

REPORT
OF
***THE CURRICULUM
DEVELOPMENT
COMMITTEE***

ECONOMICS

SUBMITTED TO

**UNIVERSITY GRANTS COMMISSION
NEW DELHI
2001**

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RECOMMENDATIONS OF CURRICULUM DEVELOPMENT COMMITTEE IN ECONOMICS SUBMITTED TO THE UNIVERSITY GRANTS COMMISSION, NEW DELHI.

PREAMBLE

Higher education is a catalyst in shaping the development of human resources and in human capital formation. With the broadening of the concept of 'capital', the possibility of using expenditure on higher education as an 'investment' towards promoting growth through better quality human capital is well accepted. At the same time, with ever growing awareness, the criteria of 'quality and relevance' of higher education has also attracted attention from all the quarters in the country. It has, therefore, become inevitable that a close scrutiny be undertaken to take stock of the adaptability of the various disciplines in the changing global scenario. In this context, 'Economics' has emerged as one of the most 'sought-after' subjects of study in Social Sciences as it immediately communicates with the changing societal priorities and needs.

In the past twenty years or so, many new insights have taken root and become important in economic theory and policy. To name a few — the micro behaviour of economic agents and their adaptations to economic policy, analysis of economic behaviour in the context of imperfect markets and asymmetric information, the theory of second best, primacy of non-economic factors in explaining growth differentials among economies, emergence of knowledge as a non-ending source of growth, dynamic aspects of trade and industry in imperfect markets, issues of good governance in developing economies, infrastructure development: its rationale, importance and financing, gender and other social issues, problems of risk management and insurance as a vehicle of risk management and economics of law, find inclusion in courses among various Papers or independently.

The discipline of economics has a production function just like any industry: its inputs are the papers and books of professional economists, its output is economic knowledge which is put to use by business and government, taught to students and used for further advancement of the existing knowledge of economics. The Committee has tried to assemble main strands of economics to be fed to students as inputs that are closer to Indian realities. In the light of the expanding horizons of knowledge, constant endeavours need be made to review the course curriculum so

that the study of Economics remains relevant and focussed and relates well to the sweeping changes in the theoretical constructs all around and emerging dynamics of the Indian situation.

The curriculum merits better pondering so as to make it practically more useful and job-oriented in the multifaceted environment ranging from trade, industry, etc. to infrastructure to information technology. At the same time, the syllabi must give sufficient impetus for academic inputs for preparing students for research/teaching career in Economics. Gearing up the students for passing the examinations and obtaining the degrees should only be incidental and secondary. A deeper insight in each individual should be so developed as to enable him/her to opt for challenges of self-employment in the face of broadening gap between the demographic needs and the number of jobs becoming available.

Endeavours to reassess the extent to which the curriculum needs to be remodelled are also dependent on the latest developments in thought, technique and analysis and the rapidly changing socio-economic environment in the economy. Literature in Economics has been increasing at a rapid pace — theoretical and empirical contributions are made continuously and these merit proper place in the syllabus to give students greater adaptability and exposure to the expanding frontiers of the subject.

In view of the need for a model syllabus in Economics which could be ideally followed by various Universities or which could provide a basic framework for formulating its own syllabus, the University Grants Commission vide its letter No. F.4-1/97(Desk Panel), dated August 31, 2000 constituted a Curriculum Development Committee for Economics and nominated Professor P.K. Bhargava, the then Head of the Department of Economics, Banaras Hindu University, as its Nodal Person. Shri Narain Singh, Under Secretary, University Grants Commission, performed the task of the Secretary to the Committee.

MECHANISM OF CONSULTATIONS

For the purpose of formulating a fresh curriculum in Economics, syllabi of various Indian Universities were consulted with a view to prepare a common base. Suggestions from eminent economists from different parts of the country were invited to get a feedback from a wider cross section of the academia and institutions involved in imparting knowledge about the subject. In this connection,

special mention may be made of Professor P.R. Brahmananda, Chairman, Amrit Jubilee Committee, Indian Economic Association; Professor I.G. Patel, former Director, London School of Economics and Former Governor, Reserve Bank of India; Professor H.K. Manmohan Singh, Emeritus Professor of Economics and former Vice-chancellor, Punjabi University, Patiala; and Professor A.C. Angrish, Emeritus Professor of Economics, Jodhpur University, whose invaluable suggestions have been appropriately incorporated. Constructive and encouraging suggestions were also received from Professor U. Sankar, Madras School of Economics; Professor T. Krishna Kumar, Director, Institute of Econometrics, Bangalore; Professor (Ms.) Kanchan Chopra, Institute of Economic Growth; Professor Ravindra H. Dholakia, Indian Institute of Management, Ahmedabad; and Professor B.M. Jani, Saurashtra University. The Committee also approached Professor V. Pandit, Delhi School of Economics; Professor P.P. Pillai, Director, Institute of Planning and Applied Economics Research, Thrissur; Professor J.C. Sandesara, Mumbai; Professor Ashok Mathur, Jawaharlal Nehru Univeristy; Professor L.M. Bhole, IIT, Mumbai; and Professor Ajit Kumar Singh, Giri Institute of Development Studies, Lucknow, who, due to their various pre-occupations, could not favour the Committee with their contributions.

CURRICULUM DEVELOPMENT COMMITTEE (CDC) MEETINGS

Five meetings of the CDC for Economics were held at the UGC premises in New Delhi between November 2000 and June 2001. Detailed deliberations were conducted regarding the Course Structure at the U.G. and P.G. levels. More specifically, the contents of each of the Papers were deliberated at length. These meetings were attended to by experts specializing in various fields of economics, where they deliberated upon multifaceted aspects of Economics curricula and identified the lacunae in the existing system. These experienced experts, mostly drawn from leading teaching institutions, have remained part and parcel of our present educational system for several decades and to a large extent have been conversant with the weaknesses and strengths of our educational and social systems. Considering the fact that uniformity of syllabi in all teaching institutions of the country may not be feasible due to shortage of required expertise, physical infrastructure including library facilities and peculiar problems of the region, an attempt has been made by the Committee to provide a model syllabus so that inter-institutional and inter-state movement of students becomes feasible without much difficulty. The meetings were held with different sets of experts in order to concentrate on specific subjects in each of the meetings. The details regarding the Core Members and other Experts invited for each of the meetings are as under:

1st Meeting : November 01, 2000

Core Members

1. Professor M.R. Agarwal, Punjab University, Chandigarh.
2. Professor Ashok Mittal, Aligarh Muslim University, Aligarh.
3. Professor D.P.S. Verma, Delhi School of Economics, Delhi University, Delhi.

Other Experts

4. Professor B.B. Bhattacharya, Institute of Economic Growth, Delhi.
5. Professor Raghvendra Jha, Indira Gandhi Institute of Development Research, Mumbai.
6. Professor S.K. Singh, Indira Gandhi National Open University, New Delhi.
7. Professor P.N. Mehrotra, Allahabad University, Allahabad.

Professor B.B. Bhattacharya, Professor Raghvendra Jha and Professor D.P.S. Verma could not attend the meeting.

2nd Meeting : February 14-15, 2001

Core Members

1. Professor M.R. Agarwal, Punjab University, Chandigarh.
2. Professor A.K. Jain, Banaras Hindu University, Varanasi.
3. Professor Ashok Mittal, Aligarh Muslim University, Aligarh.

Other Experts

4. Professor (Ms.) U. Kalpagam, G.B. Pant Social Science Institute, Allahabad.
5. Professor B. Satyanarayan, Osmania University, Hyderabad.
6. Professor P.N. Mehrotra, Allahabad University, Allahabad.
7. Professor K.K. Saxena, IIT, Kanpur.
8. Professor S.K. Singh, Indira Gandhi National Open University, New Delhi.

Professor K.K. Saxena, IIT, Kanpur, could not attend the meeting.

3rd Meeting : March 13-14, 2001

Core Members

1. Professor B.S.R. Rao, Director, College of Insurance and Financial Planning, Secunderabad.
2. Professor M.R. Agarwal, Punjab University, Chandigarh.
3. Professor P.N. Mehrotra, Allahabad University, Allahabad.

Other Experts

4. Professor Ashok Mittal, Aligarh Muslim University, Aligarh.
5. Professor R.S. Bawa, Guru Nanak Dev University, Amritsar.
6. Professor T.V.S. Rammohan Rao, IIT, Kanpur.
7. Professor S.K. Singh, Indira Gandhi National Open University, New Delhi.
8. Professor M.N. Murty, Institute of Economic Growth, Delhi.

Professor P.N. Mehrotra and Professor T.V.S. Rammohan Rao could not attend the meeting.

