

Syllabus for descriptive type **Subject Aptitude Test (SAT)** for the recruitment to **post of Assistant Research Officer, Class-II (Non-Gazetted)** in the **Department of Planning, H.P.** The SAT paper shall have two parts i.e. Part-I and Part-II and cover the following topics of **Master of Arts (Economics) level.**

### **PART-I (60 Marks)**

#### **1. MICRO-ECONOMICS**

Role and significance of assumption in economic models, Empirical testing of economic models.: The Slutsky theorem; Compensated demand curves; The revealed preference theory. Duality theory, Dual properties of utility and expenditure function, Shepard's Lemma inter-temporal choice in consumption, Recent developments in the theory of limit pricing; Baumol's theory of contestable markets; Public utility pricing; inter-temporal and intra temporal equity, Markets with Asymmetric information: Hidden Characteristics adverse selection and Moral hazards in insurance, Banking, Labour market & second-hand product markets. Pricing and output behaviour under oligopoly: Collusive and non-collusive models: Extensions of the oligopoly: models: Models of Baumol, Marris and Williamson, Theory of Distribution: The adding up Problem and Euler's theorem. Modern theory of distribution. Theory of Rent: Ricardian and Modern. IS- LM curve theory of interest, Modern theory of wages; wage determination under trade unionism, Marxian and Kalecki's theories of profit, Welfare Economics: Marshallian and Robbinsian concepts Pigouvian Welfare Economics. New Welfare Economics: Pareto's optimum and externalities; Compensation principle.

#### **2. ELEMENTARY MATHEMATICS FOR ECONOMICS:-**

**MATRICES AND DETERMINANTS:** Their properties, addition, subtraction, and multiplication of matrices. Transpose of a Matrix. Some special forms of square matrices- Trace, Idempotent matrix, Sub-matrix of a matrix. Inverse of a matrix and solution of equations using both the inverse of a matrix and Cramer's rule. Rank of a Matrix (Numericals relating to inverse of a matrix and Cramer's rule should to be confined to matrix of order 3x3), **DIFFERENTIATION:** Derivatives: differentiations of functions of a single variable. Derivative of a composite function, Parametric function, logarithmic function, Exponential, and inverse functions. Concave and convex functions. Derivative of higher order. Partial Derivatives and total derivative Homogenous functions and Euler's Theorem. Maxima and Minima of functions of single variable. Profit maximization and cost minimization. Constrained optimization of function with two variables. Constrained utility maximization, constrained minimization, and the interpretation of the Lagrange multiplier, **DIFFERENTIAL AND DIFFERENCE EQUATIONS:** Introduction, non-linear and linear differential equations of the first order and first degree. Solutions of differential equations when variables are separable, homogenous equations and non-homogenous equations, exact differential equations and linear equations. Solution of linear differential equations of second with constant coefficient. Finite difference, difference equations. Solutions of homogeneous linear difference equation with constant, coefficients, linear first-order difference equations, Linear second order difference equations with constant coefficients, Application of differential and difference equations in economic models (dynamics of market price, Solow growth

model, cob-web model, multiplier- accelerator interaction model, Domar growth model), ANALYTIC GEOMETRY: Introduction of a Straight Line, section formula, the gradient of a straight line, the equation of a straight line in intercept form, two-point form. Circle: The general equation of a circle, Parabola: equation of a parabola, the points of intersection of line and a parabola. Equation of a rectangular hyperbola. Problems based on applications of analytic geometry in economics, Integration of function of one variable by parts and substitution. Integration of logarithmic and exponential functions. Definite integral and area between two curves. Simple applications of integration to the relationship between marginal functions and total functions, Consumer's surplus and producer's surplus. Investment and capital formation and the present value of a continuous flow, THE INPUT-OUTPUT MODEL: Its assumptions, technological coefficient matrix, closed and open input-output model, the Hawkins-Simon conditions. Solving the input-output models both open and closed using the inverse matrix, An Introduction to Linear Programming, Linear equations, slack variables. Feasible and basic solutions. Degeneracy. Solving the primal and Dual with simplex method. Interpretation of the linear programming results.\

