

RAIGANJ UNIVERSITY

Syllabus for Undergraduate Course
In Economics Honours (2015-16 Sessions onwards)

DEPARTMENT OF ECONOMICS
RAIGANJ UNIVERSITY
RAIGANJ, UTTAR DINAJPUR-733134
West Bengal, India

Framework of the Syllabus

1st Semester

Name of the Papers	Total Marks-100
Micro Economics-IA	25 Marks
Macro Economics-IB	25 Marks
Introductory Mathematics-IC	25 Marks
Indian economic problems and planning-ID	25 Mark

2nd Semester

Name of the Papers	Total Marks-100
Micro Economics-IIA	25 Marks
Macro Economics-IIB	25 Marks
Introductory Mathematics-IC	25 Marks
Indian economic problems and planning-ID	25 Marks

3rd Semester

Name of the Papers	Total Marks-100
Micro Economics-IIIA	25 Marks
Macro Economics-IIIB	25 Marks
Mathematical Economics-IIIC	25 Marks
Statistics-IIID	25 Marks

4th Semester

Name of the Paper	Total Marks-100
Micro Economics-IVA	25 Marks
Macro Economics-IVB	25 Marks
Mathematical Economics-IVC	25 Marks
Statistics-IVD	25 Marks

5th Semester

Name of the Papers	Total Marks-200
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Development Economics-VA	25 Marks
Environmental Economics-VB	25 Marks
International Economics-VC	25 Marks
Public Economics-VD	25 Marks
Statistics-VE	25 Marks
Mathematical Economics-VF	25 Marks
Financial Economics-VG	25 Marks
Indian Economic Policy and Performance-VH	25 Marks

6th Semester

Name of the Papers	Total Marks-200
Development Economics-VIA	25 Marks
Environmental Economics-VIB	25 Marks
International Economics-VIC	25 Marks
Public Economics-VID	25 Marks
Statistics-VIE	25 Marks
Mathematical Economics-VIF	25 Marks
Financial Economics-VIG	25 Marks
Indian Economic Policy and Performance-VIH	25 Marks

Semester-I

Paper: Microeconomics

Unit-1

Introduction: Nature and scope-Scarcity and choice.

Unit-2

Demand and supply: Concept of demand and supply functions- Price, income and cross elasticities of demand - Elasticity of supply - market demand function - Concept of equilibrium - Impact of changes in demand and supply on equilibrium.

Unit-3

Theory of Consumer Behaviour: Concept of cardinal and ordinal utility - Marshallian utility analysis - Consumer's equilibrium - Derivation of Law of Demand - Concepts of consumer's and producer's surplus - Limitations of cardinal analysis.

Indifference Curve Analysis: Preference ordering- Concept of Budget Line- Consumer's equilibrium - Price, Income and Substitution effects: Hicksian Approach and Slutsky Approach - Compensating variation and Equivalent variation - Income Effect and substitution effect in case of Inferior and Giffen goods- Shapes of Indifference Curves in exceptional cases- Indirect Utility Function- Roy's Identity.

Semester-II

Paper: Microeconomics.

Unit-4

Revealed Preference Approach: Weak and strong axioms- Derivation of the Law of Demand.
Choice under uncertainty and Economics of Information; Utility function and expected utility- Risk aversion and risk preference -Insurance and investor's choice.

Unit-5

The Theory of Production: Concept of production function - Production with a single variable input -TP, AP and MP- Production with two variable inputs: Isoquant and economic region of production - Marginal Rate of Technical Substitution - Optimal input combination - Constrained output maximization and cost minimization - Elasticity of substitution - Scale elasticity of output: Wickseil-Johnson Theorem - Cobb-Douglas and CES production functions (basic properties only).

Unit-6

Theory of Cost: Different concepts of cost: Short - run and long- run analysis – Modern concept: Saucer-type SAVC curve J and L-shaped LAC curve.

Suggested Reading List:

1. Koutsoyiannis, A (1990): *Modern Microeconomics*, Macmillan, London
2. Gould, J.P. and Lazer: *Microeconomic Theory*, Richard D. Irwin, Homewood.
3. Henderson, J. M. and R. E. Quandt (1980) : *Microeconomic Theory : Mathematical Approach*. McGraw Hill, New Delhi.
4. Varian, Hall R. (2000): *Intermediate Microeconomics: A Modern Approach*, East-West Press, New Delhi.
5. Varian, Hall R. (2000): *Microeconomic. Analysis*, W.W. Norton, New York.
6. Pyndick, R.S., and D.S. Rubinfeld (1998): *Microeconomics*, Prentice Hall of India, New Delhi.
7. Mass-Colell, Anderson, M.D. Whitson and J.R. Green (1998): *Microeconomic Theory*, OUP, New York,
8. Mansfield, E.: *Microeconomics: Theory and Applications*, W.W.Norton and Co., New York.
9. Sen, Anindya (1999): *Microeconomics: Theory and Applications*, OUP, New Delhi.
10. Samuelson, P.A. and W.D. Nordhaus (1998): *Economics*, Tata McGraw- Hill, New Delhi.
11. Mankiw: *Principles of Microeconomics*, Cengage
12. Maddala and Miller : *Microeconomics: Theory and Applications*, Tata McGraw -Hill, New Delhi.
13. Roy Chowdhury. Kalyanjit: *Basic Principles of Modern Micro-economics*, Book Land Publishing Co, Delhi.
14. Salvatore: *Microeconomics*, Oxford University Press.
15. Lipsey and Chrystal: *Economics*, Oxford University Press.
16. Amos Witztum: *Economics: An Analytical Introduction*, Oxford University Press.

Semester-I

Paper-Macro Economics

Unit-1

Introduction: Scope and nature of Macroeconomics.

Unit-2

National Income Accounting: Principles of national income accounting - Problems of measuring national Income – National Income as a measure of economic Welfare.