4th Meeting : May 10-11, 2001**Core Members**

1. Professor B.S.R. Rao, Director, College of Insurance and Financial Planning, Secunderabad.
2. Professor M.R. Agarwal, Punjab University, Chandigarh.
3. Professor P.N. Mehrotra, Allahabad University, Allahabad.

Other Experts

4. Professor A.K. Jain, Banaras Hindu University, Varanasi.
5. Professor Ashok Mittal, Aligarh Muslim University, Aligarh.
6. Professor R.S. Bawa, Guru Nanak Dev University, Amritsar.
7. Professor K.R.G. Nair, South Campus, University of Delhi, New Delhi.

5th Meeting : June 11-12, 2001

In addition to Dr. A.K. Jain, Professor and Head, Department of Economics, BHU, the following core members attended this meeting to give final shape to the recommendations of Curriculum Development Committee in Economics:

1. Professor B.S.R. Rao, Director, College of Insurance and Financial Planning, Secunderabad.
2. Professor M.R. Agarwal, Punjab University, Chandigarh.
3. Professor P.N. Mehrotra, Allahabad University, Allahabad.

Professor P.K. Bhargava, Department of Economics, Banaras Hindu University, the Nodal Person, was present in all the meetings.

In addition to the experts referred to above, the Committee also availed of the expertise of various well-known economists who contributed by way of suggestions, as referred to above.

In formulating the scheme of Papers at the undergraduate and postgraduate levels, the Committee has assumed that as many as 180 days shall be available for teaching purposes during an academic session in the colleges and the universities. Further, the course content of each of the Papers has been so framed that the same may be completed in 90 hours of teaching during an academic session.

BASIC FRAMEWORK FOR THE PROPOSED UNDERGRADUATE SYLLABUS

Most of the Universities have the Three-year Degree Course and award the 'Pass' or the 'Honours' degree. Universities which run the Three-year Degree Pass Course lay equal emphasis on the subjects that a student is supposed to study during the three year period. On the other hand, the Universities which offer the Honours Course at the undergraduate level require the student to concentrate on the Honours subject at the final year (third year) stage. Keeping these facts in view, the Committee has finalised the Papers as also the contents for each of the Papers. Accordingly, the following SIX PAPERS are proposed to be taught at the Undergraduate (Pass and Honours) level to the students during the three year period:

1. Microeconomics;
2. Indian Economy;
3. Macroeconomics;
4. Money, Banking and Public Finance;
5. Development and Environmental Economics; and
6. International Economics

The Committee strongly feels that each undergraduate student should also have knowledge and understanding about the region from which he/she hails. Accordingly, the Paper entitled 'Indian Economy' should contain a module on 'The Economy of the Region/State' with the details to be finalized by each of the Universities at its own level.

The aforesaid Six Papers will also be taught to the B.A. Honours students, with the addition of the following TWO CORE PAPERS which are to be taught at the B.A. Part III stage and the same be studied as Papers 7 and 8.

7. Quantitative Techniques; and
8. History of Economic Thought

In addition, B.A. Honours students shall also be required at the B.A. Part III stage to opt for two OPTIONAL PAPERS out of the following Nine Optional Papers:

1. Mathematical Economics;
2. Econometric Methods;
3. Demography;
4. Regional Economics;
5. Banking and Financial Markets;
6. Agricultural Economics;
7. Industrial Economics;
8. Economics of Social Sector and Environmental Issues; and
9. Computer and its Applications.

Thus a B.A. Honours student shall be required to study TEN PAPERS in all, to obtain the B.A. (Honours) Degree in Economics.

The number of Papers as also the course content for each of the Papers as far as possible should be the same for all the Universities, following either the Yearly System of Examination or the Semester System of Examination. Further, maximum marks for each of the Papers be kept at 100.

The Committee feels that to ensure horizontal and vertical academic mobility, one year 'Bridge Course' be introduced by those Universities which award B.A. Pass Degree in Economics so as to enable such students to study the remaining four Papers (not taught at the B.A. Pass level) which are essential to obtain the B.A. Honours Degree and make them eligible for admission to the Postgraduate Course in Economics.

As for the pattern of Reading List at the Undergraduate level, the Committee felt that a BASIC READING LIST and an ADDITIONAL READING LIST be appended to each of the Papers.

BASIC FRAMEWORK FOR THE PROPOSED POSTGRADUATE SYLLABUS

Most of the Universities at the Postgraduate level require a student to study Eight Papers during the two-year period, including two Optional Papers. However, in view of the changing scenario and emerging needs across the country, the Committee felt that the following Eight Papers be taught as Compulsory Papers at the postgraduate level:

1. Micro Economic Analysis;
2. Macro Economic Analysis;
3. Quantitative Methods;
4. Public Economics;
5. Indian Economic Policy;
6. Economics of Growth and Development;
7. International Trade and Finance; and
8. Economics of Social Sector and Environment.

In addition, each student shall also be required to opt for TWO OPTIONAL PAPERS out of the following fourteen Optional Papers:

1. Industrial Economics;
2. Labour Economics;
3. Mathematical Economics;
4. Econometrics;
5. Demography;
6. Agricultural Economics;
7. Economics of Gender and Development;
8. Financial Institutions and Markets;
9. Economics of Infrastructure;

10. Computer Applications in Economic Analysis;
11. Economics and Law;
12. History of Modern Economic Analysis (Contribution of Nobel Laureates in Economics)
13. Welfare Economics; and
14. Economics of Insurance.

Thus the Committee suggests that each student henceforth be required to study TEN PAPERS at the post-graduate level. This pattern be also followed by the Universities which follow the Semester System of Examination by dividing the contents of each of the Papers Semester-wise. Further, the maximum marks for each of the Papers be kept at 100.

The pattern of Reading list at the post-graduate level has been suggested by the Committee keeping in view the fact that a student is expected to be interested in making an in-depth study in various Papers. Hence, a BASIC READING LIST as also an ADDITIONAL READING LIST module-wise has been appended with each of the Papers.

SOME SALIENT FEATURES OF THE PROPOSED STRUCTURE OF COURSES

The Committee deliberated at length and has dealt with the various issues like multi-disciplinary skills, linking the subject to professional courses, modular system, introduction of bridge course, and allowing both the vertical and horizontal academic mobility.

In framing the course structure, both at the undergraduate and postgraduate levels, the Committee has not diluted the relevance of the traditional course structure but has tried to ensure continuity by incorporating modern developments. Hence the revision of course structure that had been undertaken by the UGC some eleven years ago has its relevance and this Committee has also drawn from it.

The Committee felt convinced that a student should be well acquainted with the nature and problems of the Indian economy. Accordingly, the Committee has recommended a Compulsory Paper relating to the Indian economy both at the undergraduate and postgraduate levels; and also strongly

recommends the inclusion of a separate Module relating to 'The Economy of the Region/State' by the respective University in the Paper entitled 'Indian Economy' at the undergraduate level.

In framing the course structure, the Committee has also taken cognizance of the emerging areas which are socially relevant. Accordingly, the Papers relating to issues of social sectors, infrastructure, law, computer applications, Nobel Laureates' contributions, insurance and environment study (of late emphasized by the Hon'ble Supreme Court and the UGC) have been incorporated in the various Papers of the proposed structure of courses.

SPECIAL RECOMMENDATION

The Committee is of the opinion that the number of Optional Papers at the undergraduate and postgraduate levels to be offered by each of the Universities be decided, depending upon the availability of required expertise and the various other inputs in terms of the physical infrastructural facilities.

The Committee strongly feels that there should be provision of 'Tutorials' at the undergraduate and the postgraduate levels so that the difficulties and problems of each individual student are attended to and he/she is in a position to have a clear understanding of the subject.

The Committee also feels that there should be adequate and proper exposure of each of the students to the external environment so as to ascertain as to what he/she has learnt at the undergraduate and postgraduate levels. Accordingly, the Committee recommends that viva-voce examination, along with a short dissertation, be introduced as a Compulsory Paper of 100 marks at the postgraduate level. This be treated as the ELEVENTH PAPER of the course structure at the postgraduate level.

ACKNOWLEDGEMENTS

The members of the Core Group as also the Nodal Person for Curriculum Development Committee in Economics would like to place on record their grateful thanks to all the Subject Experts for their cooperation and help in formulating the proposed syllabi for the undergraduate and postgraduate levels. Thanks are specially due to the Expert Members for sparing their valuable time and coming all the way to New Delhi to participate in the deliberations of the Committee. Sri

Narain Singh, Under Secretary, University Grants Commission, who acted as the Secretary to the Curriculum Development Committee (CDC) for Economics, deserves appreciation and thanks for coordinating all the meetings at the UGC. Finally, we would like to place on record that the credit goes primarily to **Professor Dr. Hari Gautam, Chairman, University Grants Commission**, for recognizing the need for updating the curricula in Economics in the Indian Universities as also for providing freedom and flexibility to the Committee in discharging its functions.