### **3. INTERNATIONAL ECONOMICS:-**

Need for a separate theory of international trade. Theories of international trade classical, Neo-classical, Heckscher-Ohlin and Factor price equalization theories. Empirical verification of Classical and Heckscher-Ohlin theories, Factors reversal and Leontief paradox. Emmanuel's theory of unequal exchange, Impact of dynamic factors on international trade changes in tastes, technology, factor endowments. Rybeznski theorem and transportation costs. Derivation of offer curves-Marshall-Edgeworth, Mill and Meade. Terms of trade and measurement of gains from trade. Secular deterioration in the terms of trade of developing countries. Aid versus trade controversy, Commercial Policy: Free trade versus protection. Theory of tariffs; partial effects and effects on income distribution. Stolpher-Samuelson theorem. Optimum tariff, nominal and effective tariffs, infant industry tariff. Quotas and other quantitative restrictions. State trading. Multiple exchange rates. Trade policies of developing countries. Theory of custom union –trade creation and trade diversion. The SAARC, NAFTA, BRICS, G8, EU and the WTO framework. The WTO's and the developing countries, International Monetary Theory: Balance of payments and its adjustment. Maintenance of internal balance-Elasticities and absorption approaches. Exchange rate determination and adjustments. Foreign trade multiplier. Foreign repercussions and stability problem. Flexible versus fixed exchange rate system, Capital requirements of developing countries. Development of International Monetary system since the 1970s and its reform, international reserves and problems of liquidity, IMF and the SDRs, ADB, IFC, IDA Short-term International finance-its nature and magnitude; its merits and demerits for the developing countries.

### **4. LABOUR ECONOMICS:-**

Labour Market: Nature and characteristics of labour markets in developing economics like India. Paradigms of labour market – classical, neo-classical and dualistic; Analysis of demand and supply forces, Demand for labour relating to choice of technology. Supply of labour in relation to growth of labour force. Labour force participation rates, Employment: Employment

and development relationship Importance of full employment in the context of poverty in the developing countries. Unemployment – concept and measures. Causes of unemployment, Issues relating to employment rationalization, technological change and modernization. Rural unemployment and educated unemployment. Planning of Human capital, Wage Determination: Various classical, neo-classical and bargaining theories of wage determination. Various concepts of minimum wages and fair living. Problems of implementation of minimum wages. Wage determination by sectors – Urban and Rural, organized and unorganized. Wage and inflation. Productivity and wage relationship. Profit sharing schemes. Causes of wage differentials in terms of firm, industry, occupation and region, Industrial Relations and Trade Unions: Industrialization and emergence of trade unionism. Growth, structure and pattern of trade unionism. Achievements and failures of trade union movement. Determinants of industrial disputes. Steps to achieve industrial peace. Methods of settlement of industrial disputes: collective bargaining, conciliation, arbitration and labour participation in management, State and Labour in India, Increasing role of State in labour matters. Labour policy of the Government. Social Security and Legislative Measures adopted for Socio-economic upliftment of labour. Social security measures for organized visa-vis unorganized sector of labour. Important labour legislations (industrial dispute act), trade unions act, factories act and employees state insurance act. Problems of rural labour. Government policy towards rural labour and women and child labour. Evaluation of recent employment policy in India.