Unit-3

The classical view of Macroeconomics: Say's Law and Walras Law (Barter Exchange Model), Restatement of Say's Law (in money economy and in Relation to Quantity Theory of Money)- The dichotomy between the real and monetary sectors, Determination of employment, output and prices-Wage-price flexibility, Quantity Theory of Money, Aggregate Demand and Aggregate Supply in the Classical System, The Classical Theory of Interest Rate, Policy Implication of the Classical Equilibrium Model (Fiscal and Monetary Policy)

Semester-II

Paper-Macro Economics

Unit-4

Simple Keynesian Theory of Income Determination- Conditions for Equilibrium Output, The Components of Aggregate Demand (Consumption, Investment and Government Expenditure) Determination of Equilibrium Income in a closed economy without government, closed economy with government, Stability of equilibrium, — Static multiplier (Expenditure Multiplier, Balanced Budget Multiplier and Tax Rate Multiplier) and Dynamic multiplier.

Unit-5

The Keynesian System: Money, Interest and Income- Money in the Keynesian system, Interest Rate Determination (Liquidity Preference Theory), Interaction between Money Market, Bond Market and Commodity Market- Hicks-Hansen IS-LM model for Income and Rate of Interest Determination — Different types of multiplier in the IS-LM model and comparisons with the multipliers derived in Simple Keynesian Model-Effectiveness of Monetary and Fiscal policies in the IS-LM model, Transmission mechanism and Crowding Out Effect.

Unit-6

Complete Keynesian Model: Interaction between commodity market, money market and labour market, Aggregate Demand Curve (CM Curve) and Aggregate Supply Curve (NN Curve) and Determination of Equilibrium Price and Output - Involuntary unemployment - Pigou effect and Keynes effect - Role of monetary and fiscal policies in the two systems.

Suggested Reading list:

1. Branson, W.H. (1979): *Macro Economic Theory and Policy*, Universal Book Stall, New Delhi.
2. Dornbusch, R. and S. Fischer (1978): *Macro Economics*, McGraw-Hill, New York.
3. Ackley, G(1986): *Macroeconomics*, Macmillan, London.
4. Levacic, G (1976): *Macroeconomics*, Macmillan, London.
5. Mueller, M.G. (ed.) (1978): *Readings in Macroeconomics*, Surjeet Publications, Delhi.
6. Sayers, R.S. (1960): *Modern Banking*, Clarendon Press, Oxford.
7. Shapiro, E. (1996): *Macroeconomic Analysis*, Galgotia Publications, New Delhi.
8. Froyen :*Macroeconomics: Theories and Policies*, Prentice Hall.
9. Mankiw: *Macroeconomics*, Worth Publishers.
10. Soumyen Sikdar: *Principles of Macroeconomics*, Oxford University Press.
11. Sweezy, Paul M. (2002); *Essays on Keynesian Economics and Crisis of Capitalism*, Cornerstone Publications, India
12. Bhaduri, Sunil. (1999): *Macro Economics*; New Central book Agency
13. Patnaik, Prabhat (1997): *Macro Economics*, Oxford University Press.
14. Mulier, M.G. (1988): *Readings in Macro Economics*, Surjeet publications
15. D'Souza, ErroL (2008): *Macro Economics*, Pearson Education

Semester-I**Paper- Introductory Mathematics-IC****Unit 1: Elementary Linear Algebra:**

Concept of sets and their operations, Convex sets, 2, 3, and n-dimensional vectors; Orthogonality. Geometric representation, lines and planes in R^2 and R^3 . Linear and Convex Combination of Vectors, Linear Independence.

Matrices and Matrix Operations: Addition, Scalar Multiplication, Matrix Multiplication. The Transpose. The Inverse of a Square Matrix. Rank of a matrix. Matrix Methods of Solution and Cramer's rule.

Determinants: Definition, Properties, Minors and Cofactors, Singularity and Invertibility; the Adjoint Matrix and formula for the inverse.

Unit 2: Graphs and Functions:

Concept of Variables, Constants, Parameters, Vocabulary of functions, graphs, polynomials, increasing and decreasing functions Local, global maximum, linear and non-linear functions and their slopes, Limits and continuity of a function; Functions of several variables.

Semester-II**Paper- Introductory Mathematics-IIC****Unit 3: Differential Calculus:**

Derivatives of Algebraic functions; Exponential, Logarithmic functions; Parametric differentiation; Product and Quotient rules; Successive differentiation (up to second order); Partial Differentiation.

Unit 4: Integral Calculus:

Indefinite and Definite Integrals: Integration by Parts and Integration by Substitution.

.Suggested Reading List:

1. Chiang, A.C (1984): Fundamental Methods of Mathematical Economics, McGraw Hill book Co. New York.
2. Henderson, J.M. and Quandt, R.E. (1980): Micro Economic Theory: A mathematical Approach, McGraw Hill Book Co., New York.
3. Silberberg, E. (1990): The structure of Economics, A mathematical Analysis McGraw Hill Book Co., New York.
4. Mukherjee, B. and V. Pandit (1989): Mathematical Methods for Economic Analysis, All it Publishers Pvt. Ltd., New Delhi.
5. Baumol, W.J. (1996): Operations Research: An Introduction, Prentice Hall, Englewood Cliffs, New jersey.
6. Taha, H.A. (1996): Operations Research: An Introduction, Prentice Hall of India, New Delhi.

