, Rotation, Removal, Remuneration, Rights and Duties Auditor’s Report- Contents and Types. Liabilities of Statutory Auditors under the Companies Act 2013, Special Areas of Audit:- Special features of Cost audit, Tax audit, and Management audit; Auditing Standards. Forensic Audit.

4. COST ACCOUNTING:- Introduction: Meaning, objectives and advantages of cost accounting; Relationship between cost accounting and financial accounting; Cost concepts and classifications; Elements of cost; Cost Sheet, Installation of a costing system; Role of a cost accountant in an organization, Cost Accounting Standards (CAS – 4 on Cost of Production / Acquisition / Supply of Goods / Provision of Services) and (CAS – 22 on Manufacturing Cost) as amended from time to time. **Elements of Cost:** Material Material/inventory control 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 Cost. Treatment of Material Losses - - Wastage, scrap, spoilage and defectives, Elements of Cost: 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. Methods of wage payment and the Incentive schemes- Halsey, Rowan, Taylor’s Differential piece wage Elements of Cost: Overheads, Book Keeping in Cost Accounting Classification, allocation, apportionment and absorption of overheads; Under- and over-absorption; Capacity Levels and Costs; Treatments of certain items in costing like interest on capital, packing expenses, bad debts, research and development expenses; Activity based Costing & Service Costing (brief overview), Reconciliation of cost and financial accounts Methods of Costing Job costing, Contract costing, Process costing (process losses, valuation of work-in-progress, joint and by-products).

5. MANAGEMENT ACCOUNTING:- Introduction and Contemporary Issues: Meaning, Objectives, Nature and Scope of management accounting, Difference between cost accounting and management accounting, Difference between financial and management accounting, Cost control and Cost reduction, Cost management, Financial Statement Analysis – Common Size Statement, Comparative Statements, Trend Analysis and Ratio Analysis, Marginal Costing: Absorption versus Variable Costing: Distinctive features and income determination. Cost-Volume-Profit Analysis, Profit / Volume ratio. Break-even analysis-algebraic and graphic methods. Angle of incidence, margin of safety, Key factor, determination of cost indifference point, Decision Making: Steps in Decision Making Process, Concept of Relevant Costs and Benefits, Various short term decision making

situations – profitable product mix, Acceptance or Rejection of special/ export offers, Make or buy, Addition or Elimination of a product line, sell or process further, operate or shut down. Pricing Decisions: Major factors influencing pricing decisions, various methods of pricing, Budgetary Control: Budgeting and Budgetary Control: Concept of budget, budgeting and budgetary control, objectives, merits, and limitations. Budget administration. Functional budgets. Fixed and flexible budgets. Zero base budgeting. Programme and performance budgeting, Responsibility Accounting- Concepts and Significance, Different Responsibility Centres; Divisional Performance Measurement: Financial and Non-Financial measures; Standard Costing: Standard Costing and Variance Analysis: Meaning of standard cost and standard costing, advantages, limitations and applications. Variance Analysis – material, labour, overheads and sales variances, Disposition of Variances, Control Ratios.

Part-II (B) (Business Administration)

1. BUSINESS ORGANIZATION AND MANAGEMENT:-

Foundation of Indian Business: Manufacturing and service sectors; Small and medium enterprises; Problems and government policy, India's experience of liberalization and globalization. Technological innovations and skill development, 'Make in India' Movement, Corporate Social responsibility and ethics Emerging opportunities in business; Franchising, Outsourcing, and E-commerce, Business Enterprises Forms of Business Organization: Sole Proprietorship, Joint Hindu Family Firm, Partnership firm, Joint Stock Company, Cooperative society; Limited Liability Partnership; Choice of Form of Organization, Government - Business Interface; Rationale and Forms of Public Enterprises, International Business, Multinational Corporations. Management and Organization The Process of Management: Planning; Decision-making; Strategy Formulation. Indian Philosophy of Management: The Gita and Management, Management lesson from Ramayana; Gandhian Philosophy, Organizing: Basic Considerations; Departmentation – Functional, Project, Matrix and Network; Delegation and Decentralisation of Authority; Groups and Teams Leadership, Motivation and Control Leadership: Concept and Styles; Trait and Situational Theory of Leadership, Transactional Vs. Transformational Leadership; Motivation: Concept and Importance; Maslow Need Hierarchy Theory; Herzberg Two Factors Theory. McGregor Theory X and Theory Y. Communication: Process and Barriers; Control: Concept and Process. New trends and directions (Role of IT and social media). Functional Areas of Management Marketing Management: Marketing Concept; Marketing Mix; Product Life Cycle; Pricing Policies and Practices Financial Management: Concept and Objectives; Sources of Funds – Equity Shares, Debentures, Venture Capital and Lease Finance. Securities Market, Role of SEBI. Human Resource Management: Concept and Functions; Basic Dynamics of Employer – Employee Relations.