(P.K. Bhargava)

Nodal Person

(B.S.R. Rao)

Core Member

(M.R. Agarwal)

Core Member

(P.N.Mehrotra)

Core Member

BACHELOR OF ARTS
(PASS & HONOURS)
COMPULSORY PAPERS

B.A. (Pass & Honours)
Compulsory Paper
Paper-I
MICROECONOMICS

PREAMBLE

As a foundation course, in this Paper, student is expected to understand the behaviour of an economic agent, namely, a consumer, a producer, a factor owner and the price fluctuation in a market. The approach of this paper is to study the behaviour of a unit and analysis is generally static and in partial equilibrium framework.

The modules incorporated in this Paper deal with the nature and scope of economics, the theory of consumer behaviour, analysis of production function and equilibrium of a producer, the price formation in different markets structures and the equilibrium of a firm and industry. In addition, the principles of factor pricing and commodity pricing as also the problems of investment and welfare economics have been included.

Module 1 : Introduction

Nature and scope of economics; Methodology in economics; Choice as an economic problem; basic postulates; Role of price mechanism; Demand and supply; Basic framework — applications; Market equilibrium.

Module 2 : Consumer's Behaviour

Utility — Cardinal and ordinal approaches; Indifference curve; Consumer's equilibrium (Hicks and Slutsky); Giffin goods; Compensated demand; Elasticity of demand — Price, income and cross; Consumer's surplus; Engel curve.

Module 3 : Theory of Production and Costs

Production decisions; Production function; Iso-quant; Factor substitution; law of variable proportions; returns to scale; economies of scale; Different concepts of cost and their interrelation; Equilibrium of the firm; Expansion path; Empirical evidence on costs.

Module 4 : Market Structure

Market forms — Perfect and imperfect markets; Equilibrium of a firm — Perfect competition, monopoly and price discrimination; Measure of monopoly power; Monopolistic competition; Duopoly, Oligopoly; Taxation and equilibrium of a firm; Notion of controlled and administered prices.

Module 5 : Factor Pricing

Marginal productivity theory of distribution; Theories of wage determination; Wages and collective bargaining; Wage differentials; Rent — Scarcity rent; Differential rent; Quasi rent; Interest — Classical and Keynesian theories; Profits — Innovation, risk and uncertainty theories.

Module 6 : Investment Analysis

Payback period—average annual rate of return, Net present value, Internal rate of return criteria, price changes, risk and uncertainty, elements of social cost-benefit analysis.

Module 7 : Welfare Economics

Problems in measuring welfare; Classical welfare economics; Pareto's criteria; Value judgement; Concept of a social welfare function; Compensation principle — Kaldor, Hicks.

BASIC READING LIST

- Bach, G.L. (1977), Economics, Prentice Hall of India, New Delhi.
- Gauld, J.P. and Edward P. L. (1996), Microeconomic Theory, Richard. Irwin, Homewood.
- Henderson J. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Heathfield and Wibe (1987), An Introduction to Cost and Production Functions, Macmillan, London.
- Koutsoyiannis, A. (1990), Modern Microeconomics, Macmillan.
- Lipsey, R.G. and K.A. Chrystal (1999), Principles of Economics (9th Edition), Oxford University Press, Oxford.

- Mansfield, E. (1997), Microeconomics (9th Edition), W.W. Norton and Company, New York.
- Ray, N.C. (1975), An Introduction to Microeconomics, Macmillan Company of India Ltd., Delhi.
- Ryan, W.J.L. (1962), Price Theory, Macmillan and CO. Limited, London.
- Samuelson, P.A. and W.D. Nordhaus (1998), Economics, Tata McGraw Hill, New Delhi.
- Stonier, A.W. and D.C. Hague (1972), A Textbook of Economic Theory, ELBS & Longman Group, London.
- Varian, H.R. (2000), Intermediate Microeconomics : A Modern Approach (5th Edition), East-West Press, New Delhi.

B.A. (Pass & Honours)
Compulsory Paper
Paper-II
INDIAN ECONOMY

PREAMBLE

The purpose of this course on Indian economy at the B.A. (Pass and Honours) level is to enable students to have an understanding of the various issues/components of the Indian economy so that they are able to comprehend and critically appraise current Indian economic problems. For this, it is essential to have a good deal of understanding about the major developments in the Indian economy before Independence, at the time of Independence and during the post-Independence period. The contents of the different modules have been accordingly devised.

Module 1 : Pre-British Period

Indian economy in the Pre-British Period — Structure and organization of villages, towns, industries and handicrafts.

Module 2 : Towards a Market Economy

Changes in the land system; Commercialization of agriculture; Policy of discriminating protection and industrial development; Monetary and currency developments; Commercial and central banking developments; Taxation system during the British Period.

Module 3 : Economic Consequences of the British Rule

General overall impact; Colonial exploitation — forms and consequences; Case for protection of Indian industries; The theory of drains — its pros and cons.

Module 4 : Indian Economy at the Time of Independence

Colonial economy; Semi-feudal economy; Backward economy; Stagnant economy; Other salient features; Planning exercises in India — National Planning Committee, Bombay Plan; People's Plan; Gandhian Plan; The Planning Commission.

Module 5 : Structure of the Indian Economy

Basic features; Natural resources — Land, water and forest resources; Broad demographic features — Population size and growth rates, sex composition, rural-urban migration, occupational distribution; Problem of over-population; Population policy; Infrastructure development; National Income.

Module 6 : Planning in India

Objectives; Strategy; Broad achievements and failures; Current Five Year Plan — Objectives, allocation and targets; New economic reforms — Liberalization, privatization and globalization; Rationale behind economic reforms; Progress of privatization and globalization.

Module 7 : Agriculture

Nature and importance; Trends in agricultural production and productivity; Factors determining productivity; Land Reforms; New agricultural strategy and green revolution; Rural credit, Agricultural marketing.

Module 8 : Industry

Industrial development during the planning period; Industrial policy of 1948, 1956, 1977 and 1991; Industrial licensing policy — MRTP Act, FERA and FEMA; Growth and problems of small scale industries; Role of public sector enterprises in India's industrialization.

Module 9 : External Sector

Role of foreign trade; Trends in exports and imports; Composition and direction of India's foreign trade; Balance of payments crisis and the New economic reforms — Export promotion measures and the new trade policies. Foreign capital — FDI, aid; Multinational corporations (MNCs).

Module 10 : Important Areas of Concern

Poverty and inequality; Unemployment; Rising prices; Industrial relations.

BASIC READING LIST

- Datt, R. and K.P.M. Sundharam (2001), Indian Economy, S. Chand & Company Ltd., New Delhi.
- Dhingra, I. C. (2001), The Indian Economy : Environment and Policy, Sultan Chand & Sons, New Delhi.
- Dutt, R.C. (1950), The Economic History of India Under Early British Rule, Low Price Publications. Delhi.
- Kumar, D. (Ed.) (1982), The Cambridge Economic History of India, Volume II, 1757-1970, Orient Longman Ltd., Hyderabad.
- Misra, S.K. and V.K. Puri (2001), Indian Economy — Its Development Experience, Himalaya Publishing House, Mumbai.

ADDITIONAL READING LIST

- Gadgil, D.R. (1971), The Industrial Evolution in India in Recent Times, 1860-1939, Oxford University Press, Bombay.
- Government of India, Economic Survey (Annual), Economic Division, Ministry of Finance, New Delhi.
- Naoroji, D. (1962), Poverty and Un-British Rule in India, Low Price Publications, Delhi.
- Planning Commission (1999), Ninth Five Year Plan, Government of India, New Delhi.
- Singh, V.B. (Ed.) (1965), Economic History of India, 1857-1956, Allied Publishers Private Limited, Bombay.

- Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999), India's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
- Jalan, B. (1992), The Indian Economy : Problems and Prospects, Viking, New Delhi.
- Jalan, B. (1996), India's Economic Policy — Preparing for the Twenty-first Century, Viking, New Delhi.
- Parikh, K.S. (1999), India Development Report — 1999-2000, Oxford University Press, New Delhi.
- Datt, R. (Ed.) (2001), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.

B.A. (Pass & Honours)
Compulsory Paper
Paper-III
MACROECONOMICS

PREAMBLE

On account of the growing influence and involvement of the State in economic fields, macroeconomics has become a major area of economic analysis in terms of theoretical, empirical as well as policy-making issues. Macroeconomics has an extensive, substantive as well as methodological content. It deals with the functioning of the economy as a whole, including how the economy's total output of goods and services and employment of resources is determined and what causes these totals to fluctuate. The canvass of the study is the whole rather than the part because what is true of parts is not necessarily true of the whole.