7. Archibald and Lipsey(1984): An introduction to the Mathematical Treatment of Economics, All India Travelers Book Seller, AITBS, New Delhi.
8. Dorfman, R.P.A. Samuelson and R.M. Solow(1958): Linear Programming and Economics Analysis, McGraw Hill Book Co., New York.
9. Yamane, Taro (1975): Mathematics for Economists: An Elementary Survey, Prentice Hall of India, New Delhi.
10. Allen,R.G.D(1974): Mathematical Analysis for Economics, Macmillan'and Co., London.
11. Bailey, D: Mathematics in Economics, McGraw Hill Publishing Co., London.
12. Simon, C.P.L. and Blume (1994): Mathematics for Economics, W.W. Norton and Co., New York.
13. Sydsaeter and Hammond: Mathematics for Economic Analysis, Pearson Education, Asia.
14. Balaam, Bradfield and Turner: An Introduction to Mathematical Economics, Cengage Learning.
15. Chiaing, A. C and Wainwright, K: Fundamental Methods of Mathematical Economics (4th Edition), McGraw Hill book Co. New York.
16. Hoy, Livernois, McKenna, Rees and Stengos: Mathematics for Economics, Prentice-Flail. Geoff Renshaw: Maths for Economics, Oxford University Press.

Semester-I

Paper-Indian Economic Problems and Planning

Unit-1

Structural Changes in the Indian Economy:

- (a) Trends in National Income
- (b) Sectoral distribution of income and its pattern of change since independence
- (c) The pattern of income distribution in India

Unit-2

Agricultural Sector:

- (a) Farm size and productivity
- (b) Green Revolution - productivity, employment and distribution aspects
- (c) Land reforms with special reference to West Bengal
- (d) Problems of credit - Institutionalization of rural credit.
- (e) Agricultural Marketing

Semester-II

Paper-Indian Economic Problems and Panning

Unit -3

Indian Industry:

- (a) Growth and stagnation of the industrial sector in the sixties with special reference to monopoly and concentration in Indian industry.
- (b) Role of public sector in India and critical review of its performance.
- (c) Role of small scale and cottage industries in India and its interface with economic reforms

- (d) Private sector in Post-liberalization phase

Unit-4

Labour and Employment:

- (a) Nature and types of unemployment in India
- (b) Industrial disputes and social security measures
- (c) Informal Labour Market -features, problems, women and child labour
- (d) Emerging issues in Labour Market - Approaches from employment generation.

Suggested Reading List:

1. Rao, V.K.R.V. (1983): *India's National Income, 1950-1980*, Sage publications Delhi.
2. Choudhury, P. (1979): *The Indian Economy: Poverty and Development*, Vikas Publishing House, Delhi.
3. Wadhwa, C.D. (Ed) (1995): *Some Problems of India's Economic Policy*, Tata McGraw Hill Publishing Co. Ltd, New Delhi.
4. Lucas, E.E.B. and F. Papanek (eds.) (1988): *The Indian Economy - Recent Development and Future Prospects*, Oxford University Press, New Delhi.
5. Rudra, Ashok (1982): *Indian Agricultural Economics: Myths and Realities*, Allied Publishers.
6. Joshi V. & I.M.D. Little (1998): *India's Economic Reforms, 1999-2001*, Oxford University Press, New Delhi.
7. Buyers, T.J. (ed.) (1998): *The Indian Economy: Major Debate Since Independence*, Oxford University Press, And New Delhi.
8. Dutta, R. and K. P. M. Sundharam (latest edition): *Indian Economy*, S. Chand & Co. Ltd, New Delhi.
9. Misra, S. K. and V. K. Puri (latest edition): *Indian Economy*, Himalaya Publishing House, Mumbai.
10. Bhalla, G.S, (2007): *Indian Agriculture since Independence*, National Book Trust, India.
11. Joshi, Vijay and I.M.D Little (1999): *India-Macro Economics and political Economy 1964-1991*, Oxford University Press, New Delhi.
12. Ramchandran, R (1989): *Urbanisation and Urban system in India*, Oxford University Press, New Delhi.
13. Rao, Govinda M. and Nirvikar Singh (2005): *Political Economy of Federalism in India*, Oxford University Press, New Delhi.
14. Bhaumik, S.K. (2008): *Reforming Indian Agriculture – Towards Employment Generation and Poverty Reduction*, Sage Publications.

Semester-III

Paper- Microeconomics

Unit-1

Perfect competition: Characteristics - Short-run and long-run equilibrium of the firm- Industry equilibrium - Short-run supply function of the firm and the market - long-run industry supply with and without external economies and diseconomies.

Unit-2

Stability of equilibrium- Marshallian and Walrasian conditions of stability of equilibrium - The Cobweb Theorem.

Unit-3**Imperfect competition:**

- A. Monopoly: Characteristics- short- run and long- run equilibrium - Non-existence of supply function - Equilibrium of a multi-plant monopoly - Price discrimination - Welfare loss under monopoly - Theoretical index of monopoly power.
- B. Monopolistic Competition: Characteristics -Short-run-and long run equilibrium with product variation - Selling cost, ideal output and excess capacity - Comparison with perfect competition.
- C. Oligopoly: Characteristics - Conjectural variation and reaction patterns-Oligopoly Models: Cournot, Sweezy, Stackelberg and Collusive oligopoly - Market- Sharing with price leadership - Theory of sales maximization.

Semester –IV**Paper-Microeconomics****Unit-4 Theory of Factor Pricing:**

The demand for productive service (single variable input and two variable inputs) in perfect and imperfect markets- Firm demand and' industry demand for inputs - The supply of productive service - Indifference curve analysis of labour supply - Marginal productivity theory of input returns- Adding-up problem.

Wages: Determination in perfect and imperfect markets, Collective Bargaining and exploitation.

Theory of Rent: Ricardian Theory - Modern Theory - Elasticity of supply and rent- Rent and price- Quasi-rent.

Profit: Gross and net -Nature of profit - Risk and uncertainty theory of profit.

Unit-5

Welfare Economics: Conditions of Pareto optimality in pure exchange and with production, optimality of perfect competition, externalities and market failure.

Suggested Reading List:

1. Koutsoyiannis, A (1990): Modern Microeconomics, Macmillan, London
2. Gould, J.P. and Lazer: Microeconomic Theory, Richard D. Irwin, Homewood.
3. Henderson, J.M. and R.E. Quandt (1980): Microeconomic Theory: A Mathematical Approach. Mc Graw Hill New Delhi.

