ANNEXURE-C1

DEPARTMENT OF ECONOMICS
JAMIA MILLIA ISLAMIA
NEW DELHI

20th January 2014.

Minutes of the BoS meeting held on 20-01-2014

A meeting of BoS of Economics was held in the Committee Room of the Department of Economics on 20th January 2014 at 3.00 p.m., in which all the members were present except Prof Shahid Ashraf and Dr Saba Ismail, due to their preoccupations. The following Agenda Items were taken up for discussion and resolution:

Agenda Items:
1. Confirmation of the Minutes of the last BoS meeting.
2. Regarding the Implementation of the Judgment Case Titled "Jitender Kumar Vs Jamia Millia Islamia and others".
3. SAP: Upgradation/Continuation from DRS-I to DRS-II.
4. Optional paper(s) to be offered by Department of Mathematics.
5. Any other item with permission to the chair.

1. Confirmation of the Minutes of the last BoS meeting

The minutes of the meeting of BoS of Economics held on 19-12-13 were confirmed.

2. Regarding the Implementation of the Judgment Case Titled "Jitender Kumar Vs Jamia Millia Islamia and others"

The chairperson briefed the members about the judgment and explained the details of meetings and discussions that has taken place so far in this regard amongst the officer of the University for its smooth implementation. The court has set-aside the cancellation order issued by the Dean, FoSS, questioning the validity and rationality of the reason — communication gap, of request for change of supervisor after one and a half year, thereby nullified the request itself. The court even has gone to suggest that the University may admit Mr Jitender Kumar under the same Supervisor.

Members of the BoS were also of the opinion that the matter was not properly handled by legal cell with desired proper understanding of the minutes and related documents. Prof Akhtar Hussain and Prof Bhatt were of the opinion that Legal Cell should have gone to higher bench after careful study of the minutes and the related documents.

However, BoS found a better solution with the help of magnanimity shown by two Senior Professors, viz., Professor M S Bhatt and Professor N A Azad willing to Supervise Mr Jitender Kumar, so the assigning the scholars again to the same Supervisor be avoided. Therefore, BoS has appointed Professor M S Bhatt as Supervisor and Professor N A Azad as Co-Supervisor for Mr Jitender Kumar with immediate effect. It will be a special case to honour the court decision and should not be a bearing on intake of PhD admission of Prof Bhatt next year. The Chairperson/HoD may inform it to all the concerned.

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3. SAP: Upgradation/Continuation from DRS-I to DRS-II

The chairperson congratulated and greeted the team of the Department for getting sanction from DRS-I to DRS-II to the tune of Rs 60,00000/-. However, an unprecedented change is noted in the document received from the UGC, where the name of the coordinator has been change without the knowledge of the Department without looking into the specializations. It is the prerogative of the statutory body BoS and not the UGC to appoint the Coordinator and Deputy Coordinator of such programme which needs to be based on strength of the Department, specialization of faculty members and vision of the Department. The Chairperson has also shown the copy of the proposal sent by the University to UGC bearing the signature of Registrar mentioning Professor M S Bhatt as coordinator, however, which has got changed to Professor Shahid Ahamd, strangely, when his specialization does not match with the sanctioned area of DRS II document.

The BoS unanimously resolved that the chairperson has to write back to UGC as HoD of the Department and retaining Professor M S Bhatt's name which is consistent with the proposal posted to UGC after due approval of BoS.

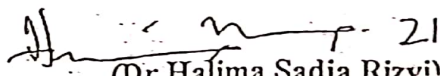## 4. Optional paper(s) to be offered by Department of Mathematics

BoS resolved that, whatever optional paper will be offered by the Department of Mathematics will be acceptable to the Department of Economics.

5. Any other item with permission to the chair

As regard some important inclusions in the JMI prospectus, 2014-15, the BoS resolved that the BACA programme is distinctively interdisciplinary in nature, therefore its entrance examination should be conducted separately, and not along with group.

For admission to MA in Economics, the eligibility criteria needs to be Listed as Eligibility: (i) B.A./B.A.(Hons.) in the subject concern with not less than 50% marks in aggregate. OR (ii) B.A./B.Sc/B.Com. or /B.Sc./B.Com.(Hons.) with not less than 55% marks in aggregate. BoS also pointed out that the correction in nomenclature of BACA be made in the AC meeting.

As no further item was raised the meeting ended with vote of thanks to the chair.

(Dr Halima Sadia Rizvi) 21/01/14.
Chairperson (BoS) and Head (DoE)

Dr. HALIMA SADIA RIZVI
Prof. and Head
Department of Economics
Jamia Millia Islamia
New Delhi-110025

To,
All the Members of BoS of Economics.

CC to:
1. P.S. to VC, JMI, 2. P.S. to Registrar, JMI, and 3. BoS File.

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DEPARTMENT OF ECONOMICS
JAMIA MILLIA ISLAMIA
NEW DELHI, INDIA

16th July, 2015

Minutes of the Department Committee Meeting

A Department Committee (DC) meeting was held on 16-07-2015 at 2 PM. The following members attended the meeting.

1.	Prof. Shahid Ahmed	(Chairman)
2.	Prof. N.A. Azad	(Member)
3.	Mr. Shakeel Ahmad	(Member)
4.	Mr. T.A. Farooqui	(Member)
5.	Dr. J.R. Chowdhary	(Member)
6.	Mr. Asheref Illiyan	(Member)
7.	Dr. M. A. Baig	(Member)

Prof. Shahid Ashraf could not attend the meeting due to his engagements being Registrar of the university. However, he discussed the issues and agenda of DC meeting and provided his inputs. He has given his consent to the DC decisions.

The meeting started with a welcome note by the new Head of the department (HOD) Prof. Shahid Ahmed in which he welcomed all the members of the department. The faculty members also welcomed the HOD whole heartedly and wished him for successful tenure as it was first departmental committee meeting under his chairmanship.

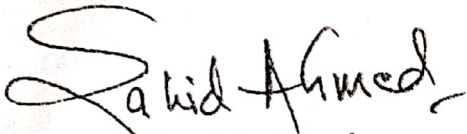The following decisions were taken the DC Meeting:

1. The agenda of restructuring of M.A., B.A. (Hons) & B.A.CA. Programmes in the light of new guidelines of the university was discussed and deliberated. The HOD presented first M.A. programme as per new guidelines of 80 credit programme and other proposed changes. The course structure is now divided into core courses, choice based courses, skill enhancement courses and ability enhancement courses. With some minor modification, the revised structure was approved by the members of the committee unanimously. Similarly, the revised course structure of B.A.(Hons.) & B.A.C.A was also discussed and duly approved by the members to be placed before BOS for its approval (annexure-I, II &III).

The meeting was urgently convened by the HOD in order to get the approval of the departmental committee for the revised courses structure so that it could be sent before 22 July 2015 for necessary approval of competent authorities/ bodies.

2. Under any other item, the HOD brought to the notice of the members about the research scholars drawing fellowship but some time found out of station without any intimation to the office. To streamline the research programme in the department, it

was resolved that research scholar must attend department everyday as per fellowship rules applicable. If there is a need for leave for research purpose or otherwise, the scholar should submit leave application with the recommendation of Ph.D. supervisor to the office of HOD for necessary sanctions.

The meeting came to an end at 3.45PM with thanks to the chair.

Prof. Shahid Ahmed
Head of the Department

B.A. (HONS) ECONOMICS, SEMESTER PROGRAMME - 2012

Semester-I	Semester-II
• Micro Economics-I • Mathematical Methods for Economics- I	• Micro Economics-II • Mathematical Methods for Economics-II
Semester-III	**Semester-IV**
• Macro Economics-I • Statistical Methods -I • Indian Economy	• Macro Economics-II • Statistical Methods-II • Development Economics
Semester-V	**Semester-VI**
• Money and Banking • Econometrics - I • International Trade **Optional Papers:** • India and the World Economy • Econometrics - II • Regional Economics • International Finance • Economics of Education • Health Economics	• History of Economic Thought • Public Economics • Environmental Economics **Optional Papers:** • Agriculture Economics • Industrial Economics • Game Theory Applications • Financial Economics • Computer Applications

Each paper is of 4 credits. The students have to take a total of 20 papers for a total of 80 credits. From the optional papers in Semesters V and VI, the students have to opt 4 papers, 2 in each semester.

The Honours students have to take any one subsidiary subject from the following: Mathematics, Geography, Political Science, Sociology and History.

The students will take a total of 6 papers from any one of the Subsidiary subjects for a total of 24 credits.

The distribution of the subsidiary papers will be one each in Semesters I and II, and 2 papers each in Semesters III and IV.

Further there will be 8 compulsory papers of 2 credit each for a total of 16 credits.

Thus, the total credits in the programme will be 120 credits.

MICROECONOMICS-I

Unit-1: Introduction

Nature and scope of economics, Methodology in Economics, Theory of consumer behavior, Cardinal approach and its critique, Indifference curve approach, Consumer's equilibrium, Income, Substitution and Price effects (Hicks and Slutsky, approaches), Giffen goods, Elasticity of demand and its measurement, Consumer's surplus-Marshallian and Hicksian approaches.

Unit-2: Theory of Production and Costs

Production Function, law of variable proportions, Isoquants, factor substitution, Equilibrium of the firm with respect to input use, Returns to scale, Economies and Diseconomies of scale, Expansion path, Deferent concepts of cost and their inter-relationship, Short run and long run cost curves, Empirical evidence on costs.

Unit-3: Market Structure

Perfect and imperfect markets, Equilibrium of the firm and industry under perfect competition, Role of time element in the determination of value, supply curve under perfect competition, Equilibrium of the firm under monopoly, Discriminating monopoly, Conditions of equilibrium under price discrimination, Dumping.

References:

1. Varian H.R: Intermediate Microeconomics, 7th Edition

2. Pindyck, Rubinfield and Mehta: Microeconomics, 6th Edition

3. Ferguson and Gould: Micro economics, 6th Edition

5. Gravelle and Rees- Microeconomics; Pearson Education, 2nd Edition

6. Nicholson, Microeconomics

MATHEMATICAL METHODS FOR ECONOMICS- I

Unit - 1: Basic concepts, Functions and Graphs

Sets and set operations, Ordered pairs, the real numbers, natural numbers, integers, rational and irrational numbers; absolute value and intervals; inequalities.

The general concept of function, types of function (linear, quadratic, power, exponential, inverse); graphs of functions; Applications in Economics

Unit-2: Limits, Continuity and Single variable Differential Calculus

Limits, continuity and differentiability, rules of differentiation (simple differentiation, sums, products, and quotients); Second and higher order derivatives, power rule, chain rule, implicit differentiation; Linear approximation and differentials; Quadratic approximations, Elasticities the Intermediate-value Theorem; the Extreme-value Theorem; The Mean-value Theorem; Indeterminate forms and L'Hopital's rule; Applications in Economics

Unit-3: Single variable optimization and Integral Calculus

Stationary points of a function, Maxima and Minima(local and global); Convexity and Concavity of functions; Points of inflection; Optimization of economic functions Rules of integration, integration by parts, integration by substitution, indefinite integral, Definite Integral, Proper and Improper integral; Areas under curves and economic application of integration.

References:

1. Knut Sydsaeter and Peter J. Hammond (2005), *Mathematics for Economic Analysis*. Pearson Educational Asia: Delhi, 4th Indian reprint

2. Chiang, A. C. & Kevin Wainwright (2005) (Fourth Edition): Fundamental Methods of Mathematical Economics, McGraw-Hill.

3. Allen, R.G.D.(1974), Mathematical Analysis for Economists, McMillan press, London

4. Chiang, A. C. (1984), *Fundamental Methods of Mathematical Economics, 3rd Ed*, McGraw-Hill.

5. Hoy,M., J. Livernois, C. McKenna, R. Rees and T. Stengos(2001), Mathematics for Economics, 2nd Edition Prentice Hall, India

6. Dowling, Edward T. (1992), Schaum's Outline of Theory and Problems of Introduction to Mathematical Economics, 3rd Edition, McGraw Hill

MICROECONOMICS-II

Unit-1: Market Structure-II

Monopolistic Competition-Equilibrium of firm under monopolistic competition (selling cost excluded), Group equilibrium, Excess capacity, Oligopoly-Coumot solution, Paul Sweezy's kinked demand curve solution.

Unit-2: Factor Pricing

Marginal productivity theory of distribution, Ricardian & Modern Theories of rent, Quasi-rent, Wage determination under perfect and imperfect competition, wages and collective bargaining, Theories of interest-Classical, Neoclassical and Keynesian theories of interest, Theories of profit-Dynamic theory, Risk and uncertainty theory and Schumpeterian theory of profit.

Unit-3: Welfare Economics

Problems of measuring welfare, Marshallian and Pigovian approaches, Pareto's welfare criteria, Concept of Social welfare function.

References:

1. Chaudhary, Kalyanjit, Roy Microeconomics.
2. Koutsyansis, A. Modern Microeconomics, Macmillan.
3. Left witch, price Theory and Resource Allocation   .
4. Lipsey, R.G. An Introduction to Positive Economics.
5. Ray, N.C. An Introduction to Microeconomics, Macmillan.
6. Samuelon, P.A. and W.D. Noidhaus, Economics.
7. Stonier and Hague A Text Book of Economic Theory.
8. Varian, Hal, Intermediate Microeconomics.
9. Ferguson and Gould: Microeconomics, 6th Edition

MATHEMATICAL METHODS FOR ECONOMICS- II

Unit - 1: Linear Algebra

System of linear equations, vectors, vector operations, linear combinations of vectors, length of vectors and orthogonality, Matrices and its types, matrix operations(row and column), Echelon and Reduced echelon forms, determinants and its properties, singularity of a matrix, inverse of a matrix, linear independence and rank of a matrix, solution of a system of linear equations (by Cramer's Rule, Matrix Inversion); Solution of Homogeneous Equation System; Leontief Input-Output models (Open and Closed), Applications in Economics

Unit - 2: Calculus of Multivariate Functions

Partial derivatives (two variables and many variables) and its economic relevance, Total derivatives, Derivatives of functions using chain rule, Derivative of functions defined implicitly, Homogeneous and Homothetic functions, Multivariable optimization, local and global extreme, Stationary points of a function, first and second order condition using Hessian, Point of Inflection, Saddle point, Constraint Optimization (using Lagrangean

multiplier), sufficient condition (using Bordered Hessian), Optimization of economic functions, Applications in Economics

Unit -3: Dynamic Analysis

Continuous time: First order linear differential equations (homogeneous and non homogeneous case) with constant coefficient and constant term; with variable coefficient and variable term; Dynamics of market price; Exact differential equations. Discrete Time: First order Difference equations, the stability analysis of the equilibrium (oscillatory and non-oscillatory, divergent and convergent time paths); The Cobweb model, Applications in Economics

References:

1. Knut Sydsaeter and Peter J. Hammond (2005), *Mathematics for Economic Analysis.* Pearson Educational Asia: Delhi, 4th Indian reprint

2. Chiang, A. C. & Kevin Wainwright (2005) Fourth Edition): *Fundamental Methods of Mathematical Economics,* McGraw-Hill.

3. Allen, R.G.D.(1974), *Mathematical Analysis for Economists*, McMillan Press, London

4. Chiang. A.C. (1984), *Fundamental Methods of Mathematical Economics,* 3rd ed. McGraw-Hill

5. Hoy.,M., J. Livernois, C. McKenna, R.Rees and T. Stengos: *Mathematics for Economics*, 2nd Edition Prentice Hall, India (2001)

6. Dowling, Edward T. (1992*), Schaum's Outline of Theory and Problems of Introduction to Mathematics,* 3rd Edition, McGraw-Hill

MACROECONOMICS-I

Unit-I: National Income Analysis

Concepts of National Income-GNP and NNP at market price and factor cost, national product and Domestic product, Measurement of National Income-output, Income & Expenditure approaches and Difficulties of Measurement, National Income Identities with Government and Foreign Trade.

Unit-2: Classical Theory of Output & Employment

Says law of markets and quantity theory of money, classical model without saving in labour supply. Change in labor demand, Rigid money wage, Monetary policy and full employment, Classical theory with saving and investment, Criticism and evaluation.

Unit-3: Keynesian Theory of Income and Employment

The Keynesian approach to the determination of price, Output and Employment – The complete Keynesian model. Consumption function, Equality savings and investment, Concept of multiplier, Types of multiplier, Investment multiplier, Government expenditure multiplier, Income determination involving government expenditure and tax multiplier, Leakages of multiplier.

References:

1. Ackley, G. Macro-Economic Theory, Latest Edition.
2. Allen, R.G.D. Macro-Economic Theory, Latest Edition.
3. Beckerman, Wilfred, an Introduction to National Income Analysis.
4. Dillard, Dudley Economics of John Maynard Keynes.
5. William Branson: Macro Economic Theory and Policy
6. Shapiro, E. Macro-Economic Analysis.

STATISTICAL METHODS - I

Unit-1: Basic Concepts and Descriptive Methods

Definition and Role of Statistics; Graphical Presentation of Data – Straight Lines, Curves and Semi-logarithmic Graphs – Examples from Economics and Business Measures of location – Median, Mode, Mean (AM, GM, HM), simple and weighted averages, group averages, moving averages Measures of dispersion – Range, Variance and Standard Deviation, Mean Deviation, Quartile Deviation, Computation of S.D. from grouped data, simple and weighted averages, group averages, moving averages Measures of skewness and kurtosis; Measures of economic inequality

Unit-2: Probability and Probability distributions

Random experiment, sample space and events; permutations and combinations; classical, empirical and axiomatic definitions of probability; addition and multiplication theorems; conditional probability, independent events and Baye's rule Random variable and probability function (pdf, pmf, cdf); mathematical expectation - mean and variance of a random variable Binomial, Poisson and Normal distributions

Unit-3: Index Numbers and Time Series Analysis

Index Numbers: Concept, use and examples; Laspeyres, Paasche's and Fisher's index numbers; time reversal, factor reversal and circular tests; chain base index; problems in constructing index numbers; splicing, base shifting; use of index numbers for deflating other series.Time Series Analysis: Concept, use and examples; Components of time series - secular trend, seasonal, cyclical and irregular variations; Methods of semi-averages, moving averages and least squares.

References:

1. Nagar, A.L. and R.K. Das (1983), Basic Statistics, Oxford University Press, New Delhi

2. Gupta, S. P. (2005), Statistical Methods, S. Chand & Sons, New Delhi

3. Freund, John E. (1979), Modern Elementary Statistics, Prentice Hall of India, New Delhi.

4. Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book, London.

5. Thukral, J. K. (2010), Business Statistics, Taxmann Publications, New Delhi

6. P.H. Karmel and M. Polasek (1978), *Applied Statistics for Economists,* 4th edition, Pitman, Australia

7. Allen Webster (1997), *Applied Statistics for Business and Economics: an Essential Version*, 3rd edition, McGraw-Hill

8. Lind, Douglas A., William G. Marchal, and Samuel A. Wathan(20060, *Business Statistics for Business & Economics*, 5th ed. Boston: McGraw-Hill Irwin.

Other Books

1. Allen, R.G.D. (1949), *Statistics for Economists*, Hutchinson's University Library, London, UK.

2. Croxton, F.E., D.J. Cowden and S. Klein (1973), Applied General Statistics, Prentice Hall, New Delhi.

3. Gupta, S.C. and V.K. Kapoor (1993), Fundamentals of Applied Statistics, S. Chand and Sons, New Delhi.

4. Freund John E. and Ronald E. Walpole (1987), Mathematical Statistics, Prentice-Hall of India, New Delhi.

HISTORY OF ECONOMIC THOUGHT

Objectives: The main objectives of this course are that by the end of the course, students are expected to:

- Develop an insight and interest in situations and processes in which the subject matter has developed over time.
- Develop a chronological understanding of the development of Economic Thought

  Relate the developments in different schools of thought with contemporary issues.

Unit -1: Pre Classical and the Classical School

Mercantilism: Main Principles, Physiocracy: Natural order, Agriculture and Product Net , Adam Smith – Division of Labour, theory of value, doctrine of laissez faire, David Ricardo – Theory of Value, Theory of Distribution, Malthus – Theory of Gluts, Theory of Population, John Stuart Mill - Principles of Political Economy

Unit-2: The Marxian Challenge and Marginal Revolution

Karl Marx - A Contribution to the Critique of Political Economy, William Stanley Jevons - The Theory of Political Economy, Alfred Marshall - Principles of Economics, Eugen von Bohm-Bawerk - The Positive Theory of Capital

Unit 3: Contemporary School of Economic Thought

Irving Fisher - The Purchasing Power of Money and its Determination and Relation to Credit Interest and Crises, John Maynard Keynes – Treatise on Money and The

General Theory of Employment, Interest and Money, Milton Friedman – Resataement of the Quantity Theory of Money, George Akerlof – Information Asymmetry

Select References:

1. Hunt, E.K. and Lautzenheiser, M. (2011), *History of Economic Thought: A Critical Perspective*, M.E. Sharpe.
2. Medema, S.G. and Samuels, W.J. (2003), *The History of Economic Thought: A Reader*, Routledge.

Detailed Readings:

1. Ekelund, R.B. and Hebert, R.F. (1975), *A History of Economic Theory and Method,* McGraw-Hill.
2. Hajela, T.N. (2008), *History of Economic Thought*, Ane Books Pvt. Ltd.
3. Haney, L.H. (1922), *History of Economic Thought: A Critical Account of the Origin and Development of the Economic Theories of the Leading Thinkers in the Leading Nations*, Macmillan.
4. Landerth, H. and Colander, D.C. (2002), *History of Economic Thought, Houghton Mifflin.*
5. Robbins, L. (2000), *A History of Economic Thought: The LSE Lectures*, Princeton University Press.
6. Roncaglia, A. (2005), T*he Wealth of Ideas: A History of Economic Thought*, Cambridge University Press.
7. Spiegel, H.W. (1991), *The Growth of Economic Thought*, Duke University Press.

MACROECONOMICS-II

Unit-1: Theories of Consumption & Investment

General theories of spending behavior, Absolute income hypothesis, Relative income hypothesis, Permanent income hypothesis, Life cycle hypothesis, Motivation for investment, Marginal efficiency of capital, Supply price, Expected income streams, Marginal efficiency of capital and rate of interest, Principal of acceleration.

Unit-2: Money and Interest

Keynesian Theory of Interest, determination of rate of Interest, Changes in the Levels of Income, Speculative Demand and Money Supply and their effect on equilibrium rate of Interest, Liquidity Trap and Policy Implications, Simple IS-LM Approach to the Determination of the Equilibrium rate of Interest, Elasticity of LM Schedule and Shifts in LM curve with changes in Money Supply and Money Demand, Interest Elasticity of IS schedule and Equilibrium.

Unit-3: Theory of Inflation and Business Cycle
Types and theories of inflation: Demand pull I cost push inflation, Wage push inflation, profit push inflation. The Philips curve trade off between inflation and unemployment, Stagnation, Concept and Phases of trade cycle, Innovation theory-criticism, Keynesian and monetary theory.

References:

1. Dorndush & Fisher, Macro Economic Fiscal Policy.
2. Hansen, A. H. Monetary Theory and Fiscal Policy.
3. MC Dougall & Deinberg, Macro Economics
4. Shapiro, E. Macro-Economic Analysis.
5. Studenski, Paul, Income and Nation.
6. Vaish, M.C. Macroeconomic Theory, Vikas Publishing House Pvt. Ltd.
7. William Branson: Macro Economic Theory and Policy

STATISTICAL METHODS - II

Unit-I: Uni-variate and Bi-variate Analysis
Moments and moment generating function (m.g.f.), calculation of mean and variance of binomial, Poisson and normal variables by m.g.f. method , Multivariate Statistics - joint, marginal and conditional distribution; Product moment – covariance, correlation, rank correlation , Simple linear regression; method of least squares; linear and exponential trend

Unit-2: Introduction to Sampling Distributions

Population versus sample, Methods of sampling, simple random sample, sampling distribution of sample mean for normal and non-normal populations, Chebyshev's inequality, law of large numbers, optimum size of sample, central limit theorem Definition of z, chi-square, t and F statistics

Unit-3: Introduction to Statistical Inference

Properties of point estimator - unbiasedness, relative efficiency and consistency, Testing of Hypothesis - type I and type II errors, level of significance, power of a test, Use of z, chi-square, t and F statistics - large sample and small sample tests for mean, one tail and two tail tests for difference of means, Chi-square test for (i) goodness of fit and (ii) independence of two attributes, F-test for ratio of two variances, one-way analysis of variance, confidence intervals for mean and variance

References

1. Freund John E. and Ronald E. Walpole (1987), Mathematical Statistics, Prentice-Hall of India, New Delhi.

2. Nagar, A.L. and R.K. Das (1983), Basic Statistics, Oxford University Press, New Delhi

3. Kapur, J.N. and Saxena, H.C. (1988), Elements of Mathematical Statistics, S. Chand & Sons, New Delhi

4. Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book, London.

5. P.H. Karmel and M. Polasek (1978), *Applied Statistics for Economists,* 4th edition, Pitman, Australia

6. Lind, Douglas A., William G. Marchal, and Samuel A. Wathan. *Business Statistics for Business & Economics*, 5th ed. Boston: McGraw-Hill Irwin. 2006

Other Books

1. Allen, R.G.D. (1949), *Statistics for Economists*, Hutchinson's University Library, London, UK.

2. Croxton, F.E., D.J. Cowden and S. Klein (1973), Applied General Statistics, Prentice Hall, New Delhi.

3. Gupta, S.C. and Kapoor, V.K. (1988), Elements of Mathematical Statistics, S. Chand & Sons, New Delhi

DEVELOPMENT ECONOMICS

Preamble: This paper will attempt to train students to understand the underlying substantive issues of economic transformation in a historical context. Both economic and non-economic perspectives and dimensions will form the backdrop of this paper. It is expected to help a student to master the basic requirements and capabilities for doing Masters in Growth and Development.

Unit-1: Growth and Development

Growth and Development--Meaning, Evolution and Approaches, Determinants' of Growth, Indicators, Linkages. Human Development-- Approach and Indicators. Sustainable Development-Concept, Operational Rules and Indicators. Growth Models- Classical, Neo-Classical, Harrod-Domar.

Unit-2: Under-Development Determinants and Theories

Under-Development Meaning, Determinants and Indicators, Partial Theories of Growth and Development-Vicious Circle of Poverty, Circular Causation, Unlimited Supply of Labour, Big Push, Balanced Growth, Critical Minimum Effort Thesis, Low Income Equilibrium Trap, Dualism-Technical, Behavioral and Social. Characteristics of Developing Countries.

Unit-3: Determinants of Development

State and Markets; Capital-Human, Natural and Social and Manmade., Agriculture Industry and Services;

Physical Infrastructure, Policies, Planning and Development Administration, Research and Development and Technology, Non-Economic Factors.

References:

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

2. Aghion, P. and Peter Howit (2011), Economics of Growth, PHI Learning Pvt. Ltd., New Delhi.

3. Behrman, S. and T. N. Srinivasan (1995), Handbook of Development Economics, Vol. 1 to 3, Elsevire, Amsterdam.

4. Chari, Sharad and Staurt Corbridge (2008), The Development Reader, Routledge London.

5. Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.

6. Hayami, Y. (1997), Development Economics, Oxford University Press, New York.

7. Higgins, B. (1959), Economic Development, Norton, New York.

8. Kindleberger, C. P. (1977), economic Development, 3rd edi., McGraw Hill, New York.

9. Meier, G. M. (1995), Leading Issues in Economic development, Oxford University Press, New Delhi.

10. Myint, Hla (1971), Economic theory and under developed countries, Oxford University Press, New York.

11. Ray, Debraj (1988), Development Economics OUP, New Delhi.

12. Seers Dudley, (1969), The Meaning of Development, International Development Review, Vol. 11, No. 4. Pp.2-6

13. Sen , A. K. (1995), The Concept of Development, In Handbook of Development Economics, (eds.)Behrman, S. and T. N. Srinivasan Vol. 1 to 3, Elsevire, Amsterdam.

14. Sen , A. K. (), Development Which Way Now, In: Resources Values and Development, OUP, New Delhi.

15. Todaro, M. P. and Stephan C. Smith (2011), Economic Development, 5th edi. Pearson Education in South Asia.

16. Thirwal, A. P. (1999), Growth and development, 3rd edi. Macmillan, London.

MONEY AND BANKING

Objective:

The paper is designed to develop the competence of the student to accustom with the evolution and the role of money in modern economies. The present banking structure in inclusive banking strategy and the role envisaged by a central will be discussed.

Unit- 1: Money and Evolution

Money an overview, Theories of Demand for Money -- Various approaches- Fisher, Cambridge, Keynes, Friedman , Measures of Money, Money Multiplier analysis

Unit-2:   Financial   Markets

Banking System, Central Bank's – Role, Functions, Credit Control Methods, Monetary Policy, Monetary policy in India, Financial sector reforms in India

Unit- 3: Commercial Banks

Commercial Banking- functions, Credit creation, Social banking, Role of Private Banks and a comparison, foreign banks Role

References:

1. Chandler, L.V. The Economics of Money and Banking, S. Chand & Company Ltd., New Delhi

2. Chandler, L.V., The Monetary and Financial System

3.M.K.   Lewis   (2000),   Monetary   Economics,   OUP

4. M.R. Baye, D.W. Jansen (1996), Money Banking and Financial Markets, AITBS, (Indian

Edition)

5.Maurice   Levi   (1999),   International   Finance,   Tata   McGraw   Hill

6. L.M. Bhole (1999), Financial Institutions and Markets, Tata Mcgraw Hill

7.R.B.I.   Bulletin,   Annual   Report;   Report   on   Currency   and   Finance

8.R.B.I. - Report of the Committee on the Financial System (Narasimham Committee Report   I)

9.R.B.I. - Report of the Committee on Banking Sector Reforms (Narasimham Committee   Report   II)   Summary   in   RBI   Bulletin,   July,   1998.

10.R.B.I - Report of the Working Group: Money Supply Analytics and Methodology

of

Compilation, 1998.

11.   S.B.Gupta,   Monetary   Economics
12. Y.V. Reddy (2000), Monetary and Financial Sector Reforms in India UBSPD,
New Delhi

ECONOMETRICS - I

Unit- 1: Simple Linear Regression Analysis

Introduction to Econometrics, Two- variable regression analysis - Population
Regression Function and Sample Regression Function, Significance of Stochastic
Disturbance Term, Problem of Estimation of Two variable regression model – CLRM
assumptions, Method of OLS estimation, Goodness of Fit, Desirable properties of
OLS estimators- Gauss Markov Theorem, Interval Estimation and Hypothesis
Testing, Extension of Two Variable Regression Model.

Unit- 2: Multiple Regression Analysis

Multiple Regression Equation, OLS estimation of Partial Regression Coefficients,
Multiple Coefficient of Determination (R^2) and Adjusted R^2, Multiple and Partial
Correlation Coefficients, Problem of Inferences and Hypothesis Testing.

Unit- 3: Problems in OLS Estimation

Problems in OLS Methods: Analysis of Residuals – Heteroscedasticity and
Autocorrelation Problems – Consequences of applying OLS under Heteroscedasticity
and Autocorrelation – tests and remedial measures for removal of hetroscedasticity
and autocorrelation Multicollinearity- consequences, tests and remedial measures.