## **5. MACRO ECONOMICS:-**

The basic classical model of income and employment determination. The basic Keynesian model; equilibrium in product and money markets. Multiplier process and the different concepts of multiplier; balanced budget theorem, Macro-Economic Theories of Consumption: Keynesian theory; Relative income, Permanent income, and Life cycle income hypotheses. Pigou effect and real balance effect on consumption demand, Macro-Economic Theories of Investment: The Keynesian Post-Keynesian, New-Keynesian, and the financial theory of investment determination. Lags in investment. Portfolio disequilibrium and the transmission mechanism. The Demand for Money; The classical, Keynesian and Post-Keynesian approaches. The supply of Money and Definitions of Money Supply: Inside and outside money, the neutrality of money Equilibrium in money market. The classical and Keynesian dichotomies and their resolution by Patinkin's real balance effect and through IS-LM model respectively. Keynesian and post Keynesian theories of rate of interest, Growth Models: Harrod-Domar model; Neo – classical model; Golden rule of accumulation; Optimal growth turnpikes. Theories of Trade Cycles: Multiplier- Accelerator interaction model, Kaldor and Hicks' models. Determination of General Price Level; Classical and Keynesian approaches. Micro Foundations of Macro Economics. Theories of Inflation; Demand – pull and cost-push inflation; short and long-run Phillips's curve analysis; The Keynesian, the monetarist and the rational expectations analysis, Keynesian and monetarist perspectives on monetary, fiscal and income policies. Stabilisation policies: Rules Discretion: lagged effects of policies and role of expectations. Crowding out effect and government budget constraint. Rational expectations and effectiveness of stabilisation policies.

## **6. BASIC STATISTICS:-**

Measure of Central Tendency, Dispersion, Skewness and Kurtosis. Correlation; Meaning and methods of measuring correlation, Karl Pearson's method, Spearman's Rank Correlation coefficient, Limitations of Correlation analysis. Linear Regression; relation between correlation coefficient and regression coefficients, Fitting of regression equations, Standard error of estimates, The General Linear Regression Model, An Introduction to the matrix formulation and solution of the general linear regression Model. Solution for a model with one dependent and two independent variables. Prediction for simple regression models of demand, supply, production and cost. Multiple and partial correlations and regressions. Relationship between the measures of multiple correlation and measures of partial correlation, Beta coefficients, Elements of Probability Theory, The Concept of Probability Distribution and a Density function. Mathematical expectation, Binomial distribution, the Normal distribution, Some properties of the normal distribution. Sampling and sample designs: simple random sampling, stratified random sampling, systematic sampling and cluster sampling. Large samples. Tests of significance. Limitation of sampling; procedure of testing hypothesis: Region of acceptance and rejection, two tailed and one tailed tests, Type I and Type II errors. Non-Parametric Tests: The sign test, rank sum test, the Mann-Whitney U test, advantages and limitations of non-parametric tests, Tests of Significance, Standard error of the mean, Student's "t" distribution and its properties, Use of the "t" distribution to test hypothesis of the population means. Chi Square: general features of Chi Square ( $\chi^2$ ), chi square as a test of goodness of fit, chi square as a test of independence. Contingency table and Yate's correction for continuity, testing homogeneity of several independent estimates of population variance. Analysis of variance; meaning, assumptions and techniques of analysis of variance, one way and two-way analysis of variance problem. Inter relationship between "t", Chi square and F tests, Analysis of Time Series, Meaning and components of time series, Methods of estimating trend – the semi average method, the moving average method and the least squares method. Fitting of straight line, second- and third-degree equations. Fitting of the modified exponential curve, Gompertz curve and the logistic curve. Measurement of Seasonal, Cyclical and irregular variations, Index numbers: Meaning, problems in construction of index numbers. Classification of index numbers, unweighted price index numbers, relative of aggregate method and average of price relatives, Weighted price index numbers: Laspeyre's, Paasche's and Fisher's ideal index numbers. Time reversal test and factor reversal test and chain-based index numbers. Uses and limitations of index numbers.

## **7. MONEY AND BANKING:-**

Basic Concepts: Different approaches to the definition of money; Types, role and functions of money inside money and outside money; Measures of Money supply. Traditional quantity theory of money Fisher's equation of exchange; Cambridge cash balance approach; Keynes reformulation of quantity theory of money; Modern quantity theory; Friedman's approach, Theory of Commercial and Central Banking: Money markets and capital markets; commercial banks. Theories of commercial banking; Process of credit creation; non-bank financial intermediaries (NBFI's); Objectives and role of central banks in economic development; The currency and credit schools; Quantitative and qualitative methods of credit-controls. Review of Narsimham committee report (1991 & 1998 Reports), Digitalisation of

