Syllabus for Admission to M. Phil/ Ph.D / 3 Year Integrated Ph.D programme in Economics -2018

Part-2\textsuperscript{nd}

Production and Markets:
Production functions - linear and non-linear, Laws of production, equilibrium of firm, theory of costs, Perfect Competition: Monopoly, Monopolistic competition, Oligopoly duopoly models-.

Theory of Distribution:
Neo-classical approach-Marginal productivity theory. Product exhaustion theorem, elasticity of technical substitution and factor shares; technical progress and income distribution; pricing of fixed factors, non-homogeneous factors and wage differentials.

Supply of Money:
Empirical definitions of Money. Measures of money supply in India. The stock of high powered money and its determinants. (H theory of Money) Money multiplier process and factors affecting the money multiplier. Predictability and the stability of money multiplier. Reserve Bank’s Analysis of money supply.

Demand for Money :

Fluctuations and Stabilization:
The Anatomy of business cycle; Theories of trade Cycle; Hicksian; Samuelson; Kaldor’s; Stabilization policy in an open economy and its limitations.
Introduction

Development-Concept and Approaches, Measurement, Economic development and institutions, Market, state, and community, Classical theories of development, Adam Smith, Ricardo, Malthus, Karl Marx

Approaches to Development:


Theories of International Trade:


Gains from Trade:

Production and consumption effect – social indifference curves – optimality and free trade - commodity, income and factorial terms of trade –terms of trade and gains from international trade – imperfect competition and international trade monopoly; monopolistic competition and oligopoly –export cartels and commodity agreements – dumping.

Fundamentals of Public Economics


**Public Expenditure and Taxation and fiscal federalism**

Wagner’s and Wiseman-Peacock hypothesis, Pure theory of public expenditure, programme budgeting and zero-base budgeting. Taxation: incidence and impact, Dead-weight loss, Theory of Optimal Taxation, Public Borrowing and Debt. Fiscal Federalism, Centre-State financial relations, Sources of Revenue, Reforms in Direct and Indirect Taxes, Budget Deficit and Its Implications.

**Public Finance – Subject Matter and Role of Government:**

Role of public Finance in an underdeveloped economy. Government failures, planning and economic development. Budget as means of operationalising the planning process. Public and Private sector cooperation or competition.

**Calculus and Economic Application**

Derivatives—definition and evaluation; Rules of differentiation; Partial derivatives; Higher order differentiation; Euler’s theorem; Uses of differentiation in economics; constrained optimization; Lagrangian multiplier; Marginal Concepts—Relationship between average, marginal and total elasticities; Logarithm and exponents. Indefinite integral; rules of integration; definite integral; Fundamental theorem of integral; properties of definite integral; Economic application of integrals; Consumer’s surplus; Producer’s surplus.
First Order Differential and Difference Equation

First Order differential Equations—definition and concept; general formula for first order linear differential equations; Exact differential equations and partial integration; Rules for integrating functions; First-order difference equations—definition and concept; general formula for first order difference linear equations; lagged income determination modal; Cobweb theorem.
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Part-3\textsuperscript{rd}

\textbf{Consumer Behavior:}
Utility function, Indifference curve analysis, income and substitution effects, revealed preference hypothesis, elasticity, Homogeneity of demand functions, consumer surplus, income leisure tradeoff, decision making under uncertainty, expected utility maximization, risk aversion and insurance premium

\textbf{Theory of Games}
Repeated Games, Sequential and Non sequential Games,

\textbf{Welfare Economics,}
Walrasian Equilibrium; existence, stability and uniqueness of general equilibrium; Pareto Optimality, social welfare function, Arrows impossibility theorem,

\textbf{Macro-Economic policies:}

\textbf{Sectoral Demand Functions:}
Theories of Economic Growth:


Planning and Development:

Need for investment criteria in developing countries- capital –output ratio; project appraisal , private cost-benefit analysis, theory of growth Centers and growth poles . Need for planning – democratic, decentralized and indicative planning.

Trade, Economic Growth


Trade Policy :


Balance of payments and Adjustment Mechanism:

BOP- Meaning and components, equilibrium and disequilibrium. The process of adjustment under flexible exchange rate system. Adjustment under fixed exchange rate system. Expenditure reducing and expenditure switching policies and direct controls. Devaluation –elasticity and
absorption approaches. Policies for achieving internal and external balance simultaneously under alternative exchange rate regimes. Foreign trade multiplier, Monetary approach to the balance of Payments.

**Public Bads and Externalities:**


**Measurement of Environmental value:**


**Correlation and Regression**


**Probability and Frequency Distribution**

Meaning and definition of probability; Probability Rules—Addition and multiplication rule; Conditional Probability; Frequency distribution—binomial, Poisson, normal and Chi-Square Distribution (mean; standard deviation and their applications). The Hypothesis Testing Process;
One tailed and two tailed tests; type I and type II error; t, Z, F and $\chi^2$ tests; Chi square goodness of Fit; Analysis of variance (one way and two way analysis);

**Econometric Models**

Dummy variables techniques and qualitative dependent variable models-logit and probit. Auto regressive and distributed lag models- koyek, partial adjustment and adaphic expectations. Simultaneous equations- problem; estimation- Indirect Least Square, Two Stage Least Square

Time series- stationery, unit root, Dickey fuller test, co - integration, causality test, Box Jenkins methodology.