The Paper entitled "Macroeconomics" is designed to make an undergraduate student aware of the basic theoretical framework underlying the field of macroeconomics.

Module 1 : National Income and Social Accounts

Concept and measurement of national income; National income identities with government and international trade; incorporation of environmental concerns in national accounts — green accounting.

Module 2 : Output and Employment

Say's law of markets and the classical theory of employment; Keynes' objection to the classical theory; Aggregate demand and aggregate supply functions; The principle of effective demand; Consumption function — Average and marginal propensity to consume; Factors influencing consumption spending; The investment multiplier and its effectiveness in LDCs; Theory of investment — Autonomous and induced investment; Marginal efficiency of capital; Savings and investment — ex post and ex ante, Equality and equilibrium.

Module 3 : Rate of Interest

Classical, Neo-classical and Keynesian theories of interest.

Module 4 : Trade Cycles

Nature and characteristics; Hawtrey's monetary theory; Hayek's over-investment theory; Keynes' view on trade cycle; The concept of accelerator; Samuelson and Hicks multiplier-accelerator interaction model; Control of trade cycles.

Module 5 : Economic Growth

Sources of growth; Growth models — Harrod and Domar; Instability of equilibrium; Neo-classical growth models — Solow; Economic growth and technical progress.

BASIC READING LIST

- Ackley, G. (1976), Macroeconomics : Theory and Policy, Macmillan Publishing Company, New York.
- Day, A.C.L. (1960), Outline of Monetary Economics, Oxford University Press, Oxford.
- Gupta, S.B. (1994), Monetary Economics, S. Chand and Co., Delhi.
- Heijdra, B.J. and F.V. Ploeg (2001), Foundations of Modern Macroeconomics, Oxford University Press, Oxford.
- Lewis, M.K. and P.D. Mizan (2000), Monetary Economics, Oxford University Press, New Delhi.
- Shapiro, E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi.

ADDITIONAL READING LIST

- Dillard, D. (1960), The Economics of John Maynard Keynes, Crosby Lockwood and Sons, London.
- Hanson, A.H. (1953), A Guide to Keynes, McGraw Hill, New York.
- Higgins, B. (1963), Economic Development: Principles, Problems and Policies, Central Book Depot, Allahbad.
- Keynes, J.M. (1936), The General Theory of Employment, Interest and Money, Macmillan, London.
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B.A. (Pass & Honours)
Compulsory Paper
Paper-IV
MONEY, BANKING AND PUBLIC FINANCE

PREAMBLE

Money, banking and public finance constitutes important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude of channels — market, non-market, institutions and, among others, the state. In modern times, the activities of State have considerably increased and the theoretical understanding of different State activities through the budgetary mechanism is essential. Accordingly, the Paper on 'Money, Banking and Public Finance' is an optimal integration of monetary theory, banking institutions and government which combines with itself a systematic discussion of the theory, institutions and policy with special reference to India.

Module 1 : Basic Concepts

Money — meaning, functions and classification; Gresham's law; Role of money in capitalist, socialist and mixed economies; Monetary standards — Metallic and paper systems of note issue.

Module 2 : Value of Money and Inflation

Uses and limitations of index numbers; Quantity theory of money — Cash transaction and cash balance approaches; The Keynesian approach; Inflation, deflation and reflation — definition, types, causes and effects of inflation on different sectors of the economy; Demand-pull and cost-push inflation; Measures to control inflation; Trade-off between inflation and unemployment.

Module 3 : Commercial Banking

Meaning and types; Functions of commercial banks; The process of credit creation — Purpose and limitations; Liabilities and assets of banks; Evolution of commercial banking in India after Independence; A critical appraisal of the progress of commercial banking after nationalization; Recent reforms in banking sector in India.

Module 4 : Central Banking

Functions of a central bank; Quantitative and qualitative methods of credit control — bank rate policy, open market operations, variable reserve ratio and selective methods; Role and functions of the Reserve Bank of India; Objectives and limitations of monetary policy with special reference to India.

Module 5 : Nature and Scope of Public Finance

Meaning and scope of public finance; Distinction between private and public finance; Public goods vs. private goods; The Principle of maximum social advantage; Market failure; Role of the government.

Module 6 : Public Expenditure

Meaning, classification and principle of public expenditure; Canons and effects of public expenditure; Trends in public expenditure and causes of growth of public expenditure in India.

Module 7 : Taxation

Sources of public revenue; Taxation — Meaning, canons and classification of taxes; Division of tax burden — The benefit and ability-to-pay approaches; Impact and incidence of taxes; Taxable capacity; Effects of taxation; Characteristics of a good tax system; Major trends in tax revenue of the central and state governments in India.

Module 8 : Public Debt and Financial Administration

Sources of public borrowing; Effects of public debt; Methods of debt redemption; Growth of India's public debt; The public budget — Kinds of budget; Economic and functional classification of the budget; Preparation and passing of budget in India.

BASIC READING LIST

- Ackley, G. (1978), Macroeconomics : Theory and Policy, Macmillan Publishing Co., New York.
- Bhargava, R.N. (1971), The Theory and Working of Union Finance in India, Chaitanya Publishing House, Allahbad.
- Gupta, S.B. (1994), Monetary Economics, S. Chand & Company, New Delhi.
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ADDITIONAL READING LIST

- Day, A.C.L. (1960), Outline of Monetary Economics, Oxford University Press, Oxford.
- De Kock, M.H. (1960), Central Banking, Staples Press, London.
- Due, J.F. (1963), Government Finance, Irwin, Homewood.
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- Herber B.P. (1976), Modern Public Finance, Richard D. Irwin, Homewood.
- Laliwala, J.I. (1984), The Theory of Inflation, Vani Educational Book, New Delhi.
- Mishra, S.S. (1981), Money, Inflation and Economic Growth, Oxford & IBH Publishing Company, New Delhi.
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- Reserve Bank of India (1983), The Reserve Bank of India: Functions and Working, Bombay.
- Reserve Bank of India, Report on Trend and Progress of Banking in India, (various years), Mumbai.
- Reserve Bank of India, Report on Currency and Finance (Annual), Mumbai.
- Sayers, R.S. (1978), Modern Banking, (7th Edition), Oxford University Press, Delhi.

B.A. (Pass & Honours)
Compulsory Paper
Paper-V
DEVELOPMENT AND ENVIRONMENTAL ECONOMICS

PREAMBLE

Modules incorporated in this Paper would enable the students to know about theories of growth and development, sectoral aspects of development, investment criteria, allocation of resources, interrelations of international trade and development, domestic macro policies, international aspects of development and the techniques of planning and its recent adaptations in the light of market dominated strategy. Issues relating to sustainable development, environmental protection and pollution control also find their due place in the modules.

Module 1 : Development and Economic Growth

Economic growth and development — Factors affecting economic growth — Capital, labour and technology; Growth models — Harrod and Domar; Instability of equilibrium — Neo-classical growth models — Solow and Meade, Mrs. Joan Robinson's growth model; Technological progress — Embodied and disembodied technical progress — Technical progress of Hicks, Harrod; Learning by doing; Production function approach to the sources of growth.

Module 2 : Economic Development, Population and Institutions

Development and underdevelopment — Perpetuation of underdevelopment; Poverty — absolute and relative; Measuring development and development gap — per capita income, inequality of income and wealth, Human development index and other indices of development and quality of life; Concept of intellectual capital; Food security, education, health and nutrition — Human resource development — Population problem and growth pattern of population; Theory of demographic transition; Population, poverty and environment; Economic development and institutions; Markets and market failure; State and state failure; Issues of good governance.

Module 3 : Theories of Economic Development

Theories of development — Classical theory of development; Karl Marx in the theory of development — theory of social change; Immutable laws of capitalist development — Crisis in capitalism; Schumpeter and capitalistic development.

Module 4 : Approaches to Economic Development

Partial theories of growth and development — Vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis; Low income equilibrium trap — Dualism : Technical, behavioural and social.

Module 5 : Sectoral View of Development

Role of agriculture in economic development; Importance of land reforms; Efficiency and productivity in agriculture; New technology and sustainable agriculture; Globalization and agricultural growth; Rationale and pattern of industrialization in developing countries; The choice of technique and appropriate technology and employment; Efficiency of small-scale vs. large-scale production; Terms of trade between agriculture and industry; Infrastructure and its importance; Labour markets and their functioning in developing countries.

Module 6 : Choice and Pattern of Investment

Need for investment criteria in LDCs; Present vs. future growth; Alternative investment criteria; Cost-benefit analysis.