Indian Banking system, The Theories of Demand and Supply of Money: Theories of demand for money; Classical Keynesian and Monetarist. Theories of money supply; The 'H' Theory of money Supply; Money multiplier process and its determinants; Commercial banks and the money multiplier; Factors affecting 'H' RBI analysis of money supply; Control of the money stock; Money stock and interest rates; monetary equilibrium: money in equilibrium and non-equilibrium states; Neutrality of money. Demonetization: concept, logic, impact, Principles of Monetary Policy: Monetary Policy: Its meaning, objectives, framework, targets and indicators of monetary policy; Transmission mechanism of monetary. Policy; Restrictive Vs. accommodating monetary policy; Need and effectiveness of monetary policy; Lags in monetary policy; Role of monetary policy in developing countries; Monetary and credit planning; Monetarist and Keynesian views on monetary policy, Indian Money Market and International Financial Institutions: India and NBARD. Reserve Bank of India (RBI); Its working, functions, performance and role in the economic development of India; RBI's monetary policy; International Financial Institutions IMF, IBRD (World Bank), Asian Development Bank (ADB). International Development Association (IDA).

## **8. HISTORY OF ECONOMIC THOUGHT:-**

Mercantilism: Main Principles. Theory of economic development; Views of Keynes, Petty, Hume and Cantillon on Mercantilism: Physiocracy: Natural Order, Agriculture and Product net, social classes. *Tableau Economique*, The Classical Period: Economic Thought of Adam Smith, David Ricardo, and J. S. Mill with special reference to their views on value, distribution international trade and economic development; Malthus theory of population; Says law of market. Ricardo Malthus controversy on Say's law of market, Socialistic Economic Thought: Socialist critique of classical economic thought with special references to the views of Saint Simon, Sirmondi and Proudhon. The Historical critics of Classicism, Karl Marx method of Economic analysis. Marx analysis of economic crises. Transformation Problem, The Neo-Classical Period: Similarity and differences between classical and neo-classical thought; The Marginal Revolution with special reference to the contribution of the Austrian School, Leon Walras, Jevons, Wickshell and Marshall, Post Marshalling Development in Economic Theory: Contribution of Joan Robinson, E. H. Chamberlin; J. M. Keynes and Post Keynesian developments in economic theory, Introduction to Indian economic thought: Economic ideas of Kautilya, Thiruvalluvar, BR Ambedkar, Mahatma Gandhi, JL Nehru, VKRV Rao and Amartya K. Sen.

## **9. FUNDAMENTAL CONCEPTS IN ECONOMICS:-**

Definition of economics, nature of economic problem, Concepts and measurement of utility, law of diminishing marginal utility-its practical applications and importance Law of demand, elasticity of demand (price, income and cross)-Measurement, practical importance and applications. Law of supply, elasticity of supply and its practical applications, Theory of Production: Stages of production function; Returns to factor proportions; Return to scale; Elasticity of substitution; Technical progress and production function; Cost and Revenue Analysis (traditional and modern theories of cost), Equilibrium of the firm-marginal analysis: Optimum factor combination and product combination. Meaning of market, types-Perfect, Monopoly, Oligopoly, Monopolistic (Main features only), Concept of Gross Domestic Product, Gross National Product, National Income and Disposable Income. Aggregate demand

and supply (Both open and closed economies) Basic concepts of inflation, deflation, stagflation, business cycles and Balance of Payment (with special reference to India's BOP). Reserve Bank of India (RBI); Its working, functions, performance and role in the economic development of India; RBI's monetary policy, Growth and Structure of Indian Economy Since 1950. Growth of Indian economy since 1950. Trends in the nature and magnitude of poverty, inequality and unemployment. Trends in agricultural and industrial production and productivity. India's developmental pattern-Successes and failures.; India's engagement with International Financial Institutions IMF, IBRD (World Bank), Asian Development Bank (ADB). International Development Association (IDA).