References:

1.Green W H (2003), Econometric Analysis, Prentice Hall, Pearson   Education, New
Delhi
2.Gujrati, D 2007. : Basic Econometrics, McGraw Hill , 4th edition, New Delhi

3.Gujarati D (1992).:Essential Econometrics McGraw Hill, Singapore

4.Johnston, J. and Dinardo(1997), Econometric Methods, 4th Edition. McGraw Hill, New York.

5.Jhonston J (1985) Econometric Methods, McGraw Hill, New York

6. Koutsoyiannis A 1977, Theory of Econometrics, The Macmillan Press Ltd, Hampshire

7. Kmenta J (1997), Elements of Econometrics, Michigan Press New York

8. Maddala , Introduction to Econometrics, 3rd Edition. John Wiley, 2001.

INTERNATIONAL TRADE

Unit 1: Introduction

Need for separate Theory of International Trade. Concepts of Opportunity Cost, Production possibility Curve, Offer Curves, Terms of Trade, Pure Theory of International Trade: Ricardian Theory of Comparative Advantage, Heckscher-Ohlim Trade Theory.

Unite 2: Trade Policy

Gains from Free Trade, Protectionism versus Free Trade, Tariff Quota and Import-substitution and Export Promotion, Prebisch-Singer Hypothesis GATT/WTO UNCTAD

Unit 3: International Monetary System

Balance of payments and its components, Exchange Rate Determination, System of Fixed and Floating Exchange Rates, Disequilibrium in the Balance of Payments, Adjustment Mechanism, IMF

Brottonrood Monetary System, World Bank (IBRD)

References:

1. Ellsworth, P.T. (1969) International Economics
2. Haberler G (1935) The Theory of International Trade
3. Kindleberger. C.P. (1976) International Economics
4. Bo-Sodersten S Goeffrey Reed (1994) International Economics III Edition.

5. Salvatore. D (1983) International Economics

INDIAN ECONOMY

Objectives: The main objectives of this course are that by the end of the course, students are expected to:

- have an in-depth understanding of the subject matter and development of Indian economy since independence
- critically examine the government policies adopted during the Five Year Plans
- Evaluate the pre and post reforms progress of India.

Unit- 1: Concept of Developed and Developing Economies

Characteristics of a developing economy – basic features of Indian economy at the time of independence

Population and Economic Development - Demographic trends of India – Occupational Structure - Population policy, Employment in organised and unorganised sectors , Issues in Indian Planning – Objectives and critical evaluation of each plan. Centre-State relationship

Unit-2: Perspective of India's Agricultural and Industrial Economy

Importance of Agriculture in Indian economy – trends in agriculture production and productivity, Green Revolution and Food Security, Agriculture Price Policy, Sources of Agricultural Finance and Sustainable Agricultural Growth, Industrial Policy – pre and post 1991 and trends in India's industrial growth and productivity, Small vs. large industry, public vs. private sector industries, disinvestment strategies, Policy issues and future prospects: infrastructure, technology and regional imbalances

Unit-3: Contemporary Issues

Macro-economic stabilisation – fiscal and monetary policies, Globalisation and its impact on the Indian economy with special reference to global financial crisis, 2007-08, India and the World Economics, India's foreign trade and investment policies,

References:

1. Bansil, P.C, *Agricultural Problems of India*, Vikas Publishing House Pvt. Ltd.

2. Datt, R. and Sundharam, K.P.M, *Indian Economy*, S. Chand & Company Ltd, New Delhi.

3. Kapila, U. (2008-09), *Indian Economy Since Independence*, Academic Foundation, New Delhi.

4. Mookherjee, D. (1997), *Indian Industry: Policies and Performance*, Oxford University Press,

Detailed Readings:

1. Acharya, S. (2002), *India: Crisis, Reforms and Growth in the Nineties*, Working Paper No. 139, Centre for Research on Economic Development and Policy Reform, Stanford University.

2. Ahluwalia, I.J. and Little, I.M.D. (Eds.) (1999), *India's Economic Reforms and Development (Essays in Honour of Manmohan Singh)*, Oxford University Press, New Delhi.

3. Basu, S.C. and Gulati, A. (2005), *Economic Reforms and Food Security: The Impact of Trade and Technology in South Asia*, Routledge.

4. Bhagwati, J.N.(1993), *India in Transition: Freeing the Economy*, Clarendon Oxford.

5. Bhalla, G.S. and Singh, G. (2001), *Indian Agriculture: Four Decades of Development*, Sage Publications.

6. Glinskaya, E. and Lokshin, M. (2005), *Wage Differentials Between The Public And Private Sectors in India*, The World Bank.

7. Mattoo, A. and Stern, R.M. (2003), *India and the WTO*, World Bank Publication.

8. Mohan, T.T.R. (2005), *Privatisation in India: Challenging Economic Orthodoxy*, Routledge.

9. Rao, C.H.H. (2005), *Agriculture, Food Security, Poverty and Environment: Essays on post-reforms India*, Oxford University Press.

10. Sengupta, D., Chakraborty, D. and Banerjee, P. (2006), *Beyond the Transition of WTO: An Indian Perspective on Emerging Issues*, Academic Foundation.

PUBLIC ECONOMICS

Objective:

Public finance (also known as public economics) analyzes the impact of public policy on the allocation of resources and the distribution of income in the economy. In this course, you will learn how to use the tools of microeconomics and empirical analysis to analyze the economic effects of public expenditures and taxation.

Unit-1: Meaning and Scope of Public finance

Public finance – Meaning and Scope – Public and Private Finance – Principles of Maximum Social Advantage – Public Goods, Private Goods

Unit-2: Public Revenue

Sources of public revenue Taxes -Classification of Taxes - Canons of Taxation, Principles of Taxation. Ability, Benefit and cost of service- Impact, Incidence and shifting of Tax Burden — Effects of Taxation – Major Taxes in India. Value Added Tax in India The concept of goods and service tax (GST)

Unit- 3: Public Expenditure and Public Debt

Public Expenditure Meaning and Importance – Reasons for the Growth of Public Expenditure 25– Wagner's Hypothesis, Peacock - Wiseman Hypothesis, Canon's of Public Expenditure – Effects of Public Expenditure. Public Debt: Meaning, Types of Public Debt, Debt Redemption.

References:

1. R.A Musgrave and PB Musgrave – Public finance – Tata Macgrail

2. Govinda Rao and Singh - Political Economy of Federalism in India – Oxford.

3. Shankar Acharya – Thirty Years of Tax Reforms in India (Article) EPW – 14-05-1995.

4. Bhatia HL – Public Finance – Vikas Publishing.

ENVIRONMENTAL ECONOMICS

Preamble: The Course is designed to gradually develop the capability of a student so

that he/she masters the significance and scope of environmental economics as a separate subdiscipline of teaching, research and policy. The paper focuses on: Elements of Environmental Economics, Environment-Economy Linkages and Working of these Linkages. Basic Understanding of Micro-economics, Public Economics, Quantitative Techniques and Natural Sciences is a desirable input for efficient learning

Unit-1: Basic Environmental Issues

Environmental Economics- Meaning, Definition, Nature, Scope and Limitations, Difference between Environmental Economics and Resource Economics., Economy-Environment Linkages. Elementary Ecology- Definition, Types and Functions of Ecosystem; Laws of Thermodynamics; Basic Concept of Capital Theory, Externality-Positive and Negative, Public Goods and Criterion for Public Goods; Market Failure; Sustainable Development: Concepts; Indicators of Sustainable Development. Environmental Degradation-Types, Causes and Consequences.

Unit-2: Economics of Natural Resources

Renewable and Non-Renewable Natural Resources: Forest Resources, Water Resources, Mineral Resources, Land Resources, Energy Resources; Common Property Resources (CPRs), Destruction of CPRs and Its Impact on Human Welfare.

Unit-3: Economics of Environmental Regulation

Evolution of Environmental Regulation; Environmental Legislations/ Policies in India; Instruments for Pollution Control: Command and Control Policy vs. Market Based Instruments: Taxes vs. Permits; Direct and Indirect Instruments of Pollution Control; Pollution Control System and Policy Measures in Indian Context

References:

1. Bhattacharya, Rabindra N. (2001), "Environmental Economics-An Indian Perspective", Oxford University Press, New Delhi
2. Boumal, W.J. and W.E. Oates (1988), "The Theory of Environmental Policy", 2nd Edition, Cambridge University Press, UK

3. Hanley, N.J.F. Shogren and B. White (1997), "Environmental Economics in Theory and Practice", OUP, Delhi.

4. Kolstad, Charles D. (2000), "Environmental Economics", Oxford University Press, New York

5. Sankar, U (2001), "Environmental Economics", Oxford University Press, New Delhi

6. Sengupta, R. (….), "Ecology and Economics: An Approach to Sustainable Development", Oxford University Press, New Delhi

7. Tietenberg, T. (1994), " Environmental Economics and Policy", Harper Collins, New York (T);

8. Tietenberg, T. (2003), Environment and Natural Resource Economics, 6th Edi. Pearson Education Inc. New Delhi.

9. Pearce D. W. and R. Kerry Turner, (1990), "Economics of Natural Resources and Environment, Baltimore, Maryland USA: The johns Hopkins University Press

OPTIONAL PAPERS

INDIA AND THE WORLD ECONOMY

UNIT-I

The changing structure of Indian Economy before and after 1991

India's External Sector – Commodity and Regional Composition of exports and imports, Major trading partners (US, EU, West Asia) -

Balance of Payments before and after 1991 - Implications

UNIT-II

ALTERNATIVE PATHS AMONG DEVELOPING ECONOMIES

China – a model of Socialist Market Economy

Revolution and Reforms in the Mexican Economy

North & South Korea: The lingering Shadow of the Cold War

Iran: The Struggle for a New Traditional Islamic Economy

North & South Korea: The lingering Shadow of the Cold War

UNIT-III

The evolving trends of world economy – the shift of the centre of gravity from West to East and from North to South

Indian Economy and the Globalizing World – Regional Cooperation and World Economic Integration – SAARC, BRICS, ASEAN

Relevance of Global Economic Governance – World Bank, IMF, WTO

READINGS:

1. Papoala, T. S. EMERGING STRUCTURE OF INDIAN ECONOMY - Implications of Growing Inter-sectoral Imbalances (isid.org.in/pdf/presAdd_IEA05.PDF)

2. Basu, K. (2004) (ed.), India's Emerging Economy: Performance and Prospects in the 1990s and Beyond.

3. Basu, K. (2008) (ed.), The Oxford Companion to Economics in India

4. Huang, Yasheng and Tarun Khanna (2003) "Can India Overtake China?," Foreign Policy, July-August.

5. Jorgenson, Dale and Khuong Vu (2005) "Information Technology and the World Economy," Scandinavian Journal of Economics 107 (4), forthcoming.

6. Srinivasan, T.N. (2005b) "Information Technology Enabled Services and India's Growth Prospects," in Lael Brainard and Susan Collins (Ed.) Off shoring White Collar Work: Issues and Implications, Washington D.C., Brookings Institution Press, forthcoming.

7. Virmani, Arvind (2002) "Sources of India's Economic Growth," Working Paper 131, New Delhi, Indian Council for Research on International Economic Relations (ICRIER).

8. IMF (2005), World Economic Outlook, Washington D.C., International Monetary Fund.

9. World Bank (2005) World Development Indicators, Washington D.C., World Bank.

10. G. Balachandran, India and the World Economy 1850-1950, OUP 2003

11. Chakravarty, S., Development Planning: The Indian Experience, Clarendon Press, Oxford, 1987.

12. Brahmananda, P.R. and Panchmukhi, V.R. (Eds.), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay, 1987.

13. AK Bagchi, 'De- Industrialization in India in the Nineteenth Century: Some Theoretical Implications', Journal of Development Studies, 12:2 (1976), 135-64

14. Acharya, S. 2009. *India and Global Crisis*. Academic Foundation, New Delhi.

WEB READINGS:

http://www.econ.yale.edu/~srinivas/IntegratingIndia.pdf

www.cacci.org.tw/Journal/2004%20Vol%202/CountryReport-India.pdf

www.thehindu.com/multimedia/archive/00952/Chapter_14_952322a.pdf

ECONOMETRICS - II

Unit- 1: Simple and Multiple Regression Analysis

Review of Simple and Multiple Regression Analysis, Dummy Variable Regression Model – Alternatives to Chow test, Interaction Effects, Technical Aspects of Dummy Variable Techniques, Violation of CLRM Assumptions and Model Specification Problems – Model Selection Criteria, Specification Errors: Consequences and Tests, Test for Regression Model, Coefficient of Determination, F-test, Applications to Application to Consumption studies and Production functions

Unit- 2: Dynamic Econometric Model

Distributed Lag Model (DLM) – Ad hoc Estimation, Koyck and Almon Approaches to DLM, Adaptive Expectation Model, Partial Adjustment Model, Auto Regressive Model, Method of Instrumental Variables, Detecting and Correcting Autocorrelation in Autoregressive Model

Unit- 3: Simultaneous Equation Model

Simultaneous Equation Bias, Identification Problem, Rules for Identification – Order and Rank Conditions, Indirect Least Square Methods, Two State Least Square (2SLS) Method, Application to Macro Models (Examples)

References:

1. D. Gujrati, Basic Econometrics, 4th Edition, McGraw-Hill/Irwin
2. Stock and Watson, Introduction to Econometrics, Pearson Publication
3. Cramer J.S., Empirical Econometrics.
4. Deaton A.S. and J. Muellbauer, Economics and Consumer Behaviour.
5. Klein L.R., Introduction to Econometrics
6. Wallis K.F., Topics in Applied Econometrics.

REGIONAL ECONOMICS

Objective:

To acclimatize to the student with the problems of regional economies and methods of analyzing them. The roles and natural resources, demographic base, location of industries and factors determining regional growth and development will be considered.

Unit – 1: Definition and Scope of Regional Economics

Regional Economics - Scope, Definition, Concerns of Regional Development, - Location Theories- -Weber- Christalien Losch Theory of Location and interdependence.

Unit – 2: Region – definition

Identification of Backward regions: Determinants of Regional Development: Natural Endowments Human Resources-Capital-Technology-Economic and Social

infrastructure; Factor and commodity mobility and Regional development; Convergence Theory.

Unit – 3: Regional Planning under alternative economic system

Historical perspectives of Indian development: Regional Development Models: Practice of Regional Planning in India, USA, Germany, Canada

References:

1. Harry N Richardson: regional Economics.

2. Hugy O. Nourse: Regional Economics,

3. Walter lsard: introduction to Regional Science.

4. Friedman & Alonse (Ed): regional Development.

5. Amitabh Kundu et al.: input-Output frame-work and Economic Analysis

6. B. Sarah, C.O.A.R. & J.B. Cuillingworth: Regional and Urban Studies,

7. Mark Wright: industrial Location & Regional Analysis.

8. David M. Smith: industrial Location.

9. David Mekee, Robert A. Dean (Ed) William H. Healey: Regional Economics   Theory and Policy.

10. Richardson: Regional Economics

11. Friedman and Alan (Ed): Regional Development Policy.

12. Seibert: Regional Economic Growth.

13. Fu-Chen Lo Kamal Salih (Ed): Growth pole strategy and Regional Development Policy.

14. Peter Hall: Urban and regional Planning.

15. O.E.C.D.: Regional Problems and Policies in O.E.CD Countries. Vol. I & II.

INTERNATIONAL FINANCE

Unit – I: The International Monetary System

Alternative Exchange Rate System., A Brief History of the International Monetary System

The European Monetary System and Monetary Union, Exchange Rate Policies in Emerging Markets

Unit – 2: The Foreign Exchange Market

Organization of the Foreign Exchange Market, Importance of Foreign Exchange Market Trading

Foreign Exchange Market Products and Activities, Parity conditions in International Finance

      i)   Arbitrage and the Law of One price

      ii)   Purchasing Power Parity

      iii)   The Fisher Effect

      iv)   The International Fisher Effect

      v)   Interest Rate Parity Theorem

Unit -3: International Financing and Investment Decisions

Overview of the International Financial Market, National Capital Markets and International Financial Centres, The Euro-currency Market and International Banks, The Euro-bonds, International Equities

References:

1. Brian Tew : The Evolution of International Monetary System, Hutchinson, 1985
2. Alan C Shapiro: Multinational Financial Management, Seventh Edition, John Wiley & Sons, 2003
3. Richard M Levich: International Financial Markets, McGraw Hill International Edition, 2001
4. A.V. Rajwade: Foreign Exchange, International Finance and Risk Management, Academy of Business Studies, 1996

ECONOMICS OF EDUCATION

Objectives: The main objectives of this course are that by the end of the course, students are expected to:

- Appreciate the importance of education at individual and societal level
- Have an insight into the education-economic development linkages
- Have a clear understanding with regards to India's education system and related concerns

Unit- I: Economics of Education

Meaning and Scope of Economics of Education, Education - Human Resource Development – Economic Development Linkages

Unit -2: Education Planning and Finance

Education planning techniques, Cost – Benefit Analysis, Theories of Public Expenditure, Resource Mobilisation and Utilisation, Effects of Education on levels of earnings and value based education

Unit -3: Education in India

Indian perspective to education, Sarva Shiksha Abhiyan, Right to Education and Legislations relating to Right to Education with special reference to Constitutional provisions/Preamble. Higher Education in India: Issues, Concerns and New Directions

References:

1. Belfield, C.R. (2000), *Economic Principles for Education: Theory and Evidence*, Edward Elgar Publishing.
2. Deka, B. (2000), *Higher Education in India: Development and Problems*, Atlantic Publishers &Dist.
3. Jha, P., Das, S., Mohanty, S.S. and Jha, N.K. (2008), *Public Provisioning of Elementary Education in India*, Sage Publications India Pvt. Ltd.

Detailed Readings:

1. Agarwal,A.K. (2005), *Development of Educational Systems in India*, AnmolPublicatonsPvt. Ltd.
2. Checchi, D. (2006), *The Economics of Education: Human Capital, Family Background and Inequality*, Cambridge University Press.

3. Gupta, N.L. (2000), *Human Values in Education*, Concept Publishing Company.

4. Harris, I.M. and Morrison, M.L., Peace Education, McFarland, 2003.

5. *Higher Education in India: Issues, Concerns and New Directions* (December 2003). Recommendations of UGC golden jubilee Seminars-2003, held at eleven universities in India.

6. Kashyap, S.C. (2006), *The Constitution of India*, Universal Law Publishing.

7. Kumar, B. and Hansara, B.S. (2000), *Extension Education for Human Resource Development*, Concept Publishing Company, 2000.

8. Pathak, R.P. (2007), *Education in the Emerging India*, Atlantic Publishers &Dist.

9. Sharma, R.N. and Sharma, R.K. (2004), *Problems of Education in India*, Atlantic Publishers &Dist.

World Development Report 1980, World Bank Publications

HEALTH ECONOMICS

Unit – I: Introduction to Health Economics

Defining Health Economics. Importance of Health Economics – Essential Features. Concepts: Health Health Care, Birth Rate, Fertility Rate, Death Rate, IMR, CMR, MMR, Morbidity Rate (Acute and Chronic), Disability Adjusted Life Year (DALY), Quality Adjusted Life Year (QUALY), Sex Ratio.

Unit- 2: Demand and Supply of Health Care

Demand for Health Care – Case of Health Care Accessibility – Socio Economic and Cultural Features, Determining Health Status – Supply of Health, Health Care Delivery System – Pricing of Health Care.

Unit- 3: Health Financing & Policy

Health Expenditure – Public & Private – Direct & Indirect – Health Insurance – Concept of User Cost – Health Policy of WHO, National Health Policy – NRHM, Health as a State Subject.

References:

1. V. Raman Kutty (2007), A Premier of health System Economics, Allied Publications, New Delhi

2. J.W. Hinderson (2009) Health economics and Policy, Thomson Learning

AGRICULTURAL ECONOMICS

Unit- 1: Introduction

Definition and scope of Agricultural Economics, Unique features of Agriculture, Role of Agriculture in Economic Development-Kuznet formulation, linkage between Agriculture and Non Agricultural sectors.

Unit -2: Agricultural Marketing and Price Policy

Agricultural Marketing, Efficiency criteria of Agricultural Marketing, causes for the inefficiency of Indian Agricultural Marketing,   Agricultural Price Policy and Evaluation, Public Distribution system in India-issues and challenges Food Corporation of India, Agicultural Costa and Price Commission.

Unit- 3 : Issues in India's Agricultural Development

Land Tenure system on the eve of independence, land reforms measures-Achievements, problems and policy- The new agricultural technology and Green Revolution-Rationale, Progress Problems and Prospects. Agricultural credit-Problems and sources, WTO and Indian Agriculture.

References:

1. GS Bhalla, Agricultural Development since Independence

2. TW Schultz, Transformation of Traditional Agriculture

3. Mellor, Agricultural Development

4. R.N. Soni,Leading Issues in Agricultural Economics

5. Sadhu and Singh,Agricultural Problems in India

 6. Indian Journal of Agricultural Economics Relevant issues

INDUSTRIAL ECONOMICS

Unit- 1: The Concept of a Firm
Economic Theory of Firm, Organisational form, Individual Ownership, Partnership and joint stock companies, Choice of organisational form, Public sector enterprises-Objectives and Role , Privatisation of Public Sector Undertakings in India.

Unit- 2: Industrial Productivity
Productivity and its measurement, Factors influencing industrial productivity, Productivity Movements in India, National Productivity Council, Size of Firm, optimum firm, Factors influencing optimum size.

Unit- 3: Industrial Pricing and Market Structure
Pricing under imperfect competition, the concept of workable competition on. Small Scale Vs Large Scale industries, Regional variations in Industrial development in India

References:
1. -R.R. Barthwal, Industrial Economics, New Age International Publisher
2. Donald A Hay and D.J Morris, Industrial Economics: Theory and Evidence-, Oxford University Press.
3. SSM Desai and Nimal Bhalerao, Industrial Economy of India: Himalaya Publishing House
4. K.V. Sivaya and VBM Das, Indian Industrial Economy:, S Chand Company
5. PK Dhar,Indian Economy- Kalyani Publisher

GAME THEORY APPLICATIONS

Unit -1: Static Games of Complete Information
Concepts: What is a Games of Strategy? How to think about strategy?Decision versus Game, Some terminology and Background Assumptions, Static versus Simultaneous Move Game, Games of Complete and Incomplete Information, Use of Game Theory, Simultaneous Move Games with Pure Strategies (Discrete Strategies) – Normal Form of Representation of Games, Solution Concepts: Dominant Strategy - Prisoners

Dilemma Game, Iterated Dominance , Nash Equilibrium, Mini-max Methods for Zero Sum Games, Matching of Pennies – no Equilibrium in Pure Strategies, Multiple Equilibrium in Pure Strategies - Battle Sexes Game, Coordination Games, Chicken Games, Focal Point, Economic Applications – Best Response Functions – Cournot Equilibrium.

Mixed strategy Equilibrium – Expected Utility, Best Response Analysis, Case of Domination by a Mixed Strategy

Unit -2: Dynamic Games of Complete Information

Extensive Form of a Game with Perfect Information - Information Sets, strategies and Outcomes, Nash Equilibrium, Backward Induction and Sub-game Perfect Equilibrium in finite Horizon Game

Extensive Game with Imperfect Information

Repeated Games and Sub-game Perfection –Finitely Repeated and Infinite Repeated Games

Games with Incomplete Information

Unit – 3: Information

Categories of Asymmetric Information Models – Adverse Selection, Moral Hazards, Mechanism Design in Adverse Selection and in Moral Hazards, Signaling and Screening

Principal Agent Problem - Production Game – Full Information, Sequential Move, Fixed Wage, Output based Wage under Certainty, Output based Wage under Uncertainty.

Moral Hazard –Incentive Compatibility Constraint and Participation Constraint, Monopoly Solution, Moral Hazard in Insurance Markets

Adverse Selection – The Market for Lemons, Production Game

Educational Signaling.

References:

1. Martin J Osborne, 'Introduction to Game Theory,' Indian Edition, Oxford Unversity Press

2. Avinash Dixit, Susan Skeath, David H. Reiley : Games of Strategy, 2010, 3rd Edition, VV Norton & Company.

3. Hall R. Varian, 'Microeconomic Analysis, Third Edition, Viva Books, 2009, India.

4. Walter Nicholson, Intermediate Microeconomic Theory: Basic Principles and Extensions, 9th Edition

5. Bernheim and Whinstone, Microeconomics / Edition 1, McGraw-Hill Companies.

FINANCIAL ECONOMICS

Unit- 1: Basics of Financial Markets

Indian Financial Markets, Operations and Regulations of Financial Markets, Market Efficiency, Diversification and Behavioural Finance

Unit- 2: Fundamental Analysis of Stocks

Fundamental Analysis and Stock Valuation, Investment Analysis, Risk and Return, Modern PortfolioTheory, Capital Asset Pricing Model , Single and Multi Factor Models

Unit- 3: Bond Market Analysis (Financial Income Analysis)

Allocating Resources over time: Compounding, Present Value and Discounting, Structure of Interest Rates, Bond Valuation and Yield Curves, Corporate Bonds, RBI Operations

References:

1. Bodie, Robert c Merton and David Cleaton (2009), Financial Economics, Pearson

2. Elton, Gruber Brown, Goetzmann (2007), Modern Portfolio Theory and Investment Analysis

3. Prasanna Chandra (2010), International Analysis and portfolio Management, Tata McGraw Hill

COMPUTER APPLICATIONS

Unit- 1: Computer Fundamentals and Data

Basics in Computer - Computer hardwares and softwares, Disk operating systems, Operating system – Windows, and Introduction to MS Office – Word and Excel, Different Types of Data – Time series, cross-section and Pooled, Data Entry, Tabulation and Graphical Representation in Excel, Data Imports and Exports from/to

application software Eviews/SPSS,Data tabulation and graphical representation in Eviews/SPSS

Unit- 2: Data Analysis in Eviews/SPSS

Moments - Mean, Median and Mode,Measures of Dispersion and Skewness,Correlation and Simple Regression,Multiple Regression Analysis

Unit- 3: Introduction to Time Series Analysis in Eviews/SPSS

Stochastic Processes,Autocorrelation Functions and Correlogram,Stationarity: Unit-Root Test,Timeseries Regression Analysis – Spurious Regression,Random Walk Model and Introduction to Cointegration Analysis

References

1. Rajaraman, V. (1996), Fundamentals of Computers, Prentice Hall of India, New Delhi.
2. Kerns (1993), Essentials of Microsoft Windows, Word and Excel; Prentice Hall of India, New Delhi.
3. Allen, R.G.D., Statistics for Economics
4. D. Gujrati (2002), Basic Econometrics, 4th Edition, McGraw-Hill/Irwin
5. Enders, W. (2003), Applied Econometric Time Series", 2nd edition, 2003
6. Eviews Manuals
7. SPSS Manuals

Syllabus for PhD in Economics, 2014-15

Paper I: Course on Research Methodology

Unit 1: Methodology of Research

• Philosophy of Research
• Research Design
• Experimental Survey and Case Studies
• Planning and Implementing Research Projects
• Methods of Data Collection and Data Processing
• Documentation - Writing the Research Thesis

Unit 2: Statistical and Mathematical Methods

• Probability Theory
• Theoretical Distributions: Discrete and Continuous
• Sampling Distribution
• Statistical Inference
•Data Mining/Filtering Techniques, ANOVA, Discriminant Analysis, Factor Analysis-Principal Component Analysis
• Linear Programming, Game Theory and Input-Output Analysis
• Exercises with Statistical/Econometric Software

Unit 3: Econometric Methods

• Methods of Analysis: Simple and Multiple Regressions
• Time Series Analysis: Stationarity and Integration Process, Cointegration & ECM, ARIMA, VAR
• Problems in Econometric Estimation
• Exercises with Statistical/Econometric Software

References
Unit 1
Kothari, C.R., "Research Methodology"
Kurien, C.T. (ed.), "A Guide to Research in Economics".
Ghosh, B.N., "Scientific Methods and Social Research".
Foercese, D.P. and Richer, S., "Social Research Methods".
Feeber, R. and Verdoom, P.J., "Research Methods in Economics and Business".
Wilkinson, T.S. and Bhandarkar, P.L., "Methodology and Techniques of Social Research".

Unit 2

Gupta, S.C. and V.K. Kapoor, "Fundamentals of Applied Statistics", Sultan Chand & Sons Publication.

Freund, J. E., "Mathematical Statistics", 5th Edition, Prentice-Hall International, 1999.

Hogg, R.V. and Craig, A.T. "Introduction to Mathematical Statistics", Prentice-Hall International, inc. Engle Wod Cliff, N.J., Fifth Edition, 1995.

Simon, Carl P. and Blume, Lawrence (1994), Mathematics for Economists, First Edition, 1994, W.W. Norton and Company.

A.C. Chiang and Kevin Wainwright (2005), Fundamental Methods of Mathematical Economics, Mcgraw-Hill.

Chiang, A.C. (1984), Fundamental Methods of Mathematical Economics, 3rd Edition, Mc-Graw Hill.

Allen, R.G.D.(1974), Mathematical Analysis for Economists, Macmillan Press, London.

Sydsaeter, Knut, Peter Hammond (2002), Essential Mathematics for Economic Analysis, Prentice Hall.

Dixit, A.K. (1990), Optimization in Economic Theory, 2nd Edition, Oxford University Press.

Unit 3

Gujarati, D.N., "Basic Econometrics", 4th Edition, McGraw-Hill, New York.

Enders, W., "Applied Econometric Time Series", John Wiley & Sons, New York.

Stock and Watson, "Introduction to Econometrics", Pearson Publication.

Wei, W.W.S., "Time Series Analysis: Univariate and Multivariate Methods", Addison-Wesley Publishing Company, New York.

Wojciech Charemza and Derek Deadman, "New Directions in Econometric Practice: General to Specific Modelling, Cointegration, and Vector Autoregression", Edward Elgar Publication.

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Paper –II: Advanced Studies in Economics

Unit 1: Microeconomics & Economic Growth
Microeconomics:
Economics of Information:
- Principal Agent Framework, Moral Hazard
- Adverse Selection,
- Network Externalities,
- Bundling

Economics of Growth:
- Economics of Growth-- In Retrospect and Prospect;
- Major Paradigms of Growth Theories;
- Political Economy of Growth ---Linkages, Convergence, Institutions and Resources.