Module 7 : International Aspect of Economic Development

International trade as an engine of growth; Static and dynamic gains from trade; Prebisch, Singer and Myrdal theses vs. free trade; Export-led growth; Dual gap analysis; Balance of Payments; Tariffs and effective protection; Post-GATT international economic order; WTO and developing countries.

Module 8 : Macro Economic Policy and Economic Development

Role of monetary and fiscal policies in developing countries; External resources; FDI; Aid vs. trade; Technology inflow; MNC activity in developing countries; IMF and World Bank policies in developing countries.

Module 9 : Planning and Development

Need for planning — Democratic, decentralized and indicative planning, micro level planning; Review of Indian plan models.

Module 10 : Environment and Ecology

Environment-economy linkage; Environment as a necessity and luxury; Population-environment linkage; Environmental use and environmental disruption as an allocation problem; Market failure for environmental goods; Environment as a public good; The commons problem; Property right approach to environmental problem; Valuation of environmental damages; Land water, air and forest.

Module 11 : Pollution Control

Prevention, control and abatement of pollution; Choice of policy instruments in developing countries; Environmental legislation; Indicators of sustainable development; Environmental accounting.

BASIC READING LIST

- Adelman, I. (1961), Theories of Economic Growth and Development, Stanford University Press, Stanford.
- Behrman, S. and T.N. Srinivasan (1995), Handbook of Development Economics, Vol. 1 to 3, Elsevier, Amsterdam.

- Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.
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- Myint, Hla (1965), The Economics of Underdeveloped Countries, Preager, New York.
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- Thirlwal, A.P. (1999), (6th Edition), Growth and Development, Macmillan, London.

ADDITIONAL READING LIST

- Arestis, P. (Ed.) (1993), Employment, Economic Growth and the Tyranny of the Market, Edward Elgar, Aldershot.
- Bhagwati, J. and P. Desai (1970), India : Planning for Industrialization, Oxford University Press, London.
- Boserup, E. (1991), Population and Technological Change : A Study of Long Term Change, Chicago University Press, Chicago.
- Brahmananda, P.R. and C.N. Vakil (1956), Planning for an Expanding Economy, Vora and Co., Bombay.
- Chakravarti, S. (1982), Alternative Approaches to the Theory of Economic Growth, Oxford University Press, Delhi.
- Chakravarty, S. (1987), Development Planning : The Indian Experience, Clarendon Press, Oxford.

- Chenery, H.B. et. al. (Eds.) (1974), Redistribution with Growth, Oxford University Press, New York.
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- Ehrlich, P., A. Ehrlich and J. Holden (1997), Economics, Population, Resources, Environment, W.H. Freeman, San Francisco.
- Government of India (2000), India 2000, Ministry of Information and Broadcasting, New Delhi.
- Hemple, Lamont C. (1998), Environmental Economics : The Global Challenge, First East West Press, Edinburgh.
- Hirsch, A.O. (1958), The Strategy of Economic Development, Yale University Press, New Haven.
- Kahkonon, S. and M. Olson (2000), A New Institutional Approach to Economic Development, Vistaar.
- Kuik, O.J. et. al (Eds.) (1997), Environment Policy, Pollution Control in the South & North : A Comprehensive Assessment of Approach in India and Netherlands, Indo-Dutch Studies on Development Alternatives, Sage Publications, New Delhi.
- Little, I.M.D. (1982), Economic Development : Theory and International Relations, Basic Books, New York.
- Lopez, R.E. (1997), Where Development Can Go Or Can Not Go, The Role of Poverty — Environmental Linkages, Annual World Bank Conference on Development Economics, World Bank, Washington D.C.
- Maler, K.G. (1997), Environment, Poverty in Economic Growth, Annual World Bank Conference on Development Economics, World Bank, Washington D.C.
- Mehrotra, S. and J. Richard (1998), Development With a Human Face, Oxford University Press, New Delhi.

- Mishan, E.J. (1975), Cost-Benefit Analysis, (2nd Edition), Allen and Unwin, London.
- Sen, A.K. (Ed.) (1990), Growth Economics, Penguin, Harmondsworth.
- Therberge, J.D. (Ed.) (1968), Economics of Trade and Development, John Wiley, New York.
- Thirwal, A.P. (1974), Inflation, Savings and Growth in Developing Economies, Macmillan, London.
- Todaro, M.P. (1971), Development Planning : Models and Methods, Oxford University Press, Oxford.

B.A. (Pass & Honours)
Compulsory Paper
Paper-VI
INTERNATIONAL ECONOMICS

PREAMBLE

This course provides the students a thorough understanding and deep knowledge about the basic principles that tend to govern the free flow of trade in goods and services at the global level. The contents of the Paper, spread over various modules, lay stress both on theory and applied nature of the subject that have registered rapid changes during the last decade. Besides this, the contents prepare the students to know the impact of free trade and tariffs on the different sectors of the economy as well as at the macro level. The students would also be well trained about the rationale of recent changes in the export-import policies of India. This paper has become relatively more relevant from the policy point of view under the present waves of globalization and liberalization both in the North and in the South.

Module 1 : Importance of Trade and Trade Theories

Importance of the study of international economics; Inter-regional and international trade; Theories of absolute advantage, comparative advantage and opportunity cost; Heckscher-Ohlin theory of trade — its main features, assumptions and limitations.

Module 2 : Gains from Trade

Gains from trade — Their measurement and distribution; Trade as an engine of economic growth; Concepts of terms of trade and their importance in the theory of trade; Doctrine of reciprocal demand — its importance and limitations in the theory of trade.

Module 3 : Tariffs and Quotas

Types of tariffs and quotas; Their impact in partial equilibrium analysis; Free trade and policy of tariffs in relation to economic growth with special reference to India; Concept of optimum tariff.

Module 4 : Balance of Trade and Balance of Payments

Concepts and components of balance of trade and balance of payments; Equilibrium and disequilibrium in balance of payments; Consequences of disequilibrium in balance of payments; Various measures to correct deficit in the balance of payments; Relative merits, demerits and limitations of devaluation; Concept and implications of foreign trade multiplier; Functions of IMF, World Bank and GATT/WTO; Reform of the international monetary system and India.

Module 5 : Foreign Trade in India

Recent changes in the composition and direction of foreign trade; Causes and effects of persistent deficit in the balance of payments; Measures adopted by the government to correct the deficit before and after 1991; Need for and rationale of trade reforms in India (including partial and full convertibility of rupee); Instruments of export promotion and recent export and import policies of India; Role of multinational corporations in India.

BASIC READING LIST

- Kenan, P.B. (1994), The International Economy, Cambridge University Press, London.
- Kindlberger, C.P. (1973), International Economics, R.D. Irwin, Homewood.
- Krugman, P.R. and M. Obstfeld (1994), International Economics : Theory and Policy, Glenview, Foresman.

- Salvatore, D.L. (1997), International Economics, Prentice-Hall, Upper Saddle River, N.J.
- Sodersten, Bo (1991), International Economics, Macmillan Press Ltd., London.

ADDITIONAL READING LIST

- Aggarwal, M.R. (1979), Regional Economic Cooperation in South Asia, S. Chand and Co., New Delhi.
- Bhagwati, J. (Ed.) (1981), International Trade, Selected Readings, Cambridge University Press, Mass.
- Crockett, A. (1982), International Money: Issue and Analysis, ELBS and Nelson, London.
- Greenaway, D. (1983), International Trade Policy, Macmillan Publishers Ltd., London.
- Heller, H.R. (1968), International Monetary Economics, Prentice Hall, India.
- Joshi V. and I.M.D. Little (1998), India's Economic Reforms, 1999-2001, Oxford University Press, Delhi.
- Nayar, D. (1976), India's Exports and Export Policies in the 1960s, Cambridge University Press, Cambridge.
- Panchmukhi, V.R. (1978), Trade Policies of India : A Quantitative Analysis, Concept Publishing Company, New Delhi.
- Patel, S.J. (1995), Indian Economy Towards the 21st Century, University Press Ltd., India.
- Singh, M. (1964), India Export Trends and the Prospects for Self-sustained Growth, Oxford University Press, Oxford.

**B.A. (Honours)
Compulsory Paper
Paper-VII
QUANTITATIVE TECHNIQUES**

PREAMBLE

This course is to be offered by the students who opt for B.A. Honours degree in economics. In order to understand economic problems clearly, the knowledge of quantitative techniques in the area of mathematics and statistics is very essential. The students in this direction are expected to have an elementary knowledge of concept of functions, differential and integral calculus. Further, in the field of statistics, measures of central tendency, dispersion, techniques of simple correlation and regression, theory of index numbers and time series and knowledge of the concept of probability and theoretical distribution should be clearly understood by the student. This course is meant to train the student in this direction.