## **PAPER-II (60 MARKS)**

### **1. AGRICULTURAL ECONOMICS:-**

Nature and scope of agricultural economics. Role of agriculture in economic development. Interdependence between agriculture and industrial development. Systems of farming Farm size and productivity debate. Land reforms in India, Agricultural production functions. Input output relationships; factor-factor relationships and product-product relationships. Measures of farm efficiency. Risk and uncertainty in agriculture, Models of agricultural development (Lewis, Fei-Ranis, Jorgenson, Mellor, Schultz, and Boserup. Modals). Technological change and new agricultural strategy (green revolution) in India, Agro-climatic zonal planning in India, Agricultural price policy in India. Criteria to fix agricultural prices. Intersectoral terms of trade. Measures to increase marketable surplus. Functions of agricultural marketing. Efficiency criteria for agricultural marketing. Problems of Indian agricultural marketing. Measures to improve the efficiency of agricultural marketing in India, Importance of agricultural finance. Source of agricultural finance, Defects of rural money lending system. Problems of agricultural cooperative societies. Government policy for agricultural credit. Problems and suggestions to improve agricultural finance. Causes of rural indebtedness. Measures to reduce rural, indebtedness. Objective and impact of integrated rural development programme. Resource mobilisation from agricultural sector.

### **2. GENDER ECONOMICS:-**

Concept of Gender and human development. Gender disaggregated data/gender statistics. From Women in Development to Gender and Development. Gender Inequality. Capability approaches. Perspectives on men and masculinities in economic development. Relationship between economic growth and gender equality, empowerment (emphasis on economic empowerment). Indicators of economic inequalities. Third gender and development: substance and indicators. Demographic changes and gender status. Gender interpretation of causes of demographic shift in birth rates. Child sex preferences and secondary sex ratio. Gender differences in mortality: concept and factors - biological, environment, discrimination and behavioural (lifestyle) factors. Socio-economic differences in mortality, Subject and methods of gender economics. Feminist economic critique of mainstream economics and alternatives. Feminist perspectives on economic, methods and arguments. Neoliberal economic policies, international trade and investment. Trade, feminization and international gender wage inequality. Gender effects on macroeconomic theory and instability. Globalization of the world economy and gender status: concepts such as feminization of poverty and

multidimensional poverty. Women's contribution to GDP, Conceptualizing Women's Work: Productive/Reproductive Work and Formal/Informal work. Estimating Women's Work, Indian and International Debates.

Issues in Participation; Occupations; Women and Globalization; Globalization and Economic Change; International Division of Labour, Gender inequality in the labour market: entry into and exit from the labour market, careers, wages, skills training. Inequality and discrimination. Factors in wage disparities. Gender dimension of employment of youth and older persons, Household economics: theoretical concepts and gender critique. Gender critique of the neo-Marxist approach. Gender critique of neo-classic household theory. The gender contract, negotiation models within families. Distribution of time: work in the labour market, work in the household, leisure time. Distribution of incomes (expenditures) in the household: inter-generational and gender aspect. Distribution of resources and decision-making mechanisms in households. Investments in human capital at household level and the sex factor. Accumulation of human capital over a life cycle. Household factors (reproductive, productive, structural, income-based, power-related) and employment of household members. Gender based marital and age-dependent migration, Gender policy: national, regional and global, Practical policy solutions to the problem of gender inequality. Policies and strategies for reducing gender inequalities. Gender mainstreaming (including organizational mainstreaming), participatory approaches, gender budgeting, micro-credit. Welfare and Social Security Measures. Women in Planning and Social Policy.