Unit 2: Monetary Economics, Macroeconomics & International Trade
- Issues of Monetary Economics
- Issues of Macro Economics
- Issues of International Trade

Unit 3: Development & Contemporary Issues in Indian Economy Development
- Concept, Measurement and Indicators;
- Underdevelopment—Meaning, Measurement, Determinants and Implications;
- Approaches---From Adam Smith to Limits To Growth Paradigm
- Freedom, Justice and Development
- State, Markets and Development

Contemporary Issues in Indian Economy
- Monetary Policy
- Fiscal Policy
- Institutions and Governance
- Sectoral Analysis: Agriculture, Industry, Service, Infrastructure
- Social Sector: Education, Health, Environment, Gender and Livelihood

Reading List

Unit 1
- Hayek, F. A. (1945), ''The Use of Knowledge in Society,'' American Economic Review, XXXV, 519-530.
- Hirshleifer, J. (1973). "Where Are We in the Theory of Information?" American Economic Review, 63(2), 31-39. (JSTOR)
- Stiglitz, J. E. (2000), "The Contributions of the Economics of Information to Twentieth Century Economics," Quarterly Journal of Economics (Nov), p 1441-1478. (JSTOR).
- Liebowitz, S. J. and Margolis, S. E. (1994). Network Externality: An Uncommon Tragedy. Journal of Economic Perspectives. 8(2): 133-150
- Bakos, Y., & Brynjolfsson, E. (1999). "Bundling Information Goods: Pricing, Profits, and Efficiency," Management Science, 45(12): 1613-1630.
- Akerlof, G. (1970): "The Market for Lemons: Qualitative Uncertainty and the Market Mechanism," Quarterly Journal of Economics, 84, 488-500.
- Rothchild, M. and J. Stiglitz (1976): "Equilibrium in a Competitive Insurance Market," Quarterly Journal of Economics, 90, 629-49.
- Mas-Colell, Andreu, Michael D.Whinston and Jerry R. Green, (1995), Microeconomic Theory, OUP, New York.
- Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India
- Varian, Hall R., (1992), Microeconomic Analysis (Third Edition), W.W. Norton & Company, New York, London.
- Varian, Hal R. (1990), Microeconomics, W.W. Norton & Company, New York, London.
- Kreps, David M.(1998), A Course in Microeconomic Theory, Prentice Hall, India, New Delhi
- Sen, A.K. (19'70): Growth Economics, Penguin.
- Thirawall, A. (1978): Growth and Development, Macmillan, London.

Unit 2
- Dornbush, R. and S. Fischer (2004) – Macroeconomics (9th Ed, Tata-McGraw Hill)).
- Jha, R. (1991)– Contemporary Macroeconomic Theory and Policy; (Wiley Eastern)
- Levacic, R and A. Rebman (1986) – Macroeconomics; (2nd Ed, Macmillan).
- Mankiw, N. Gregory (2000) – Macroeconomics (4th Ed, Macmillan-Worth))
- Mankiw, N.G. and D. Romer (eds.) (1991) – New Keynesian Economics; (MIT, Cambridge)
- Begg, D. K. H. (1982), The Rational Expectation Revolution in Macro-Economics", Oxford,
- Davidson, Paul (1994), Post Keynesian Macroeconomic Theory, Aldershot, UK: Edward Elgar.
- Romer, David (1996), Advanced Macroeconomics, New York: McGraw-Hill.
- Salvatore, Dominick, International Economics, 6th Edition (1998) Prentice Hall, 7th and 8th Editions (2001 and 2004) John Wiley & Sons.
- Sodersten, Bo and Reed, G. (1994), International Economics, Macmillan Press Ltd., London
- Krugman P.R. and Obstfed D. (1994), International Economics: Theory and Policy. Third edition. Harper Collins. New York
- Caves, Jones and Frankel (1999), World Trade and Payments, 8th edition, Addison-Wesley.
- Alexander, G.J., W.F. Sharpe and J.V. Bailey (2002), Fundamentals of Investments, Third Edition, Prentice-Hall of India Private Limited, New Delhi
- Shapiro, Alan C., Multinational Financial Management, John Wiley and Sons, 2003, Seventh Editions, Chapter3.

• Kenen, P.B, The International Economy, Prentice Hall Publication.
• Pecchioli, R.M., The Internationalization of Banking, OECD, Paris; 1983

Unit 3
• Aggarwal and Singh (1958): The Economics of Underdevelopment. Oxford university Press, New Delhi
• Chakarvarti, S (1981):Development Planning: The Indian Experience. Oxford University Press, New Delhi.
• Chakarvarti, S. (1982): Alternative Approaches to a Theory of Economic Growth, Oxford University Press, New Delhi.
• Chenery, H. et-al(987): Handbook of Development Economics V 01.1 and II. North-Holland.
• Haq, M.: Reflection on Human Development, Oxford University Press. New Delhi.
• Harris. John: (1982), .Rural Development - Theories of Peasant Economy and Agrarian Change
• Meier, G.M.(1971): Leading Issues in Economic Development, OUP, New Delhi.
• Myrdal. G ((968): Asian-Drama: An Enquiry into the Poverty of Nations, Pelican, London.
• Sen, A.K. (1981): Poverty and Famines, Allied publishers, New Delhi.
• Sen, S.K. (1984): Resources, Values & Development, Basil Blackwell. London.
• Ahluwalia. I.J. and I.M.D Little (Eds.), India's Economic Reforms and Development (Essays in honour of Manmohan Singh) Oxford University Press, New Delhi – 1999.
• Bardhan. P.K. (9th Edition), the Political Economy of Development in India, Oxford University Press, New Delhi – 1999.
• Ahluwalia. I.J., Industrial Growth in India, Oxford University Press, New Delhi – 1985.
• Brahmananda, P.R. and V.R Panchmukhi (Edi.), The Development Process of Indian Economy, Himalayas Publishing House, New Delhi – 1987.
• Mookherjee. D. (Edi); Indian Industry, Policies and Performance – Oxford University Press, New Delhi – 1997.
• Mundle. S: Public Finance; Policy Issues for India – Oxford University Press, New Delhi –1999.
• Srinivasan. T.N. (Edi.) Measurement of Inequality and Poverty, Oxford University Press, 1997.
• Myrdal. Gunnar. Asian Drama: An Inquiry into Poverty of Nations, New Xark, Twentieth Century Fund.
• Williamson, Oliver E: the Economic Institutions of Capitalism, firms, Markets, Relational Contracting, New York: Free Press.
• Bardhan, Pranab; Poverty Agrarian Structure and Political Economy in India. Selected Essays – Oxford University Press, New Delhi – 2003.
• World Bank; Re-Energising the Agriculture Sector to Sustain Growth and Reduce Poverty – Oxford University Press, New Delhi – 2005.
• Rao Hunumanta, C.H.; Agriculture, Food Security Poverty and Environment, Essays on Post Reform in India, Oxford University Press, New Delhi – 2005.
• Duff L, Government and Market, Orient Longman, New Delhi 1997.
• Chelliah Raja J; Fiscal Policy in under developed countries, George Allen and Unwin, London 1971
• Bhargava, R.K.; Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi – 1985
• Ashok Rudra (1965) Economics of Agricultural Production and Resource Use, Prentice Hall
• Khusro AM. (1968) Readings in Agricultural Economics, Allied, Bombay
• Kuznets.S. (1965) Economic Growth and Structure, Oxford and DBH Publishing Company, New Delhi.
• Schultz T.W. (1964 Transforming Traditional Agriculture, New Have, Yale University Press

• Sidhu, D.S. (1990) Some Aspects of Agricultural Economics and Price Policies in India, IJAE,July-Sept.

• Suthworth, H. M. and B.F. Johnston(Ed) (1974 Agricultural Development and Economic Growth, Cornell Univesity, London

• Tyagi D.S (1974) Farmers Response to Agricultural Price In India: A Study in Decision Making, Heritage Publishers New Delhi

• Y.Haymi and V.Rutan (1971) Agricultural Development-An International Perspective, John Hopkins

• Witt L (1950) Role of Agriculture in Economic Development, a Review of J.I of Farm Economics, February.

• David A.M. Lea and D.P. Chaudhri (Ed), Rural Development and the State

• Harris John. (Ed). 1982, Rural Development theories of Peasant economy and agrarian change, Hutchison University library, South Africa

• Basu Kaushik, Agrarian Questions, Oxford University Press

• Battacharya S.N., Rural Industrialization in India

• Rao R.V., Rural Industrialization in India

• Bagchi V., Khadi and Village Industries in the Indian Economy

• Vasant Desai., Organization and Management of Small Scale Industries

• Sundaram J.B., Rural Industrial Development

• Vasant Desai, Problems and Prospects of Small Scale Industries in India

• Mehan K K , Small Industry Entrepreneurs Handbook

• Dandekar V.M. and Rath .N. –poverty in India

• Government of India – evolution of community development programme in India

• Desai, Vasant – study of rural economics, Himalya Publishing Company, New Delhi

Krishnamurthy V.T. –community development India

• Jain P.C. – Agriculture Reforms in India

• R.B.I Report on SFDA - -R.B.I. Mumbai

• Government of India, Ministry of Finance, Economic Devision Economic Survey- various issues

• Jain, P.C. Agricultural Reforms in India

Syllabus for Ph.D in Economics, JMI

(Paper I)Course on Research Methodology

Unit-1:
- Introduction to philosophy of science and research methodology
- Research Design: Need for research design, Features of a good research design, Different research design
- Experimental survey: Basic principles of experimental design
- Case studies - problems and limitations.
- Planning and implementing research projects: planning a research project, problem formulation, research strategy and methods

Unit-2:
- Methods of Data Collection: Direct method and Indirect methods
- Data collection through questionnaires and schedules
- Problems in data collection
- Data processing: Operations and Problems in data processing
- Sampling design: meaning and its applications
- Measurement and scaling techniques: Measurement Scales and Sources of errors in measurement

Unit-3:
- Analysis of Data: Measures of and analysis Central Tendency, Dispersion, Skewness and Kurtosis
- Theoretical Distributions: Normal, Poisson and Binomial
- Statistical Estimation and Testing of hypothesis.

Unit-4:
- Methods of Analysis: Simple and Multiple Regression
- Time series analysis
- Problems in econometric estimation

Unit-5:
- Documentation - writing the research thesis
- Introduction to statistical and econometric software

Readings:

Kothari, C.R., Research Methodology

Kurien, C.T. (ed.), A Guide to Research in Economics.

Ghosh, B.N., Scientific Methods and Social Research.

Foercese, D.P. and Richer, S., Social Research Methods.

Feeber, R. and Verdoom, P.J. , Research Methods in Economics and Business.

Wilkinson, T.S. and Bhandarkar, P.L., Methodology and Techniques of Social   Research

Enders, W., Applied Econometric Time Series, John Wiley & Sons, New York,.

Gujarati, D.N., Basic Econometrics, 4th Edition, McGraw-Hill, New York.

Wei, W.W.S., Time Series Analysis: Univariate and Multivariate Methods, Addison-Wesley Publishing Company, New York

(Paper II)Advanced Topics in Economics

Unit 1: Micro and Macro Economics
- Consumer Demand Theory: Choice under Certainty and Uncertainty
- Theory of Production and Cost
- Inflation and Unemployment in the Closed and Open Economy
- Macro policy options

Unit 2: International Trade, International Finance, Corporate Finance
- Modern theory of trade and trade Policy,
- Intra-Industry Trade, Free Trade versus Protection, Analysis of gains from free trade.
- Theories of Balance of Payment and exchange rate determination
- Policy Conflicts and Adjustment under Fixed and Flexible Exchange Rates
- Modern Investment Theory
- Financial Derivatives

Unit 3: Development and Growth Theory
- Theories of under-development
- Classical Growth Models
- Endogenous Growth Models
- Sustainable Development

Unit 4: Economic Issues and Policy-I
- Planning and Economic Reforms
- Financing of Infrastructure Development, Education Sector,
- PSUs, Privatization and Disinvestment,
- Fiscal and Monetary Policy Approaches
- Tax Reforms, Central Government Finances

- Financial Sector Reforms, Money and Capital market.
- Foreign Trade Liberalization, Balance of Payments, Exchange Rate
- World Trade Organization (WTO) and Indian Competition Policy.
- Patterns (structure) of lndia's Foreign Trade and India's Trade Policy, RTAs and FTAs.
- WTO and Effects of Trade (Liberalization and Globalization) on Poverty, Inequality, Environment, Gender, Labour Standards, Technological Transfers etc.

Unit 5: Economic Issues and Policy-II
- Poverty, Income Distribution and Justice
- Migration and Demographic Transition
- Land Reforms in India and their impact on Agrarian Structure
- The New Economic Policy and Indian Agriculture
- Nature and Problems of Rural Development in India
- Indian Industry and Structural Changes
- Rural industrialization and strategies
- Rural poverty alleviation and employment programmes

Reading List:

Unit 1
- Mas-Colell, Andreu, Michael D.Whinston and Jerry R. Green, (1995), Microeconomic Theory, OUP, New York.
- Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India
- Varian, Hall R., (1992), Microeconomic Analysis (Third Edition), W.W. Norton & Company, New York, London.
- Varian, Hall R.,(1990), Intermediate Microeconomics, W.W. Norton & Company, New York, London.
- Kreps, David M.(1998), A Course in Microeconomic Theory, Prentice Hall, India, New Delhi (For Unit V).
- Dornbush, R. and S. Fischer (2004) – Macroeconomics (9th Ed, Tata-McGraw Hill)).
- Jha, R. (1991)– Contemporary Macroeconomic Theory and Policy; (Wiley Eastern)
- Levacic, R and A. Rebman (1986) – Macroeconomics; (2nd Ed, Macmillan).
- Mankiw, N. Gregory (2000) – Macroeconomics (4th Ed, Macmillan-Worth))
- Mankiw, N.G. and D. Romer (eds.) (1991) – New Keynesian Economics; (MIT, Cambridge)
- Begg, D. K. H. (1982), The Rational Expectation Revolution in Macro-economics", Oxford, Allan
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- Romer, David (1996), Advanced Macroeconomics, New York: McGraw-Hill.

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- Thirawall, A. (1978): Growth and Development, Macmillan, London.

Unit 4 and Unit 5
- Ahluwalia. I.J. and I.M.D Little (Eds.), India's Economic Reforms and Development (Essays in honour of Manmohan Singh) Oxford University Press, New Delhi – 1999.
- Bardhan. P.K. (9th Edition), the Political Economy of Development in India, Oxford University Press, New Delhi – 1999.
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- Williamson, Oliver E: the Economic Institutions of Capitalism, firms, Markets, Relational Contracting, New York: Free Press.

4

- Bardhan, Pranab; Poverty Agrarian Structure and Political Economy in India. Selected Essays – Oxford University Press, New Delhi – 2003.
- World Bank; Re-Energising the Agriculture Sector to Sustain Growth and Reduce Poverty – Oxford University Press, New Delhi – 2005.
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Minutes of the BOS Meeting Held on 15 July 2016

The Meeting of the Board of Studies (BOS) was held on 15 July 2016 at 3:30 pm in the Model Class-Room-1 of the Department.

The following members attended the meeting:

1. Prof. Shahid Ahmed, Head & Chairman, BOS
2. Dr. Mirza Allim Baig, Member and Secretary, BOS
3. Prof. Asok Mittal, External Expert
4. Prof. Majid Jamil, Internal Expert
5. Mr. Shakeel Ahmed, Member
6. Mr. Taqueer Alam Farooqui, Member
7. Mr. Asheref Illiyan, Member
8. Dr. Bathula Srinivasu, Member
9. Dr. Saba Ismail, Member

Agenda 1: Confirmation of the Minutes of the Last BOS Meeting

The minutes of the last BOS Meeting held on 12 May 2016 were circulated in advance and no comment or suggestions were received. The minutes of the last BOS meeting were confirmed without any change.

Agenda 2: Restructuring/ Up-dating the Syllabus

The structure and revision of the syllabus done by the Department was presented before BOS. The Codes of the Papers and Credit of the Papers were assigned in the restructuring. The BOS thoroughly discussed the Course Structure and Syllabus of all the Programmes, viz., M.A. Economics, B.A. (Hons) Economics, B.A. Programme and B.A. Subsidiary; and approved the Course Structure and the syllabus. The revised syllabus will be uploaded in the University Website. The HOD thanks the member of the Syllabus Restructure Committee for their meticulous efforts.

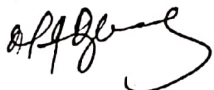## Agenda 3: Any Other Item with the Permission of the Chair

1. The request for change of PhD Topic was received from Ms. Kirti Gupta, duly forwarded by the Supervisor. Since the request is within one year of PhD registration, BOS granted the change of the topic. The topic – "English Language Skills and Occupational Choices" will now be read as "Foreign Capital Flows and Its Macroeconomic Impact in India".

2. The Syllabus Restructure and Revision Committee was converted to Standing Committee for Syllabus Restructure and Revision. The Composition of the Committee is as follows:
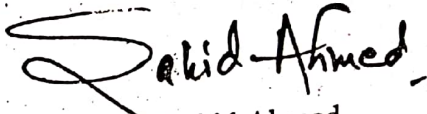   (a) Mr. T.A. Farooqui – Coordinator
   (b) Mr. Asheref Illyian – Member

(c) Dr. Mirza Allim Baig – Member
(d) Dr. Bathula Srinivasu – Member
(e) Dr. Saba Ismail - Member

The revision and restructure of the syllabus are continuous process. At any point of time, if any faculty member feels the need to revise the syllabus, he/she can submit the revised version to the Committee. If the Committee is satisfied, it may forward this to BOS Chairman for necessary action. The BOS authorised the Chairman to approve the Course if needed and present the same in the subsequent BOS.

3. Prof. Shahid Ahmed briefed about the status of DRS Stage II. He met the senior officials in UGC and discussed the continuation of the DRS. On the request of HOD, Honourable VC talked to UGC officials to release the grant.

4. Mr. Tauqeer Alam Farooqui proposed for plausible introduction of M.A. Economics (Evening) Programme in the Department. The justification of this Programme was to cater the huge demand for the M.A. Economics in the Department. The matter was referred to DC Meeting for its feasibility and modality.

The meeting was closed at 5:00 pm with the thanks to the Chair.

Dr. Mirza Allim Baig
(Secretary, BOS)

Prof. Shahid Ahmed
(Head & Chairman, BOS)

Department of Economics
Jamia Millia Islamia
New Delhi, India

Minutes of the BOS meeting held on 12th May, 2016

The Board of Studies (BOS) meeting was held on 12th May, 2016 at 3:30 p.m. in the Model Class Room - I of the Department of Economics. The meeting was chaired by Prof. Shahid Ahmed, Head, Department of Economics. The following members have attended the meeting:

1. Prof. Shahid Ahmed, Head, Deptt. of Economics, JMI	Chairman
2. Prof. Majid Jamil Deptt. of Electt. Engg., JMI	Int. Member
3. Prof. N.U. Khan, Deptt. Of Social Work, JMI	Int. Member
4. Prof. H.S. Rizvi, Deptt. of Economics, JMI	Member
5. Mr. Shakeel Ahmad, Deptt. of Economics, JMI	Member
6. Mr. Tauqeer Alam Farooqui – Deptt. of Economics, JMI	Member
7. Mr. Asheref Illiyan – Deptt. of Economics, JMI	Member
8. Dr. Mirza Allim Baig, Deptt. of Economics, JMI	Member
9. Dr. Bathula Srinivas – Deptt. of Economics, JMI	Member
10. Dr. Saba Ismail – Deptt. of Economics, JMI	Member

Prof. Mohd. Shafique, Dean, FSS, JMI, Prof. Shahid Ashraf, Deptt. of Economics, JMI, Prof. Ashok Mittal, Deptt. of Economics, AMU and Prof. Biswajit Dhar, CESP, JNU could not attend the meeting due to their prior engagements.

At the outset, Chairman welcomed the new member of the BOS, Prof. N.U. Khan, Head, Department of Social Work and sought his cooperation in the functioning of the department to achieve higher academic standards. He also appreciated the contributions made by the following outgoing members during their tenure as member of the BOS:

1. Prof. N.A. Azad; 2. Prof. M.S.Bhatt and 3. Prof. Syed Akhtar Hussain

Thereafter, following decisions were taken in the meeting:

Agenda Items:

1. **Confirmation of the Minutes of the Last BOS meeting:** Since no observation was received from any member on the Minutes of previous meeting of BOS held on 7th and 8th September, 2015, the BOS confirmed the said Minutes.

2. **Restructuring/updating the Syllabus:** The course structure of M.A. (Economics), B.A. (Hons) and B.A. Programme/Subsidiary (Annexure-I, II, III) were discussed and minor changes were suggested by the members. BOS authorized the department to make necessary changes, if required, in course structure and design the syllabus at Department level and place the same in next BOS as a reporting item.

3. **Ph.D. Students' request for leave, Extension Period for Ph.D., Cancellation of Ph.D. admissions, Change of Ph.D. topics, etc.**
   a) **Extension Period for Ph.D.:**
   ➤ One year extension request from Ph.D. scholars, namely Mr. P. Srinivasa Rao and Ms. Aditi Aeron Bansal was submitted through their supervisors which was discussed and approved.

   ➤ One year extension request from Ph.D. scholars Ms. Jasleen Kaur was submitted through her supervisors which was discussed and approved. In view

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of the retirement of her Supervisor Prof. M.S. Bhatt, BOS appointed Prof. Halima Sadia Rizvi as her supervisor and Prof. M.S. Bhatt as Co-supervisor on the request of the candidate.

- In view of the retirement of Prof. M.S.Bhatt, BOS appointed Prof. Shahid Ashraf as the new supervisor of Ms. Apra Sinha.

- One year extension request from Ph.D. scholars Ms. Areej Aftab Siddiqui was submitted through her supervisors which was discussed and approved. In view of the retirement of her Supervisor Prof. N.A. Azad, BOS appointed Prof. Shahid Ahmed as her new supervisor.

- Application of Ms. Namita Kapoor dated 28 April 2016 seeking the extension for completing PhD work was discussed in the BOS. The scholar has not applied for extension for sixth year and seeking extension in the seventh year. As per JMI ordinance, *"A candidate enrolled in the Ph.D. course will be required to submit his/her thesis not earlier than two years but not later than five years. Provided that the Board of Studies/ Committee of Studies, after the expiry of five years period, may grant an extension for a period of one year on the recommendations of the Supervisor concerned. If the candidate fails to submit his/ her Ph.D. Thesis within the extended period of one year, an extension of another year may be granted by the Vice – Chancellor on the basis of the recommendation of the Board of Studies/ Committee of Studies"*. BOS observed that she has not submitted any progress report of her research through the supervisor since 31st October, 2012. She bears a casual attitude towards research as reported by the supervisor about her irregularity. She has neither met nor reported/updated the supervisor about her research for last two years. BOS observed that her case is not fit for consideration either in word or in spirit of the existing JMI ordinances. In view of this, her application is not tenable and hence BOS not found fit to recommend the candidate for extension of time for completion of Ph.D. work.

- **Extension of Non-Net Fellowships:** One request of extension of non-net fellowship from 18/09/2015 till the date of Ph.D. thesis submission by Ms. Jaweriah Hazrana through her supervisor was submitted which was discussed and approved.

b) **Cancellations of Ph.D. Admissions:** Mr. Mustafa Kocoglu through his supervisor had submitted a request for cancellation of his Ph.D. admission, BOS discussed and recommended for cancellation of his Ph.D. admission.

c) **Change of Ph.D. topics:** Following Ph.D Students have requested for a change in their Ph.D topics through their supervisors:
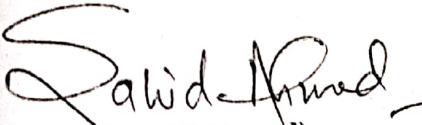
Name	Existing Topic	Proposed Topic
Ms. Nidhi Bagaria	Analysis of Structural Impact of Trade Liberalisation-A Comparative Study of China and India	Structure and Performance of Exports-A Comparative Study of China and India
Ms. Swatilekha Thakur	Dynamic of Exchange Rate Volatility, Foreign Trade and FDI in India	India-Africa Trade Relations: An Analysis with specific reference to African LDCs.

2

BOS discussed and approved the proposed change in Ph.D Topics.

4. **Any other Item with the permission of the chair**
   - The coordinator of workload allotment committee circulated the minutes of the meeting held on 27th April, 2016 which was endorsed by BOS (Annexure-IV).
   - Name of examiners/paper setters and moderators were endorsed and approved.

The meeting came to an end at 5:30 pm with thanks to the Chairman.

(Prof. Shahid Ahmed)
Chairman - BOS

Dr. Shahid Ahmed
Prof. and Head
Department of Economics
Jamia Millia Islamia
New Delhi-110025

Department of Economics
Course: B.A.Programme /B.A. (Subsidiary)
Semester-Wise Paper and Credits*
(REVISED COURSE STRUCTURE w.e.f. 2016-17)

Semester-I	Semester-II
BES-(P/S)-101: Principles of Microeconomics	BES-(P/S)-201:Principles of Macroeconomics
Semester-III	**Semester-IV**
BES-(P/S)-301 (Old) Macro Economics – I (2016-17)/ BES-(P/S)-301:Indian Economy (2017-18 Onwards)	BES-(P/S)-401 (Old) Macro Economics – II (2016-17)/ BES-(P/S)-401:Money and Banking
Semester-V	**Semester-VI**
BES-(P/S)-501: International Trade	BES-(P/S)-601: Public Economics

*Each paper carries 100 marks/4 credits.

Syllabus for B.A. Programme/ B.A. Subsidiary

BES-(P/S)-101: Principles of Microeconomics

Unit- 1: Basic Concepts in Economics

Demand: Demand function, law of demand, determinants of individual demand; demand curve and demand schedule; market versus individual demand schedule; extension and contraction of demand, shifts in the demand curve.

Supply: Supply function, determinants of supply; supply schedule and supply curve; market versus individual supply; extension and contraction of supply, shifts in the supply curve.

Concepts of elasticity of demand; factors affecting elasticity of demand; elasticity of supply.

Unit- 2: Consumption, Production and Costs

Concept of utility, budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects;

Production isoquants, law of variable proportion, economic region of production, return to scale using isoquants. Cost of Production: Long run and short run costs of production, various cost concepts and shape of their curves; short run costs and output decisions; equilibrium of the firm.

Unit-3: MARKETS

Introduction to Markets
Perfect Competition: Assumptions, Equilibrium of the firm and the industry in the short and the long runs, including industry's long run supply curve
Monopoly: features of monopoly, price and output under monopoly, nature and degree of price discrimination.

Suggested Readings:

1. Pindyck,R.S., D.L. Rubinfeld and P.L .Mehta;*Microeconomics*, Pearson Education.
2. N.Gregory mankiw, *Principles of Micro Economics* ,Cengage Learning
3. Browining ,E.K. and J,M Browning ; *Microeconomic Theory and Applications*, Kalyani Publishers,New Delhi.
4. Gould,J.P . and E,P.Lazear *; microeconomic Theory* ,All India Traveller bookseller ,New Delhi.
5. Lipsey ,R.G.and K.A. Chrystal ;*Economics* ,Oxford University Press.
6. Salvatore,D.Schaum's *Outline of Theory and Problems of Microeconomic Theory*,McGraw-Hill,International Edition.

BES-(P/S)-201: Principles of Macroeconomics

Unit-.1 Basic Concept of National Income.

Concepts of National Income –GNP and NNP at market price and factor cost, National product and Domestic product, Measurement of National Income–Output Method, Income Method and Expenditure Method, difficulties in the measurement of National Income.

Unit.2 Classical Theory of Output & Employment.

Says law of markets and Quantity theory of Money, Classical model without saving and Investment. Effects of the change in Labour supply and in Change in labour demand, on the level of output employment, Rigid money wage, monetary policy and full employment. Classical theory with saving and investment.

Unit.-3 Keynesian Theory of Income and Employment.

The Keynesian approach to the determination of price, Output and Employment –The Complete Keynesian model.`Consumption function, Saving and Investment, Concept of Multiplier, Government Expenditure Multiplier, and tax multiplier, Leakages of multiplier.

Basic Readings:

1.Shapiro E. Macro Economic Analysis Second Edition.

2. Vaish,M.C. Macroeconomic Theory,Vikas Publishing House Pvt.Ltd.

3. Macroeconomics N. Gregory Mankiw, First Indian Reprint 1992.

4. Wilfred Beckerman' An Introduction to National Income Analysis'.

5. S.K.Aggarwal National Income Accounting Latest Edition.

BES-(P/S)-301: Indian Economy

Unit- 1: Concept of Developed and Developing Economies
Characteristics of a developing economy – basic features of Indian economy -Population and Economic Development - Demographic trends of India – Occupational Structure - Population policy, Employment in organised and unorganised sectors , Issues in Indian Planning – Objectives and critical evaluation of each Plan.

Unit-2: Perspective of India's Agricultural and Industrial Economy
Importance of Agriculture in Indian economy – trends in agriculture production and productivity, Green Revolution and Food Security, Agriculture Price Policy, Sources of Agricultural Finance and Sustainable Agricultural Growth, Industrial Policy – pre and post 1991 and trends in India's industrial growth and productivity, Small vs. large industry, Policy issues and future prospects: infrastructure, and regional imbalances

Unit-3: Contemporary Issues
Macro-economic stabilization – fiscal and monetary policies, Globalisation and its impact on the Indian economy with special reference to global financial crisis, 2007-08, India and the World Economics, India's foreign trade and investment policies,

References:
1. Bansil, P.C, *Agricultural Problems of India*, Vikas Publishing House Pvt. Ltd.
2. Datt, R. and Sundharam, K.P.M, *Indian Economy*, S. Chand & Company Ltd, New Delhi.
3. Kapila, U. (2008-09), *Indian Economy Since Independence*, Academic Foundation, New Delhi.
4. Mookherjee, D. (1997), *Indian Industry: Policies and Performance*, Oxford University Press,

Detailed Readings:
1. Acharya, S. (2002), *India: Crisis, Reforms and Growth in the Nineties*, Working Paper No. 139, Centre for Research on Economic Development and Policy Reform, Stanford University.
2. Ahluwalia, I.J. and Little, I.M.D. (Eds.) (1999), *India's Economic Reforms and Development (Essays in Honour of Manmohan Singh)*, Oxford University Press, New Delhi.
3. Basu, S.C. and Gulati, A. (2005), *Economic Reforms and Food Security: The Impact of Trade and Technology in South Asia*, Routledge.
4. Bhagwati, J.N.(1993), *India in Transition: Freeing the Economy*, Clarendon Oxford.
5. Bhalla, G.S. and Singh, G. (2001), *Indian Agriculture: Four Decades of Development*, Sage Publications.
6. Glinskaya, E. and Lokshin, M. (2005), *Wage Differentials Between The Public And Private Sectors in India*, The World Bank.
7. Mattoo, A. and Stern, R.M. (2003), *India and the WTO*, World Bank Publication.
8. Mohan, T.T.R. (2005), *Privatisation in India: Challenging Economic Orthodoxy*, Routledge.
9. Rao, C.H.H. (2005), *Agriculture, Food Security, Poverty and Environment: Essays on post-reforms India*, Oxford University Press.
10. Sengupta, D., Chakraborty, D. and Banerjee, P. (2006), *Beyond the Transition of WTO: An Indian Perspective on Emerging Issues*, Academic Foundation.

BES-(P/S)-401: Money and Banking

Unit- 1: Money and Evolution

Money an overview- Classification of Money- Theories of Demand for Money -- Various Approaches- Fisher, Cambridge, Keynes, Friedman

Unit-2: Banking System- an overview

Banking System- Central Bank's – Role, Functions, Credit Control Methods- Commercial Banking- functions, Process of Credit Creation, Social banking

Unit- 3: Monetary Policy and Perspectives

Monetary Policy- goals and objectives of Monetary Policy- Monetary Policy in India, Fiscal Policy in India- Fiscal Policy measures in India - Financial sector reforms in India

References:

Chandler, L.V. The Economics of Money and Banking, S. Chand & Company Ltd., New Delhi

M.K. Lewis (2000), Monetary Economics, OUP

M.R. Baye, D.W. Jansen (1996), Money Banking and Financial Markets, AITBS, (Indian Edition)

Maurice Levi (1999), International Finance, Tata McGraw Hill

L.M. Bhole (1999), Financial Institutions and Markets, Tata Mcgraw Hill

R.B.I. Bulletin, Annual Report; Report on Currency and Finance

R.B.I - Report of the Working Group: Money Supply Analytics and Methodology of Compilation, 1998.