Module 1 : Basic Concepts

Variables, Sets, Functions, Equations, Identities, Systems of equations, Application of straight-line system, Slope of the line, Homogeneous function.

Module 2 : Calculus

Differentiation of a Function; Maxima and Minima, Elasticities; Equilibrium of a firm and consumer; Inter-relationships among total, marginal and average cost and revenues; Constrained optimisation problem; Integration of a function, consumer's and producer's surplus.

Module 3 : Matrix and Determinants

Various types of matrices, Determinants, Inverse of a matrix, Cramer's rule, Input-output analysis; Simple static model, Linkages, Concept of linear programming — Graphic Method.

Module 4 : Introduction to Statistics

Basic concepts: Population, Sample, Parameter, Frequency Distribution, Cumulative frequency; Graphic and diagrammatic representation of data, Techniques of data collection; Sampling vs. Population, primary and secondary data.

Module 5 : Central Tendency and Dispersion

Measures of central tendency; Mean, Median, Mode, Geometric mean and Harmonic mean. Measures of dispersion; Range, Mean Deviation, Standard deviation, Coefficient of variation, Quartile deviation, Skewness and Kurtosis.

Module 6 : Correlation and Regression

Correlation; Simple, Coefficient of correlation — Karl Pearson and Rank Correlation, Partial and Multiple correlation Analysis, Regression analysis — Estimation of regression line in a bivariate distribution— Least squares method, interpretation of regression coefficients.

Module 7 : Time Series and Index Numbers

Time series analysis — Concept and components — Determination of regular, trend and seasonal indices; Index numbers — Concept, price relative, quantity relative, value relative; Laspeyer's, Paasche's and Fisher, Family budget method; Problems in the construction and limitations of index numbers, Tests for ideal index number.

Module 8 : Probability and Distribution

Probability: Concept, Rules of probability (Addition and Multiplication); Random variables, Mathematical expectations, Theoretical distribution — Binomial, Poisson and Normal: their properties and uses.

BASIC READING LIST

- Allen, R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press, London.
- Black, J. and J.F. Bradley (1973), Essential Mathematics for Economists, John Wiley and Sons.
- Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics (3rd Edition), McGraw Hill, New Delhi.
- Croxton, F.E., D.J. Cowden and S. Klein (1973), Applied General Statistics, Prentice Hall, New Delhi.
- Gupta, S.C. and V.K. Kapoor (1993), Fundamentals of Applied Statistics, S. Chand and Sons, New Delhi.
- Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book, London.

B.A. (Honours)
Compulsory Paper
Paper-VIII
HISTORY OF ECONOMIC THOUGHT

PREAMBLE

This course is essential for a student who aspires for advanced training in economics. Contemporary economic science has evolved over many centuries. The evolution of economic ideas in each instance was as much a response to immediate economic problems and policy issues as much as it was a self-conscious attempt to refine earlier analysis by correcting mistakes and filling in the gaps in analysis. Economic ideas did not evolve in isolation, but were an integral and important part of the evolution of modern social thought. Prevailing ideas of science, scientific rigour and measurement played a significant role in the shaping of economic science at each stage of its evolution. This course, tracing the history of economic thought, would enable the student to understand how contemporary economics came to be what it is.

Module 1 : Early Period

Economic thought of Plato and Aristotle — Doctrines of Just cost and Just price — Mercantilism: main characteristics; Thomas Mun — Physiocracy: natural order, primacy of agriculture, social classes, Tableau Economique, taxation, Turgot — Economic ideas of Petty, Locke and Hume.

Module 2 : Classical Period

Adam Smith — division of labour, theory of value, capital accumulation, distribution, views on trade, economic progress; David Ricardo — value, theory of rent, distribution, ideas on economic development and international trade; Thomas R. Malthus — theory of population, theory of gluts; German romantics and socialists — Sismondi, Karl Marx — dynamics of social change, theory of value, surplus value, profit, and crisis of capitalism; Economic ideas of J.B. Say, J.S. Mill; Historical School — Senior, List.

Module 3 : Marginalists

The precursors of marginalism — Cournot, Thunen, Gossen — The marginalist revolution: Jevons, Walras and Menger — Bohm-Bawark, Wicksell and Fisher: the rate of interest — Wicksteed and Weiser: Distribution — Marshall as a great synthesizer: role of time in price determination, economic methods, ideas on consumer's surplus, elasticities, prime and supplementary costs, representative firm, external and internal economies, quasi-rent, organization as a factor of production, nature of profits; Pigou: Welfare economics; Schumpeter: role of entrepreneur and innovations.

Module 4 : Keynesian Ideas

The aggregate economy, Liquidity Preference Theory and Liquidity trap, Marginal Efficiency of Capital and Marginal Efficiency of Investment, wage rigidities, underemployment equilibrium, role of fiscal policy: deficit spending and public works, multiplier principle, cyclical behaviour of the economy, uncertainty and role of expectations, impetus to economic modelling.

Module 5 : Indian Economic Thought

Early economic ideas: Kautilya, Valluvar; Modern economic ideas: Naoroji, Ranade, R.C. Dutt and M.N. Roy; Economic ideas of Gandhi: Village, Swadeshi, place of machine and labour, cottage industries, trusteeship; Early approaches to planning (The national planning committee); Gadgil: co-operation as a way of life and strategy of development; J.K. Mehta: Wantlessness.

BASIC READING LIST

- Blackhouse, R. (1985), A History of Modern Economic Analysis, Basil Blackwell, Oxford.
- Ganguli, B.N. (1977), Indian Economic Thought: A 19th Century Perspective, Tata McGraw Hill, New Delhi.
- Gide, C. and G. Rist (1956), A History of Economic Doctrines, (2nd Edition), George Harrop & Co., London.

- Grey, A. and A.E. Thomson (1980), The Development of Economic Doctrine, (2nd Edition), Longman Group, London.
- Kautilya (1992), The Arthashastra, Edited, Rearranged, Translated and Introduced by L.N. Rangaranjan, Penguin Books, New Delhi.
- Roll, E. (1973), A History of Economic Thought, Faber, London.
- Schumpeter, J.A. (1954), History of Economic Analysis, Oxford University Press, New York.
- Seshadri, G.B. (1997), Economic Doctrines, B.R. Publishing Corporation, Delhi.

ADDITIONAL READING LIST

- Blaug, M. (1997), Economic Theory in Retrospect : A History of Economic Thought from Adam Smith to J.M. Keynes, (5th Edition), Cambridge University Press, Cambridge.
- Dasgupta, A.K. (1985), Epochs of Economic Theory, Oxford University Press, New Delhi.
- Gandhi, M.K. (1947), India of My Dreams, Navajivan Publishing House, Ahmedabad.
- Koot, G.M. (1988), English Historical Economics : 1850-1926, Cambridge University Press, Cambridge.
- Rao, M.N. (1964), Memoirs, Allied Publishing House, Bombay.
- Schumpeter, J.A. (1951), Ten Great Economists, Oxford University Press, New York.
- Shionya, Y. (1997), Schumpeter and the Idea of Social Science, Cambridge University Press, Cambridge.

BACHELOR OF ARTS
(HONOURS)
OPTIONAL PAPERS

**B.A. (Honours)
Optional Paper
Paper-I
MATHEMATICAL ECONOMICS**

PREAMBLE

Economics has increasingly become the most scientific of all social sciences these days. An important reason for this is that most economic analysis and theorizing are easily amenable to mathematical tools and techniques. A student of economics can make much headway in understanding the subject with basic mathematical logic. The student is exposed to economic concepts in mathematical format through simple illustrations and prepares the ground for more scientific study.

Module 1 : Quantitative Methods

Variable, constants and parameters; Simple functional relationship and their graphs; Elementary ideas of differential and integral calculus; Matrix and determinants; Solution of simultaneous equations; Quadratic equations; Difference and differential equations.

Module 2 : Consumer Theory

Utility function; budget line; Constrained optimization; Consumer's equilibrium; Income effect; substitution effect and price effect; Slutsky equation; Derivation of demand curve; Elasticity of demand; Consumer's surplus.

Module 3 : Theory of Production

Properties of production function — Homogeneous and non-homogeneous; Cobb-Douglas, CES, Returns to scale; Technology progress and production function; Choice of optimal combination of

factors of production; Cost and revenue functions; Derivation of cost curves; Relation between total, average and marginal cost and revenue; Producer's surplus; Production possibility curve; Adding up theorem.

Module 4 : Market Structure/Pricing

Concept of equilibrium; Equilibrium of the firm under perfect competition, monopoly, price discrimination, monopolistic competition; Subsidies and taxes; Economies of scale; Market equilibrium; Economic interpretation of time lag in function; Cobweb model.