### **3. RESEARCH METHODOLOGY:-**

Scientific Methods of Research: Definition of research, assumptions, operations and aims of scientific research. The research process; conceptual, empirical and analytical phases of research, Essential criteria for scientific methods, Research designs: observational Studies; descriptive, explanatory, exploratory and evaluative studies. Experimental studies; pre-test design, post-test design, follow-up or longitudinal design. Action research studies and panel studies, Methods of Data Collection: Collection of primary data. Selection of appropriate method for data collection; interview schedule, questionnaire, case history and case study method, Tools of Data Collection: schedule and questionnaire, construction of schedule and questionnaire, qualities of a good schedule and questionnaire. Guidelines for successful interviewing, Collection of secondary data - population (sex wise data) labour force, occupational, educational and vital statistics. Focus Group discussion (FGD), content analysis, social mapping, social networking and mystery client technique, Sampling Techniques: Complete enumeration versus sampling. Concept of Sampling unit, Sampling frame and sampling design. Sampling methods: simple random sampling, stratified sampling, Systematic sampling, cluster Sampling and purposive sampling. Multistage sampling in large-scale surveys, self-weighting, designs, stratification in multistage sampling. Sampling and non-sampling errors, calculation of weights, sample size determination, Measurement: Reliability and validity of measurement: Face, Content, Construct, convergent, concurrent and predictive validity. Scaling techniques: attitude scales, point scales, ranking scales, rating scales, limitations of attitude scales. Techniques of scale construction: Bogardus, Guttman, Likert, Semantic and Thurstone Scale, Data collection,

processing and analysis: editing, coding, data entry, validation and analysis, Writing Research Proposal and Report, Purpose of a proposal/ report. Content of proposal/ report: introductory section, methodology adopted, analysis and inferences, summary, Conclusion and recommendations, References/ Bibliography, appendices, footnotes, Examples of some hypothetical proposals.

#### **4. ECONOMICS OF POPULATION:-**

Early theories of population (Malthus, Ricardo, Marx, J.M. Keynes and others). Effect of Pre-industrial technological and institutional changes on population. Demographic transition. The concept of optimum population, Economic determinants of fertility: new household economics (Leibenstein theory and Gary Becker's Theory). Alternative economic approaches to fertility theory (Easterlin's and Caldwell's theories), Cost and values of children and their effects on fertility, Supply of children and elements of uncertainty for the parents. economic determinants of Nuptiality (marriages and divorce), Gary Becker's model. Economic determinants of mortality, Economic determinants of migration (Regenstein's, Lee's and Todaro's Model). Economic consequences of population growth (General views of Malthus, Marx, Simon Kuznets). Economic consequences of population growth (Dual sector models of Lewis, Ranis Fei and Jorgenson's), Effects of population growth on Savings and investment, population growth and Labour supply, population growth and distribution of income. Effects of population growth on educational and human capital input facilities. Economic consequences of slowing population growth and population decline. Policy issues related to population and economic growth.

**Or**

#### **ECONOMETRICS**

The Simple Linear Regression Model: Assumptions of ordinary Least Squares (OLS) method, Properties of OLS estimates. Assumption of normality and confidence intervals for the parameters. Tests of significance of the parameter estimates. Tests of hypotheses with parameter estimates, test of goodness of fit with R-square. Desirable properties of estimates. Prediction with a linear regression model. Proof of BLUE properties of estimates (Gauss-Markov theorem). Different types of variables (Dominant, proxy irrelevant and superfluous variables), Extension of Linear Regression Model, General Linear regression Model and Analysis of Variance: general linear regression model. Extension of the linear regression model to non-linear relationships. Applications of analysis of variance and regression. Tests of restriction imposed on the relationship of two or more parameters. The Chow test. Specification errors and specification bias, Violations of Assumptions of Linear Regression Model, The Problem of heteroscedasticity, its consequences and some methods to overcome the problem. Auto-correlation, its Sources, consequences and methods to solve the problem. The Durbin-Watson test. Consequences and tests for detection of multicollinearity. The Farrar-Glauber test. Methods to solve the problem of multicollinearity. Errors in Variables: their consequences and solutions. Method of inverse least squares, Dummy and Lagged Variables: Analysis with dummy variables as explanatory variables. Lagged variables and distributed lag models; The Koyck model, the adaptive expectation model, the Nerlovian partial adjustment model and the Almon scheme of polynomial lag. The method of instrumental variables. The method of maximum likelihood as applied to regression. The Cramer-Rao lower



bound. Regression on dummy dependent variables. The linear probability and the Logit models, Identification and Simultaneous Equation Models: The Simultaneous equation bias. The problem of identification. Formal rules for identification and choice of econometric methods. Recursive models, Indirect Least Squares model. Two stage least squares (2SLS) and the method of Instrumental Variables.