S.B.Gupta, Monetary Economics

Y.V. Reddy (2000), Monetary and Financial Sector Reforms in India UBSPD, New Delhi

BES-(P/S)-501: International Trade

Unit-I: Introduction to International Trade

International Trade definition, scope current scenario of trade, opportunity cost and production possibility curve, Terms of Trade, Rcardian Theory of Trade, its criticism and application.

Unit – II: Trade Policy

Free Trade and Economic Protection, Theory and Practice, Economic Effects of Tariff, Import Quota, Import Substitution and Export Promotion, Trade Negotiation under General Agreement on Tariff and Trade (GATT) and World Trade Organization (WTO).

Unit-III : Balance of payment and exchange rate

Balance of payment meaning and its components, exchange rate determination, fixed and flexible exchange rate, balance of payments in under liberalised trade regime, brettlor wood monetary system and its breakdown

Basic Readings:

- Ellsworth, P.T. International Economics, 1969
- Haberler G, The Theory of International Trade, 1935
- Bo-Sodersten and Goeffrey Reed, International Economics III Edition, 1994
- Salvatore, D International Economics, 1983.

BES-(P/S)-601: Public Finance

Unit-I : Meaning and Scope of Public Finance:

Public finance-Meaning and Scope –Public and Private Finance –Principles of Maximum Social Advantage –Public Goods, Private Goods, Merit Goods.

Unit-II: Principles of Taxes

Source of Public revenue Taxes Classification of Taxes-Canons of Taxation, Principles of Taxation .Ability ,Benefit and Cost of Service –Impact ,Incidence and shifting of Taxation-Major Taxes in India. Value Added Tax In India the concept of Goods And Services Tax (GST).

Unit-III : Public Expenditure and Public Debt:

Public Expenditure Meaning and Importance –Reasons For the Growth of Public Expenditure 25- Wagner's Hypothesis, Peacock –Wiseman Hypothesis ,Canon's of Public Expenditure – Effects of Public Expenditure. Public Debt: Meaning Types of Public Debt, Debt Redemption.

Basic Readings:

- R.A.Musgave and PB Musgrave –Public Finance –Tata Macgrail.
- Govinda Rao and Singh –Political Economy of Federalism in India –Oxford.
- Shankar Acharya –Thirty Years of Tax Reforms in India (Article) EPW-14-05-1995.
- Bhatia HL-Public Finance –Vikas Publishing.

Department of Economics
Course: B.A. (HONS) ECONOMICS
Semester-Wise Paper and Credits*
(REVISED COURSE STRUCTURE w.e.f. 2016-17)

Semester-I	Semester-II
BES-C-101: Micro Economics-I BES-C-102: Mathematical Methods for Economics-I BES-CB-101: Environmental Economics	BES-C-201: Micro Economics-II BES-C-202: Mathematical Methods for Economics-II BES-CB-201: Agricultural Economics
Semester-III	**Semester-IV**
BES-C-301: Macro Economics-I BES-C-302: Statistical Methods -I BES-C-303: Indian Economy BES-AE-301: Economics of Education	BES-C-401: Macro Economics-II BES-C-402: Statistical Methods-II BES-C-403: Money and Banking BES-CB-401: International Finance
Semester-V	**Semester-VI**
BES-C-501: Development Economics BES-C-502: Econometrics - I BES-C-503: International Trade BES-CB-501: Financial Economics	BES-C-601: History of Economic Thought BES-C602: Public Economics BES-C-603: Econometrics - II BES-SE-601: Computer Applications in Economics

*Each paper carries 100 marks/4 credits.

BES-C-101: MICROECONOMICS-I

Unit-1: Theories of Consumer Behaviour
- Law of demand/supply, Determinants of demand/supply, Expansion/ contraction of demand/ supply, Increase/ decrease in demand/ supply, Market demand/ supply curve, concept of equilibrium, Elasticity of demand/supply and its measurement
- Cardinal utility approach (assumptions, equilibrium and its critique)
- Ordinal utility approach (assumptions, equilibrium and its critique), Income consumption curve, Engel curve, Price consumption curve, Income effect, Substitution effect and Price effect (Hicks and Slutsky approaches)
- Revealed Preference approach
- Consumer's surplus-Marshallian and Hicksian approaches.

Unit-2: Theory of Production and Costs

- Production Function, law of variable proportions, Isoquants, factor substitution, Equilibrium of the firm with respect to input use, Returns to scale, Economies and Diseconomies of scale, Expansion path, features of Cobb Douglas production function and elasticity of substitution
- Different concepts of cost and their inter-relationship, Short run and long run cost curves, Empirical evidence on costs, Modern theory of costs

Unit-3: Market Structure-I

- Perfect competiton(assumptions, features revenue curves, short & long run equilibrium of firm and industry, economic profits, Short and long run supply curve of firm and industry
- Monopoly (Features, conditions, Equilibrium of the firm, Price discrimination, Conditions of equilibrium under price discrimination.

References:
1. Varian H.R: Intermediate Microeconomics, 7th Edition 3
2. Pindyck, Rubinfield and Mehta: Microeconomics, 6th Edition
3. Ferguson and Gould: Micro economics, 6th Edition
4. Gravelle and Rees- Microeconomics; Pearson Education, 2nd Edition
5. Nicholson, Microeconomics

BES-C-102: MATHEMATICAL METHODS FOR ECONOMICS- I

Unit -1: **Basic concepts, Functions and Graphs**
- ➢ Sets and set operations, Ordered pairs, the real numbers, natural numbers, integers, rational and irrational numbers; absolute value and intervals; inequalities.
- ➢ The general concept of function, types of function (linear, quadratic, power, exponential, inverse); graphs of functions; Applications in Economics

Unit-2: Limits, Continuity and Single variable Differential Calculus
- ➢ Limits, continuity and differentiability, rules of differentiation (simple differentiation, sums, products, and quotients); Second and higher order derivatives, power rule, chain rule, implicit differentiation; Linear approximation and differentials; Quadratic approximations, Elasticities the Intermediate-value Theorem; the Extreme-value Theorem; The Mean-value Theorem; Indeterminate forms and L'Hopital's rule; Applications in Economics

Unit-3: **Single variable optimization and Integral Calculus**
- ➢ Stationary points of a function, Maxima and Minima(local and global); Convexity and Concavity of functions; Points of inflection; Optimization of economic functions Rules of integration, integration by parts, integration by substitution, indefinite integral, Definite Integral, Proper and Improper integral; Areas under curves and economic application of integration.

References:
1. Knut Sydsaeter and Peter J. Hammond (2005), *Mathematics for Economic Analysis*. Pearson Educational Asia: Delhi, 4th Indian reprint.
2. Chiang, A. C. & Kevin Wainwright (2005) (Fourth Edition): Fundamental Methods of Mathematical Economics, McGraw-Hill.
3. Allen, R.G.D.(1974), Mathematical Analysis for Economists, McMillan press, London
4. Chiang, A. C. (1984), *Fundamental Methods of Mathematical Economics, 3rd Ed*, McGraw-Hill.
5. Hoy,M., J. Livernois, C. McKenna, R. Rees and T. Stengos(2001), Mathematics for Economics, 2nd Edition Prentice Hall, India.
6. Dowling, Edward T. (1992), Schaum's Outline of Theory and Problems of Introduction to Mathematical Economics, 3rd Edition, McGraw Hill.

BES-CB-101: ENVIRONMENTAL ECONOMICS

Unit-1: Basic Environmental Issues:
➢ Environmental Economics- Meaning, Definition, Nature, Scope and Limitations, Difference between Environmental Economics and Resource Economics., Economy-Environment Linkages. Elementary Ecology- Definition, Types and Functions of Ecosystem; Laws of Thermodynamics; Basic Concept of Capital Theory, Externality-Positive and Negative, Public Goods and Criterion for Public Goods; Market Failure; Sustainable Development: Concepts; Indicators of Sustainable Development.

Unit-2: Economics of Natural Resources:
➢ Renewable and Non-Renewable Natural Resources: Forest Resources, Water Resources, Mineral Resources, Land Resources, Energy Resources; Common Property Resources (CPRs), Destruction of CPRs· and Its Impact on Human Welfare.

Unit-3: Economics of Environmental Regulation
➢ Evolution of Environmental Regulation; Environmental Legislations/ Policies in India; Instruments for Pollution Control: Command and Control Policy vs. Market Based Instruments: Taxes vs. Permits; Direct and Indirect Instruments of Pollution Control; Pollution Control System and Policy Measures in Indian Context

Basic Readings:

1. Bhattacharya, Rabindra N. (2001), "Environmental Economics-An Indian Perspective", Oxford University.Press, New Delhi
2. Boumal, WJ. and W.E. Oates (1988), "The Theory of Environmental Policy", 2nd Edition, Cambridge University Press, UK
3. Hanley, NJ.F. Shogren and B. White (1997), "Environmental Economics in Theory and Practice", OUP, Delhi.
4. Kolstad, Charles D. (2000), "Environmental Economics", Oxford University Press, New York
5. Sankar, U (2001), "Environmental Economics", Oxford University Press, New Delhi
6. Sengupta, R. (....), "Ecology and Economics: An Approach to Sustainable Development", Oxford University Press, New Delhi
7. Tietenberg,T.(1994),"Environmental Economics and Policy",Harper Coli ins,New York(T)
8. Tietenberg, T. (2003), Environment and Natural Resource Economics, 6th Edi. Pearson Education Inc. New Delhi.
9. Pearce D. W. and R. Kerry Turner, (1990), "Economics of Natural Resources and Environment, Baltimore, Maryland USA: The johns Hopkins University press.

BES-C-201: MICROECONOMICS-II

Unit-1: Market Structure
- Monopolistic Competition : Assumptions of Chamberlin's model, Concept of product group, Equilibrium of individual firm (selling cost excluded) and Group equilibrium, Excess capacity, criticism of the model
- Oligopoly:-Cournot's duopoly model and its applicability to Oligopoly, Cournot's equilibrium using reaction curves, Paul Sweezy's kinked demand curve solution.

Unit-2: Factor Pricing
- Wage determination under perfect and imperfect competition, monopolistic and monopsonistic exploitation
- Theories of rent- Ricardian theory of rent (scarcity rent verses differential rent, critical evaluation of the theory), Modern Theory of rent, Quasi-rent
- Theories of interest-Classical, Neoclassical and Keynesian theories of interest
- Theories of profit-Dynamic theory, Risk and uncertainty theory and Schumpeterian theory of profit.

Unit-3: Welfare Economics
- Various approaches to social welfare
- Pareto's welfare criteria
- Kaldor-Hicks compensation criteria
- Concept of Social welfare function, maximisation of social welfare and determination of 'Point of Bliss'.

References:

1. Chaudhary, Kalyanjit, Roy Microeconomics.
2. Koutsyansis, A. Modern Microeconomics, Macmillan.
3. Left witch, price Theory and Resource Allocation .
4. Lipsey, R.G. An Introduction to Positive Economics.
5. Ray, N.C. An Introduction to Microeconomics, Macmillan.
6. Samuelon, P.A. and W.D. Noidhaus, Economics.
7. Stonier and Hague A Text Book of Economic Theory.
8. Varian, Hal, Intermediate Microeconomics.
9. Ferguson and Gould: Microeconomics, 6th Edition

BES-C-202: MATHEMATICAL METHODS FOR ECONOMICS- II

Unit - 1: Linear Algebra
- System of linear equations, vectors, vector operations, linear combinations of vectors, length of vectors and orthogonality, Applications in Economics
- Matrices and its types, matrix operations(row and column), Echelon and Reduced echelon forms, determinants and its properties, singularity of a matrix, inverse of a matrix, linear independence and rank of a matrix, solution of a system of linear equations (by Cramer's Rule, Matrix Inversion), Applications in Economics
- Solution of Homogeneous Equation System; Leontief Input-Output models (Open and Closed),Applications in Economics

Unit - 2: Calculus of Multivariate Functions
- Partial derivatives (two variables and many variables) and its economic relevance, Total derivatives, Derivatives of functions using chain rule, Derivative of functions defined implicitly, Homogeneous and Homothetic functions, Multivariable optimization, local and global extreme, Stationary points of a function, first and second order condition using Hessian, Point of Inflection, Saddle point, Constraint Optimization (using Lagrangean 6 multiplier), sufficient condition (using Bordered Hessian), Optimization of economic functions, Applications in Economics

Unit -3: Dynamic Analysis
- Continuous time: First order linear differential equations (homogeneous and non homogeneous case) with constant coefficient and constant term; with variable coefficient and variable term; Dynamics of market price; Exact differential equations. Discrete Time: First order Difference equations, the stability analysis of the equilibrium (oscillatory and non-oscillatory, divergent and convergent time paths); The Cobweb model, Applications in Economics

References:
1. Knut Sydsaeter and Peter J. Hammond (2005), *Mathematics for Economic Analysis.* Pearson Educational Asia: Delhi, 4th Indian reprint
2. Chiang, A. C. & Kevin Wainwright (2005) Fourth Edition): *Fundamental Methods of Mathematical Economics,* McGraw-Hill.
3. Allen, R.G.D.(1974), *Mathematical Analysis for Economists*, McMillan Press, London
4. Chiang. A.C. (1984), *Fundamental Methods of Mathematical Economics,* 3rd ed. McGraw-Hill
5. Hoy.,M., J. Livernois, C. McKenna, R.Rees and T. Stengos: *Mathematics for Economics*, 2nd Edition Prentice Hall, India (2001)
6. Dowling, Edward T. (1992*), Schaum's Outline of Theory and Problems of Introduction to Mathematics,* 3rd Edition, McGraw-Hill

BES-CB-201: AGRICULTURAL ECONOMICS

Unit- 1: Introduction
  ➢ Definition and scope of Agricultural Economics, Unique features of Agriculture, Role of Agriculture in Economic Development-Kuznet formulation, linkage between Agriculture and Non Agricultural sectors.

Unit -2: Agricultural Marketing and Price Policy
  ➢ Agricultural Marketing, Efficiency criteria of Agricultural Marketing, causes for the inefficiency of Indian Agricultural Marketing, E- Marketing in agricultural Commodities-issues and Challenges,   Agricultural Price Policy and Evaluation, Public Distribution system in India-issues and challenges, Food Corporation of India, Agricultural Costs and Price Commission.

Unit- 3: Issues in India's Agricultural Development
  ➢ Land Tenure system on the eve of independence, land reforms measures- Achievements, problems and policy- The new agricultural technology and Green Revolution-Rationale, Progress Problems and Prospects. Agricultural credit-Problems and sources, WTO and Indian Agriculture.

Readings:
1. GS Bhalla, Agricultural Development since Independence
2. TW Schultz, Transformation of Traditional Agriculture
3. Mellor, Agricultural Development
4. R.N. Soni,Leading Issues in Agricultural Economics
5. Sadhu and Singh,Agricultural Problems in India
6. Indian Journal of Agricultural Economics -Relevant issues
7. Economic Survey various issues
8. Khusro A. M. , Readings in Agricultural Economics
9. Swaminathan M. S , Agriculture Cannot Wait- New Horizons in Indian Agriculture

BES-C-301: MACROECONOMICS-I

Unit-1: National Income and Methods of Measurement.
- ➢ Concept of National Income –GNP and NNP at market price and factor cost, National product and Domestic product, Measurement of National Income –Method ,Expenditure Method and Value added Method. Problems in the estimation National Income

Unit-2: Classical Theory of Output and Employment.
- ➢ Says law of Market ,Quantity Theory of Money, Classical model without saving and investment. Effects of a change in Labour Supply and a change in labour demand on the level output and employment, rigid money wage, monetary policy and full employment. Classical Theory with saving and investment.

Unit-3: Keynesian Theory of output and Employment.
- ➢ The Keynesian approach to the determination of price, Output and Employment –The complete Keynesian model. Consumption function, Saving and Interment Equality, Concept of Multiplier, Government Expenditure Multiplier, and Tax multiplier Leakages of Multiplier.

Basic Readings:
1. Macroeconomics Rudiger Dornbush,Stanley Fischer,Richard Startz, Eleventh Edition.
2.Macro Economy Today Bradley R.Schiller,Tata Mcgraw-Hill, Eleventh Edition.
3. Macroeconomics N. Gregory Mankiw, First Indian Reprint 1992.
4.Macroeconomic Theory and Policy,William H.Branson, Second Edition.
5. Macroeconomics John Lindauer,Third Edition.
6. Macroeconomics Analysis and Policy,Lioyd G.Reynolds Sixth Edition.
7. Macroeconomics Theory and Policy, William J.Baumol,1973.
8.Shapiro E. Macro Economic Analysis Second Edition.
9. Wilfred Beckerman' An Introduction to National Income Analysis'.
10. S.K.Aggarwal National Income Accounting Latest Edition.

BES-C-302: STATISTICAL METHODS – I

Unit-1: Basic Concepts and Descriptive Methods
➢ Definition and Role of Statistics; Measures central location – Median, Mode, Mean, Harmonic Mean, Geometric Mean (AM, GM, HM, GM), simple and weighted averages, group averages, Measures of dispersion – Range, Variance and Standard Deviation, Mean Deviation, Quartile Deviation, Measures of Skewness and kurtosis; Measures of economic inequality

Unit-2: Probability and Probability Distributions
➢ Random experiment, sample space and events; classical, empirical and axiomatic definitions of probability; addition and multiplication theorems; conditional probability, independent events and Baye's rule, Random variable ; mathematical expectation -mean and variance of a random variable Binomial, Poisson and Normal distributions

Unit-3: Index Numbers and Time Series Analysis
➢ Index Numbers: Concept and uses; Laspeyres, Paasche's and Fisher's index numbers; time reversal, factor reversal and circular tests; problems in constructing index numbers; splicing, base shifting; use of index numbers for deflating other series.Time Series Analysis: Concept and uses; Components of time series; Methods of moving averages and least squares.

Readings:
1. Nagar, A.L. and R.K. Das (1983), Basic Statistics, Oxford University Press, New Delhi
2. Gupta, S. P. (2005), Statistical Methods, S. Chand & Sons, New Delhi
3. Freund, John E. (1979), Modern Elementary Statistics, Prentice Hall of India, New Delhi.
4. Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book, London.
5. Thukral, J. K. (2010), Business Statistics, Taxmann Publications, New Delhi
6. P.H. Karmel and M. Polasek (1978), *Applied Statistics for Economists,* 4th edition, Pitman, Australia
7. Allen Webster (1997), *Applied Statistics for Business and Economics: an Essential Version*, 3rd edition, McGraw-Hill
8. Lind, Douglas A., William G. Marchal, and Samuel A. Wathan(20060, *Business Statistics for Business & Economics*, 5th ed. Boston: McGraw-Hill Irwin.

Other Books
1. Allen, R.G.D. (1949), *Statistics for Economists,* Hutchinson's University Library, London, UK.
2. Croxton, F.E., D.J. Cowden and S. Klein (1973), Applied General Statistics, Prentice Hall, New Delhi.
3. Gupta, S.C. and V.K. Kapoor (1993), Fundamentals of Applied Statistics, S. Chand and Sons, New Delhi.
4. Freund John E. and Ronald E. Walpole (1987), Mathematical Statistics, Prentice-Hall of India, New Delhi.

BES-C-303: INDIAN ECONOMY

Unit- 1: Concept of Developed and Developing Economies
  ➢ Characteristics of a developing economy – basic features of Indian economy at the time of independence Population and Economic Development - Demographic trends of India – Occupational Structure - Population policy, Employment in organised and unorganised sectors , Issues in Indian Planning – Objectives and critical evaluation of each plan. Centre-State relationship

Unit-2: Perspective of India's Agricultural and Industrial Economy
  ➢ Importance of Agriculture in Indian economy – trends in agriculture production and productivity, Green Revolution and Food Security, Agriculture Price Policy, Sources of Agricultural Finance and Sustainable Agricultural Growth, Industrial Policy – pre and post 1991 and trends in India's industrial growth and productivity, Small vs. large industry, public vs. private sector industries, disinvestment strategies, Policy issues and future prospects: infrastructure, technology and regional imbalances

Unit-3: Contemporary Issues
  ➢ Macro-economic stabilisation – fiscal and monetary policies, Globalisation and its impact on the Indian economy with special reference to global financial crisis, 2007-08, India and the World Economics, India's foreign trade and investment policies,

References:
1. Bansil, P.C, *Agricultural Problems of India*, Vikas Publishing House Pvt. Ltd.
2. Datt, R. and Sundharam, K.P.M, *Indian Economy*, S. Chand & Company Ltd, New Delhi.
3. Kapila, U. (2008-09), *Indian Economy Since Independence*, Academic Foundation, New Delhi.
4. Mookherjee, D. (1997), *Indian Industry: Policies and Performance*, Oxford University Press,

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1. Acharya, S. (2002), *India: Crisis, Reforms and Growth in the Nineties*, Working Paper No. 139, Centre for Research on Economic Development and Policy Reform, Stanford University.
2. Ahluwalia, I.J. and Little, I.M.D. (Eds.) (1999), *India's Economic Reforms and Development (Essays in Honour of Manmohan Singh)*, Oxford University Press, New Delhi.
3. Basu, S.C. and Gulati, A. (2005), *Economic Reforms and Food Security: The Impact of Trade and Technology in South Asia*, Routledge.
4. Bhagwati, J.N.(1993), *India in Transition: Freeing the Economy*, Clarendon Oxford.
5. Bhalla, G.S. and Singh, G. (2001), *Indian Agriculture: Four Decades of Development*, Sage Publications.
6. Glinskaya, E. and Lokshin, M. (2005), *Wage Differentials Between The Public And Private Sectors in India*, The World Bank.
7. Mattoo, A. and Stern, R.M. (2003), *India and the WTO*, World Bank Publication.
8. Mohan, T.T.R. (2005), *Privatisation in India: Challenging Economic Orthodoxy*, Routledge.

9. Rao, C.H.H. (2005), *Agriculture, Food Security, Poverty and Environment: Essays on post-reforms India*, Oxford University Press.
10. Sengupta, D., Chakraborty, D. and Banerjee, P. (2006), *Beyond the Transition of WTO: An Indian Perspective on Emerging Issues*, Academic Foundation.

BES-AE-301: ECONOMICS OF EDUCATION

Unit- I: Economics of Education
➢ Meaning and Scope of Economics of Education, Education - Human Resource Development – Economic Development Linkages

Unit -2: Education Planning and Finance
➢ Education planning techniques, Cost – Benefit Analysis, Theories of Public Expenditure, Resource Mobilisation and Utilisation, Effects of Education on levels of earnings and value based education

Unit -3: Education in India
➢ Indian perspective to education, Sarva Shiksha Abhiyan, Right to Education and Legislations relating to Right to Education with special reference to Constitutional provisions/Preamble. Higher Education in India: Issues, Concerns and New Directions

References:
1. Belfield, C.R. (2000), *Economic Principles for Education: Theory and Evidence*, Edward Elgar Publishing.
2. Deka, B. (2000), *Higher Education in India: Development and Problems*, Atlantic Publishers &Dist.
3. Jha, P., Das, S., Mohanty, S.S. and Jha, N.K. (2008), *Public Provisioning of Elementary Education in India*, Sage Publications India Pvt. Ltd.

Detailed Readings:
1. Agarwal,A.K. (2005), *Development of Educational Systems in India*, AnmolPublicatonsPvt. Ltd.
2. Checchi, D. (2006), *The Economics of Education: Human Capital, Family Background and Inequality*, Cambridge University Press.
3. Gupta, N.L. (2000), *Human Values in Education*, Concept Publishing Company.
4. Harris, I.M. and Morrison, M.L., Peace Education, McFarland, 2003.
5. *Higher Education in India: Issues, Concerns and New Directions* (December 2003). Recommendations of UGC golden jubilee Seminars-2003, held at eleven universities in India.
6. Kashyap, S.C. (2006), *The Constitution of India*, Universal Law Publishing.
7. Kumar, B. and Hansara, B.S. (2000), *Extension Education for Human Resource Development*, Concept Publishing Company, 2000.
8. Pathak, R.P. (2007), *Education in the Emerging India*, Atlantic Publishers &Dist.
9. Sharma, R.N. and Sharma, R.K. (2004), *Problems of Education in India*, Atlantic Publishers &Dist.
10. *World Development Report 1980*, World Bank Publications

BES-C-401: MACROECONOMICS-II

Unit.-1: Theories of Consumption & Investment
➢ General theories of spending behaviour, Absolute Income hypothesis, Relative income hypothesis, Permanent Income hypothesis, Life Cycle hypothesis Motivation, for investment, Marginal efficiency of capital supply price expected income streams, Marginal efficiency of capital and rate interest, acceleration principle.

Unit-2: Keynesian Theory of Money and Interest
➢ Keynesian Theory of Interest, Determination of rate of interest,Changes in the levels of income,speculative,Demand and Money supply and their effect on equilibrium rate of interest Liquidity trap and policy Implications. IS and LM Curve Analysiss,The General Equilibrium of Product and Money Market Relative,Effectiveness of Monetary and Fiscal Policies.

Unit-3: Theory of Inflation and Business Cycle
➢ Types and Theories of Inflation, Demand pull and cost push inflation, The Philips curve, trade of between inflation and unemployment, Concept and Phase of Business cycle, Innovation Theory, Keynesian Theory, Monterey Theory.

Basic Readings:
1. Macroeconomics Rudiger Dornbush,Stanley Fischer,Richard Startz, Eleventh Edition.
2.Macro Economy Today Bradley R.Schiller,Tata Mcgraw-Hill, Eleventh Edition.
3. Macroeconomics N. Gregory Mankiw, First Indian Reprint 1992.
4.Macroeconomic Theory and Policy,William H.Branson, Second Edition.
5. Macroeconomics John Lindauer,Third Edition.
6. Macroeconomics Analysis and Policy,Lioyd G.Reynolds Sixth Edition.
7. Macroeconomics Theory and Policy, William J.Baumol,1973.
8.Shapiro E. Macro Economic Analysis Second Edition.
9. Wilfred Beckerman' An Introduction to National Income Analysis'.
10. S.K.Aggarwal National Income Accounting Latest Edition. Pvt. Ltd.
7. William Branson: Macro Economic Theory and Policy

BES-C-402: STATISTICAL METHODS – II

Unit-1: Uni-variate and Bi-variate Analysis
➢ Moments and moment generating function (m.g.f.), , Multivariate Statistics - joint, marginal and conditional distribution; Product moment – covariance, correlation, rank correlation , Simple linear regression; method of least squares; linear and exponential trend

Unit- 2: Introduction to Sampling Distributions
➢ Population versus sample, Methods of sampling, simple random sample, sampling distribution of sample mean for normal and non-normal populations, Chebyshev's inequality, law of large numbers, optimum size of sample, central limit theorem, Definition of z, chi-square, t and F statistics.

Unit-3: Introduction to Statistical Inference
➢ Properties of point estimator - unbiasedness, relative efficiency and consistency, Testing of Hypothesis - type I and type II errors, level of significance, power of a test, Use of z, chi-square, t and F statistics - large sample and small sample tests for mean, one tail and two tail tests for difference of means, Chi-square test for (i) Independence of two attributes, F-test for ratio of two variances, one-way analysis of variance.

Readings:
1. Freund John E. and Ronald E. Walpole (1987), Mathematical Statistics, Prentice-Hall of India, New Delhi.
2. Nagar, A.L. and R.K. Das (1983), Basic Statistics, Oxford University Press, New Delhi
3. Kapur, J.N. and Saxena, H.C. (1988), Elements of Mathematical Statistics, S. Chand & Sons, New Delhi
4. Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book, London.
5. P.H. Karmel and M. Polasek (1978), *Applied Statistics for Economists,* 4th edition,
6. Pitman, Australia
7. Lind, Douglas A., William G. Marchal, and Samuel A. Wathan. *Business Statistics for Business & Economics*, 5th ed. Boston: McGraw-Hill Irwin. 2006

Other Books
1. Allen, R.G.D. (1949), *Statistics for Economists,* Hutchinson's University Library, London, UK.
2. Croxton, F.E., D.J. Cowden and S. Klein (1973), Applied General Statistics, Prentice Hall, New Delhi.
3. Gupta, S.C. and Kapoor, V.K. (1988), Elements of Mathematical Statistics, S. Chand & Sons, New Delhi

BES-C-403: MONEY AND BANKING

Unit- 1: Money and Evolution
 ➤ Meaning, Definitions and Functions of Money - Classification of Money- Gresham's Law - RBI classification of Money. Theories of Money - Fisher's Quantity Theory of Money -Cambridge Approach (Marshall, Pigou, Robertson & Keynes), Measures of Money, Money Multiplier Analysis

Unit-2: Banking Sector- An overview

 ➤ Banking: Meaning and definition- Functions of Central Bank, Credit Control Methods by RBI, Reserve Money/High powered Money
 ➤ Functions of Commercial Banks - Concept of Credit Creation-Functions of RBI -, Role of Private Banks and a comparison- Role of Foreign Banks
 ➤ Recent developments in Banking Sectors- Social banking, Alternative Banking Strategy- Inclusive Banking

Unit- 3: Monetary Management
 ➤ International Monetary System- Monetary Policy in India- Instruments of Monetary policy in India- Fiscal Policy in India- Instruments of Fiscal Policy in India- Financial Sector Reforms in India, The Narasimhan Committee Report

References:
1. Chandler, L.V. The Monetary and Financial System
2. M.K. Lewis (2000), Monetary Economics, OUP
3. M.R. Baye, D.W. Jansen (1996), Money Banking and Financial Markets, AITBS, (Indian Edition)
4. Maurice Levi (1999), International Finance, Tata McGraw Hill
5. L.M. Bhole (1999), Financial Institutions and Markets, Tata Mcgraw Hill
6. R.B.I. Bulletin, Annual Report; Report on Currency and Finance
7. R.B.I. - Report of the Committee on the Financial System (Narasimham Committee Report I)
8. R.B.I. - Report of the Committee on Banking Sector Reforms (Narasimham Committee Report II) Summary in RBI Bulletin, July, 1998.
9. R.B.I - Report of the Working Group : Money Supply Analytics and Methodology of Compilation, 1998.
10. S.B.Gupta, Monetary Economics
11. Y.V. Reddy (2000), Monetary and Financial Sector Reforms in India UBSPD, New Delhi
12. K.P.M. Sundaram - "Money, banking & International Trade", Sultan Chand, 2010.