4. Varian, Hall R. (2000): Intermediate Microeconomics: A Modern Approach, East-West Press New Delhi.
5. Varian, Hall R. (2000): Microeconomic Analysis, W.W.Norton, New York.
6. Pyndick, R.S., and D.S. Rubinfeld (1998): Microeconomics, Prentice Hall of India, New Delhi.
7. Mass-Colell, Anderson, M.D. Whitson and J.R. Green (1998): Microeconomic Theory, OUP, New York.
8. Mansfield, E.: Microeconomics: Theory and Applications, W.W.Norton and Co., New York.
9. Sen, Anindya (1999): Microeconomics: Theory and Applications, OUP, New Delhi.
10. Samuelson, P.A. and W.D. Nordhaus (1998): Economics, Tata McGraw Hill, New Delhi.
11. Manlciw: Principles of Microeconomics, Cengage Learning.
12. Maddala and Miller: Microeconomics: Theory and Applications, Tata McGraw - Hill, New Delhi.

Semester- III

Paper- Macroeconomics

Unit-1

Theories of Consumption Function: Short run and Long Run Consumption Function, Consumption and present Value of Income, Life Cycle Hypothesis - Relative Income Hypothesis - Permanent Income Hypothesis.

Unit-2

Investment Function -The Present Value Criterion for Investment, Relation between MEC and MEI- Acceleration Principle- Flexible accelerator model.

Unit-3

Inflation: DPI and CPI - Inflationary gap- Bent Hansen's dynamic demand-pull inflation model Philips curve (short run and long run) and the role of inflation - Effects of inflation, Anti-inflationary policies — Ackley's mark- up inflation.

Semester- IV

Paper- Macroeconomics

Unit-4

Sources of Growth models- Early Growth Theories: Adam Smith, David Ricardo and Marx, Keynesian Theory of Secular Stagnation, Harrod and Domar - Instability of equilibrium - Neo-Classical growth models - The Solow model- Economic growth and technical progress.

Unit-5

Trade Cycle Theories - Hawtrey, Hayek, Hicks - Samuelson.

Suggested Reading list:

1. Branson, W.H. (1979): Macro Economic Theory and Policy, Universal Book Stall, New Delhi.
2. Dornbusch, R. and S. Fischer (1978): Macro Economics, McGraw-Hill, New York.
3. Ackley, G.(1986): Macroeconomics, Macmillan, London.
4. Levacie, G. (1976): Macroeconomics, Macmillan, London.
5. Mueller, M.G. (ed.) (1978): Readings in Macroeconomics, Surjeet Publications, Delhi.
6. Sayers, R.S. (1960): Modern Banking, Clarendon Press, Oxford.
7. Shapiro, E. (1996): Macroeconomic Analysis, Galgotia Publications, New Delhi.
8. Froyen : Macroeconomics: Theories and Policies, Prentice Hall.
9. Mankiw: Macroeconomics, Worth Publishers.
10. Blanc hard and Fisher (1989): Lectures on Macro Economics, MIT Press, Cambridge
11. Barro, R. J; (1993): Macro Economics, New York Wiley.

Semester-III**Paper- Mathematical Economics-IIIC****Unit-1: Maxima and Minima Concepts:**

Slope of a Curve; Maxima and Minima; Points of Inflexion; Constrained and unconstrained optimization with first-order and second-order conditions; Homogeneous and homothetic functions.

Unit-2 Partial and Total Derivatives:**Semester-IV****Paper- Mathematical Economics-IVC****Unit-3**

- A. Differential Equations - Solution processes for first order and second order equations.
- B. Difference Equations - Solution process for first order and second order equations.

Semester-III**Unit-1**

Nature of Statistics and Role of Statistics in Economics.

Unit-2

Statistical data - Classification and presentation - Statistical population - Collection of data – Variable and attribute - Different columns of a standard frequency distribution - Discrete and continuous variables - Choice of class intervals - Diagrammatic representation of frequency distribution - Cumulative frequency distribution - Ogive.

Unit-3

Measures of Central Tendency: Arithmetic mean, median and mode (for both grouped and ungrouped data) - Comparison of mean, Median and mode - geometric mean and harmonic mean (for both grouped and ungrouped data) - Complete mean (average from combined data).

Unit-4

Measures of Dispersion: Definition of dispersion - Distinction between absolute and relative measures - Some absolute measures like range, quartile deviation, mean deviation and standard deviations - Properties of different measures - Mean and S.D. of a combined set-Relative measures like coefficient of variation etc. - Lorenz curve: Representation of distribution of income - Measures of inequality - Gini Coefficient and Lorenz curve.

Semester-IV**Paper-Statistics****Unit-5**

Moments and Measures of Skewness and Kurtosis: Definition of moments- Relationship between central and non-central moments - Sheppard's correction for moments - Skewness - Kurtosis.

Unit-6

Bi-variate Frequency Distributions: Bi-variate data - Scatter diagram - Correlation (Simple) - Correlation co-efficient, properties of the correlation co-efficient - Calculation of correlation co-efficient, Rank correlation co-efficient - Spearman's rank correlation coefficient .

Unit-7

Index Numbers: Problems in the construction of index numbers - Purpose of construction of index number - Choice of the base period, Choice of the commodities, choice of weights/ interpretation of the index .errors, index numbers - Tests for index number - Chain index - Chain based versus fixed based indices - Cost of living index - Laspeyres' and Paasche's formulae - Marshall and Edgeworth formulae - Fisher's ideal index - Uses of index numbers (official index number)

Suggested Reading List:

1. Goon, A.M., M.K. Gupta and B. Dasgupta (1986): Fundamentals of Statistics, Vols. 1 & 2, The World Press Private Limited. Calcutta.
2. Nagar, A.L. and R.K.Das (1977): Basic Statistics, OUP, Delhi.
3. Hoel, P.G. (1984): Introduction to Mathematical Statistics, 5th edition, Wiley, New York.
4. Hoel P.G., S.C. Port and C.J. Stone (1972): Introduction to Stochastic Processes, Houghton Mifflin Co. Boston.
5. Yule, G.U. and Kendall, M.G. (eds.) (1958): Introduction to the Theory of Statistics, Charles Griffin & Co. Ltd. London.