2. BUSINESS ACCOUNTING:-

Theoretical framework: financial accounting, accounting as an information system, importance, scope and limitations, uses of accounting information basis of accounting, generally accepted accounting, principles, the accounting equation, nature of accounts and rules of debit and credit, Accounting Process: recording, transactions in general journal, recording transactions in three column cash book, an overview of subsidiary books, preparation of ledger accounts, Depreciation accounting: depreciation accounting and revenue recognition, methods of charging, depreciation straight-line method and written-down-value method, Bank Reconciliation statement: meaning and reasons for preparing bank reconciliation, statement, methods of preparing bank reconciliation statement, Preparation of financial statements of sole proprietor: Preparation of trial balance, preparation of trading account, profit & loss account and balance sheet for a sole proprietor with adjustment entries, Financial statements of joint stock company: understanding contents of financial statements of

a joint stock company as per Companies Act, 2013, Preparation of cash flow statement, Financial Statement analysis: Objectives of Financial Statement analysis: sources of information, techniques of financial statement analysis horizontal analysis, vertical analysis and ratio analysis, meaning and usefulness of financial ratios, limitations of ratio analysis, Ratio analysis: analysis of financial Ratios from the perspective of different stakeholders like; investors, lenders and short term creditors: profitability ratios, solvency ratios, liquidity ratios and turnover ratios. An overview of Artificial Intelligence and Data Analytics in Accounting.

3. QUANTITATIVE TECHNIQUES FOR MANAGEMENT:-

Linear Programming: Formulation of L.P. Problems, Graphical Solutions (Special cases: Multiple optimal solution, infeasibility, unbounded solution); Simplex Methods (Special cases: Multiple optimal solution, infeasibility, degeneracy, unbounded solution) Big- M method and Two-phase method; Duality and Sensitivity (emphasis on formulation & economic interpretation); Formulation of Integer programming, Zero-one programming, Goal Programming, Elementary Transportation: Formulation of Transport Problem, Solution by N.W. Corner Rule, Least Cost method, Vogel's Approximation Method (VAM), Modified Distribution Method. (Special cases: Multiple Solutions, Maximization case, Unbalanced case, prohibited routes) Elementary Assignment: Hungarian Method, (Special cases: Multiple Solutions, Maximization case, Unbalanced case, Restrictions on assignment.), Network Analysis: Construction of the Network diagram, Critical Path - float and slack analysis (Total float, free float, independent float), PERT, Project Time Crashing, Introduction to Game Theory: Pay off Matrix- Two person Zero- Sum game, Pure strategy, Saddle point; Dominance Rule, Mixed strategy, Reduction of $m \times n$ game and solution of 2×2 , $2 \times s$, and $r \times 2$ cases by Graphical and Algebraic methods; Introduction to Simulation: Monte Carlo Simulation.