BES-CB-401: INTERNATIONAL FINANCE

Unit 1: The Foreign Exchange Market
- Foreign Exchange Market – Structure and Functions
- Foreign Exchange Market Products
- Foreign Exchange Market Trading
- Efficiency of Foreign Exchange Market
- Foreign Exchange Market in India

Unit 2: Balance of Payment and Exchange Rate Determination
- Balance of Trade and Balance of payment
- Fixed Exchange Rate System
- Flexible Exchange Rate System
- Floating Exchange Rate System
- Theories of Balance of Payment and Exchange Determination- PPP, Elasticity Approach, Income Absorption Approach, Monetary Approach

Unit 3: The International Monetary System
- Overview of the International Financial Market
- A Brief History of the International Monetary System
- The European Monetary System and Monetary Union
- Alternative Exchange Rate System
- Exchange Rate System and Policies in India

References:
1. Brian Tew : The Evolution of International Monetary System, Hutchinson, 1985
2. Alan C Shapiro: Multinational Financial Management, Seventh Edition, John Wiley & Sons, 2003
3. Richard M Levich: International Financial Markets, McGraw Hill International Edition, 2001
4. A.V. Rajwade: Foreign Exchange, International Finance and Risk Management, Academy of Business Studies, 1996

BES-C-501: DEVELOPMENT ECONOMICS

Unit-1: Growth and Development
➢ Growth and Development--Meaning, Evolution and Approaches, Determinants' of Growth, Indicators, Linkages. Human Development-- Approach and Indicators. Sustainable Development-Concept, Operational Rules and Indicators. Growth Models- Classical, Neo-Classical, Harrod-Domar.

Unit-2: Under-Development Determinants and Theories
➢ Under-Development Meaning, Determinants and Indicators, Partial Theories of Growth and Development-Vicious Circle of Poverty, Circular Causation, Unlimited Supply of Labour, Big Push, Balanced Growth, Critical Minimum Effort Thesis, Low Income Equilibrium Trap, Dualism-Technical, Behavioral and Social. Characteristics of Developing Countries.

Unit-3: Determinants of Development
➢ State and Markets; Capital-Human, Natural and Social and Manmade., Agriculture Industry and Services; Physical Infrastructure, Policies, Planning and Development Administration, Research and Development and Technology, Non-Economic Factors.

References:
1. Adelman, I. (1961), Theories of Economic Growth and Development, Stanford University, Stanford.
2. Aghion, P. and Peter Howit (2011), Economics of Growth, PHI Learning Pvt. Ltd., New Delhi.
3. Behrman, S. and T. N. Srinivasan (1995), Handbook of Development Economics, Vol. 1 to 3, Elsevire, Amsterdam.
4. Chari, Sharad and Staurt Corbridge (2008), The Development Reader, Routledge London.
5. Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.
6. Hayami, Y. (1997), Development Economics, Oxford University Press, New York.
7. Higgins, B. (1959), Economic Development, Norton, New York.
8. Kindleberger, C. P. (1977), economic Development, 3rd edi., McGraw Hill, New York.
9. Meier, G. M. (1995), Leading Issues in Economic development, Oxford University Press, New Delhi.
10. Myint, Hla (1971), Economic theory and under developed countries, Oxford University Press, New York.
11. Ray, Debraj (1988), Development Economics OUP, New Delhi.
12. Seers Dudley, (1969), The Meaning of Development, International Development Review, Vol. 11, No. 4. Pp.2-6
13. Sen , A. K. (1995), The Concept of Development, In Handbook of Development Economics, (eds.)Behrman, S. and T. N. Srinivasan Vol. 1 to 3, Elsevire, Amsterdam.
14. Sen , A. K. (), Development Which Way Now, In: Resources Values and Development, OUP, New Delhi.

15. Todaro, M. P. and Stephan C. Smith (2011), Economic Development, 5th edi. Pearson Education in South Asia.
16. Thirwal, A. P. (1999), Growth and development, 3rd edi. Macmillan, London.

BES-C-502: ECONOMETRICS – I

Unit 1: Simple Linear Regression Analysis
➢ Introduction to Econometrics; Two variable regression analysis-Population Regression function and Sample Regression Function; Significance of Stochastic Disturbance Term; Simple Classical Linear Regression Model (CLRM)-Assumptions, OLS estimation; Desirable Properties of OLS Estimators- Guass Markov Theorem; Hypothesis Testing, Goodness of Fit.

Unit 2: Multiple Regression Analysis
➢ Multiple Regression Equation; OLS estimation of Partial Regression Coefficients; Multiple Coefficient of Determination (R^2) and Adjusted R^2; Multiple and Partial Correlation Coefficients; Problem of Inferences and Hypothesis Testing.

Unit 3: Problems in OLS Estimation
➢ Problems in OLS Methods: Analysis of Residuals – Heteroschedasticity and Autocorrelation Problems – Consequences of applying OLS under Heteroscedasticity and Autocorrelation – tests and remedial measures for removal of Hetroscedasticity and autocorrelation; Multicollinearity-consequences, tests and remedial measures.

References:
1. Green W.H (2003), "Econometric Analysis", Prentice Hall, Pearson Education,New Delhi
2. 2.Gujrati, D (2007), "Basic Econometrics", McGraw Hill , 4th Edition, New Delhi
3. 3.Gujarati D (1992),"Essential Econometrics", McGraw Hill, Singapore
4. 4.Johnston, J. and Dinardo(1997), "Econometric Methods", 4th Edition, McGraw Hill, New York.
5. 5.Jhonston J (1985), "Econometric Methods", McGraw Hill, New York
6. 7.Kmenta J (1997), "Elements of Econometrics", Michigan Press New York
7. 8.Maddala (2001) , "Introduction to Econometrics", 3rd Edition. John Wiley, 2001.
8. 9.Wooldridge Jeffrey W.(2013), "Introductory Econometrics- A Modern Approach", Fourth Edition, Cengage India Private Limited, New Delhi

BES-C-503: INTERNATIONAL TRADE

Unit-1: Introduction to International Trade
➢ International trade, domestic, regional and intra regional trade, forces for and against economic integration need for separate theory of inter natural trade, production possibility curve, Offer curve terms of trade. Pure theory of international trade, Ricardo's comparative cost advantage Hecksher Ohlin trade model, Criticism Leontif Paradox.

Unit-2: International Trade Policies
➢ Free trade and economic protection, Tariff, Economic effects of tariff, partial and general equilibrium, import quota, Import substitution vs export promotion, Prebisch Singer Hypothesis General Agreement on Tariff and Trade (GATT), various rounds of trade negotiations and new issues under Uruguay Round issues under Doha Development Round.

Unit-3: Balance of Payment and International Monetary System

➢ Balance of payment, exchange rate determination, exchange rate liberalisation, disequilibrium in the balance of payments, adjustment mechanism, Bretton Wood monetary system and its break down and current scenario, world bank, organisation, function and its role in the development of developing countries.

Basic Readings:
1. Bo-Sodersten and S Goeffrey Reed, International Economics III Edition, 1994
2. Salvatore. D , International Economics, 1983
3. Haberler G, The Theory of International Trade, 1935
4. Kindleberger. C.P. , International Economics, 1976.
5. Ellsworth, P.T. International Economics, 1969

Unit 1: Introduction to Financial Markets
- ➢ Financial Markets – Role and Functions
- ➢ Types of Financial Markets - Primary and Secondary Markets
- ➢ Financial Markets – Instruments and Transaction Mechanism in Spot Market
- ➢ Introduction to Derivatives Market – Forward, Futures and Options
- ➢ Transactions Mechanism in Derivative Markets
- ➢ Indian Financial Markets – Equity Market, Bond Market, Mutual Funds and Commodity Market
- ➢ Role of Stock Exchanges (NSE/BSE)
- ➢ Regulations of Indian Financial Markets and Role of SEBI

Unit 2: Stocks Market Analysis
- ➢ Fundamental Analysis of Stocks and Investment – Qualitative and Quantitative Analysis
- ➢ Different Types of Stocks and Valuation of Stocks
- ➢ Concept of Market Efficiency and Forms of Market Efficiency
- ➢ Modern Theory of Investment - Capital Asset Pricing Model
- ➢ Portfolio Diversification and Simple Portfolio Diversification Problem

Unit- 3: Bond Market Analysis
- ➢ Time Value of Money – Present Value and Future Value
- ➢ Annuity and Perpetuity, Compounding and Discounting
- ➢ Types of Bond – Pure Discount Bond, Coupon Bond, Consols
- ➢ Valuation of Bond
- ➢ Relationship between Government Bond and Corporate Bond
- ➢ Bond Price and Interest Rate
- ➢ Term Structure of Interest Rates and Yield Curve

References
1. Bodie, Robert c Merton and David Cleaton (2009), Financial Economics, Pearson
2. Elton, Gruber Brown, Goetzmann (2007), Modern Portfolio Theory and Investment Analysis
3. Prasanna Chandra (2010), International Analysis and portfolio Management, Tata McGraw Hill

BES-C-601: HISTORY OF ECONOMIC THOUGHT

Unit -1: Pre Classical and the Classical School
➢ Mercantilism: Main Principles, Physiocracy: Natural order, Agriculture and Product Net , Adam Smith – Division of Labour, theory of value, doctrine of laissez faire, David Ricardo – Theory of Value, Theory of Distribution, Malthus – Theory of Gluts, Theory of Population, John Stuart Mill - Principles of Political Economy

Unit-2: The Marxian Challenge and Marginal Revolution
➢ Karl Marx - A Contribution to the Critique of Political Economy, William Stanley Jevons - The Theory of Political Economy, Alfred Marshall - Principles of Economics, Eugen von Bohm-Bawerk - The Positive Theory of Capital

Unit 3: Contemporary School of Economic Thought
➢ Irving Fisher - The Purchasing Power of Money and its Determination and Relation to Credit Interest and Crises, John Maynard Keynes – Treatise on Money and The General Theory of Employment, Interest and Money, Milton Friedman – Resataement of the Quantity Theory of Money, George Akerlof – Information Asymmetry

Select References:
1. Hunt, E.K. and Lautzenheiser, M. (2011), *History of Economic Thought: A Critical Perspective*, M.E. Sharpe.
2. Medema, S.G. and Samuels, W.J. (2003), *The History of Economic Thought: A Reader*, Routledge.

Detailed Readings:
1. Ekelund, R.B. and Hebert, R.F. (1975), *A History of Economic Theory and Method,* McGraw-Hill.
2. Hajela, T.N. (2008), *History of Economic Thought*, Ane Books Pvt. Ltd.
3. Haney, L.H. (1922), *History of Economic Thought: A Critical Account of the Origin and Development of the Economic Theories of the Leading Thinkers in the Leading Nations*, Macmillan.
4. Landerth, H. and Colander, D.C. (2002), *History of Economic Thought, Houghton Mifflin*.
5. Robbins, L. (2000), *A History of Economic Thought: The LSE Lectures*, Princeton University Press.
6. Roncaglia, A. (2005), *The Wealth of Ideas: A History of Economic Thought*, Cambridge University Press.
7. Spiegel, H.W. (1991), *The Growth of Economic Thought*, Duke University Press.

BES-C-602: PUBLIC ECONOMICS

Unit-1: Meaning and Scope of Public finance
- ➢ Meaning and Scope of Public Finance- Distinction between Public Finance and Private Finance, Economic Activities and the State- Public Goods Vs Private Goods, Principle of Maximum Social Advantage

Unit-2: Public Revenue and Taxes
- ➢ Sources of Public Revenue- Division of Tax Burden-Taxes – Objectives of Taxation-Classification of Taxes - Canons of Taxation, Principles of Taxation. Ability, Benefit and cost of service- Impact, Incidence and shifting of Tax Burden- Theories of Tax Shifting– Effects of Taxation – Major Taxes in India. Value Added Tax in India -The concept of Goods and Service Tax (GST), Double Taxation,

Unit- 3: Public Expenditure and Public Debt
- ➢ Public Expenditure Meaning and Importance – Reasons for the Growth of Public Expenditure – Wagner's Hypothesis, Peacock - Wiseman Hypothesis, Canons of Public Expenditure – Effects of Public Expenditure. Public Debt: Meaning, Types of Public Debt, Debt Redemption.

References:
1. R.A Musgrave and PB Musgrave – Public finance – Tata Macgrail
2. Govinda Rao and Singh - Political Economy of Federalism in India – Oxford.
3. Shankar Acharya – Thirty Years of Tax Reforms in India (Article) EPW – 14-05-1995.
4. Bhatia HL – Public Finance – Vikas Publishing.
5. B.P.Tyagi - "Public Finance", Jai Prakash Nath, 2012.
6. S.K.Misra & V,K,Puri - "Indian Economy", Himalaya Publishing House, 2015.

BES-C-603: ECONOMETRICS – II

Unit 1: Review of Regression Analysis and Dummy Variable Regression Model
- Review of Simple and Multiple Regression Analysis
- Reviews of Violation of CLRM Assumptions
- Model Specification Problems and Model Selection - t – test, F-ratio, R^2, D-W Statistics
- Dummy Variable Regression Model – Model Specification and Applications

Unit- 2: Dynamic Econometric Model
- Distributed Lag Model (DLM) – Ad hoc Estimation
- Koyck Transformation and DLM
- Almon Approach to DLM
- Adaptive Expectation Model
- Partial (Stock) Adjustment Model
- Auto Regressive (AR) Model - Estimation
- Detecting and Correcting Autocorrelation Problem in AR Model

Unit- 3: Simultaneous Equation Model
- Simultaneous Equation Bias
- Identification Problem and Rules for Identification – Order and Rank Conditions
- Instrumental Variables Method (IVM)
- Indirect Least Square (ILS) Methods
- Two Stage Least Square (2SLS) Method
- Application to Macro Models (Examples)

References:
- D. Gujrati, Basic Econometrics, 4th Edition, McGraw-Hill/Irwin
- Stock and Watson, Introduction to Econometrics, Pearson Publication
- Cramer J.S., Empirical Econometrics.
- Deaton A.S. and J. Muellbauer, Economics and Consumer Behaviour.
- Klein L.R., Introduction to Econometrics
- Wallis K.F., Topics in Applied Econometrics.

BES-SE-601: COMPUTER APPLICATIONS IN ECONOMICS

Unit 1: Computer Fundamentals and Data
- Basics in Computer, Operating Systems and MS Office
- Disk operating systems, Operating system – Windows,
- Nature and Types of Data
- Tabulation and Graphical Representation of Data
- Descriptive Analysis of Data
- Introduction to Statistical Softwares - Eviews/SPSS

Unit 2: Data Analysis in Eviews/SPSS
- Measures of Central Tendency - Mean, Median and Mode
- Measures of Dispersion – Mean Deviation, Standard Deviation and Variance
- Measures of Skewness and Kourtosis
- Simple and Partial Correlation
- Analysis of Varaince

Unit 3: Regression Analysis in Eviews/SPSS
- Hypothesis Testing – t- test, F-test, Chi-Square Test
- Simple and Multiple Regression Analysis
- Dummy Variable Regression Analysis
- Auto-Regressive Model
- Simple Simultaneous Equation Model Estimation

References
1. Rajaraman, V. (1996), Fundamentals of Computers, Prentice Hall of India, New Delhi.
2. Kerns (1993), Essentials of Microsoft Windows, Word and Excel; Prentice Hall of India, New Delhi.
3. Allen, R.G.D., Statistics for Economics
4. D. Gujrati (2002), Basic Econometrics, 4th Edition, McGraw-Hill/Irwin
5. Enders, W. (2003), Applied Econometric Time Series", 2nd edition, 2003
6. Eviews Manuals
7. SPSS Manuals

■■

B.A. (Hons.) Syllabi for the Subsidiary Papers on Environmental Studies

Semester –I

Paper –I
Introduction to Environmental Studies

Part-I: Ecosystem and Economy

Definition, types and Functions of Ecosystem, Linkage between Economy and Ecosystem, Degradation of Ecosystem, Need for Conservation of Ecosystems, Present state of Eco-systems with special reference to India.

Part-II: Natural Resources

I) Definition, classification and types of Renewable and Non- Renewable Natural resources: Forest Resources, Water resources, Mineral resources, Land resources, Energy resources; II) Common Property resources (CPRs), Destruction of CPRs and its Impact on Human Welfare; III) Scarcity of Natural Resources, Concept and Management.

Part-III: Environmental Pollution

I) Concept and Classification; II) types of Environmental Pollution: Air Pollution, Water Pollution, Soil Pollution, Marine Pollution, Noise Pollution, Nuclear Pollution, Thermal Pollution; III) Causes of Pollution and Measures of Pollution Control.

Basic Reading List:

1-Anindita Basak, (2009), "Environmental Studies" Dorling Kindersley (India) Private Limited, New Delhi, ISBN:978-81-317-2188-6.

2-Bhattacharya, Rabindra N. (2001), "Environmental Economics- An India Perspective", Oxford University Press, New Delhi,

3-Hanley, N.J.F. Shorgren and B. White (1997), "Environmental Economics in Theory and Practices", University Press, New Delhi.

4-Sengupta, R. (2001), "Ecology and Economics: An Approach to Sustainable Development", Oxford University Press, New Delhi,

5-N.K. Uberoi, (2010), "Environmental Studies", Excel Publication, New Delhi, ISBN:978-81-7446-886-4.

6- R.C. Das & D.K. Beliera, (2008), Environmental Science Principles and Practice", Prentice-Hall of India Private Limited, New Delhi, ISBN: 978-81-203-3330-7.

7- S.N. Prasad, (2011), "environmental Economics", Pointer Publishers, Jaipur, India, ISBN:81-7132-391-X.

8-www.envfor.nic.in

9-www.cpcb.nic.in

Semester –II

Paper –II
Environmental Thought and Environmentalism

UNIT-I: Evolution of Environmental Thought and Environmentalism

Introduction to Environmental thought, the origin of modern environmental thought, Evolution of Environmentalism in the West, Western Environmentalism, Environmentalism in Developing Countries.

UNIT-II: History of Environmentalism in India

Environmentalism- Definition, Major Environmental Ideology, Indian Environmental Movements-Chipko Movement, Gandhian Environmentalism; Current State of Environment: Biodiversity, Forest, Water, Air.

UNIT-III: Environmental Regulatory Bodies and Important Legislations/ Policies in India

Role of Ministry of Environment and Forest (MoEF), Government of India; Central Pollution Control Board (CPCB); Environmental Legislations/ Policies: National Environmental Policy (NEP)-2006; Indian Forest Act-1865; Wildlife Protection Act-1972; Environment (Protection) Act-1986; Biological Diversities Act-2002.

Basic Reading List:

1-Anindita Basak, (2009), "Environmental Studies" Dorling Kindersley (India) Private Limited, New Delhi, ISBN:978-81-317-2188-6.

2-Bhattacharya, Rabindra N. (2001), "Environmental Economics- An India Perspective", Oxford University Press, New Delhi,

3-Hanley, N.J.F. Shorgren and B. White (1997), "Environmental Economics in Theory and Practices", University Press, New Delhi.

4-Sengupta, R. (2001), "Ecology and Economics: An Approach to Sustainable Development", Oxford University Press, New Delhi,

5-N.K. Uberoi, (2010), "Environmental Studies", Excel Publication, New Delhi, ISBN:978-81-7446-886-4.

6- R.C. Das & D.K. Beliera, (2008), Environmental Science Principles and Practice", Prentice-Hall of India Private Limited, New Delhi, ISBN: 978-81-203-3330-7.

7- S.N. Prasad, (2011), "environmental Economics", Pointer Publishers, Jaipur, India, ISBN:81-7132-391-X.

8-www.envfor.nic.in

9-www.cpcb.nic.in

Semester –III

Paper –III
Environmental and Economics Development

Part-I: Basic Theory of Environmental Economics

Brief Introduction of: Capital Theory, Public Goods, Externality, Market Failure, Property Rights, Information Asymmetry.

Part-II: Economics of Pollution Control

Instruments of Pollution Control: Command and Control Measures Vs Market Based Instruments; Taxes Vs Permits; Direct and Indirect Instruments of Pollution Control; Pollution Control System and Policy Measures in Indian context Concept of Optimum Pollution.

Part-III: Economics of Sustainable Development

Definition and Concepts of Sustainable Development, Indicators of Sustainable Development, Environmental Kuznets Hypothesis (EKH) and Millennium Development Goals (MDGs)

Basic Reading List:

1-Anindita Basak, (2009), "Environmental Studies" Dorling Kindersley (India) Private Limited, New Delhi, ISBN:978-81-317-2188-6.

2-Bhattacharya, Rabindra N. (2001), "Environmental Economics- An India Perspective", Oxford University Press, New Delhi,

3-J. E. De Steiquer,(2006), "The origins of Modern Environmental thoughts", university of Arizona Press

4-Hanley, N.J.F. Shorgren and B. White (1997), "Environmental Economics in Theory and Practices", University Press, New Delhi.

5-N.K. Uberoi, (2010), "Environmental Studies", Excel Publication, New Delhi, ISBN:978-81-7446-886-4.

6-R.C. Das & D.K. Beliera, (2008), Environmental Science Principles and Practice", Prentice-Hall of India Private Limited, New Delhi, ISBN: 978-81-203-3330-7.

6-Sengupta, R. (2001), "Ecology and Economics: An Approach to Sustainable Development", Oxford University Press, New Delhi,

7- S.N. Prasad, (2011), "environmental Economics", Pointer Publishers, Jaipur, India, ISBN:81-7132-391-X.

8-www.envfor.nic.in

9-www.cpcb.nic.in

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Semester-III

Paper-V

International Environmental Issues and Challenges
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UNIT-1: Global Environmental Issues

Climate Change: Reasons for Climate Change, Historical Trends, Climate Change and Its Effect on: Agriculture, Availability of Fresh Water and Change of River Ecosystem, Sea-Level Rising and Loss of Human Interest, Ozon Layer Depletion, Deforestation and Desertification.

UNIT-II: Climate Change and Policy Adapted

Causes, Consequences and Solution of Climate Change, Determinants of Climate Change, Major Indicator of Climate Change, Policy adapted by the International Community to cope up with the Climate Change, Role of states, civil society and international organization to come out with the problem of climate change.

UNIT-3: Loss of Biodiversity

Definition, Types and Value of Biodiversity, Loss of Biodiversity and Its Major Causes, Mega-Diversity Countries, IUCN Red List, Needs for Conservation of Biodiversity.

Basic Reading List:

1-1-Anindita Basak, (2009), "Environmental Studies" Dorling Kindersley (India) Private Limited, New Delhi, ISBN:978-81-317-2188-6.

2-Bhattacharya, Rabindra N. (2001), "Environmental Economics- An India Perspective", Oxford University Press, New Delhi,

3-J. E. De Steiquer,(2006), "The origins of Modern Environmental thoughts", university of Arizona Press

4-Hanley, N.J.F. Shorgren and B. White (1997), "Environmental Economics in Theory and Practices", University Press, New Delhi.

5-N.K. Uberoi, (2010), "Environmental Studies", Excel Publication, New Delhi, ISBN:978-81-7446-886-4.

6-R.C. Das & D.K. Beliera, (2008), Environmental Science Principles and Practice", Prentice-Hall of India Private Limited, New Delhi, ISBN: 978-81-203-3330-7.

6-Sengupta, R. (2001), "Ecology and Economics: An Approach to Sustainable Development", Oxford University Press, New Delhi,

7- S.N. Prasad, (2011), "environmental Economics", Pointer Publishers, Jaipur, India, ISBN:81-7132-391-X.

8-www.envfor.nic.in

9-www.cpcb.nic.in

10-www.iucn.org

11-www.unep.org

12-www.wwf.org

13-www.ramsar.org

14-www.ipcc.ch

Semester-IV

Paper-IV

Human Environment Relationship and Economic Valuation

1- A Brief History of Human and Environment Relationship

Historical Progress, Adaptation, Ecosystem- Concepts, Structure and Functions, Environmental Problems in Tropical, Temperate and Polar Ecosytems,Environmental Programmes and Policies- Global, National and Local Levels.

2-Distribution of Various Environmental Resources

Problems of Distribution, Utilisation, and Management of Environmental Resources, Appraisal and Conservation of Natural Resources.

3-Methods for Valuation of Environment

Economic Values of Environment-A Brief Introduction of, Use Value (UV) nad Non-Use Value (NUV), Direct and Indirect Methods of Valuation, Environmental Valuation Using Contingent Valuation Method (CVM) and Travel Cost Method (TCM).

Basic Readings List:

1-Anindita Basak, (2009), "Environmental Studies" Dorling Kindersley (India) Private Limited, New Delhi, ISBN:978-81-317-2188-6.

2-J. E. De Steiquer,(2006), "The origins of Modern Environmental thoughts", university of Arizona Press

3-Hanley, N.J.F. Shorgren and B. White (1997), "Environmental Economics in Theory and Practices", University Press, New Delhi.

4-N.K. Uberoi, (2010), "Environmental Studies", Excel Publication, New Delhi, ISBN:978-81-7446-886-4.

5-R.C. Das & D.K. Beliera, (2008), Environmental Science Principles and Practice", Prentice-Hall of India Private Limited, New Delhi, ISBN: 978-81-203-3330-7.

6-Sengupta, R. (2001), "Ecology and Economics: An Approach to Sustainable Development", Oxford University Press, New Delhi,

7- S.N. Prasad, (2011), "environmental Economics", Pointer Publishers, Jaipur, India, ISBN:81-7132-391-X.

8-www.envfor.nic.in

9-www.cpcb.nic.in

Semester –IV

Paper –VI
International Environmental Institutions and Negotiation/Agreement

Part-I: Major International Environmental Negotiation/Agreement

Agenda 21, Earth Summit, Convention on Biological Diversity (CBD), Ramsar Convention, Kyoto Protocol, Bali Road Map

Part-II: Global/Regional Environmental Organisation

   (a) IUCN-International Union for the Conservation of Nature

   (b) UNEP-United Nations Environment Programme

   (c) WWF-World Wide Fund

   (d) IPCC-International Panel on Climate Change

   (e) Ramsar Convention on Wetlands of International Importance

Part-III: International Environmental Law

A Brief History of International Law, Distinguishing National Law from International Law, Means of Implementing and Enforcing International Environmental Law, Distinguishing between Hard and Soft International Law, Jurisdiction for Disputes: Courts, Parties and Enforcement

References:

1-Anindita Basak, (2009), "Environmental Studies" Dorling Kindersley (India) Private Limited, New Delhi, ISBN:978-81-317-2188-6.

2- 3-J. E. De Steiquer,(2006), "The origins of Modern Environmental thoughts", university of Arizona Press

3-Hanley, N.J.F. Shorgren and B. White (1997), "Environmental Economics in Theory and Practices", University Press, New Delhi.

4-N.K. Uberoi, (2010), "Environmental Studies", Excel Publication, New Delhi, ISBN:978-81-7446-886-4.

5-R.C. Das & D.K. Beliera, (2008), Environmental Science Principles and Practice", Prentice-Hall of India Private Limited, New Delhi, ISBN: 978-81-203-3330-7.

6-Sengupta, R. (2001), "Ecology and Economics: An Approach to Sustainable Development", Oxford University Press, New Delhi,

7- S.N. Prasad, (2011), "environmental Economics", Pointer Publishers, Jaipur, India, ISBN:81-7132-391-X.

8-www.envfor.nic.in

9-www.cpcb.nic.in

10-www.iucn.org

11-www.unep.org

12-www.wwf.org

13-www.ramsar.org

14-www.ipcc.ch

Economics of Population and Demographic Analysis

Unit – I:

Development of the discipline, Population Studies and Demography, Population studies in India subject matter, Importance & scope, Sources of demographic data, Population Census, Definition, Features, Procedures, census operation in India, vital events registration system, sample surveys, sample registration system in India,

Unite – II:

Population Theories, Early Population concerns, Contribution of Malthus, Malthusian Population trap, Marxian approach, Optimum Population, Demographic Transition, Population and Economic Development and Developing countries. Arthur Lewis model, Leibenstein critical minimum effort, Labour force concept, Economically active population, Census approaches, Migration Concept, Kinds Causes, Estimation, Theories, Rural urban Migration Model (P. Todaro)

Unite – III:

Fertility, basic concepts, measures of fertility, reproduction rate, fertility transition, reasons for high fertility in developing countries, economic theories of fertility, mortality, concepts, measures of mortality, life expectancy, sex and age pattern of mortality, mortality in India, life table, age sex structure, sex ratio, factors, affecting sex ratio, age structure, aging of population, factors determine, age structure, population growth and population policy in India.

Suggested Readings

- Bague D.J. ; Principles of Demography, John Wiley New York 1971.
- Bhende A. Kanitkar T; Principles of Population studies, Himalaya Publishing House, Bombay.
- Coale A.J. and L.M. Hoover; Population growth and economic development in Low income Countries: A Case Study of India's prospects, Princeton University Press 1958

- Cox, Peter R, Demography.

- Thomson W.S. and Lewis D.T. Population Problems, Tata Mac Graw Hill, Bombay 1965

- Agarwal, S.N.; India's Population Problem , Tata Mac Graw Hill, Bombay 1972

- United Nations: The Determinates and consequences of population in trends vol.I 1973 in part of Chapter 2 population theory vol-I 1973 UNO Publication

- John C. Caldwell, Toward a Restatement of Demographic transition theory, Population And Development Review vol. 2 No. 3-4 September and December 1976

- Gary Becker;An economic analysis of Fertility in Demographic and Economic change in developed countries, Princeton university Press 1960.

- Choubey, P.K.; Population Policy in India, Kaniska Publications New Delhi 2000

- Srinivasan, K; Basic Demographic techniques and application, Sage New Delhi 1968

- Srinivasan, K and A. Sharif; India: Towards population and Demographic goals, oxford university press New Delhi 1998

- Bose, A; India's basic Demographic Statistics, B.R. publishing corporation New Delhi 1996

- Daugherty, Ginn Helen, Kennith C.W. Kammeyer: An Introduction to Population, Second edition The Guilford Press, New York, 1995.

- Chandersekhar, S: Infant Mortality Population Growth and Family Planning in India, Routledge, 2011.

- Todaro, Michael P, Stephan C. Smith: Economic Development Pearson Education India 2003.

- Peterson Williom: Population , Macmillon 1975.

M.A. Economics Syllabus

Semester I (Compulsory Papers)

1. MICRO ECONOMICS

Unit 1: Theory of Consumer Behavior
- Demand Theory: Preference Based Approach under Choice under Certainty
- Revealed Preference Theory
- Welfare Analysis and Aggregate Demand
- Consumer Demand Theory: Choice Under Uncertainty

Unit 2: Theory of Firm Production and Cost
- Theory of Production
- Theory of Cost
- Profit Function
- Homogeneous, Homothetic, CES, Cobb Douglas, Translog Production Function

Unit 3: Market Structure
- Monopoly
- Monopolistic Competition
- Oligopoly – Price Competition
- Oligopoly – Quantity Competition

Reading List:
- Mas-Colell, Andreu, Michael D.Whinston and Jerry R. Green, (1995), Microeconomic Theory, Oup, New York.
- Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India
- Varian, Hall R., (1992), Microeconomic Analysis (Third Edition), W.W. Norton & Company, New York, London.
- Varian, Hall R.(1990), Intermediate Microeconomics, W.W. Norton & Company, New York, London.
- Kreps, David M.(1998), A Course in Microeconomic Theory, Prentice Hall, India, New Delhi (For Unit V).
- Silberberg E., The Structure of Economics: A Mathematical Analysis, McGraw-Hill

2. MACRO ECONOMICS

Unit 1: Classical Approach, Keynesian Approach and Monetarism
- Determination of Price, Output and Employment
- Is-Lm Analysis-Aggregate Demand and Supply;
- Is-Lm and the Neoclassical Synthesis
- The Short Run and Long Run Phillips Curve;
- Expectation, Interest Rates and Inflation;

- The Trade-off Between Inflation and Unemployment,
- The Natural Rate of Unemployment (NRU),
- NRU and Full Employment,
- Macroeconomic Policy.