6. Murthy. M.N. (1967): Sampling Theory and Methods, Statistical Publishing Society, Calcutta.
7. Kenney, and keeping (1974)- Mathematics of Statistics - Part I, Affiliated East West Press, New Delhi.
8. Das, N.G. (1977): Statistical Methods (Part-I & II) M. Das & Co., Calcutta.
9. Hogg, R.V. and A.T. Craig (1970): Introduction to Mathematical Statistics (3rd edition), Macmillan Publishing Co. New York.
10. Mathai & Rathie : Probability & Statistics, Macmillan India. Part-I

Semester-VA

Paper- Development Economics

Unit-1

Economic Growth, Economic Development, Poverty and Income Inequality: Meaning of economic growth, Indicators of Growth, Meaning of Development, Distinction between Growth and Development - International comparisons - Alternative approaches to development Economics (Basic Need Approach, Peoples' Quality Life Index, Human Development and Deprivation Indices) - Perpetuation of underdevelopment - Kuznet's Inverted-U Hypothesis, Causes and pattern of income Inequality, Poverty- Absolute (Head Count Ratio, Poverty Gap) and Relative Poverty (Gini Coefficient, Lorenz Curve).

Unit-2

Population and Economic Development: Malthusian Theory, Theory of Optimum Population, Theory of demographic transition, Two way Relationship between Population growth and Economic Development

Unit-3

Stages of Development: Rostow and Marx.

Semester-VI A

Paper-Development Economics

Unit-4

Problems of labour surplus economy - Concept and measurement and studies on surplus labour in less developed economy (disguised unemployment)- Sen's Model, Lewis model and its criticisms - Wage gap and Labour migration and Harris-Todaro model.

Unit-5

Problems of Economic Development and Development strategy: Vicious cycle of poverty, Big-push, Balanced vs. Unbalanced growth, Critical minimum effort thesis - Low level equilibrium trap model - Various forms of dualism - Choice of Technique in a labour surplus economy.

Suggested Reading List:

1. Adelman, I. (1961): Theories of Economic Growth and Development, Stanford University Press Stanford.

2. Behrman, S. and T.N. Srinivasan (1995): Handbook of Development Economics, Vol 1 to 3 Elsevier, Amsterdam.
3. Ghatak, S. (1986): Introduction to Development Economics, Routledge, London.
4. Kindeberger, C.P. (1997): Economic Development, McGraw Hill, New York.
5. Meier, G.M. & J.E. Rauch (2000): Leading Issues in Economic Development, OUP, New Delhi.
6. Todaro, M.P. and S.C. Smith (2003): Economic Development, Pearson Education (Singapore) Pvt. Ltd, Indian Branch, Patparganj, Delhi.
7. Myint, Hia (1971): Economic Theory and Under developed Countries, OUP, New York.
8. Thirlwall, A.P. (1999): Growth and Development, Macmillan Press Ltd. London.
9. Sen, A.K. (ed.) (1990): Growth Economics, Penguin Books.
10. Roy, Debraj (1999): Development Economics, OUP New Delhi.
11. Hayami Yujiro and Yoshihisa Godo (2006) : Development Economics, OUP.
12. Basu, K: Analytical Development Economics- The Less Developed Economy Revisited, OUP, Delhi

Semester-V

Paper-Environmental Economics-VB

Unit-1

Economics and the Environment - Material balance model - Resources of the environment - Renewable and exhaustible - Residuals and pollutants - Types of pollutants and sources of pollution - point and non-point-source - Environment as an economic good - Production possibility curve approach for the choice of environmental quality for the current and future generations.

Unit-2

Environment as public good: Characteristics - Environmental quality as public goods- Externalities: Negative and positive externalities-Environmental damages as negative Externalities - Relation between public goods and externalities.

Unit-3

Environmental quality and Market: The competitive equilibrium - Allocative inefficiency of competitive equilibrium - The socially efficient equilibrium - Causes of market failure.

Unit-4

Absence of Property Right: The Coase Theorem - solution for the market failures - Bargaining when property right belongs to polluters - bargaining when property right belongs to pollution victims - Limitations of Coase Theorem.

Semester-VI

Paper- Environmental Economics VIB

Unit-5

Economic solution to Environmental problems: The market Approach - pollution charges: Modeling a product charge as a per unit tax - the implementation of a Pigouvian tax to achieve efficiency - Modeling an emission charge in two- polluter model - Assessing the model – Environmental subsidies - Pigouvian Subsidy - General Subsidy.

Unit-6

Conventional System: The command and Control Approach: The use of standards in environmental policy - Allocatively efficient level of pollution abatement - Effects of regional differences on achieving allocative efficiency - The cost-effective solution in a two- polluter model.

Unit-7

The Environment and Development: Sustainable development and sustainability indicators - common property Resources (Tragedy of the Commons)

Suggested Reading List:

1. Field, Barry C. (1997): Environmental Economics: An Introduction (2nd Ed.), McGraw Hill Co. Inc. New York.
2. Callan, Scott J. and Janet M. Thomas (1996): Environmental Economics and Management, Irwin, Chicago.
3. Kolstad, C.D. (2000): Environmental Economics, Oxford University Press, New York.
4. Tietenberg, Tom (2000): Environmental and Natural Resources, 5th Ed. Wesley, New York.
5. Hemple, Lamont C. (1998): Environmental Economics: The Global Challenge, First West Press, Edinburgh.
6. Bhattacharya, Rabindra N (2001): Environmental Economics: An Indian Perspective, OUP, New Delhi.
7. Hussen Ahmed M: Principles of Environmental Economics: Economics, Ecology and Public Policy, Routledge.
8. Hanley N, Shogren Jason F and Ben White: Introduction to Environmental Economics, OUP.
9. Singh, Katar and Anil Shishodia (2007): Environmental Economics, Sage Publications.
10. Dasgupta, Partha. (2007): A Short Introduction to Economics, Oxford University Press
11. Ostrom, Elinor. (1990): Governing The Commons, Cambridge University Press.