## **5. INDIAN ECONOMY:-**

Growth and Structure of Indian Economy Since 1950. Growth of Indian economy since 1950. Measures for raising economic growth. Trends in the nature and magnitude of poverty, inequality and unemployment. The unorganized Sector and its implications for the economy, Changes in occupational pattern, Demographic trends and economic development. Rate and trend in saving, investment and growth rate, Growth of Agricultural, Industrial and Tertiary Sectors, Trends in agricultural production and productivity. Impact of liberalization in agricultural sector. Industrial Growth performance and problems. Industrial concentration; its nature and extent. Cottage and small-scale and MSME industries. Impact of liberalization and privatization on the industrial sector. Tertiarization of the Indian economy, Money Supply, Inflation and Public Policies, Factors determining interest rates. Money supply and inflation in India. Financial sector reforms during 1990's. recent tax reforms. Growth and structure of subsidies in India. Macro-economic policies – fiscal policy, income policy and stabilization policy. Parallel economy and its implications, International Trade Policies: Composition and directions of India's foreign trade. Factors determining the balance of payment. Disequilibrium in the balance of payment. Causes, consequences and policy measure. India's policies towards foreign capital; collaboration, export promotion and import substitution. Exchange rate policy and the convertibility of Rupee, Development Policies: India's planned development; Successes and failures. Policies for social justice (with special reference to the alleviation of poverty, inequality and unemployment). Food policy and public distribution system (PDS). Sectoral policies: Industrial and agrarian. Policies for liberalization and privatization.

## **6. PUBLIC FINANCE:-**

Principles of Public Finance: Principles of maximum Social Advantage. Role of public finance in the developing Economics. Fiscal economics: An overview. Of allocation, distribution and stabilization. Functions. Market failure. Public goods and externalities. Public goods and free-rider problem, Principles of Taxation: Meaning and type of taxes; requirements of a good tax structure. Approaches to taxation: micro analysis of direct and indirect taxes; individual income tax, corporation income tax, sales tax including value-added tax, expenditure tax and Goods and service Tax. Incidence of taxes; nature of tax burden and principles of tax incidence. Theories and measures of tax incidence. Effects of taxes on work efforts, savings, investment, and growth. Trade-off between equity and efficiency. Taxable capacity, Economics of Public Debt and Public Expenditure: Sources of public debt. Classical theory of public debt. Compensatory aspects of debt policy. Burden of public debt. Management of public debt. Growth of internal and external public debt. in India. Theories of growth of public expenditure. Pattern of public expenditure. Pure theory of public expenditure. Growth of public expenditure in India, Reforms in Budgeting System and Stabilization Polices: Performance and programming budgeting. Classification of budgets. Fiscal policy: traditional and modern views on fiscal policy. Instruments of fiscal policy; built-in-stabilizes and

compensatory fiscal policy. Fiscal policy for stability and growth. Fiscal policy and economic development, Fiscal Federalism: Role of fiscal federalism. Allocation, distribution, and stabilization in a federation. Union-state-local financial relations in India. Growth and composition of statutory and non-statutory financial transfers in India. Nature and extent of deficits in central and State budgets. Policy measures to correct fiscal imbalances. Economic analysis of recent union budgets.