Unit 2: New Classical Macroeconomics and New Keynesianism:
- Main Features of the New Classical Macroeconomics,
- Efficient Market Hypothesis,
- Rational Expectation Model,
- Lucas Supply Function,
- Okun's Law and Phillips Curve,
- Reh and its Critique,
- Keynesian Reappraisal School (Clower, Leijonhufvud and Malinvaud)

Unit 3: Imperfect Completion Approach
- Inflation and Employment- Non Accelerating Inflation Rate of Unemployment (NAIRU) and Natural Rate of Unemployment,
- Policy to Shift the Equilibrium Rate of Unemployment;
- Supply Side Fiscal and Income Policies,
- The Effect of Policy on Actual Employment,
- Crowding out Effect

Reading List:
- Wendy Carlin and David Soskice (1996)- Macroeconomics and The Wage Bargain; Oxford University Press
- Branson, W. (1989) – Macroeconomic Theory and Policy; (3rd Ed, Harper & Row)
- Dornbush, R. and S. Fischer (2004) – Macroeconomics (9th Ed, Tata-Mcgraw Hill)).
- Jha, R. (1991)– Contemporary Macroeconomic Theory and Policy; (Wiley Eastern)
- Levacic, R and A. Rebman (1986) – Macroeconomics; (2nd Ed, Macmillan).
- Mankiw, N. Gregory (2000) – Macroeconomics (4th Ed, Macmillan-Worth))
- Mankiw, N.G. and D. Romer (Eds.) (1991) – New Keynesian Economics; (Mit, Cambridge)
- Begg, D. K. H. (1982), The Rational Expectation Revolution in Macro-Economics", Oxford, Allan
- Davidson, Paul (1994), Post Keynesian Macroeconomic Theory, Aldershot, Uk: Edward Elgar.
- Romer, David (1996), Advanced Macroeconomics, New York: Mcgraw-Hill.

3. STATISTICS

Unit 1: Probability and Probability Distributions
- Introduction O Probability–Classical,Empirical and Axiomatic Definitions; Random Experiments – Sample Space, Sigma Field and Probability Measure; Methods of

Counting - Permutations and Combinations; Rules of Probability – Addition, Multiplication, Conditional, Independence, Bayes' Theorem; Numerical Examples.

- Random Variable – Discrete and Continuous; Probability Distribution - Pdf, Pmf and Cdf; Mathematical Expectation of Random Variables and Their Functions; Mean and Variance, Moment Generating Function and Characteristic Function; Numerical Examples.
- Discrete Distributions – Uniform, Bernoulli, Binomial, Poisson, Negative Binomial, Geometric; Hypergeometric, Multinomial; Use of Tables and Numerical Examples.
- Continuous Distributions – Uniform, Exponential, Normal, Lognormal, Gamma, Beta; Use of Tables and Numerical Examples.
- Multivariate Distributions – Bivariate Pdf and Cdf, Covariance, Marginal Distributions, Correlation, Partial and Multiple Correlation, Normal Bivariate, Multivariate Hypergeometric, Numerical Examples.

Unit 2: Sampling and Sampling Distributions
- Population Versus Sample, Iid Random Variables, Sampling Errors; Non-Random or Judgement Sampling, Methods of Random Sampling – Simple Random, Cluster, Stratified, Systematic; Sample Statistic – Sample Mean and Sample Variance; Standard Error.
- Methods of FInding Sampling Distributions – Direct Method, Transformation of Variables Method, Mgf Method.
- Z Chi-Square, T and F Distributions.
- Chebyshev's Inequality, Law of Large Numbers, Central Limit Theorem, Sampling Distribution of Sample Mean, Sampling Distribution of Sample Variance.
- Sampling from Finite and Infinite Population, Finite Population Correction Factor, Sampling from Normal Population.

Unit 3: Methods of Statistical inference
- Desirable Properties of An Estimator - Unbiasedness, Consistency, Efficiency and Sufficiency. Robustness, Mean-Squared Error. Consistency and Best Asymptotically Normal Estimator, Cramer-Rao Inequality, Method of Moments, Method of Maximum Likelihood, Interval Estimation - Confidence Intervals For Mean and Variance.
- Types of Hypothesis, Types of Errors, Level of Significance, Power of a Test, Interpretation of P-Value; Most Powerful Test – Neyman-Pearson Lemma. Loss Function and Risk Function. Generalized Likelihood-Ratio Tests. Uniformly Most Powerful Tests. Unbiased Test. Uniformly Most Powerful Unbiased Test. Sequential Probability Ratio Test.
- Testing For Means – One Sample and Two Sample Tests, Testing For Variance – One Sample and Two Sample Tests. Chi-Square Tests – Goodness of Fit Test, Test for Independence, Homogeneity Test.
- Introduction To Linear and Non-Linear Regression.
- Introduction To Nonparametric Methods, Principal Components and Factor Analysis, Analysis of Variance – One Way.

Reading List:

- J. E. Freund (1999), Mathematical Statistics, 5th Edition, Prentice-Hall International.
- J. E. Freund and R. E. Walpole (1987), Mathematical Statistics, Prentice-Hall inc.
- Hogg, R.V. and Craig, A.T. "Introduction To Mathematical Statistics", Prentice-Hall International, inc. Engle Wod Cliff, N.J., Fifth Edition, 1995.
- Mood, A.M. Graybill, F.A. and Boes, D.C., "Introduction to the Theory of Statistics", Mcgraw-Hill Book Company, New York, Third Edition, 1974.
- Hogg, R. V. and A. T. Craig (1970), Introduction to Mathematical Statistics (3rd Edition), Macmillan Publishing Co., New York.
- Sukhatme, P. V. and B. V. Sukhatme (1970), Sampling Theory of Survey With Applications, Lowa State University Press, Ames.
- J. A. Rice (1995), Mathematical Statistics and Data Analysis, 2nd Edition, Duxbury Press.
- Hogg, R.V. and Tanis E.A., "Probability and Statistical inference" Macmillan Publishing Company, New York, Fourth Edition, 1993.
- S. C. Gupta (1993), Fundamentals of Applied Statistics, S. Chand and Sons, New Delhi
- D. Gujrati (2002), Basic Econometrics, 4th Edition, Mcgraw-Hill/Irwin
- D. G. Rees (1987), Foundation of Statistics, Chapman & Hall.
- G. M. Clarke and D. Cooke (1992), A Basic Course in Statistics, 3rd Edition, Arnold.
- R. L. Schaeffer (1990), Introduction to Probability and its Applications, Pws-Kent.
- F. Daly, D. J. Hand, M. C. Jones, A. D. Lunn, K. J. Mcconway (1995), Elements of Statistics, Addison-Wesley.
- S. Ross (1976), A First Course in Probability, Macmillan.
- Chou, Y. (1975), Statistical Analysis, Holt, Reinhart and Winston, New York.
- Croxton, Crowden and Klein (1971), Applied General Statistics, Prentice Hall of India, New Delhi.
- Millar, J. (1996), Statistics For Advanced Level, Cambridge University Press, Cambridge.

4. MATHEMATICS FOR ECONOMICS

Unit 1: Functions and Calculus
- Types of Function; Differentiability; Rules of Differentiation; Derivative Versus Differential, Interpretation of Revenue, Cost, Demand, Supply Functions; Elasticities and Their Types; Higher-order Derivatives. Convex and Concave Functions. Multivariable Functions; Types of Production Functions, Homogeneous and Homothetic Functions.
- Partial Differentiation - Interpretation; Problems of Maxima and Minima in Single and Multivariable Functions; Unconstrained and Constrained Optimization; Simple Problems in Market Equilibrium; the Implicit Function Theorem; the Envelope Theorem (Unconstrained Case).

- Integration; Rules of Integration; Taylor Series Formula, Application to Consumer's Surplus and Producer's Surplus; Growth Rates and Simple Properties of Time Path of Continuous Variables.

Unit 2: Matrix, Determinant and Differential Equations
- Vectors, Matrices, Determinants – Types and Properties. Solution of Simultaneous Equations Through inversion and Cramer's Rule
- Concept of Quadratic Forms – Eigen Roots and Eigen Vectors;
- Difference Equations – Solution of First order and Second order Difference Equations; Applications in Trade Cycle Models; Growth Models and Lagged Market Equilibrium Models.

Unit 3: Linear Programming, Game Theory and Input-Output Analysis
- Linear Programming – Formulation of a Linear Programming Problem, Solution of Linear Programming Through Graphical and Simplex Methods;
- Formulation of The Dual of a Linear Programme and its Interpretation; Shadow Prices and Their uses; Concept of Duality and Statement of Duality Theorems;
- Concept of A Game; Strategies – Simple and Mixed; Value of a Game; Saddle PoInt Solution; Simple Applications.
- Introduction to input-Output Analysis

Reading List:
- Hoy, M., J. Livernois, C. Mckenna, R. Rees and T. Stengos (2001), Mathematics for Economics, 2nd Ed. Mit Press.
- Simon, Carl P. and Blume, Lawrence (1994), Mathematics for Economists, First Edition, 1994, W.W. Norton and Company.
- A.C. Chiang and Kevin Wainwright (2005), Fundamental Methods of Mathematical Economics, Mcgraw-Hill.
- Chiang, A.C. (1984), Fundamental Methods of Mathematical Economics, 3rd Edition, Mc-Graw Hill.
- Allen, R.G.D.(1974), Mathematical Analysis for Economists, Macmillan Press, London.
- Sydsaeter, Knut, Peter Hammond (2002), Essential Mathematics for Economic Analysis, Prentice Hall.
- Dixit, A.K. (1990), Optimization in Economic Theory, 2nd Edition, Oxford University Press.
- Dowling, Edward T. (2004), Introduction to Mathematical Economics, 3rd Ed. Mcgraw-Hill.
- Dowling, Edward T. (1992), Schaum's Outline of Theory and Problems of Mathematics for Economists, McGraw-Hill.
- Silberberg, E.(1990), the Structure of Economics - a Mathematical Analysis, McGraw-Hill, 1990.
- M.W. Klein (2002), Mathematical Methods for Economics, 2nd Ed. Addison-Wesley.
- Pemberton M. and N. Rau (2001), Mathematics for Economists, Manchester University Press.

- Mathur, P. N. and R. Bharadwaj (Eds.) (1967), Economic Analysis in Input-Output Research, Input-Output Research Association of India, Pune.
- Hadley, G. (1962), Linear Programming, Addison Wesley Publishing Co., Massachusetts.
- Kothari, C. R. (1992), An Introduction to Operations Research, Vikas Publishing House, New Delhi.
- Yamane, Taro (1975), Mathematics for Economists, Prentice Hall of India, New Delhi.
- Baumol, W. J. (1984), Economic Theory and Operations Analysis, Prentice Hall, Englewood Cliffs, New Jersey.

Semester II (Compulsory Papers)

1. OPEN ECONOMY MACROECONOMICS

Unit 1: The Open Economy
- IS-LM Analysis in Open Economy
- LM Curve and the Balance of Trade: Zero Capital Mobility
- Implication of Capital Mobility for Macro Policy
- Mundell–Fleming Model
- Marshall-Lerner Condition
- Interest-Rate Differentials
- The Mundell–Fleming Model With a Changing Price Level

Unit 2: Inflation and Unemployment in the Open Economy
- Inflation and Unemployment in the open Economy
- Equilibrium Rates of Unemployment and Sustainable Unemployment
- Fiscal Expansion, Exchange Rate and inflation
- Supply Side and Demand side in the Open Economy
- Open Economy Equilibria

Unit 3: Further Open Economy Topics
- Floating Exchange Rates with Zero Capital Mobility
- Floating Exchange Rates and Perfect Capital Mobility: Exchange Rate Expectations
- Rational Exchange Rate Expectations; Dornbusch's Overshooting Model
- Policy Interdependence and The World Equilibrium Rate of Unemployment

Reading List:
- Wendy Carlin and David Soskice (2008) Macroeconomics: Imperfections, Institutions & Policies; Oxford University Press
- Wendy Carlin and David Soskice (1996) Macroeconomics and the Wage Bargain; Oxford University Press
- Mankiw, N. Gregory (2000) – Macroeconomics (4th Ed, Macmillan-Worth))

- Obstfeld, M. and K. Rogoff (1996), Foundations of International Macroeconomics, Cambridge, Ma: Mit Press..
- Frenkel, J. and A. Razin (1996), Fiscal Policies in the World Economy, 3rd Edition, Cam-
- Bridge, Ma: Mit Press.
- Grossman, G. and K. Rogoff (Eds.) (1996), Handbook of International Economics, Vol. III,
- Amsterdam: North-Holland.
- Turnovsky, S.(1997), International Macroeconomic Dynamics, Cambridge, Ma: Mit Press.

2. GENERAL EQUILIBRIUM & WELFARE ECONOMICS

Unit 1: Partial Equilibrium and General Equilibrium Analysis
- Pareto Optimality and Competitive Equilibria
- Partial Equilibrium Competitive Analysis
- The Fundamental Welfare Theorems in a Partial Equilibrium Context
- Pure Exchange: Edgeworth Box
- One consumer one producer Economy, 2x2 Production Model
- General versus Partial Equilibrium Theory
- Pareto Optimality with Social Optima
- Existence of Walrasian Equilibrium
- Core and Equilibria in Competitive Economies

Unit 2: Social Choice & Welfare
- The Nature of the Problem
- Social Preference Relation
- Social Choice and Arrows Impossibility Theorem
- Measurability, Comparability of Social Welfare Function –
- Rawlsian Social Welfare Functions, Utilitarian Social Welfare Function

Unit 3: Market Failure
- Public Goods
- Private Provision of Public Goods
- Comparision with Private Goods
- Free Rider Problem
- Demand Revelation
- A Simple Bilateral Externalities
- Multilateral Externalities
- Coase Theorem
- Private Information and Second Best Solutions

Readings List:
- Henderson & Quandt, Microeconomic Theory: A Mathematical Approach, 3rd Edition, McGraw-Hill International Edition.
- Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India
- Mas-Colell, Andreu, Michael D.Whinston and Jerry R. Green, (1995), Microeconomic Theory, OUP, New York.
- Varian, Hall R., (1992), Microeconomic Analysis (Third Edition), W.W. Norton & Company, New York, London.

Additional Readings:

- Arrow, K.J. (1974). 'General Economic Equilibrium, Purpose, Analytic Techniques, Collective Choice'. American Economic Review, Vol. 64, pp. 253 - 273.
- Arrow, K.J. (1968). 'Economic Equilibrium' in International Encyclopaedia of the Social Sciences, (ed.) David Sills, Vol. 4, pp. 376 - 386, Reprinted in Collected Papers of K.J. Arrow, Vol. 2, Chapter 6.
- Arrow, K.J. "An Extension of the Basic Theorems of Classical Welfare Economics" in Peter Newman (ed.) Readings in Mathematical Economics, Vol. I
- Arrow, K J (1963): Social Choice and Individual Values , Cowles Foundation (Yale University Press: New Haven).
- Mukherji, A. (1990), Walrasian and Non- Walrasian Equilibria
- Quirk J.P., & Saposnik, R. (1968), Introduction to General Equilibrium Theory and Welfare Economics.
- Hildenbrand, W., and Kirman A.P. (1976), Introduction to Equilibrium Analysis.

<div align="center">

Semester III (Compulsory Papers)

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1. INDIAN ECONOMIC POLICY

Unit 1: Development Concept and Issues in Governance
- Development Concept, State and Market, Institutions,
- Panchayati Raj Institutions – (PRIs) Non Government Organizations (NGOs),
- Sustainable Development,
- Governance
- Economic Reforms, Plans After Reforms

Unit 2: Sectoral Development and Policy Reforms
- Financing of Infrastructure Development, Education Sector,
- Migration,
- Poverty, Inequality and Growth
- Current Status of Agriculture Input Pricing , Subsidies and Land Reforms
- Industrial Policy and Development after 1991, Public Sector Under-Takings (PSUs), Privatization and Disinvestment,

Unit 3: Policy Approaches in Fiscal, Financial and External Sector
- Fiscal and Monetary Policy Approaches, Fiscal Federalism,
- Tax Reforms, Central Government Finances
- Financial Sector Reforms, Money and Capital Market.
- Foreign Trade Liberalization, Balance of Payments, Exchange Rate Policy,
- World Trade organization (WTO) and Indian Competition Policy.

Readings List:
- Ahluwalia. I.J. and I.M.D Little (Eds.), India's Economic Reforms and Development (Essays in Honour of Manmohan Singh) Oxford University Press, New Delhi – 1999.
- Bardhan. P.K. (9th Edition), the Political Economy of Development in India, Oxford University Press, New Delhi – 1999.
- Bawa. R.S. and P.S. Rainkhy (Edi) Structural Charges in Indian Economy, Gurunanak Dev University Press, Amritsar.
- Brahmananda, P.R. and V.R. Panchmukhi (Edi) Development Experience in Indian Economy, Interstate Perspectives, Bookwell, Delhi – 2001.
- Dutt. R.(Edi), Second Generation Economic Reforms in India, Deep and Deep Publications, New Delhi – 2001.
- Dutt. R.(Edi), Second Generation Economic Reforms in India, Deep and Deep Publications, New Delhi – 2001.
- Joshi, V. and Imd Little; India: Macro Economics and Political Economy, 1964-1991, Oxford University Press, New Delhi – 1999.
- Ahluwalia. I.J,; Industrial Growth in India, Oxford University Press, New Delhi – 1985.
- Appu. P.S.; Land Reforms in India, Vikas, New Delhi – 1996.
- Bhargawa, P.K.; India's Fiscal Crises, Ashish Publishing House, New Delhi – 1991.
- Brahmananda, P.R. and V.R Panchmukhi (Edi.), the Development Process of Indian Economy, Himalayas Publishing House, New Delhi – 1987.
- Byers. T.J. (Edi); the Indian Economy: Major Debutes Since Independence, Oxford University Press, New Delhi – 1998.
- Chelliah, Raja J: Towards Sustainable Growth, Essays in Fiscal and Financial Sector Reforms in India – Oxford University Press, New Delhi – 1996.
- Chelliah. Raja J. and R. Sudarshan: Income, Poverty and Beyond Human Development in India Social Science Press, New Delhi – 1999.
- Debroy. B.:Foreign Trade Policy Changes and Devaluation - B.R. Publishing Corporation, Delhi – 1993.
- Dhameeja, N. and K.S. Sastry: Privatisation: Theory and Practice, A.H. Wheeler – New Delhi – 1998.
- Dubey. M: Anllnequal Treaty: World Trading order After Gait, New Age International Ltd., New Delhi
- Gupta. S.P.: Post Reform in India: Emerging Trends Allied Publishers.
- Kabra. K.N.: Development Planning in India, Sage Publication, New Delhi – 1997.
- Mookherjee. D. (Edi); Indian Industry, Policies and Performance – Oxford University Press, New Delhi – 1997.

- Mundle. S: Public Finance; Policy Issues for India – Oxford University Press, New Delhi – 1999.
- Srinivasan. T.N. (Edi.) Measurement of inequality and Poverty, Oxford University Press, Calcutta, 1997.
- Myrdal. Gunnar. Asian Drama: an inquiry Into Poverty of Nations, New York, Twentieth Century Fund.
- Williamson, Oliver E: The Economic institutions of Capitalism, Firms, Markets, Relational Contracting, New York: Free Press.
- Bardhan, Pranab; Poverty Agrarian Structure and Political Economy in India. Selected Essays – Oxford University Press, New Delhi – 2003.
- World Bank; Re-Energising the Agriculture Sector to Sustain Growth and Reduce Poverty – Oxford University Press, New Delhi – 2005.
- Rao Hunumanta, C.H.; Agriculture, Food Security Poverty and Environment, Essays on Post Reform in India, Oxford University Press, New Delhi – 2005.

2. DEVELOPMENT AND GROWTH THEORY

Unit 1: Economic of Growth and Development
- Evolution of Development of Economics;
- Concept, Measurement and Methodology;
- Historical Experiences –Gdp Per-Capita To Sustainable Development;
- Theories of Under-Development, Hirschman, Rostow, Lewis, Gunder Frank, Myrdal, Harris-Tadaro.

Unit 2: Economic Growth- Theory and Practice
- Historical Trends and Patterns;
- Growth Theories-- Classical, Neo-Classical, Keynesian, Post-Keynesian and New Growth-Theories;
- State, Market and Institutions;
- Role of Natural Resource-from Classical Economists To Thermodynamics School.

Unit 3: Poverty, Income Distribution and Justice
- Commodities, Characteristics, Functioning and Well- Being;
- Poverty- Concept, Measurement and incidence;
- Justice- Concept, Measurement and Approaches, (Lock To Sen);
- Food, Famine and Entitlements;
- Ecology- Economy and Poverty;
- Migration, Demographic Transition and Poverty.

Readings List:
- Aggarwal and Singh (1958): The Economics of Underdevelopment. Oxford University Press, New Delhi

- Chakarvarti, S (1981): Development Planning: the Indian Experience. Oxford University Press, New Delhi.
- Chakarvarti, S. (1982): Alternative Approaches to A Theory of Economic Growth, Oxford University Press, New Delhi.
- Chenery et al(987): Handbook of Development Economic V 01.1 and II. North-Holland.
- Haq, M.: Reflection on Human Development, Oxford University Press. New Delhi.
- Harris. John: (1982), Rural Development - Theories of Peasent Economy and Agrarian Change
- Meier, G.M. (1971): Leading Issues in Economic Development Oxford University Press, New Delhi.
- Myrdal. G ((968): Asian-Drama: an Enquiry Into The Poverty of Nations, Pelican, London.
- Sen, A.K. (19'70): Growth Economics, Penguin.
- Sen, A.K. (1981): Poverty and Famines, Allied Publishers, New Delhi.
- Sen, S.K. (1984): Resources, Values & Development, Basil Blackwell. London.
- Thirawall, A. (1978): Growth and Development, Macmillan, London.

Semester IV (Compulsory Papers)

1. INTERNATIONAL TRADE

Unit 1: Trade Theories 1 (Classical and Neo-Classical)
- Notion of Comparative Advantage (Static Versus Dynamic, Natural Versus Acquired, Theoretical Versus Empirical, Etc); Sources of Comparative Advantage (Technology, Resource Endowments, Demand Patterns, Economies of Scale, Government Policies Etc).
- Classical Model (Smith, Ricardo, and Haberler): Assumptions, Implications and Limitations; Extension of Ricardian Model: The Specific Factor Model.
- Standard Model: Analysis of Gains from Free Trade.
- Neo-Classical Model: Assumptions and Their Implications, Factor Substitution, One-to-One Relationship Between Factor-Prices, Commodity-Prices and Factor-Intensities; Heckscher-Ohlin, Stolper-Samuelson, Rybczynski and Factor Price Equalization Theorems; Empirical Evidence - the Leontief Paradox.

Unit 2: Trade Theories 2 (Modern Theories and Trade Policy)
- Intra-Industry Trade - Trade Under The Assumptions of Imperfect Competition and Economies of Scale, LInder's Hypothesis; Dynamic Explanations (Change of Technologies) - Product-Cycle and Technology-Gap Models; Strategic Trade Policy (Management) - The Diamond Model (Michael Porter).
- Free Trade Versus Protection - Need For Protection, Tariff and Non-Tariff instruments of Trade Policy, Comparison of Tariff and Quota, Learner's Symmetry, Aggregate Measures of Protection, Nominal and Effective Rate of Protection.

- Effects of Tariff for Small and Large Countries (Partial Equilibrium Analysis), Effects of Tariff on Distribution of Gains from Trade (General Equilibrium Analysis), the Optimum Tariff, Metzler's Paradox, Domestic Distortions, Trade Distorting Tariffs.

Unit 3: India and the World Economy
- Patterns (Structure) of Lndia's Foreign Trade - Volume, Trends, Composition, Direction, etc., Export Performance and Export Competitiveness.
- India's Trade Policy: Review of Pre- and Post-Liberalization - Exim Policies, Export Promotion Policies, SEZs; Tariff Structure, RTAs and FTAs.
- India and WTO: Uruguay Round, Highlights of Ministerial Meetings: Singapore to Hong Kong, Concerns of Advanced Countries (Acs) and Developing Countries (Dcs), the Doha Development Agenda (DDA) and Concerns of India.
- Effects of Trade (Liberalization and Globalization) on Poverty, Inequality, Environment, Gender, Labour Standards, Technological Transfers Etc.

Readings List:
- Salvatore, Dominick, International Economics, 6th Edition (1998) Prentice Hall, 7th and 8th Editions (2001 and 2004) John Wiley & Sons.
- Sodersten, Bo and Reed, G. (1994), International Economics, Macmillan Press Ltd., London
- Sawyer, W.C. and Sprinkle R.L. (2003), International Economics, Prentice-Hall of India, New Delhi.
- Krugman P.R. and Obstfed D. (1994), International Economics: Theory and Policy. Third Edition. Harper Collins. New York
- Caves, Jones and Frankel (1999), World Trade and Payments, 8th Edition, Addison-Wesley.

Additional Readings:
- Suranovic Steven M. (2005), International Trade Theory & Policy Analysis, Http://internationalecon.Com
- Hoekman, Mattoo and English (Ed.) (2002), Development, Trade and the Wto – a Handbook, The World Bank, Washington, D.C.
- Bowen Harry P., Hollander A., Viaene J. (1998), Applied International Trade Analysis, The University of Michigan Press, and Macmillan Press Ltd.
- Human Development Report 2005, Undp & Oxford, Chapter-4 (For Trade & Development)
- Bhagwati, J. (2002), Free Trade Today, Oxford University Press
- Bhagwati, J. (2004), in Defense of Globalization, Oxford University Press
- Bhagwati, Srinivasan and Panagariya (1998), Lectures On International Trade, 2nd Edition, Mit Press
- Bimal Jalan (Ed).(1992). The Indian Economy: Problems and Prospects. N. Delhi.
- Cherunilam, Francis (2006), International Economics, 4th Edition, Tata Mcgraw-Hill, New Delhi

- Wadhwa, Charan.D. 1994. Economic Reforms in India and The Market Economy. Allied Publishers Ltd. New Delhi.
- Srinivasan, T. N. (2000), Eight Lectures on India's Economic Reforms, Oxford University Press.

Articles:
- Baldwin, R. (1952), "The New Welfare Economics and Gains in International Trade", Quarterly Journal of Economics, 91-101.
- Baldwin, R.E. (1960), "The Effects of Tariffs on International and Domestic Prices", Quarterly Journal of Economics, 74(1) 65-70.
- Bhagwati, J. (1958), "Immiserizing Growth: A Geometric Note", Review of Economic Studies, 25, 201-205.
- Krugman P .R. (1980), "Scale Economics, Product Differentiation and Pattern of Trade." American Economic Review. PP 950-175.
- Lancaster, K (1980) "Intra-Industry Trade Under Perfect Monopolistic Competition, Journal of International Economics PP. 151-175.
- Posner, M. V. (1961) "International Trade and Technical Change: Oxford Economic Paper PP. 323-341.
- Vernon. R. (1966) "International Investment and International Trade in the Product Cycle'. Quarterly Journal of Economics. Pp. 197-207.
- Metzler L.A. (1949)'Tariff: the Terms of Trade and the Distribution of National Income', Journal of Political Economy, Pp. 1-29.
- De Graft V.J. (1949) ".On Optimum Tariff Structure: Review of Economic Studies No. I Pp. 47 -59
- Samuelson, P .A. (1948), "International Trade and the Equalization of Factor Prices, "Economic Journal, Pp 165-184.
- Johnson H.G. (1985), "The Gains from Free Trade With Europe: An Estimate". Manchester School of Economics and Social Studies. Pp. 247-255.

2. ENVIRONMENTAL ECONOMICS - I

Unit 1: Environmental Economics: Setting and Scope
- Meaning and Central Themes of Environmental Economics;
- Ecology- Environment and Economy Perspectives;
- Environment and Economy Linkages;
- Different Perspectives on Development - Limits to Growth, Thermodynamics School and Simon Julian's Thesis of "Ultimate Resource";
- Current State of Environment;
- Sustainable Development: Basic Issues, Concepts, Definitions Approaches, Rules and Indicators.

Unit 2: Eco-System and Natural Resources
- Definition, Functions of Ecosystem, Food-Chains, Food Webs and Ecological Succession, Net Productivity of an Eco-System;

- Geo-Ecological Cycles;
- Ecosystem Productivity and Relevance of Different KInds of Eco-Systems;
- Natural Resources and the Economy, Natural Resource Scarcity-a Historical Perspective, Classification of Natural Resources,
- Economics of Natural Resource Exploitation: Economic Analysis of Non-Renewable Renewable Natural Resources;

Unit 3: Environmental Capital—Theory, Practice and Evaluation
- Taxonomy of Individual and Public Choices,
- Externality, Market Failures and Missing Markets.
- Theory of Environmental Valuation, and Introduction to Methods of Valuation.
- Theory of Regulation and instruments of Regulation.
- Application of Cost and Benefits Analysis to Environmental Analysis.

Reading List:
- Baumol, William J. and Wallace E. Oates, (1988) the Theory of Environmental Policy, 2nd Edition, Cambridge University Press, (Ch.3,4,5)
- Bhattacharya, R.N. Edt. (2001), Environmental Economics - an Indian Perspective (Oup).
- David Paper, (1996), Modern Environmentalism - an Introduction, Routledge , London.
- Dasgupta, Kristrom and Maler (1997), Poverty, institutions and Environmental Resource Base, in J. Berhman & T. N. Srinivasan (Eds.), Handbook of Development Economics, Vol. IIIA.
- Hanley, Shogren and White (1997), Environmental Economics in Theory and Practice, Macmillan India Ltd.(and Oup Edition).
- Hussen, Ahmed. M,(2000), Principles of Environmental Economics: Economics, Ecology and Public Policy, Routledge, New York.
- Kadekodi,Gopal K.(2004) Ed."Environment Economics in Practice. Oxford University Press, New York.
- Kolstad, D. Charles. (2004). Environmental Economics. Oxford University Press, New Delhi
- Maler, K. Goran, (1974), Environmental Economics: a Theoretical inquiry, Resource for Future, Baltimore.
- Pearce, David. W.(1978)Edt. The Valuation of Social Cost. George Allen and Unwin Ltd. London.
- Sengupta, Ramprasad (2002): Ecology & Economics: an Approach to Sustainable Development, Oup, India (Ch. 5, 6, & 7).
- Solow, in Shankar U. Edt. (2000), Environmental Economics, Oup.
- Tietenberg, Tom. (2000), Environmental & Natural Resource Economics, 5th Edition, Addison-Wesley Longman inc. Usa.
- Turner R K., D W Pearce and I Bateman. (1993). Environmental Economics: an Elementary Introduction. 1st Edition Baltimore: Johns Hopkins Up.
- Shankar, U. (2001), Environmental Economics (Ed.) Oup, Last Chapter

- Van Den Berg, J.C. (1999), Handbook of Environmental & Natural Resource Economics Edward Elgar Uk.
- Undp (1992): Handbook of Sustainable Development & Environmental Management, New York.
- Ulaganathan (2001) Ed. Environmental Economics, Oxford University Press.
- World Commission on Environment & Development (Wced), 1987, Our Common Future, Oup.