4. MANAGEMENT OF GLOBAL BUSINESS INTERNATIONAL TRADE: POLICIES AND STRATEGIES:-

Review of Economic Theory on International Trade: Basis for international trade; gains from trade; distributional issues, policy instruments and their impact, political economy. Trends in Global Trade and Balance of Payments with special reference to India: Historical roots of today's international trade, Composition, origin and destination of global exports and imports, Balance of payments: current account and capital account, Capital flows and foreign exchange revenues, External Debt. The Global Institutional Structure: GATT (General Agreement on Trade and Tariffs), WTO (World Trade Organization), Regional Trade Blocks and Trade Agreements, India's Industrialization Strategy and International Trade: Review of Economic planning strategies and issues: early phase; the 1970s and 1980, Policies since 1991, Exim policy, structure of tariffs and restrictions, currency depreciation and convertibility, Export Promotion Zones, Experience of Select Developing Countries: Analysis of the trade strategy and the policy framework in two select large countries and comparison with India, Impact of trade on growth, agriculture, inequality, poverty, and other developmental indicators.

Part-II (C) (Economics)

1. INDIAN ECONOMY:- Concepts of economic growth and economic development, Human Development Index, Sustainable development, Determinants of economic development, Kautilya Arthashastra and economic development Understanding the Indian Economy, Impact of colonization on Indian Economy, Post-Independence Economy; Planning for the economy –objectives, strategy and achievements (Plan wise details to be excluded). State of the Economy in 1991, Features of the

Economic Reforms and Structural Adjustment Programme: Liberalization, Privatization and Globalization, Appraisal of Economic Reform Programme, Relevance of planning in the context of globalization, Evolution of Indian Planning: from Planning Commission to NITI Aayog. Objectives and Functions of NITI Aayog, Problems Faced by Indian Economy - Issues in India's development: Population and economic development, Demographic aspects of India's population, Demographic dividend, Problems of unemployment, poverty. Poverty: definition and estimate, poverty line, poverty alleviation programs. Inequality: income and regional inequality – causes and corrective measures. Unemployment: concepts, measurement, types, causes and remedies, Food problem and food security, Role of Public Distribution System (PDS) in India, Direct Cash Transfer Scheme of Government. Agriculture in India, Pattern of Growth of Indian Agriculture since 1950; Land Reforms, Green Revolution, White and yellow revolution, Agricultural Production, Productivity. Factors Influencing Agricultural Development: Marginalization, Labour, Marketing and Finance. Issues and challenges in agricultural credit and subsidy, Deceleration in the 1990s–Causes and Future Challenges. Economic Liberalization and Emerging Trends in Indian Agriculture. New Agricultural Policy (In the context of liberalization.) Industries in India, Role of Industry in Economic Development. Pattern of Industrialization, Industrial development during the plan period. Role, Growth and Problems of Cottage, small scale and Medium scale industries in India, Industrial Policy:1948, 1956 and 1991 and Recent Developments .Impact of New Industrial Policy on Industrial Sector.

2. BASIC ECONOMETRICS:- Elements of Statistical Inference, Concepts of population, samples, parameter and statistic; Estimation theory: Point Estimation small sample properties, asymptotic properties, Interval Estimation, Testing of hypotheses: Null v/s Alternative hypothesis, Simple and Composite hypotheses, Procedure for testing of hypotheses; Type I and Type II errors; power of a test; level of significance, Confidence Interval, confidence limits, Degrees of freedom. Simple Linear Regression Models, Two-variable linear regression model, Assumptions under CLRM, OLS method of estimation, Importance of stochastic error term, Properties of an estimator, Variance and covariance of the OLS estimator, Gauss-Markov theorem. Multiple Regression Models, kvariable linear regression model, least squares estimators, Properties, R square and Adjusted R square, ANOVA. Regression with Dummy Variables, Dummy independent variables-dummy variable trap, Structural change Model, Interaction effects, Seasonal analysis of time series, Piece wise linear regressions. Introduction to modelling and forecasting: AR, MA and ARIMA; Basics of ARCH. Applications of R programming.