Semester – V

Paper-International Economics VC

Unit-1

Importance of the study of International Economics: Inter-regional and International. Trade-Theories of Absolute Advantage, Comparative Advantage and opportunity Cost- Community Indifference Curves- Gains from Trade- Offer curves and international price determination.

Unit-2

Comparative Advantage in the Heckscher-Ohlin Theory: Price and physical definition of factor abundance.

Unit-3

Commodity and factor prices under trade: Factor Price Equalization Theorem - Complete specialization - Rybcznsky Theorem.

Unit-4

Trade and Factor Prices with Factor Reversal - The empirical evidence of H.O. Theorem - The Leontief Paradox.

Semester – VI

Paper-International Economics VIC

Unit-5

Tariff under optimal Market conditions: Some Partial Aspects of the Theory of Tariffs and Income Distribution - The Stopler - Samuelson Theorem - Tariff: the terms of trade (TOT) and Domestic Prices - The Optimum Tariff- Quotas & Quantitative restrictions: Effects of Quotas - Quantitative restriction and the balance of payment - Tariff vs. Quota.

Unit-6

Balance of Trade and Balance of Payments: Concepts and Components of Balance of Trade and Balance of payments: Equilibrium and Disequilibrium in the balance of payments- Consequences of disequilibrium in the balance of payments- Exchange rate (Fixed and flexible), devaluation and trade balance-Limitation of devaluations - Foreign trade and national income - Foreign Trade Multiplier - Elasticity Approach - Absorption Approach - functions of IMF, World Bank, GATT and WTO.

Suggested Reading List:

1. Kenan, P.B. (1994): The International Economy, Cambridge University Press, London.
2. Kindlberger, C.P. (1983): International Economics, R.D. Irwin, Homewood.
3. Krugman, P.R. & M. Obstfeld (1994): International Economics: Theory and Policy. Glenview, Foresman.
4. Salvatore, D. (1997): International Economics, Prentice Hall, Upper Saddle River, N.J. New York.

5. Aggarwal, M.R. (199): Regional Economic Cooperation in South Asia, S Chand & Co., New Delhi.
6. Bhagwati, J.(ed.) (1981): International Trade: Selected Readings, Cambridge University Press, Mass.
7. Crockett, A. (1982): International Money: Issues and Analysis, The ELBS and Nelson, London.
8. Greenaway, D. (1983): International Trade Policy, Macmillan Publishers Ltd. London.
9. Heller, H.R. (1968): International Monetary Economics, Prentice Hall, India.
10. 11 Mannur, H. G: International Economics, Vikas Publishing House, New Delhi.
11. 12. Roy Chowdhury, Kalyanjit: Basic Principles of Modern Micro-economics (Vol. II), Book Land Publishing Co, Delhi.

Semester- V

Paper- Public Economics VD

Unit-1

Nature and scope of Public finance: Distinction between Private and Public Finance.

Unit-2

The Theory of Public Good: Distinction between pure public good and pure private good.

Unit-3

Principles of taxation: Benefit Theory - Ability to Pay Principle - The Principle of Maximum Social Advantage.

Unit-4

Taxation: Classification of taxes- Division of tax burden -Impact and incidence of taxes- Taxable capacity - Effects of taxation - Characteristics of a good tax system - Major trends in tax revenue of the central and the State Government in India.

Semester- VI

Paper- Public Economics VID

Unit-5

Public Expenditure: Meaning, classification and principle of public expenditure- Canon and effects of public expenditure - Trends in public expenditure and causes of growth of public expenditure in India.

Unit-6

Public Debt and Financial Administration: Sources of public borrowing - Effects of Public debts- Methods of debt redemption - Growth of India's public debt.

Unit-7

The public budget - Kinds of budget- Economic and functional classification of the budget - Different concepts of budget Deficits,

Suggested Reading List:

1. Musgrave, Richard A (1959): The Theory at Public Finance, McGraw Hill Kogakusha, Ltd Tokyo.
2. Musgrave, Richard A. And Peggy B Mugrave (1989): Public Finance in Theory and practice, McGraw-Hill Book Company, Singapore.
3. Due, John F. and Ann F. Friedlander (1997): Government Finance: Economics of the Public Sector AITBS Publishers and Distributors, Delhi.
4. Houghton, E.W.(ed) (1998): Public Finance, Finance, Penguin, Baltimore.
5. Dalton, Hugh (1954): Principles of Public Finance, 4th edition, Routledge and Kegan Paul, London.
6. Ganguly, Subrata (1975), Public Finance, Nababharat Publisher, Calcutta.
7. Chowdhury R.K. (1993), Public Finance and Fiscal Policy, Kalyani Publishers, Ludhina.
8. Jha, R. (1998), Modern Public Economics, Routledge, London.
9. Mithani, D. M. (1998), Modern Public Finance, Himalaya Publishing House, Mumbai
10. Brown and Jackson: Public Sector Economics, Wiley Blackwell
11. Stiglitz: Economics of the Public Sector, WAV. Norton & Co

Semester-V Paper-Statistics VE

Unit-1

Probability Theory: Sample space- Events-Meaning of probability- Classical definition of probability-The addition rule-The multiplication theorems of total probability. Conditional probability and statistical independence. - Limitations of the classical definition - An axiomatic approach - Bayes' formula - Random variable IX function - Joint density functions - Marginal and conditional distributions – Expectation and variance of random variables.