Additional Readings:
- Baker, Steve, (2003), Environmental Economics, Dominant Publishers & Distributers, Delhi.
- Banerjee,S. (2001). Economic Valuation of Environmental Benefits and Costs. in Environmental Economics. (Edt) Battacharya ,RabIndra. N, Oxford University Press. New Delhi.
- Bohm Peter & Allen V. Kneese(1972) (Edt). The Economics of Environment. Paper from Nations. Published By Macmillan, St. Martins Press.
- Bowonder, Environmental Management Problems in India (1985), in Environmental Management, Vol. 10, No. 5.
- Burkhardt, Dietrich F and William H. Ittelson (1978). (Edt). Environment Assessment of Socio Economic Systems, Published By Plenum Press- New York, London
- Chopra, Kanchan, Gopal K. Kadekodi (1999): Operationalizing Sustainable Development, Sage.
- Cropper L Maureen & William E Oates. Measuring Benefits and Costs of Pollution Control" Sankar Dorfman, Robert & Nancy S. Dorfman (1973) (Edt). Economy of Environment. Selected Readings Published By W.W Norton & Co. inc.
- Hudges,Laurent. (1973).Environment Pollution. Published by Holt, Rinettart & Winston, inc.
- Rajalakshmi N (2002).Environmental Cost of Economics Evaluation. Published By Manare Publications Pvt Ltd.
- Victor,Peter A.(1972). Pollution Economy and Environment. George Allen and Unwin Ltd

Useful Links:
- Www.Evri.Ca
- Www.Wri.org
- Www.Rff.org
- Www.Undp.org
- Www.Worldwatch.org
- Www.Ecologicaleconomics.org

Semester I (Optional Papers)

No Optional Papers

Semester II (Optional Papers)

1. ECONOMETRICS

Unit 1: Regression Analysis and Violations of Basic Assumptions
- Simple and General Linear Regression Model – Assumptions.
- Estimation (Through OLS Approach) and Properties of Estimators;
- Gauss-Markov Theorem;
- Maximum Likelihood Method,
- Multiple Linear Regression, Partial and Multiple Correlation Coefficient, Hypothesis Testing.
- Nature, Test, Consequence and Remedial Steps of Problems of Heteroscedasticity; Multicollinearity and Auto-Correlation; Problems of Speciation Error; Errors of Measurement.

Unit 2: Regression with Qualitative and Lagged Variables
- Dummy Variable Techniques.
- Testing Structural Stability of Regression Models; Comparing Two Regressions, Interaction Effects, Seasonal Analysis, Piecewise Linear Regression, Use of Dummy Variables. Regression With Dummy Dependent Variables; the LPM, Logit, Probit and Tobit Models.
- Autoregressive and Distributed Lag Models- Koyck Model, Partial Adjustment Model, Adaptive Expectations; Instrumental Variables; Problem of Auto-Correlation-Application; Almon Approach to Distributed - Lag Models.

Unit 3: Simultaneous Equation Models
- The Simultaneous Equation Bias and Inconsistency of OLS Estimators;
- The Identification Problem; Rules, of Identification-order and Rank Condition;
- Method of Estimating Simultaneous Equation System; Recursive Method and OLS; Indirect Least Square (ILS); 2SLS; 3SLS – Applications.

Reading List:
- Amemiya, T. (1985), Advance Econometrics, Harvard University Press, Cambridge, Mass.
- Goldberger, A.S. (1998), Introductive Econometrics, Harvard University Press, Cambridge, Mass.
- Gujarati, D.N. (1995), Basic Econometrics (2nd Edition), Mcgraw Hill, New Delhi.
- Hill R. C, E.G. William and G.G. Judge (1997), Undergraduate Econometrics, Wiley, New York.
- J. Johnston, Econometrics Methods, Mcgraw Hill (Fourth Edition)

- Kennedy. P. (1998), A Guide to Econometrics (Fourth Edition), Mit Press, New York.
- Kmenta, J. (1997), Element of Econometrics (ReprInt Edition), University of Michigan Press, New York.
- Maddala, G.S: (Ed.) (1993), Econometric Methods and Application (2 Volumes)

2. PUBLIC ECONOMICS

Unit 1: Public Economics - Concept, Scope, Provisions of Public Goods
- Public Economics, Concept, Role of Government, Public, Private and Merit Goods, Pure impure Public Goods, Qasi Public Goods
- Information Asymmetry. Externalities,
- Public Goods, Nonrival Consumption and Non Excludability,
- Demand and Supply of Public Goods,
- Local Public Goods and Decentralization Theorem,
- Problems of Preference Revealation, Voting Rule, Characteristic of Majority Voting Rule, Rent Seeking

Unit 2: Taxes, Public Expenditure, Debt and Budgeting
- Public Expenditure, Structure and Growth, Wagner's Law,
- Peacock– Hypothesis,
- Cost Benefit Analysis, Shadow Pricing, Discount Rate,
- Budgeting, Public Borrowing Public Debt, Budgeting and Zero Based
- Benefits and Ability to Pay Approaches to Taxes Allocative and Equity Aspects of Taxes,
- Deadweight Losses, Excess Burden, Trade off Between Equity and Efficiency.

Unit 3: Fiscal Federalism and Fiscal Reforms in India
- Fiscal Federalism. Assignment of Function, Constitutional
- Provisions, and Sources of Revenue.
- Resource Transfer from Centre to State
- Principles of Multi Unit Finance
- Direct and Indirect Taxes,
- Budget Deficit and Its Implications.

Reading List:
- Duff L, Government and Market, orient Longman, New Delhi 1997.
- Qullis. John and Jones Phillp: Public Finance and Public Choice, Oxford University Press, Second Edition 1998
- Atkinson Anthony B, Stiglitz, Josheph E; Lectures on Public Economics, Mac Graw Hill Book Co. Singapore 1980
- Musgrave, Richard A, Musgrave, Peggy B; Public Finance in Theory and Practice, Tata Mc Graw Hill Companry, New Delhi 2004
- Chelliah Raja J; Fiscal Policy in Under Developed Countries, George Allen and Unwin, London 1971

- Bhargava, R.K.; Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi – 1985
- American Economic Association: Reading in Fiscal Policy, George Allen and Unwin, London – 1955.

3. FINANCIAL ECONOMICS

Unit 1: Financial Markets
- Financial Markets and Financial Instruments
- Real Assets and Financial Assets
- Stocks, Rate of Interest, Exchange Rates
- Indian Financial Markets, Regulations and SEBI

Unit 2: Modern investment Theory
- Securities Markets Operational Efficiency and Efficient Market Hypothesis (Emh)
- Modern View of Security Analysis, Performance of Securities Market, Price / Earning Ratios.
- The Determinants of Equity Prices, Estimating Fair Value, Capital Asset Pricing Models (CAPM), Arbitrage Pricing Theories (APT), Multifactor Models
- Fixed Income Securities, Bond Valuation and Analysis, Bond Portfolio Management

Unit 3: Financial Derivatives
- Derivatives Forward Markets and Future Markets.
- Mechanics of Futures Markets and Price Determination. Hedgers, Speculators, Hedging Strategies.
- Options and Option Pricing, the Payoffs from Buying and Selling Options, Put-Call Ratio and Parity.
- Mechanics and Properties of Stock Options.

Reading List:
- Alexander, G.J., W.F. Sharpe and J.V. Bailey (2002), Fundamentals of Investments, Third Edition, Prentice-Hall of India Private Limited, New Delhi
- Chandra, P. (1999), Financial Management: Theory and Practice, Galgotia Publishers
- Hull, J.C. (2002), Options, Futures, and other Derivatives, Fifth Edition, Prentice-Hall
- Francis, J.K. (1991), Investments: Analysis and Management, McGraw-Hill
- R.E.Bailey(2005) The Economics of Financial Markets, Cambridge University Press
- Z. Bodie, Robert Merton and David Cleeton (2009), Financial Economics, Pearson
- Z. Bodie, A. Kane and A. Marcus(2008), Investments, McGraw-Hill

4. AGRICULTURAL ECONOMICS

Unit 1: Agriculture and Economic Development-Introduction

- Nature and Scope of Agricultural Economics
- Peculiar Characteristics of Agriculture
- Transformation of Traditional Agriculture-Schultz and Mellor's Analysis
- Agriculture and Dual Models: Fei- Ranis and Arthur Lewis
- Agriculture and Its Contribution-Kuznets's Formulations

Unit 2: Economics of Agricultural Production
- Production Function in Agriculture and forms of Production Functions-Cobb Douglas, Spill Man
- Factor Factor Relationship in Agriculture
- Rational and Irrational Production Stages of Production
- Risk and UncertaInty in Agriculture
- Crop insurance

Unit 3: Issues in India's Agricultural Development
- Land Reforms in India and Their Impact on Agrarian Structure
- The New Agricultural Strategy
- The New Economic Policy and Indian Agriculture
- Wto and its Implication for Indian Agriculture
- Agricultural Price Policy in India

Reading List:
- Ashok Rudra (1965) Economics of Agricultural Production and Resource use, Prentice Hal
- Acharya,S.S.(1998), Agricultural Marketting in India: Some Facts and Emerging Issues,Ijae, July-Sept.
- A.S. Kahlon and D.S. Tyagi, Agricultural Price Policy in India, Heritage Publishers
- Dantwala, M.L. Et Al (1991) Indian Agricultural Development Since Independence, Oxfordand IPH, New Delhi
- Ghatak Subrata and Ken inqresent(1984) Agriculture and Economic Development, Select Book Services Syndicate, New Delhi
- Hanumantha Rao (1964)" Agriclturua1 Production Functions: Cost ant Return in'lndia" Asia Publishing House, Bombay
- H. Evan Drummond, Jhon W Goodwin (2004) Agricultural Economics, Pearson Education, Delhi
- Heady E.O.(1964) Economics of Agricultural Production and Recourse use". Prentice Hall India Ltd, New Delhi.
- Kahlon .As. and D.S. Tyagi(1983)Agriculture Price Policy in India, Allied Publishers Ltd, New Delhi
- Krishna Raj (1963) Farm Supply Response in India-Pakistan: a Study of the Punjab Region, Economics J.I Sep
- Khusro AM. (1968) Readings in Agricultural Economics, Allied, Bombay
- Kuznets.S. (1965) Economic Growth and Structure, Oxford and DBH Publishing Compnay, New Delhi.

- Lele U (1965) Food Grain Marketing in India: Private Performance and Public Policy, Popular Prakashan, I3ombay.
- Lewis, W.A (1955) Economic Development with Unlimited Supplies of Labour, Manchester School of Economic and Social Study, May
- Mellor J. (1966) the Economics of Agriculture Development, Yom and Company, Bombay. .
- Mellor J.W. (1969) Agricultural Policy in the Context of Economic Development" American Journal of Agriculture Economics, 51 (5).
- Motra A (1977) Terms of Trade and Class Relation, P. P Baghch Ad Company Culcutta
- M.L. Dantwala (Ed) 1985) Agricultural Growth in India, Indian Society for Agricultural Economics. Raj K.N. and Sen A.K. and L.H.H.
- Rao (Ed)(1988) Studies in Indian Agriculture, Oup
- Rao Y.M (1992) Fixing Agricultural Price: Issues and Experiences, Epw March
- Rath, N.K. (1985) Price" Costs of Production and Terms of Trade of Indian Agriculture, IJAE, Oct-Dec
- R.K Sampanth (1980) Economic Efficiency in Indian Agriculture
- Reins G and John Ch Fei (1961) Theory of Economic Development
- Robertson C.A. (1971) Introduction to Agricultural Production Economics and Farm Management" , Tata Macgraw Hill New Delhi
- Sakhyan Pl (1988) Introduction to Economics of Agricultural Production, Prentice Hall India Ltd, New Delhi
- S.A.R. Bilgrami(L996) a Introduction to Agricultural Economics, Himalayan Publishing House, Bombay.
- Schultz T.W. (1964 Transforming Traditional Agriculture, New Have, Yale Univesity Press
- Sidhu, D.S. (1990) Some Aspects of Agricultural Economics and Price Policies in India, IJAE,July-Sept.
- Suthworth, H. M. and B.F. Johnston(Ed) (1974 Agricultural Development and Economic Growth Cornell Univesity, London
- Tyagi D.S (1974) Farmers Response to Agricultural Price in India: a Study in Decision Making, Heritage Publishers New Delhi
- Y.Haymi and V.Rutan (1971) Agricultural Development-an International Perspective, Jhon Hopkins
- Witt L (1950) Role of Agriculture in Economic Development, a Review of J.I of Farm Economics, February.

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Semester III (Optional Papers)

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1. ECONOMICS OF EDUCATION

Unit 1: Economics of Education, Human Development and Economic Development

- Economics of Education, Nature, Definition and Scope of study.
- Education and Human Development and Human Capital Accumulation.
- Aspects, Indicators and Measures of Economic Development.
- Impact of Education on Labour Force Participation, Technological Change and Economic Development.

Unit 2: Cost Benefit Analysis and Financing of Education
- Production and Cost Functions of Education.
- Financing of Education, Public - Private Participation.
- Theories of Public Expenditure on Education, Models and Methodologies.
- Linkages between Education, Skills and Jobs.
- Wastages in Education. Non-participation, Dropouts and Brain Drain.

Unit 3: Problems and Prospects of Education in India:

- Indian Perspective to Education,
- Literacy and Education Programmes of Government of India.
- Education planning, need based and Value based education planning in India.
- Public Expenditure on Education in India.
- Need and Scope for External Participation in Education in India.

Reading List:
- De. Anuradha and Jean Dreze (1999)-Public Report on Basic Education in India (Probe), Oxford University Press. New Delhi.
- GovInda R (Ed) (2000). India Education Report. a Profile of Basic Education National institute of Educational Planning and Administration, Oxford University Press. New Delhi
- Mahbubul Haq (1996) Reflections on Human Development, Oxford University Press. New Delhi.
- Dreze Jean and Sen Amartya (1994) Indian Economic Development and Social Opportunity. Oxford University Press. New Delhi.
- Tilak Jandhala B.G. (1994) Education and Development in Asia, Sage Publications New Delhi.
- Vaidyananthan A and Nair P.R.G (2001) Elementary Education in Rural India- a Grass Root View, Strategies for Human Development in India, Vol. 2, Sage Publications, New Delhi

Additional Readings:
- Ananda Krishnan M (2006) Privatization of Higher Education Opportunities and Anomalies, National Seminar on Privatisation and Commercialization of Higher Education, New Delhi May 2
- Amit Mukherjee (2007) 'Implications for Education' EPW Volume XLII No. 14 April 2007, PP 1273-1276
- Prez, Jeon and Geeta Kingdon (2001), School Participation in Rural India, Review of Development Economics.

- Panchamukhi P.R. (1990) 'Private Expenditure on Education in India- an Empirical Study', Indian Institute of Education, Pune
- Tilak J.B.G (2006) 'Economics of Human Capital in India' Indian Economic Journal 89(4) Dec. 27, 29, Pp 2-24.
- ------- (1999), Investment in Human Capital in India: an Interstate Analysis of Stock Flow of Human Capital of India, School of Political Economy Vol. XI No 1.
- ----- (2002), Education Policy in India Review of Development and Change, Vol. XI, No. 1

Journal:
- National Council of Education Research and Training 1982, 1999. Education Survey Report, New Delhi.
- World Development Reports, Various Issues- Washington D.C Oxford University Press. New Delhi.
- National Human Development Reports Various Issues- Planning Commission GOI, New Delhi
- Human Development Reports, Undp.

2. TIME SERIES ANALYSIS

Unit 1: Introduction of Time Series
- Stochastic Processs
- Correlation and Autocorrelation Functions
- Stationarity: Unit-Root Test
- Arima Models

Unit 2: Conditional Heteroscedastic Models
- Characteristics of Volatility
- Structure of A Model
- The Arch Model
- The Garch Models: M-Garch, E-Garch and T-Garch

Unit 3: Vector Autoregression Model, Co-Integration and Forecasting
- Introduction to Var Analysis
- Causality in Time Series: Granger Causality Test and Toda and Yamamoto Causality Tests
- Co-Integration and error Correction Model
- Testing for CoIntegration – Engle – Granger Methodology – Johansen Methodology
- Time Series Forecasting.

Reading List:
- Brockwell P.J. and Davis R.A : "Introduction to Time Series and Forecasting", 2002
- Enders, W.: "Applied Econometric Time Series", 2nd Edition, 2003
- Harris, R. and R. Sollis: "Applied Time Series Modelling and Foecasting", 2003

- Kocenda, E. and A. Cerny, "Elements of Time Series Econometrics", 2007
- Hamilton, J.D.: "Time Series Analysis, Princeton University Press", 1994
- Kratzig, M. and H. Lutkepohl ,"Applied Time Series Econometrics", 2004
- Stewart, K. G.: "Introduction to Applied Econometrics", 2005
- Tsay, R. S. : "Analysis of Financial Time Series", 2005.
- Verbeek, M.: "a Guide to Modern Econometrics", 2nd Edition, 2004
- Gujrati, D: "Basic Econometrics" 4th Edition, 2004
- Patterson, K, "An Introduction to Applied Econometrics a Time Series Approach", 2000.

3. INTERNATIONAL FINANCE AND BANKING

Unit 1: The International Monetary and Financial System
- Changing Role of Monetary System
- Organization of the Foreign Exchange Market- The Spot and the Forward Market.
- Parity Conditions in International Finance - Purchasing Power Parity, Fisher Effect & International Fisher Effect, Interest Rate Parity Theory
- Exchange Rate Regime and Foreign Exchange Market in India.

Unit 2: International Financing and Investment Decision.
- Overview of the International Financial Market. Official and Private Sources
- National Capital Markets as International Financial Centers
- The Euro-Currency Market and International Banks.
- International Equities: FDI and Portfolio investment
- Evaluation and Management of Political Risk

Unit 3: Financial and Debt Management
- Roles and Functions of External Debt in Developing Countries
- Budget Deficits and Public External Debt
- Episodes of financial Crisis
- Four Generation Models of Currency crisis
- Interrelationship between Currency, Banking and Financial Crisis
- Proposals to Resolve the Debt Crisis
- Prevention of Financial crisis
- New International Financial architecture

Reading List:
- Ahmad Khan Masood, Euro-Currency Market: Structure and Working, Indus Publishing Company, 1992.
- Brain Tew. the Evolution of International Monetary' System, Hutchinson, 1985
- Franciso L. Rivera- Batiz, and Luis Rivera- Batiz, International Finance Open Economy Macroeconomics, Mazewell Macmillan International Edition, 1989; Chapter.

- J Dunning (1981), Multinational Enterprises.
- IMF: Recent Multilateral Debt Restructuring with official and Bank Credits, Washingtion, December1983.
- IMF: External Indebtedness of Developing Countries Occasional Paper No.3, Washington, May 1981.
- Moris Goldstein, the Asian Financial Crises; Causes, Cures and Systemic Implication Washington Dc, June 1998.
- Obstfied, M and Rogoff, K "Foundations of International Macroeconomics", MIT Press, 1996.
- Pecchioli, R.M., the Internationalization of Banking, Oecd, Paris; 1983.
- Rajwade, A.V., (1996), Foreign Exchange, International Finance and Risk Management, Acacdemy of Business Studies.
- Richard M. Levich, International Financial Market, Mc Graw Hill.
- Sachs, J and Radelet, Steven 1998. "The East Asian Financial Crisis; Diagnosis, Causes and Cures, institute of International Devolvement, Us, April. Also, Published in Banking Papers on Economy Activity, 1998.
- Shapiro, Alan C., Multinational Financial Management, John Wiley and Sons, 2003, Seventh Editions, Chapter3.
- The Banker, Third World Debt, September, 1987.

4. QUANTITATIVE FINANCE

Unit 1: Time Value of Money in Finance
- Time Value of Money – Annuity, Perpetuity, Consols
- Returns and Risks – Mathematical Expectations, Variance, Marginal, Conditional and Joint Distribution of Returns
- Mean Variance Model and Utility Function
- Log-Normality and Jensen's inequality
- Calculation of NPV, DPV and IRR, and Optimum Investment Decisions
- Efficient Market and Financing Decisions

Unit 2: Capital Market Theory and Estimation
- Efficient Market Model and Testing For Market Efficiency
- Capital Asset Pricing Model (CAPM) and Arbitrage Pricing Theory (Apt) – Estimation Problems
- Factor Models – one Factor Model and Multifactor Model
- Estimating Factor Models and Implications
- Portfolio Analysis – Portfolio Selection Problem and Diversification

Unit 3: Modelling the Behaviour of Stock Prices and Options
- Stochastic Process and Deterministic Process

- Markov Process and Weiner Process
- Non-Stationarity and Integrated Process
- Co-Integration and error Correction Models
- Markov Switching Models
- Dividend Valuation Models
- Binomial Trees and Risk-Neutral Valuation Models
- Geometric Brownian Motion Model
- Black-Scholes Model for options

Reading List:
- Alexander, G.J., W.F. Sharpe and J.V. Bailey (2002), Fundamentals of Investments, Third Edition, Prentice-Hall of India Private Limited, New Delhi.
- Charemza, W.W. and Derek F. Deadman (1997), New Directions in Econometric Practice: General to Specific Modelling, CoIntegration and Vector Autoregression, Second Edition, Edward Elgar Publishing Limited, U.K.
- Cuthbertson, Keith and Dirk Nitzsche (2004), Quantitative Financial Economics: Stocks, Bonds and Foreign Exchange, Second Edition, John Wiley & Sons Ltd., England.
- Hull, J.C. (2002), Options, Futures, and Other Derivatives, Fifth Edition, Prentice-Hall of India Private Limited, New Delhi.
- Ross, S.M. (2003), an Elementary Introduction to Mathematical Finance: Options and other Topics, Second Edition, Cambridge University Press, U.K.
- Ross, S.A., R.W. Westerfield and Jeffrey Jaffe (2005), Corporate Finance, Seventh Edition, Tata Mcgraw-Hill Publishing Company Limited, New York.

5. RURAL ECONOMICS

Unit 1 Rural Development and Introductory Aspects
- Concept of Rural Development
- Scope and Importance of Rural Development
- Different Approaches to Rural Development
- Nature and Problems of Rural Development
- Rural Development - Indian Perspective

Unit 2: Dimensions of Rural Development in India
- Agriculture
- Rural Industrialization
- Human Resources
- Physical Infrastructure

Unit 3: Programmes/ Strategies of Rural Development
- Growth Targeted Strategies
- Rural Development Strategies
- Target oriented Rural Poverty Alleviation Programmes
- Target oriented Rural Employment Programmes

Reading List:
- David A.M. Lea and D.P. Chaudhri (Ed), Rural Development and the State
- Harris John. (Ed). 1982, Rural Development Theories of Peasant Economy and Agrarian Change, Hutchison University Library, South Africa
- Chambers Robert (1985), Rural Development Putting the Last First, Longman
- Basu Kaushik, Agrarian Questions, Oxford University Press
- Battacharya S.N., Rural Industrialization in India
- Rao R.V., Rural Industrialization in India
- Bagchi V., Khadi and Village Industries in the Indian Economy
- Vasant Desai., Organization and Management of Small Scale Industries
- Sundaram J.B., Rural Industrial Development
- Vasant Desai, Problems and Prospects of Small Scale Industries in India
- Mehan K K , Small Industry Entrepreneurs Handbook
- Dandekar V.M. and Rath .N. –Poverty in India
- Government of India – Evolution of Community Development Programme in India
- Desai, Vasant – Study of Rural Economics, Himalya Publishing Company, New Delhi
- Krishnamurthy V.T. –Community Development India
- Jain P.C. – Agriculture Reforms in India
- R.B.I Report On SFDA - -R.B.I. Mumbai
- Maheshwari S. - -Rural Development in India
- Mishra Puri – Indian Economy, Himalya Publishing House, Mumbai
- Datt, Sundaram – Indian Economy, S. Chand and Company, New Delhi
- Government of India, Ministry of Finance, Economic Division Economic Survey-Various Issues
- Jain ,P.C. Agricultural Reforms in India

Semester IV (Optional Papers)

1. MONETARY ECONOMICS

Unit 1: Demand for Money
- Overview of Development of Monetary Theory and Major Issues
- Classical and Neo-Classical Theories of Money: Early Versions. Pigou and Cambridge School, etc. The Dichotomy between the Monetary Theory and Value Theory. Patinkin's Critique of Neo-Classical Theory.
- Money in Keynesian Framework: Liquidity Preference (L-P) Theory and Further Developments in L-P Approach; Tobin, Boumal Models.
- Friedman, New Monetarism and its Critique.

Unit 2: Supply of Money
- Monetary Aggregates, Liquidity Aggregates and Divisia Index
- H-Theory of Money Supply
- Money Multiplier Process and Factors Affecting H

- Exogeneity of Money Supply
- Money Supply in India: its Components and Trends

Unit 3: Monetary Management and Monetary Policy
- Monetary Management – Rules vs. Discretion
- Price Targeting vs inflation Targeting vs Exchange Rate Targeting
- Monetary Policy – Challenges before Reserve Bank of India.
- Difficulties of Controlling Money Supply in an open Economy
- Further Issues of Monetary Policy and Monetary Management in India

Reading List:
- Pierce D.G. and P.J. Tysome, Monetary Economics: Theories, Evidence and Policy, Butterworths, London, 1985
- Jadhav N., Monetary Economics for India, Macmillan India Ltd., 1994
- Gupta S.B., Monetary Economics: Institutions, Theory and Policy, 1982
- Goldfeld S.M. and L.V. Chandler, the Economics of Money and Banking, Harper and Row, 1981
- Handa J., Monetary Economics, Routledge, New York, 2000

2. ENVIRONMENTAL ECONOMICS - II

Unit 1: Modeling Environment: Non-Market Valuation Techniques
- Theory of Environmental Policy;
- Empirical Models of Non-Market Valuation;
- Revealed Preference Methods: Hedonic Models, Travel Cost Models;
- Stated Preference: Contingent Valuation Method;
- Choice Experiments: Conjoint Analysis;
- Environmental Accounting.

Unit 2: Environmental Issues and Legislation in India
- Environmental Issues in India: Pollution- Types, Causes and Effects;
- Environmental Jurisdiction and Environmental Legislation: Constitutional Provision;
- institutions, Instruments, Regulation and Conservation;
- Environmental Federalism, Inter-Jurisdictional Competition, Environmental Justice;
- Environmental Movements in India.

Unit 3: Global Environmental Issues and Governance
- Transboundary Pollution, Global Warming, Climate Change, Ozone Depletion,
- Climate Change & Sustainable Development, CDM & Sustainable Development;

- International Trade & Environmental;
- Environmental Conflict Management: institutional & Legal instruments, Multilateral Environmental Agreements;
- Major Environmental Organization & Events: Green Peace Movement, the World Conservation Union, The Nature Conservancy, Sierra Club, WWF, UNEP, UNCED;
- Environmental Conventions- Earth Summit, Stockholm Declaration On Human Environment, Rio Declaration, Agenda 21, Montreal Protocol, Convention on Biological Diversity, Climate Change, Basal Convention on the Control of the Transboundary Movement of Hazardous Wastes, Convention On Wetlands of International Importance,

Readings List:
- Baumol, William J. and Wallace E. Oates, (1988) the Theory of Environmental Policy, 2nd Edition, Cambridge University Press,Uk
- Bhattacharya, R.N., (2001) (Ed.) Environmental Economics - an Indian Perspective (Oup),
- Chopra, Kanchan, Gopal K. Kadekodi (1999): Operationalizing Sustainable Development, Sage.
- Freeman, A. Myrick. (2003), the Measurement of Environment and Resource Values, Research for Future, Washington D.C.
- Hanley, Shoran and White - Environmental Economics in Theory and Practice, ILO, Encyclopedia of Occupational Health & Safety, Revised 3rd Edition.
- Kadekodi, Gopal K., 2004: Common Property Resource Management: Reflection on Theory & the Indian Experience, Oup
- Kolstad, C.D, (2002), Economic Valuation with Stated Preference Technique, Edward Elgar.
- Kolstad, C.D, (2004), Environmental Economics, Oxford University Press,
- Maler, K. Goran, (1974), Environmental Economics: a Theoretical inquiry, Resource for Future, Baltimore.
- Markandya, Anil & Kirsten Halsnaes (Eds.), 2002 Climate Change & Sustainable Development: Prospects for Developing Countries, Earthscan, Uk, Usa, (Ch.1, 2, 6-8.).
- Pearson, C.S, (2000), Economics and the Global Environment, Cambridge University Press, Uk.
- Shankar, U. (2001), Environmental Economics (Ed.) Oup, Last Chapter
- Totenberg, Tom. (2000), Environmental & Natural Resource Economics, 5th Edition, Addison-Wesley Longman inc. Usa. (Ch. 2, 3, 7, 8, 9, 10
- Tribedi, R.K., Handbook of Environmental Laws, Compliance & Standards, Vol. I & II, Environ – Media Karad, India.
- Sandler, Todd, (1998), Global Challenges: An Approach To Environmental, Political, and Economic Problems, 2nd Edition, Cambridge University Press,Uk.
- Undp (1992): Handbook of Sustainable Development & Environmental Management, New York.
- V. Kerry Smith: Estimating Economic Values for Nature: Methods for Non-Market Valuation 1996, Edward Elgar, (Some Selected Papers).

- Van Den Berg, J.C. (1995), Handbook of Environmental & Natural Resource Economics Oecd (Ch. 26-30)
- World Commission on Environment & Development (Wced), 1987, Our Common Future, Oup.

Additional Readings:
- Alberini, A and J.Cooper (2002), Applications of Contingent Valuations in Developing Countries-A Survey, FAO Economic and Social Development Paper 146, Rome. (Full Preview Free on www.googlebooks.com)
- Bjomstad, David. J and James R. Kahn (1996), the Contingent Valuation of Environmental Resources: Methodological Issues and Research Needs, Brookfield: Edward Elgar.
- Arrow, K., and others. 1993. Report of the NOAA Panel on Contingent Valuation. Federal Register. Volume 58, Number 10. Pages 4601 to 4614.
- Available at: http://www.darp.noaa.gov/library/pdf/cvblue.pdf
- Murty ,M. N, A. J James,Smita Misra(1999). Economics of Water Pollution- the Indian Experience. Oxford University Press New Delhi.
- Centre for Science & Environment: State of Environment Report
- Bowonder, Environmental Management Problems in India (1985), in Environmental Management, Vol. 10, No. 5
- Websites on of Some International Environmental Conventions:
- Convention on Biological Diversity @ http://www.biodiv.org/
- Convention on Climate Change @ http://unfccc.int/
- The Convention Concerning the Protection of the World Cultural and Natural Heritage (The World Heritage Convention) @ http://whc.unesco.org/nwhc/pages/sites/main.htm
- United Nations Convention on the Law of the Sea. http://www.un.org/depts/los/index.htm
- Convention on Wetlands of International Importance (Especially as Waterfowl Habitat) @ http://www.ramsar.org/
- Basel Convention on the Control of Transboundary Movements of Hazardous Wastes @ http://www.basel.int/index.html
- Convention On International Trade in Endangered Species of Wild Fauna and Flora (cites) @ http://www.cites.org/eng/disc/what.shtml
- Convention on Migratory Species @ http://www.wcmc.org.uk/cms/
- Conventions on Ozone Layer Protection the Convention for the Protection of the Ozone Layer the Montreal Protocol on Substances That Deplete the Ozone Layer @ http://www.unep.org/ozone/aboutsec.shtml
- Convention Regional Seas @ http://www.unep.ch/seas/
- Rotterdam Convention On Voluntary Prior informed Consent Procedure About Hazardous Import and Export @ http://www.pic.int/index.html
- Convention to Combat Desertification. Website @ http://www.unccd.int/main.php
- Northern American Free Trade Agreement (NAFTA) and Free Trade Agreement of America FTAA. (Environmental Relating Issues and institutional System)
- Center For Environmental Cooperation For NFTA @ www.cec.org

3. INDUSTRIAL ORGANIZATION

Unit 1: Oligopoly: Homogeneous and Differentiated Product Market Structure
- Cournot Competition – Duopoly Cournot Vs Collusion
- Sequential Moves- Leader Follower Model
- Bertrand Market Structure, Capacity ConstraInt- Edgeworth Paradox, Collusion, Entry Barriers,
- Differentiated Products (Cournot & Bertrand), Location Models

Unit 2: Economics of R& D Licencing & Innovations.
- Model of The innovation Process.
- Patent Race,
- Market Structure and innovation Efforts.
- Incentives For innovations, Socially Optimal and Market investments Into R&D. Patent Life.