3. DEVELOPMENT ECONOMICS:- Economic Development: Meaning and Measurement, Meaning of economic development, Distinction between growth, development and sustainable development. Features of underdevelopment, Factors affecting economic development, Economic development and human welfare, Measurement of economic development, Limitations of using per capita income as a measure. Alternative measures: PQLI, HDI, Human Poverty Index, Gender Development Index, Kuznet's inverted „U“ hypothesis. Factors in Development and Indian Development Experience, Capital formation (Physical and Human); technology; institutions, Indian Development Experience: Critical evaluation of growth, inequality, poverty and competitiveness, pre and post reforms era. Theories of Under Development and Development Theories of Under Development: The Vicious Circle of Poverty, Low Level Equilibrium Trap, circular causation and backwash effect, dualism, Theories of Development: classical theories (Smith, Ricardo, Malthus), Marxian, theory of capitalist development. Theories of Development, Classical theories (Smith, Ricardo, Malthus); Marxian theory of capitalist development. Big push, Balanced vs Unbalanced growth, Balance between agriculture and industry, import substitution vs export promotion, neo-liberal vs interventionist policies.

4. INTERNATIONAL ECONOMICS:- Introduction to International Trade and Trade Theories, Nature and importance of International Trade- Inter-Regional and International Trade. Theories of Absolute Advantage, Comparative Advantage and Opportunity Costs, Heckscher-Ohlin Theory of Trade–Its main Features, Assumptions and Limitations; Leontief Paradox, Product Life Cycle theory, Theory of National Competitive Advantage; Instruments of trade control. Terms of Trade, Tariff and Economic Integration, Terms of Trade: Concept, Measurement and Effects on Nation’s Welfare. Trade Policy: Arguments for and against Free Trade and Protection, Tariff and Non-Tariff Barriers: Economic Effects, Economic Integration: Concept and Forms of Regional Integration; Static and Dynamic Effects of Custom Union. Balance of Payment BOT, BOP, Current Account, Capital Account, Visible and Invisible, causes and consequences of disequilibrium in Balance of Payments, Methods of correcting the disequilibrium., Devaluation of Currency, Convertibility of Currency: Partial Account and Full Account. Recent trends in balance of Payment in India Foreign Exchange Rate, Exchange Rate - Meaning - Demand and supply of Foreign Exchange; Types of Exchange Rate: Fixed Vs Flexible Exchange Rate. Theories of Foreign Exchange Rate: The Mint-Parity Theory, The Purchasing Power Parity Theory, BOP Theory, Objectives, Functions and Role of IMF, IBRD and WTO.

5. MATHEMATICAL ECONOMICS:- Introductory Concepts, Set and set theories, Equations of Straight Line, Concept of slope and Intercept, Point of intersection of two lines. Application of straight lines in Economics: Demand and supply analysis, determination of equilibrium price and quantity, Arithmetic and Geometric Progressions and their Applications, Differentiation Functions: Constant, Polynomial; Relation and Function, Simple Differentiation and economic applications, Marginal utility, marginal revenue and marginal cost, Elasticity, Partial derivatives and economic applications (homogeneous functions and Euler’s Theorem, Partial Elasticity). Maxima and Minima of Functions of One and Two Variables; unconstrained, Optimization Problem, Concept of Matrix and Determinant, Matrices: Meaning and types of matrices, Operation of Matrices: Addition, subtraction, multiplication (3x3), division, Determinant, Properties of determinant (without proof), Rank of matrix, trace, adjoint and inverse of a matrix, solution of linear equations Cramer’s rule-Inverse method, Application in economics. Input–Output & Linear Programming, Input- Output Model: technological coefficient Matrix (2 sector & 3 Sector Model), Hawkins Simons Conditions, Static Leontief Solution, Linear Programming: Meaning, Basic concepts, formulation and assumption of LPP, Primal and Dual, Nature of feasible, basic and feasible solution, Graphical solution to linear programming problem (only two variables). Shadow prices of the resources. Special Cases: Identification of unique and multiple optimal solutions, unbounded solution, infeasibility and degeneracy.