Module 5 : Input-Output Analysis, Linear Programming

Input-output analysis; The simple closed and open model; Linkages, concepts and measurement; Dynamic input-output model; Linear programming — Basic concepts, primal and dual; Basic theorem of linear programming; Graphic and simplex method.

Module 6 : Game Theory

Introduction and concepts — simple and mixed strategy; saddle point solution; Prisoner's dilemma; Payoff matrix of a game — two-person-two-commodity and zero-sum game.

BASIC READING LIST

- Allen, R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press, London.
- Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics (3rd Edition), McGraw Hill, New Delhi.
- Colell, A. Mas et. al. (1991), Microeconomic Theory, Harvard University Press, Cambridge, Mass.
- Hands, D.W. (1991), Introductory Mathematical Economics, D.C. Heath.

- Henderson, J. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Handy, S.T. (1997), Operations Research, Prentice-Hall of India, New Delhi.
- Mukherji, B. and V. Pandit (1982), Mathematical Method of Economic Analysis, Allied Publishers, New Delhi.

**B.A. (Honours)
Optional Paper
Paper-II
ECONOMETRIC METHODS**

PREAMBLE

Application of statistical methods to problems dealt with in economic theory has been increasing over time. Econometric methods have proved particularly useful for understanding the interrelationships in the economic variables. Use of econometrics has given greater precision in establishing such relationships. Students graduating in economics are expected to know the basic concepts and applications of econometrics, adding rigour to the understanding of economic problems.

Module 1 : Introduction

Definition and scope of econometrics; The methodology of econometric research; Specification and estimation of an econometric model; Basic concepts of estimation; Desirable properties of estimators; Unbiasedness, efficiency, consistency and sufficiency.

Module 2 : Simple Regression Analysis and Theoretical Distribution

Statistical vs. deterministic relationships; Correlation and regression; Coefficient of determination; Estimation of an equation; Theoretical frequency distribution and application of binomial, poisson and normal; Testing of hypothesis; Type-I and Type-II errors; Standard errors, Tests based on Z, t and χ^2 (Chi-square) statistics.

Module 3 : Estimation Theory

Ordinary least squares (OLS) method — Assumptions; Gauss-Markov Theorem; Testing of regression coefficient; Test for regression as a whole, Coefficient of determination, F-test.

Module 4 : Problems in OLS Estimation

Problems of heteroscedasticity; Auto correlation (first order); Multicollinearity — their consequences, tests and remedies.

Module 5 : Lag Models and Summary Variables

Lags in econometric models — Concepts, Koyck model; Partial adjustment and adaptive expectation models; Summary variables; qualitative data; Seasonal analysis; Use of dummy variables for pooled data; Proxy variable — Concept and uses.

Module 6 : Application of Econometric Methods

Estimation of demand and supply functions, production and cost functions and consumption function and investment function.

BASIC READING LIST

- Greene, W. (1997), Econometric Analysis, Prentice Hall, New York.
- Griffith, W.F., R.H. Hill and G.G. Judge (1993), Learning and Practicing Econometrics, John Wiley, New York.
- Gujrati, D. (1995), Basic Econometrics, (3rd Edition), McGraw Hill, New Delhi.
- Johnston, J. (1985), Econometric Methods, McGraw Hill, New York.

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- Koutsoyiannis. A. (1977), Theory of Econometrics, (2nd Edition), The Macmillan Press Ltd., Hampshire.
- Maddala, G.S. (1993), Econometrics — An Introduction, McGraw-Hill, New York.

**B.A. (Honours)
Optional Paper
Paper-III
DEMOGRAPHY**

PREAMBLE

The modules incorporated in this paper educate the students about the inter-relationship between economic development and population, along with an exposition of the established theories of population. Issues relating to demographic techniques and basic sources of demographic data in the Indian economy have also been included. Aspects of population policy and study of its social characteristics are other important components of the modules of this paper.

Module 1 : Introduction

Population study and demography: its relation with other disciplines; Theories of Population — Malthus, Optimum theory of population, and theory of demographic transition; Historical evidence of population growth in developed and developing countries.

Module 2 : Sources of Demographic Data in India

Sources of Demographic data in India: Census — Civil registration system and demographic surveys; National Family Health Survey 1 and 2 — their relative merits and demerits.

Module 3 : Techniques of Analysis

Crude birth and death rates, age specific birth and death rates, standardized birth and death rates — Study of Fertility: Total fertility rate, gross reproduction rate, and net reproduction rate — Study of marital status — Life table: meaning of its columns and its uses — Reproductive and child health in India — Temporal and spatial variation in sex ratios.

Module 4 : Population Projection

Techniques of population projection — Concept of stationary, stable and quasi-stationary population — Aging of population in India — Changes in family structure and old age security.

Module 5 : Population Policy

Salient features of Population Censuses of 1971, 1981, 1991 and 2001; Evolution of population policy in India, Shift in policy focus from population control to family welfare and to women empowerment; Demographic status and household behaviour — Education, Women's autonomy and fertility — Population, health, poverty and environment linkage in India; The New Population Policy.

BASIC READING LIST

- Agarwala S.N. (1985), India's Population Problem, Tata McGraw-Hill, Bombay.
- Agarwal U.D. (1999), Population Projections and Their Accuracy, B.R. Publishing Corporation, New Delhi.
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- Census of India, Government of India, Various Reports, New Delhi.
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- Misra, B.D. (1980), An Introduction to the Study of Population, South Asian Publishers, New Delhi.
- Srinivasn, K. (Ed.) (1999), Population Policy and Reproductive Health, Hindustan Publishing Corporation, New Delhi.

ADDITIONAL READING LIST

- Buvinic M. and M.A. Lycette, (1989), 'Women, Poverty and Development in the Third World,' in Lewis, J.P. (Ed.) Strengthening the Poor: What Have We Learnt, OECD, Paris.
- Government of India (1974), 'Towards Equality — Report of the Committee on the Status of Women in India, Government of India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
- Gulati, S.C. (1988), Fertility in India : An Econometric Analysis of a Metropolis, Sage Publications, New Delhi
- Gupta, J.A. (2000), New Reproductive Technologies : Women's Health and Autonomy, Indo-Dutch Studies on Development Alternatives, Sage Publications, New Delhi.
- Krishnaji M., R.M. Sudrashan and A. Shariff (1999), Gender Population and Development, Oxford University Press, New Delhi.
- Srinivasan, K. (1998), Basic Demographic Techniques and Applications, Sage Publications, New Delhi.

B.A. (Honours)
Optional Paper
Paper-IV
REGIONAL ECONOMICS

PREAMBLE

Intra-national economic analysis has, till recently, been almost totally space-free. The competitive world of the Classical economists with its simplistic assumptions of free mobility of factors of production and the total absence of transport costs was for obvious reasons devoid of the special dimension.

Revival of interest in economic development since the fifties has led to a sea change in all this. It is being increasingly recognised that market forces do not result automatically in regionally balanced development of economies, and this pinches all the more if the average level of living is already abysmally low, as is the case with many developing economies. To intervene effectively and meaningfully, to pull up economically and socially the less developed regions, it is necessary to understand the dynamics of regional development. These arguments become much more valid in the case of large nations like India which are also federal democracies.

The paper begins with an elucidation of the terms and concepts. It then goes on to unravel as to what is where, why and how. The questions are discussed not only in regard to firms but also in regard to households. Besides discussing the micro and the macro aspects of the issue, the issues of interregional trade and of regional growth are also gone into. Further, students are given a broad overview of the techniques of regional analysis. The paper also contains a section on the regional aspects of the Indian economy including the Indian experience in regional policy formulation and implementation.

Module 1 : Concepts

Why Regional Economics? What is a region? Different types of regions; Regional Income; Problems of estimation; Indicators of regional development.

Module 2 : Location of Firms

One market one input case; More generalized versions; Locational interdependence; Hotelling phenomena; General equilibrium; Uncertainty; Maximising vs. satisficing.

Module 3 : Spatial Price Theory

Price equilibrium in geographically separated and interlinked markets; Market area boundaries; Reilly's law; Models of pricing under free entry; Spatial monopoly and Price discrimination; Spatial monopolistic competition.

Module 4 : Spatial Macro Economics

Inter-regional income models; Inter-regional business cycles; Interregional trade and factor movements; Regional balance of payments; Export base models; Demand growth models; Regional multiplier.

Module 5 : Regional Growth

Neo-classical growth models — Cumulative causation model; Center-periphery model; Growth pole analysis; Convergence and divergence of disparities in per capita regional income.