Unit 3: Barriers to Entry and Exit and Network Externalities
- Entry Barrier- Limit Pricing, Capacity Constraints,
- Judo Economics- Gelman and Salop Model,
- Low Price As Signalling Device – Milogram and Roberts Model,
- Reaction To Partial Entry, Predatory Pricing,
- Predation in Learning and Network Industries

Reading List:
- Church, J., Roger Ware (2000), Industrial Organization: A Strategic Approach, Mcgraw-Hill, International Editions.
- Economides, Nicholas, the Economics of Networks, 1996, International Journal of Industrial Organization(14), 673-699.
- Loury G.L., 1979, "Market Structure and innovation", Quarterly Journal of Economics, Vol. XCIII, No. 3, 395-410.
- Martin S., 1993, Advanced Industrial Economics, Blackwell.
- Salinger M.A., 1988, Vertical Mergers and Market Foreclosure, Quarterly Journal of Economics, Vol. 77, 345-356.
- Oz Shy (1995), Industrial organization: Theory and Applications, The MIT Press, Cambridge, Massachusetts, London, England.
- Tirole J., 1988, the Theory of Industrial organization, the MIT Press

4. GAMES AND INFORMATION

Unit 1: Game Theory under Complete information
- Static Game of Complete Information.

- Dynamic Games of Complete information
- Dynamic Games of Complete But Imperfect information
- Economic Applications

Unit 2: Game Theory Under incomplete information
- Static Games of incomplete information – Bayesian Nash Equilibrium.
- Dynamic Game of Incomplete Information – Perfect Bayesian Equilibrium, Trembling Hand Perfection.
- Economic Applications

Unit 3: Economics of information
- Types of Asymmetric Information - Moral Hazards, Adverse Selection, Signaling, Market for Lemons,
- Principal Agent Problem,
- Efficiency of Market Outcomes under Asymmetric Information

Reading List:
- Gibbons, Robert (1992), a Primer in Game Theory, Harvester Wheatsheaf, Newyork, London.
- Fudenberg, Drew, and Jean Tirole, Game Theory, ANE Books, New Delhi, 2005.
- Oz Shy (1995), Industrial organization: Theory and Applications, Themit Press, Cambridge, Massachusetts, London, England.
- Church, J., Roger Ware (2000), Industrial organization: a Strategic Approach, Mcgraw-Hill, International Editions.
- inés Macho-Stadler, J. David Pérez-Castrillo, Richard Watt, an Introduction to the Economics of Information: Incentives and Contracts, Second Edition, 2001, Oup
- Jehle & Renne, Advanced Microeconomic Theory, Pearson Education, India
- Mas-Colell, andreu, Michael D.Whinston and Jerry R. Green, (1995), Microeconomic Theory, Oup, New York.
- Varian, Hall R., (1992), Microeconomic Analysis (Third Edition), W.W. Norton & Company, New York, London.

5. COMPUTER APPLICATIONS IN ECONOMICS

Unit-I: Fundamental of Database Management

- Concepts of Data
- Information
- Record, File
- Database, DBMS, RDBMS
- Function of DBMS
- Components of DBMS, Database Designer
- Database Administrator

- DBMS Availability
- MS Excel, MS Access, MS Word, MS Powerpoint

Unit-II: Cross Section & Panel Data Techniques and Methods using SPSS/STATA/ any other Software

- Series, Groups, Tables, Graphs and Objects.
- Descriptive Statistics
- One Way Tabulation
- Cross Tables
- One Sample T Test
- Independent Sample Test
- Paired Sample T Test
- One Way ANOVA
- Correlation-Bivariate Partial
- Regression-Least Square, Binary & LogisticRegression
- 2 Stage Least Square, Factor Analysis, Principal Component, Panel Regression Analysis.

Unit-III: Simultaneous Equation and Series Modeling, Using Eviews/Gempack/any other Software.

- Introduction of Econometric Software. Creating a work file, Entering Data into a work file, Creating a group, Graphing, Generating new Variables.
- Getting Data
- Importing Data
- Exporting Data
- Unit Root Test
- Cross Correlations and Correlograms
- Granger Causality
- Cointegration

Reading List:
- Eviews- Manual
- SPSS- Manual
- Cramer, J.S., Empirical Econometrics.
- Deaton, A.S., the Analysis of Household Surveys: a Micro-Econometric Approach to Development Policy.
- Deaton, A.S. and J. Muellbauer, Economics and Consumer Behaviour.
- Iyengar, N.S. and N. Bhattacharya, a Survey of Research in Economics, Vol. 7.
- Pollak, R.A. and T.J. Wales, Demand System Specification and Estimation.
- Klein, L.R.: (A) Introduction to Econometrics, (B) Text Book of Econometrics.

- Krishna, K.L. (Ed.), Econometric Applications in India.
- Wallis, K.F., Topics in Applied Econometrics.
- Fair, R.C., Specification, Estimation and Analysis of Macro-Econometric Models, Harvard University Press, Cambridge, 1984.
- Bergstrom, A.R., Selected Economic Models and Their Analysis, 1967, New York, American Elsevier Publishing Company, Inc.
- Granger, C.W.J., (Ed.), Modelling Economic Series: Readings in Econometric Methodology, Clarendon Press, Oxford, 1990.
- Fair, R.C., Testing Macro-Econometric Models, Harvard University Press, 1994.
- Peter R. M., Joanne E.S. and Kenneth, F.W., 'Fiscal Policy Rules in Macro-Economic Models: Principles and Practice', Economic Modelling, 17 (2000), 171-193).
- Fisher, P., Rational Expectations in Macroeconomic Models, Kluwer, 1992.
- Krishnamurty, K. and V. Pandit, Macroeconomic Modelling of the Indian Economy, Hidustan, 1985.
- Bedkin, R., L.R. Klein and K. Marwah, History of Macro-Econometric Modelling, Edward Elgen, 1991.

Department of Economics

Course Structure and Syllabus of M.Phil./Ph.D. Economics

Semester-I

MPhil/PhD-ECO- C101: Research Methodology in Economics
MPhil/PhD-ECO-C102: Advance Studies in Economics
MPhil/PhD-ECO-C103: Selected Issues in India and World Economy
MPhil/PhD-ECO-C104: Term Paper

Note: Each Paper carries the weights of 100 Marks/ 4 Credits.
The evaluation will be based on both internal and final assessment.
The internal assessment and the final assessment carry the weightage of 25 and 75 marks, respectively.

Paper-1 Research Methodology in Economics

Unit-I Introduction to research methodology

- Objective of and types of research.
- Problem formulation.
- Types of data and its collection method
- Data Sources and sampling techniques.
- Thesis writing and its components

Unit-II Statistics and Mathematical Methods

- Theoretical distribution-Normal distribution, T-distribution, Chi-square distribution, F distribution.
- Statistical analysis of data-ANOVA, Factor Analysis
- Mathematical analysis of data -Input-Output Methods, SAM, etc.
- Exercise in statistical/mathematical softwares.

Unit -III Econometrics and Its Applications

- Simple and multiple regression
- Problems in econometric estimation
- Introduction to simultaneous equation model.
- Time series analysis: concept of stationarity, co-integration and VAR.
- Exercises with econometrics software.

References

- Kothari, C.R. and Gaurav Garg (2014). *Research Methodology*, New Age International Publication.
- Ferber, T. and P.J. Verdoom. *Research Methods in Economics and Business*, New York: MacMillan Publication.
- Wilkinson, T.S. and P.L. Bhandarkar. *Methodology and Techniques of Social Research*, Bombay: Himalaya Publishing House.
- Freund, J. E. (1999). *Mathematical Statistics*, 5th Edition, Prentice-Hall International.
- Hogg, R.V. and A.T. Craig (1995). *Introduction to Mathematical Statistics*, Fifth Edition, Prentice-Hall International, Inc. Englewood Cliff, N.J.
- Simon, Carl P. and Lawrence Blume (1994). *Mathematics for Economists*, First Edition, 1994,
- Chiang, A.C. (1984). *Fundamental Methods of Mathematical Economics*, 3rd Edition, Mc-Graw Hill.
- Allen, R.G.D.(1974). *Mathematical Analysis for Economists*, Macmillan Press, London.
- Sydsaeter, Knut, Peter Hammond (2002). *Essential Mathematics for Economic Analysis*, Prentice Hall.

- Gujarati, D.N. *Basic Econometrics*, 4th Edition, McGraw-Hill, New York.
- Enders, W. *Applied Econometric Time Series*, John Wiley & Sons, New York.
- Stock and Watson. *Introduction to Econometrics*, Pearson Publication.
- Wojciech Charemza and Derek Deadman. *New Directions in Econometric Practice: General to Specific Modeling, Cointegration, and Vector Autoregression*, Edward Elgar Publication.

Paper-2 Advance Studies in Economics

Unit-I Micro and Macro Economics theories

- Advances in consumer theory
- Advances in theory of firm
- Selected issues in open-economy macroeconomics
- Fiscalism vs Monetarism
- Role of Expectations-AEH and REH

Unit-II Growth and Development

- Concept, measurement and indicators of growth and development
- Classical view of growth and development
- Neo classical growth theories
- New growth theories
- State, market and development

Unit-III Trade and Public Finance

- Modern trade theory
- Empirical testing of trade theories
- Trade policy theories and its implication
- Public debt and Ricardian equivalence
- EMH (Efficient Market hypothesis) and its implications

References

- Hirshleifer, J. (1973). Where Are We in the Theory of Information?. *American Economic Review*, 63(2), 31-39.
- Tiglitz, J. E. (2000). The Contributions of the Economics of Information to Twentieth Century Economics. *Quarterly Journal of Economics* (Nov), 1441-1478.
- Akerlof, G. (1970). The Market for Lemons: Qualitative Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84, 488-500.
- Mas-Colell, Andreu, Michael D. Whinston and Jerry R. Green, (1995). *Microeconomic Theory*. OUP, New York.
- Varian, Hall R., (1992). *Microeconomic Analysis* (Third Edition), W.W. Norton & Company, New York, London.
- Kreps, David M.(1998). *A Course in Microeconomic Theory*. Prentice Hall, India, New Delhi.
- Sen, A.K. (1970). *Growth Economics*. Penguin.
- Thirawall, A. (1978). *Growth and Development*. Macmillan, London.
- Dornbush, R. and S. Fischer (2004). *Macroeconomics*. (9th Ed), Tata-McGraw Hill.
- Jha, R. (1991). *Contemporary Macroeconomic Theory and Policy*. Wiley Eastern.
- Levacic, R. and A. Rebman (1986). *Macroeconomics*. (2nd Ed), Macmillan.
- Begg, D. K. H. (1982). *The Rational Expectation Revolution in Macro-Economics*. Oxford.
- Romer, David (1996). *Advanced Macroeconomics*. New York: McGraw-Hill.

- Salvatore, Dominick (1998). *International Economics*, (6th Edition) Prentice Hall.
- Sodersten, Bo and Reed, G. (1994). *International Economics*. Macmillan Press Ltd., London.
- Caves, Jones and Frankel (1999). *World Trade and Payments*, (8th edition), Addison-Wesley.
- Alexander, G.J., W.F. Sharpe and J.V. Bailey (2002). *Fundamentals of Investments*. Third Edition, Prentice-Hall of India Private Limited, New Delhi.
- Chakarvarti, S (1981). *Development Planning: The Indian Experience*. Oxford University Press, New Delhi.
- Meier, G.M.(1971). *Leading Issues in Economic Development*, OUP, New Delhi.
- Kuznets, S. (1965). *Economic Growth and Structure*, Oxford and DBH Publishing Company, New Delhi.

Paper-3 Selected Issues in India and World Economy

Unit I Issues in Indian Economy

- Growth performances since 1991
- Poverty, unemployment, inequality
- Institution and governance
- Environment and development
- Financial sector reforms

Unit-II Issues in world economy

- Globalization- concept, trend and its future
- Globalization and developing countries
- Multilateralism and regionalism
- Global economic governance
- Financial market integration

Unit III India and World Economy- Linkages

- WTO and India
- Technology transfer
- Capital flows and FDI
- Multilateral financial institutional, India and developing countries
- Climate change and its economic implications

References

- Raghvendra Jha (2008). *Indian Economy-Sixty Years After Independence*. McMillan Publication.
- Caprio, Gerard, Honohan, Patrick and Stiglitz, E Joseph (2001). *Financial Liberalization: How Far, How Fast?*. Cambridge University Press.
- Hoekman, B.M. and Kostecki M.M. (2001). *The Political Economy of the World Trading System: The WTO and Beyond*. Oxford University Press, Oxford.
- Krugman, P.R. and Obstfeld M. (2009). *International Economics: Theory and Policy*, Pearson, New Delhi.
- Balassa, B. (2013). *The Theory of Economic Integration*. Routledge Revivals.
- Ethier, W. (2011). Contemporary Regionalism. In M. Jovanovic (Ed.) International Handbook on the Economics of Integration, Vol. 1. Edward Elger
- Frankel, J. A. (1997). *Regional Trading Blocs in the World Economic System*. Institute for International Economics, Washington DC.
- Rodrik, D. (2000). How Far Will International Economic Integration Go?. *The Journal of Economic Perspectives*, Vol. 14, No. 1, 177-186.
- Deepak Nayyar (2008). *Trade and Globalization*. Oxford University Press, India.
- Reddy Y.V. (Ed) (2009). *India and the Global Financial Crisis: Managing Money and Finance*. Orient Black swan, New Delhi.

- I.J. Ahulwalia and I.M.D. Litter (Ed) (2012). India's Economic Reforms and Development: Essay for Manmohan Singh Second Edition, Oxford University Press, New Delhi.
- Shahid Ahmed, Shahid Ashraf (eds.) (2011). *Regional and Multilateral Trade in Developing Countries*. Routledge, New Delhi.
- Kenneth A. Reinert (2012). *An Introduction to International Economics*, Cambridge University Press.

Paper-4 Term Paper

General Guidelines for Preparation of Term Paper

The Term Paper will have following components:

1. **Title of the Paper:** The selected topic will be related to the broad area of specialisation of the MPhil/ PhD work.

2. **Introduction/ Background of the Study:** It is expected to cover the background of the study and introduce the research topic.

3. **Statement about the Problem:** It is important to define the research problem correctly. The research problem/ issue should bridge the gap in the literature. It should be very clear in terms of nature, size and scope of the study.

4. **Objectives of the Study:** The objective of the study should be well defined and correctly specified. The students are expected to select only one researchable issue which can be completed in the given timeframe.

5. **Data & Methodology:** The students can carry out research on both primary and/or secondary data. The secondary data source should be authentic and original wherever possible. In case of primary survey, it is important to explain the criterion for the selection of sample size. The criterion should be scientific. Given the timeframe, the sample size should be small, may be around 50. The methods to analyse the data should be clearly identified and mentioned. In case, the questionnaire/ schedule method is adopted for data collection, it should be attached with the Term Paper. The questionnaire should be very simple, focussed and ideal. The statistical/ econometric/ mathematical methods to be used in the study must be simple and at the comfortable level of the research scholar.

6. **Outcome of the Study:** The outcome of the research should have some value addition to the existing literature.

General Format of the Term Paper

The Term Paper should cover the following:
1. Table of Contents
2. Preface and Acknowledgement
3. Chapter Plan
   Chapter I: Introduction of the Problem
   Chapter II: Theoretical Perspective and Review of Literature
   Chapter III: Data and Methodology of the Study
   Chapter IV: Analysis of Data and Discussion of Results
   Chapter V: Conclusion and Policy Implications
4. References

The References should be listed in alphabetic order and may be split into two separate lists, one for the books and other for the journal articles. The bibliography should be written in APA style of references.

General Rules/ Guidelines

1. The Term Paper needs to be approved by RAC.
2. The suggestions in the research work needs to be included in consultation with the supervisor.

Evaluation of Term Paper

Internal Assessment

The internal assessment is of 25 marks and will be done by the respective supervisors.

Final Assessment

The final assessment is of 75 marks. The scholar has to prepare the Term Paper under the guidance of the supervisor and submit the term paper to the supervisor. The final assessment would be based on the presentation of seminar on the research work before the department, and the evaluation will be done by RAC.

Department of Economics

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- Hogg, R.V. and A.T. Craig (1995). *Introduction to Mathematical Statistics*, Fifth Edition, Prentice-Hall International, Inc. Englewood Cliff, N.J.
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- Allen, R.G.D.(1974). *Mathematical Analysis for Economists*, Macmillan Press, London.
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- EMH (Efficient Market hypothesis) and its implications

References

- Hirshleifer, J. (1973). Where Are We in the Theory of Information?. *American Economic Review*, 63(2), 31-39.
- Tiglitz, J. E. (2000). The Contributions of the Economics of Information to Twentieth Century Economics. *Quarterly Journal of Economics* (Nov), 1441-1478.
- Akerlof, G. (1970). The Market for Lemons: Qualitative Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84, 488-500.
- Mas-Colell, Andreu, Michael D. Whinston and Jerry R. Green, (1995). *Microeconomic Theory*. OUP, New York.
- Varian, Hall R., (1992). *Microeconomic Analysis* (Third Edition), W.W. Norton & Company, New York, London.
- Kreps, David M.(1998). *A Course in Microeconomic Theory*. Prentice Hall, India, New Delhi.
- Sen, A.K. (1970). *Growth Economics*. Penguin.
- Thirawall, A. (1978). *Growth and Development*. Macmillan, London.
- Dornbush, R. and S. Fischer (2004). *Macroeconomics*. (9th Ed), Tata-McGraw Hill.
- Jha, R. (1991). *Contemporary Macroeconomic Theory and Policy*. Wiley Eastern.
- Levacic, R. and A. Rebman (1986). *Macroeconomics*. (2nd Ed), Macmillan.
- Begg, D. K. H. (1982). *The Rational Expectation Revolution in Macro-Economics*. Oxford.
- Romer, David (1996). *Advanced Macroeconomics*. New York: McGraw-Hill.

- Salvatore, Dominick (1998). *International Economics*, (6th Edition) Prentice Hall.
- Sodersten, Bo and Reed, G. (1994). *International Economics*. Macmillan Press Ltd., London.
- Caves, Jones and Frankel (1999). *World Trade and Payments*, (8th edition), Addison-Wesley.
- Alexander, G.J., W.F. Sharpe and J.V. Bailey (2002). *Fundamentals of Investments*. Third Edition, Prentice-Hall of India Private Limited, New Delhi.
- Chakarvarti, S (1981). *Development Planning: The Indian Experience*. Oxford University Press, New Delhi.
- Meier, G.M.(1971). *Leading Issues in Economic Development*, OUP, New Delhi.
- Kuznets, S. (1965). *Economic Growth and Structure*, Oxford and DBH Publishing Company, New Delhi.

Paper-3 Selected Issues in India and World Economy

Unit I Issues in Indian Economy

- Growth performances since 1991
- Poverty, unemployment, inequality
- Institution and governance
- Environment and development
- Financial sector reforms

Unit-II Issues in world economy

- Globalization- concept, trend and its future
- Globalization and developing countries
- Multilateralism and regionalism
- Global economic governance
- Financial market integration

Unit III India and World Economy- Linkages

- WTO and India
- Technology transfer
- Capital flows and FDI
- Multilateral financial institutional, India and developing countries
- Climate change and its economic implications

References

- Raghvendra Jha (2008). *Indian Economy-Sixty Years After Independence*. McMillan Publication.
- Caprio, Gerard, Honohan, Patrick and Stiglitz, E Joseph (2001). *Financial Liberalization: How Far, How Fast?*. Cambridge University Press.
- Hoekman, B.M. and Kostecki M.M. (2001). *The Political Economy of the World Trading System: The WTO and Beyond*. Oxford University Press, Oxford.
- Krugman, P.R. and Obstfeld M. (2009). *International Economics: Theory and Policy*, Pearson, New Delhi.
- Balassa, B. (2013). *The Theory of Economic Integration*. Routledge Revivals.
- Ethier, W. (2011). Contemporary Regionalism. In M. Jovanovic (Ed.) International Handbook on the Economics of Integration, Vol. 1. Edward Elger
- Frankel, J. A. (1997). *Regional Trading Blocs in the World Economic System*. Institute for International Economics, Washington DC.
- Rodrik, D. (2000). How Far Will International Economic Integration Go?. *The Journal of Economic Perspectives*, Vol. 14, No. 1, 177-186.
- Deepak Nayyar (2008). *Trade and Globalization*. Oxford University Press, India.
- Reddy Y.V. (Ed) (2009). *India and the Global Financial Crisis: Managing Money and Finance*. Orient Black swan, New Delhi.

- I.J. Ahulwalia and I.M.D. Litter (Ed) (2012). India's Economic Reforms and Development: Essay for Manmohan Singh Second Edition, Oxford University Press, New Delhi.
- Shahid Ahmed, Shahid Ashraf (eds.) (2011). *Regional and Multilateral Trade in Developing Countries*. Routledge, New Delhi.
- Kenneth A. Reinert (2012). *An Introduction to International Economics*, Cambridge University Press.

Paper-4 Term Paper

General Guidelines for Preparation of Term Paper

The Term Paper will have following components:

1. **Title of the Paper:** The selected topic will be related to the broad area of specialisation of the MPhil/ PhD work.

2. **Introduction/ Background of the Study:** It is expected to cover the background of the study and introduce the research topic.

3. **Statement about the Problem:** It is important to define the research problem correctly. The research problem/ issue should bridge the gap in the literature. It should be very clear in terms of nature, size and scope of the study.

4. **Objectives of the Study:** The objective of the study should be well defined and correctly specified. The students are expected to select only one researchable issue which can be completed in the given timeframe.

5. **Data & Methodology:** The students can carry out research on both primary and/or secondary data. The secondary data source should be authentic and original wherever possible. In case of primary survey, it is important to explain the criterion for the selection of sample size. The criterion should be scientific. Given the timeframe, the sample size should be small, may be around 50. The methods to analyse the data should be clearly identified and mentioned. In case, the questionnaire/ schedule method is adopted for data collection, it should be attached with the Term Paper. The questionnaire should be very simple, focussed and ideal. The statistical/ econometric/ mathematical methods to be used in the study must be simple and at the comfortable level of the research scholar.

6. **Outcome of the Study:** The outcome of the research should have some value addition to the existing literature.

General Format of the Term Paper
The Term Paper should cover the following:
1. Table of Contents
2. Preface and Acknowledgement
3. Chapter Plan
   Chapter I: Introduction of the Problem
   Chapter II: Theoretical Perspective and Review of Literature
   Chapter III: Data and Methodology of the Study
   Chapter IV: Analysis of Data and Discussion of Results
   Chapter V: Conclusion and Policy Implications
4. References

The References should be listed in alphabetic order and may be split into two separate lists, one for the books and other for the journal articles. The bibliography should be written in APA style of references.

General Rules/ Guidelines

1. The Term Paper needs to be approved by RAC.
2. The suggestions in the research work needs to be included in consultation with the supervisor.

Evaluation of Term Paper

Internal Assessment

The internal assessment is of 25 marks and will be done by the respective supervisors.

Final Assessment

The final assessment is of 75 marks. The scholar has to prepare the Term Paper under the guidance of the supervisor and submit the term paper to the supervisor. The final assessment would be based on the presentation of seminar on the research work before the department, and the evaluation will be done by RAC.

Teaching Schedule of PhD Economics, 2017-18
(January 2017 – May 2018)

Paper-1 Research Methodology in Economics (40 Lectures)

Unit-I Introduction to research methodology (14 Lectures)

- Objective of and types of research.
- Problem formulation.
- Types of data and its collection method
- Data Sources and sampling techniques.
- Thesis writing and its components

Course Teachers & Class Schedule:
- Dr. B. Srinivasu (January: 23, 24, 29, 30, 31; February: 5, 6, 7, 12)
- Dr. Mirza Allim Baig (February 13, 19, 20, 21, 26)

Unit-II Statistics and Mathematical Methods (13 Lectures)

- Theoretical distribution-Normal distribution, T-distribution, Chi-square distribution, F distribution.
- Statistical analysis of data-ANOVA, Factor Analysis
- Mathematical analysis of data -Input-Output Methods, SAM, etc.
- Exercise in statistical/mathematical softwares

Course Teachers & Class Schedule:
- Dr. Abdul Quadir (February: 27, 28; March: 5, 6, 7, 12)
- Mr. Asheref Illiyan (March: 13, 14, 19, 20, 21, 26, 27)

Unit -III Econometrics and Its Applications (13 Lectures)

- Simple and multiple regression
- Problems in econometric estimation
- Introduction to simultaneous equation model
- Time series analysis: concept of stationarity, co-integration and VAR
- Exercises with econometrics software

Course Teachers & Class Schedule:
- Dr. Mirza Allim Baig (March: 28, April: 2, 3, 4)
- Dr. Saba Ismail (April: 9, 10, 11, 16, 17, 18, 23)
- Mr. Asheref Illiyan (April: 24, 25)

*Class Timings: Monday – Wednesday, 9:20-10:10 am

Paper-2 Advance Studies in Economics (40 Lectures)

Unit-I Micro and Macro Economics theories (14 Lectures)

- Advances in consumer theory
- Advances in theory of firm
- Selected issues in open-economy macroeconomics
- Fiscalism vs Monetarism
- Role of Expectations-AEH and REH

Course Teachers & Class Schedule:
- Dr. Abdul Quadir (January: 25(2); February: 1 (2), 2, 8(2), 9)
- Prof. Shahid Ahmed (February 15(2), 16, 22(2), 23)

Unit-II Growth and Development (13 Lectures)

- Concept, measurement and indicators of growth and development
- Classical view of growth and development
- Neo classical growth theories
- New growth theories
- State, market and development

Course Teachers & Class Schedule:
- Dr. Saba Ismail (March: 8(2), 9(2), 15(2), 16(1))
- Mr. T.A. Farooqui (March: 16 (1), 22(2), 23 (2), April: 5(1))

Unit-III Trade and Public Finance (13 Lectures)

- Modern trade theory
- Empirical testing of trade theories
- Trade policy theories and its implication
- Public debt and Ricardian equivalence
- EMH (Efficient Market hypothesis) and its implications

Course Teachers & Class Schedule:
- Mr. T.A. Farooqui (April: 5(1), 6(1))
- Prof. Shahid Ahmed (April: 6(1), 12(2), 13(2))
- Dr. B. Srinivasu (April: 19(2), 20(1))
- Dr. Mirza Allim Baig (April: 20 (1), 26(2))

*Class Timings: Thursday: 9:20-10:10 am & 2:00-2:50 pm;
                 Friday: 9:20-10:10 am (Jan 25-March 23); 9:20-11:00 (April)

Paper-3 Selected Issues in India and World Economy (40 Lectures)

Unit I Issues in Indian Economy (14 Lectures)

- Growth performances since 1991
- Poverty, unemployment, inequality
- Institution and governance
- Environment and development
- Financial sector reforms

Course Teachers & Class Schedule:
- Prof. Shahid Ashraf (January: 23, 24, 29, 30, 31; February: 5, 6, 7, 12, 13)
- Dr. Mohanty (February: 19, 20, 21)
- Dr. B. Srinivasu (26)

Unit-II Issues in world economy (13 Lectures)

- Globalization- concept, trend and its future
- Globalization and developing countries
- Multilateralism and regionalism
- Global economic governance
- Financial market integration

Course Teachers & Class Schedule:
- Mr. T.A. Farooqui (February: 27, 28; March: 5, 6)
- Prof. Shahid Ashraf (March: 7, 12, 13, 14)
- GF (March: 19, 20, 21)
- Dr. M.A. Baig (March: 26, 27)

Unit III India and World Economy- Linkages (13 Lectures)

- WTO and India
- Technology transfer
- Capital flows and FDI
- Multilateral financial institutional, India and developing countries
- Climate change and its economic implications

Course Teachers & Class Schedule:
- Prof. Shahid Ahmed (March: 28, April: 2, 3, 4, 9, 10)
- Mr. Asheref Illiyan (April: 11, 16, 17, 18, 23)
- GF (24, 25)

*Class Timings: Monday – Wednesday, 2:00-2:50 pm

Important Deadlines and Information for PhD Course Work, 2016-17

- **Deadlines**

Orientation for the Students	17 November 2016
Commencement of Classes	01 December 2016
Last Date of Teaching	06 March 2017
Completion of Internal Assessment	15 March 2017
Submission of Annotated Bibliography	21 March 2017
End Semester Examination	Third/ Last Week of March 2017

- **Information**

The PhD course work consists of 2 papers, namely (1) Paper 1: Course on Research Methodology; (2) Paper 2: Advanced Studies in Economics. The course work shall comprise of an internal assessment of 25 marks and end semester examination of 75 marks for each paper. Each paper is of credit of 4. A candidate having obtained a minimum of 50 percent of marks in aggregate of internal assessment and end semester examination shall be declared to have successfully qualified the course work.

In addition, students have to develop an annotated bibliography/ reviewing of research papers. The maximum marks for developing annotated bibliography/ reviewing of research papers will be 50 and is of credit of 2. The candidates will be required to secure at least 50 percent of marks in this component separately in order to become successful in the examination. The annotated bibliography should contain preferably the reviews of both books and journal articles around the research topic. The annotated bibliography/ reviewing of research papers will be evaluated by the respective supervisor.

The total Credit of the PhD Course work is 10.

For other details, please refer to Ordinance 9(IX), which exclusively deals with PhD Programme of the University.

Notes on PhD Course Work:

- The prescribed syllabus will be followed for the PhD Course work.
- Students are advised to be in touch with the concerned teachers for the classes.
- Annotated Bibliography will be submitted to Coordinator of the PhD Programme on or before due date.
- Students are free to provide any suggestions, comments and feedbacks in the improvement of the PhD Course work to the Coordinator of the PhD Programme.

Dr. Mirza Allim Baig
Coordinator, PhD Programme