Unit-2

University Theoretical Distribution: Discrete variables - Binomial distribution- Mean and standard deviation - Properties of Binomial distribution - Poisson distribution- mean and variance - Properties of the Poisson distributions- Continuous variables - Normal distribution - Normal distribution as limiting forms of Binomial and Poisson distribution. Importance of the normal distribution in statistics.

Unit-3

Sampling Theory and Sampling Distribution- Method of complete enumeration or census method and partial enumeration or sampling - Sampling techniques- Random sampling - Sampling distribution of an estimator (distribution of X from a normal distribution) - Fundamental ideas of statistical inference.

Semester- VI
Paper- Statistics VIE

Unit-4

Estimation & Testing of Hypothesis - Point & interval estimation - Desirable Properties of estimators - Confidence interval- Testing of Hypothesis- t, f and χ^2 values - Type I Type II errors - ANOVA..

Unit-5

Simple Regression Analysis: The Classical Bivariate Regression Model- Assumptions about the stochastic error term- Estimation of parameters (intercept, slope-coefficient and standard error of estimate) - The method of Ordinary Least Squares (OLS) - Statistical inference and prediction- Relationship between correlation coefficient and regression coefficient.

Unit-6

Analysis of Time Series: Nature and decomposition of a time series - Analysis of trend, Polynomial trend - Exponential trend - Non-linear growth curves - Moving average method - Seasonal component - Cyclical and random components – forecast and accuracy.
 Reading List:

1. Goon, A.M., M.K. Gupta and B. Dasgupta (1986): Fundamentals of Statistics, Vols. 1 & 2, The World Press Private Limited. Calcutta.
2. Nagar, A.L, and R.K.Das (1977): Basic Statistics, OUP, Delhi.
3. Hoel, P.G. (1984): Introduction to Mathematical Statistics, 5th edition, Wiley, New York.
4. Hoel P.G., S.C, Port and C.J. Stone (1972): Introduction to Stochastic Processes, Houghton Mifflin Co. Boston.
5. Yule, G.U. and Kendall, M.G. (eds.) (1958): Introduction to the Theory of Statistics, Charles Griffin & Co. Ltd. London.
6. Murthy. M.N. (1967): Sampling Theory and Methods, Statistical Publishing Society, Calcutta.
7. Kenney, and keeping (1974):Mathematics of Statistics - Part I, Affiliated East West Press, New Delhi.
8. Das, N.G. (1977): Statistical Methods (Part-I & II), M. Das & Co., Calcutta.
9. Hogg, R.V. and A.T. Craig (1970): Introduction to Mathematical Statistics (3rd edition), Macmillan Publishing Co. New York.
10. Mathai & Rathie : Probability & Statistics, Macmillan India.
11. Gujarati Damodar N: Basic Econometrics, McGraw-Hill.

Semester-V

Paper- Mathematical Economics-VF

Unit-1:

Linear Programming: Formulation - Graphical solution-Basic Feasible solution and the Simplex Method- Degeneracy- The Dual Problem - Shadow Price.

Unit-2

Game Theory - Structure of a game - Two person zero sum game - Maximin-Minimax Principle-Saddle points-Pure strategy versus mixed strategy solutions - Dominance property- Graphical solution of (2 X N) and (M X 2) Games.

Semester-VI**Paper- Mathematical Economics-VIF**

Unit-3: Marshallian and Walrasian stability analysis and Cob-web problems. Comparative static analysis, Input-Output Model.

Unit-4

Macro Models: Domar's growth model, Domar's debt burden model, multiplier- accelerator interaction model, IS-LM model.

Suggested Reading List:

1. Chiang, A.C (1984): Fundamental Methods of Mathematical Economics, McGraw Mill book Co. New York.
2. Henderson, J.M. and Quandt, R.E. (1980): Micro Economic Theory: A mathematical Approach. McGraw Hill Book Co., New York.
3. Silberberg, E. (1990): The structure of Economics, A mathematical Analysis McGraw Hill Book Co., New York.
4. Mukherjee, B. and V. Pandit (1989): Mathematical Methods for Economic Analysis, Allied Publishers Pvt. Ltd., New Delhi.
5. Baumol, W.J. (1996): Operations Research: An Introduction, Prentice Hall, Englewood Cliffs, New jersey.
6. Taha, H.A. (1996): Operations Research: An Introduction, Prentice Hall of India, New Delhi.
7. Archibald and Lipsey (1984): An introduction to the Mathematical Treatment of Economics, All India Travelers Book Seller, AITBS, New Delhi.
8. Dorfman, R.P.A. Samuelson and R.M. Solow (1958) Linear Programming and Economics Analysis, McGraw Hill Book Co., New York.
9. Yamane, Taro (1975): Mathematics for Economists: An Elementary Survey, Prentice Hall of India, New Delhi.
10. Allen, R.G.D. (1974): Mathematical Analysis for Economics, Macmillan and Co., London.
11. Bailey, D: Mathematics in Economics, McGraw Hill Publishing Co., London.
12. Simon, C.P.L, and Blume (1994): Mathematics for Economics, W.W. Norton and Co., New York.
13. Karak, P. M: Linear Programming and Theory of Games, New Central Book Agency, Kolkata.
14. Kanti Swarup, P. K Gupta and Man Mohan: Operations Research, Sultan Chand and Sons New Delhi.

Semester-V**Paper-Financial Economics VG****Unit-1**

Credit and the Financial System: Credit; Kinds of Credit; Financial System; Financial Intermediaries - Functions and Importance of the Financial System.

Unit-2

Financial Markets: Structure; Money and Capital Markets; Call Money Market; Commercial Bill Market; Stock Market; Working of the Capital Market and SEBI.

Semester-VI**Paper-Financial Economics VIG****Unit-3**

Non-Bank Financial Intermediaries: Role of NBFIs in Economic Development; Growth of NBFIs in India.

Unit-4

The Reserve Bank of India and its functions: Review of Monetary Policy in India with special reference to inflation and interest rate policy; Instruments of Control.