## **7. ECONOMICS OF DEVELOPMENT AND PLANNING:-**

Economic growth, development and sustainable economy. Various traditional and modern criteria and measure of development, Major features of structural change and economic development. Measurement of absolute poverty and income inequality. Growth and equality trade –off, Classical, Marxian and Schumpeterian theories of economic development. Stages of economic growth (Rostow and Marx). Approaches to the theory of underdevelopment and development underdevelopment. The big-push theory; Critical minimum effort thesis, Low level equilibrium trap. Lewis and Ranis- Fei models of economic development, Planning and the market mechanism State intervention vs. liberalization, and privatization debate. The core areas of State intervention under liberalization. Process of plan formulation. Investment criteria for plan projects, cost-benefit analysis. Determination of size, growth rate and priorities in planning. Use of input-output and linear programming techniques in planning, Models in economic planning: policy models, projection models and development planning models. Models underlying various Indian Plans: Harrod Domar model; Mahalanobis model, and the model underlying current Five Years Plan. Resource mobilization for planning: Domestic resources; mobilization of resources through fiscal measures and monetary regulation. Savings and inflationary finance. External resources-Dual gap analysis and foreign borrowings. Foreign borrowings v/s. foreign direct investment, India's Five-Year Plans: Objectives, strategies, achievements and constraints. Decentralized planning and people's participation. Saving-investment rates- trends and problems. The policy debate in the post liberalization period debate- general down sizing of the public sector and disinvestments in public sector undertaking MNCs Vs. Swadeshi movement benefits and pitfalls of globalization and international finance.

## **8. INDUSTRIAL ECONOMICS:-**

The scope of Industrial Economics. Organization of industry. Changing forms of industrial organization. Process of industrialization: Rationale, objectives, strategies and policies. Employment implications of industrialization. Appropriate industrial technology for LDSLs. Industrialization and economic development. Patterns and phases of industrial growth and changes in industrial structure, Theory of firm and pricing. Objectives of the firm: profit and non-profit maximizing models of the firm. Bans theory of limit pricing; Marginal cost versus full cost pricing; Allocation of costs in case of joint products; Welfare implications of monopoly pricing. Investment decision; conventional and modern approaches; risk, uncertainty and investment decision, Market structure, conduct and performance and interrelations among them. Industrial concentration: concepts and measurement; Extent, causes and likely effects of concentration. Analysis of diversification, Vertical integration and mergers in industry. Extent of monopoly and concentration in India; Public policy towards industrial concentration and monopoly power in India, Industrial location: Theories and

factors affecting location; infrastructure for industrialization; Regional growth of industry in India. Tools of public policy. Indian policy for backward areas. Industrial finance in India. Role of term-leading institutions in industrial development of India. Indian capital market, Issues in Indian industry: Phases of industrial growth and changes in industrial structure in India. Public sector rationale and organization; Public sector pricing policies. The question of efficiency in the context of special constraints; Over-all performance of public sector in India. The concept of joint-sector in India. The problems of industrial sickness; Capacity utilization. Foreign collaborations; Multinationals in Indian joint ventures abroad. The recent liberalization trends. Large versus small scale industry debate in India.

#### **9. ECONOMY OF HIMACHAL PRADESH:-**

Features of Himachal Pradesh Economy: Resource endowment - Land, Water, Minerals, Forests, Demographic Trends, Human Development Index. Trends in State income – Structural growth before and after reforms, Sources of State Finances. Targets and Achievements of Plans, Budget. Growth trends in GSDP, Agriculture and Horticulture of Himachal Pradesh: Role of Agriculture and Horticulture in State Domestic Product Cropping pattern, Productivity and yield of major crops, Agricultural marketing, Agricultural finance, Marginalization and Agricultural Diversification in Himachal Pradesh. Trends in Fruit and vegetable Production and Productivity. Critical evaluation of government policies on agriculture and horticulture sector, Industrial and Power Sector of Himachal Pradesh: Trends and patterns in industrial growth, large scale and MSME industries in Himachal Pradesh, Labour Welfare measures and skill development programmes. Trends in hydro power generation in Himachal Pradesh. Environmental issues related to Industrialization and power projects in Himachal Pradesh, Infrastructure and Tourism of Himachal Pradesh: Transport: road, rail and air. Banking, Housing, Social Welfare, Education and health programmes of the State Government. Role of Tourism in the economic development of Himachal Pradesh. Spillover effect of tourism development, Himachal as a model for hill development. Successes and pitfalls of planned development in Himachal Pradesh. Resource mobilization for this special category state. Growth potential and possibilities of rural modernization. Gender dimension of human capital formation in Himachal Pradesh.

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