6. STATISTICAL METHODS-I:- Introduction to statistics: Statistics: Meaning, Scope, Nature, Function, Importance and Limitations of statistics, Types of Data: Primary and Secondary data, Univariate and Bivariate data, qualitative and quantitative data; nominal and ordinal data, Cross-section and Time Series. Sources of data: Primary and Secondary data .Diagrammatic and Graphic Presentation of Data CENSUS AND SAMPLE, Collection of Statistical Data: Census and sample Method, Merits and demerits of census and sampling. Some basic sampling methods: Probability and Non Probability Sampling Methods with merits and demerits. Essentials of sampling, Methods of Selecting Sample, Sampling and Non- Sampling Errors. MEASURES OF CENTRAL TENDENCY: Objectives of Averaging, Requisites of a Good Average. Arithmetic Mean, Median, Mode, Geometric Mean and Harmonic Mean. Quartiles, Deciles, Percentiles and Limitations of Averages. DISPERSION: Meaning and significance of dispersion. Measures of dispersion: Range, Quartile,

Deviation, Mean Deviation, Standard Deviation, Coefficient of Variation, Variance, Absolute and Relative measures of variation - Lorenz Curve. Moments: Computation and significance; Skewness; Kurtosis.

7. STATISTICAL METHODS-II:-

CORRELATION ANALYSIS: Meaning, Significance of the Study of Correlation. Correlation and Causation. Types of Correlation: Positive, Negative, Partial, Multiple, Linear and NonLinear. Methods of Studying Correlation: Scatter Diagram Method, Graphic Method, Karl Pearson's Coefficient of Correlation, Spearman's Rank Correlation. Properties and Interpretation of Correlation Coefficient. Probable and standard errors; Rank correlation. **REGRESSION ANALYSIS:** Meaning - Difference between Correlation and Regression - Regression Lines - Regression Equations of X on Y and Y on X Only - Regression Coefficients. Properties of regression coefficients; Relationship between Correlation and Regression coefficients; Standard Error of Estimate. Elementary application of regression in demand, supply, consumption and investment functions. **ANALYSIS OF TIME SERIES:** Meaning and Importance of Time Series. Components of Time series, Measurement of Trend: Graphic Method, Semi, Average method, Moving Average Method, Least Square Method, Applications in Economics. **INDEX NUMBERS:** Meaning, Characteristics, Importance and Uses, Classification. Types of Index Numbers: Price, Quantity and Value Index Numbers. Special Purpose Indices: Cost of Living Index, Wholesale Price Index, Consumer Price Index. Problems in construction of Index Numbers.

8. RESEARCH METHODOLOGY:-

Introduction to Research Methodology: Research: concept, meaning, significance, types, approaches; Criteria of good research; Research problem: selection, need, techniques involved; Steps in Research Process; Terminologies of research- Concept, Construct, Variables, Reviewing and reporting Literature, Formulation of research question, Philosophies of Research; Induction and Deduction Approach, Research Design: Meaning, need and Types, Data Collection Techniques: Meaning and Sources of Primary and Secondary Data; Questionnaire Method: Types, Format and Pre- Testing of Questionnaires. Techniques for Increasing Response of Respondents. Interview Method: Types, Process and Rules of Interviews. Factors affecting interview. Interviewer's Bias. Selection and Training of Interviewers. Observation Method: Types of Observations. Measurement and Scaling Techniques, Measurement Scales: Different types of scales - nominal, ordinal, ratio and interval. Accuracy of Measurement and Testing of Reliability Increasing Reliability, Sampling Techniques: Probability Vs Non-probability sampling methods (Merits, Demerits and Applications), sample size determination. Testing of Hypotheses: Hypothesis: Meaning, and formulation .Types of hypothesis- Procedure for testing hypothesis-Type-I and Type-II errors, One tail, 2-tailtest, Parametric Tests: Applications of t, z, and F-test Statistics. Non-Parametric Tests: Application of Chi-Square. Data Preparation, Analysis and Report Writing Process of data analysis - Editing, coding, tabulation, diagrams. Use of computers: coding, data tabulation and graphic presentation of the data, Report writing: Types of Reports, Significance of report writing. Different steps in writing the report - Mechanics of writing are search report. Referencing (APA, Chicago manual etc.). Ethics in research, Presentation of Research Report.

Sd/-

Section Officer (R-III)

H. P. Public Service Commission