Unit-5

Commercial Banks: Classification; Liabilities and Assets; Credit Creation; Sectoral Allocation of Credit.

Suggested Reading List:

1. Fiege, E. (1964): *Demand for Liquid Assets: A Temporal Cross-Section Analysis*, Englewood Cliffs, Prentice Hall.
2. Singh, Shetty & Venkatachalam, (1982): *Monetary Policy in India: Issues and Evidence*, Supplement to RBI Occasional Papers.
3. Gupta, S.B.: *Monetary Economics: Institutions, Theory and Policy*, New Delhi. Chand & Company Ltd.
4. Mishkin, S.F, (1998): *The Economics of Money, Banking and Financial Markets*, New York, Harper Colins Publication.
5. Reserve Bank of India, *Report on Currency and Finance*, (Annual).
6. Machiraju, H.R. (1998): *Indian Financial System*, Vikas Publishing House Pvt. Ltd, New Delhi.
7. Bhole, L.M. (2000): *Indian Financial System*, Chugh Publication, Allahabad.
8. Basu, K. et al. (1995): *Capital Investment and Development: Essays in Memory of Sukhomay Chakravarty*, Oxford University Press, New Delhi.
9. Chelliah, Raja J. (1996): *Towards Sustainable Growth - Essays in Fiscal and Financial Sector Reforms in India*, Oxford University Press, New Delhi.

Semester-V

Paper-Indian Economic Policy and Performance

Unit -1

Economic Planning: Rationale; Features; Objectives and achievements; Planning in a Liberalized Economy.

Unit-2

Issues and Policies in Indian agriculture and Rural Development: Agricultural subsidies and impact of structural adjustment programmes on agricultural subsidies and concomitant effect on agrarian community of India; Food Security and Public Distribution System-A Critical Review; WTO and Indian Agriculture - Challenges and Priorities, Concept of Sustainable agriculture development and Policy Interventions.

Unit-3

Broad Demographic Features of Indian Population and Policy Implications: Population Growth Pattern, Population Policies, The Sex Composition of Population in India and Missing Women, Age Composition and Demographic Dividends; Urbanization; Rural-Urban Migration; Poverty and Inequality; Indicators for measuring poverty and inequality in India, Poverty alleviations measures since independence to till date.

Semester-VI

Paper-Indian Economic Policy and Performance

Unit-4 Industrial Policy and Economic Development: Industrial Policy prior to 1991; New Industrial policy-1991; A Critical review of privatization and disinvestment policy in India; Role MNCs in Industrial Development in India.

Unit-5

Centre-state Financial Relations: Finances of Central and State Governments; Problems of federal finance in India; Fiscal Imbalance and the New Fiscal Approach; The Eleventh and Twelfth Finance commission.

Unit-6

Indian Economic Reforms: First and Second generation economic reforms; Critical Review of the impact of reforms on urban and rural population; money market; foreign trade; fiscal health and on overall economic growth *vis a vis* development.

Unit-7

International trade and Finance in Indian Economy: Balance of Payment Problems; Export Import Policy; Exchange Rate Policy; Role of FDI and FII.

Suggested Reading List:

1. Ahluwalia, I.J. and I.M.D. Little (eds.) (1999): *India's Economic Reforms and Development*, Oxford University Press, New Delhi.

2. Bardhan, P.K. (1999): *The Political Economy of Development in India*, (9th edition), Oxford University Press, New Delhi.
 3. Brahmanand, P.R. and V.R, Panchmukhi (eds.) (1987): *The Development Process of the Indian Economy*, Himalaya Publishing House, New Delhi.
 4. Dhameeja, N. and K. S. Sastry(1998): *Privatization: Theory and Practice*, A.H.Wheeler, New Delhi.
 5. Dubey, M. (1996):*An Unequal Treaty: World Trading Order after GATT*, New Age International Ltd, New Delhi.
 6. Government of India:*Economic Survey*, (Annual), Ministry of Finance, New Delhi.
 7. Jalan, B. (1996): *India's Economic Policy: Preparing for the Twenty First Century*, Viking, NewDelhi.
 8. Mundle, S. (1999): *Public Finance: Policy Issues for India*, Oxford University Press, NewDelhi.
 9. Nayyar,D.(ed.)(1997):*Trade and Industrialization*, Oxford University Press, New Delhi.
 10. Rangarajan,C.(1998):*Indian Economy: Essays on Money and Finance*, UBS, New Delhi.
 11. Reserve Bank of India:*Report on Currency and Finance*, (Annual).
 12. Srinivasan, T. N. (ed.) (2000): *Eight Lectures on India's Economic Reforms*, Oxford University Press, New Delhi.
 13. Subramanian, S, (ed.) (1997): *Measurement of Inequality and Poverty*, Oxford University Press, Kolkata.
 14. Swamy, D. S. (1994): *The Political Economy of Industrialization: From Self-Reliance to Globalization*, Sage Publications, New Delhi.
 15. Uppal, J. S. (eds.) (1987): *India's Economic Problems - An Analytical Approach*, Tata McGraw Hill, New Delhi.
 16. Soumyen Sikdar (2nd edition): *Contemporary Issues in Globalization: An introduction to Theory and Policy in India*, Oxford University Press.
 17. Bhalla, G.S. (2007): *Indian Agriculture since Independence*, National Book Trust, India
 18. Joshi, Vijay and I.M.D Little (1999): *India-Macro Economics and political Economy 1964- 1991*, Oxford University Press, New Delhi.
 19. Ramchandran, R (1989): *Urbanisation and Urban system in India*, Oxford University Press, New Delhi.
 20. Rao, Govinda M. and Nirvikar Singh (2005): *Political Economy of Federalism in India*, Oxford University Press, New Delhi.
 21. Bhaumik, S.K. (2008): *Reforming Indian Agriculture-Towards Employment Generation and Poverty Reduction*, Sage Publications.
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