Module 6 : Techniques of Regional Analysis

Regional and interregional input-output analysis; Attraction model; Gravity model; Shift-share analysis; Impact studies.

Module 7 : Regional Policy

People prosperity versus place prosperity; Formulation of interregional objectives; Consistency between national and regional objectives; Alternate regional policy measures; Historical evidence.

Module 8 : Inter-regional Differentials in India's Development

Agriculture, Industry, Physical infrastructure, Social Sector.

Module 9 : Regional Policy in India

The pre-1970 era identification of backward regions; Concerted policy measures; Liberalization and regional policy.

BASIC READING LIST

- Chand, M. and V.K. Puri (1983), Regional Planning in India, Allied Publishers, New Delhi.
- Hoover, E.M. (1974), An Introduction to Regional Economics, Alfred A. Knopf, New York.
- Isard, W. (1960), Methods of Regional Analysis, MIT Press, Cambridge, Mass.
- Nair, K.R.G. (1982), Regional Experience in a Developing Economy, Wiley-Eastern, New Delhi.
- Richardson, H.W. (1969), Regional Economics, Weidenfield and Nicolson, London.
- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy : Inter-State Perspectives, Bookwell, Delhi.

ADDITIONAL READING LIST

- Beckman, M. (1968), Location Theory, Random House, London.
- Bhalla, G.S. and Y.K. Alagh (1979), Performance of Indian Agriculture: A District-wise Study, Sterling, New Delhi.

- Dholakia, R.H. (1985), Regional Disparity in Economic Growth in India, Himalaya Publishing House, Bombay.
- Friedman, J. and W. Alonso (Eds.) (1975), Regional Policy, Readings in Theory and Application, MIT Press, Cambridge, Mass.
- Glasson, J. (1975), An Introduction to Regional Planning : Concepts, Theory and Practice, Hutchison, London.
- Hansen, N.M. (1974), Public policy and Regional Economic Development; the Experience in Nine Western Countries, Ballinger, Massachusetts.
- Lefeber, L. (1968), Allocation in Space, North-Holland, New York.
- National Bureau of Economic Research (1957), Regional Income, Princeton University Press, Princeton.
- Rao, H. (1984), Regional Disparities and Development in India, Ashish Publishing House, New Delhi.
- Richardson, H.W. (1972), Input-Output and Regional Economics, Weidenfield and Nicolson, London.
- Richardson, H.W. (1973), Regional Growth Theory, John Wiley, New York.
- Seth, V.K. (1987), Industrialisation in India: A Spatial Perspective, Commonwealth Publishers, New Delhi.
- Siebert, H. (1969), Regional Economic Growth : Theory and Policy, International Textbook Company, Scranton.
- Williamson, J.G. (1985), 'Regional Inequality and the Process of National Development,' Economic Development and Cultural Change, Vol. 13, No.4, part II, July.

**B.A. (Honours)
Optional Paper
Paper-V
BANKING AND FINANCIAL MARKETS**

PREAMBLE

Banking and financial institutions have long history in most of the economies of the world. The nature, functioning and issues related to banks and non-bank financial institutions need to be understood by students of economics. The operation of financial markets and their regulation are to be studied to appreciate their key role in an economy, especially after the far-reaching banking and financial sector reforms in India and elsewhere. The present course is designed to acquaint the students fully with the changing role of financial institutions in the process of growth and development.

Module 1 : Money and Commercial Banking

Meaning, functions and kinds of money; Components of supply of money; Money market and capital market; Regulated and unregulated credit markets; Features of a developed money and capital market; Importance of Financial System in India; Functions, types and objectives of commercial banks; The process of credit creation; Liabilities and assets of banks; Role of Commercial banks before and after nationalization in economic development in India; Mechanism of credit creation by the commercial banks, purpose and limitations; Pre-requisites of a sound commercial banking system; A brief review of the measures taken to liberalize the financial system — direction of future reforms.

Module 2 : Financial Institutions in India

Functions and growth of Financial Institutions in India. Functions and objectives of Central Bank; Instruments of credit control — Quantitative and qualitative methods — Bank rate policy, Open market operations, Variable Reserve Ratio and Selective methods; Role and functions of the Reserve Bank of India; Development and regulatory role of RBI; Objectives and limitations of

monetary policy; Inflation — Types, causes and effects of inflation on different sectors of the economy; Demand - pull and cost-push inflation; Measures used by the RBI to control inflation; Recent monetary policy of RBI; Banking and financial system reforms and their impact on economic growth in India; Structure of cooperative institutions and development banks in India — their objectives, role and limitations; Definition and types of NBFIs viz., Mutual Funds, LIC, Investment Companies, Venture Capital, Growth and importance; Recent measures taken by the RBI and SEBI to regulate their working in the sound monetary management of India.

Module 3 : Financial Markets

The structure of Financial markets — Call money, treasury bills and Commercial Bills; The Stock market and market for gilt edged securities; Unregulated credit markets; Financial Sector Reforms in India; SEBI and Working of Capital Markets in India.

Module 4 : Foreign Exchange Markets

Foreign exchange; Foreign exchange rate, Foreign exchange market — concepts of spot exchange rates and forward exchange rates; Determination of exchange rates under fixed and flexible exchange rate regime and role of hedging in the determination of exchange rates; Euro-dollar market — its role and significance.

BASIC READING LIST

- Chandler L.V., and S.M. Goldfeld (1977), The Economics of Money and Banking, Harper & Row, New York.
- Gupta, S.B. (1983), Monetary Economics, S. Chand & Co., New Delhi.
- Gupta, S.B. (1979), Monetary Planning for India, Oxford University Press, Delhi.
- Mitra, S. (1970), Money and Banking, Random House, New York.
- Rangarajan, C. (1999), Indian Economics : Essays on Money and Finance, UBS Publishers, New Delhi.

- Sayers, R.S. (1978), Modern Banking, Oxford University Press, New Delhi.
- Smith, P.F. (1971), Economics of Financial Institutions and Markets, Irwin, Homewood.

ADDITIONAL READING LIST

- Gupta, S.B. (1995), Monetary Economics : Institutions, Theory and Policy, S. Chand & Co., New Delhi.
- Grabble J.O. (1992), International Financial Markets, Elsevire, New York.
- RBI (1983), Functions and Working of RBI, Bombay.
- RBI (1985), Report of the Committee to Review the Working of the Monetary System (Chakravarty Committee), Bombay.
- RBI (2000), Report on Trend and Progress of Banking in India (Annual), Mumbai.
- RBI (1992), Report of the Committee on Financial Companies, Bombay.
- Reddy, Y.V. (2000), A Review of Monetary and Financial Sector Reforms in India — A Central Banker's Perspective, UBSPD, New Delhi.

**B.A. (Honours)
Optional Paper
Paper-VI
AGRICULTURAL ECONOMICS**

PREAMBLE

The importance of agriculture in the Indian economy hardly needs to be emphasized. The paper on agricultural economics highlights important aspects of the agricultural development and planning in India. The paper is split into many modules; each module discusses an aspect of Indian agriculture.

Module 1 : Rural Economy of India

Structure of the Indian Economy: Place of agriculture in rural economy; Composition of the Indian rural economy; farm sector, and non-farm sector; Diversification of agriculture: Agriculture and allied activities (fisheries, horticulture, floriculture); Forestry in India: Its growth, problems and state policies; Cattle wealth of India and dairying; Rural Industrialization: Food processing industries and agro-based industries, development of rural infrastructure.

Module 2 : Development of Agriculture

Role and importance of agriculture in Economic Development: linkages between the agricultural sector and the non-agricultural sector, changing nature of linkages; Agricultural resources in India: land utilization and cropping pattern; Irrigation in India; Command area development and flood control; Trends in agricultural growth and agricultural productivity; Pattern of Agricultural development: regional variation.

Module 3 : Agrarian Relations and Land Reforms in India

Agrarian Relations: historical evolution and land reforms programme during 1950s and 1960s; Land Reforms: programme and performance during 1970s and after.

Module 4 : Technological Change in Agriculture

Technology in agriculture: traditional techniques and practices, HYV Seeds — fertilizers, water technology (green revolution); Sustainable agriculture; Emerging trends in agricultural technology; Dry land farming, use of bio-technology techniques.

Module 5 : State and Agriculture-I

Agricultural finance in India: Importance; types of requirements; sources: non-institutional and institutional: existing rural credit delivery system (multi-agency approach); Agricultural marketing in India: markets and marketing functions, channels of distribution of various commodities; regulated markets and warehousing; Role of cooperatives in Agriculture.

Module 6 : State and Agriculture-II

Agricultural Planning in India: decentralized planning and indicative planning; Incentives in agriculture: price and non-price incentive; input subsidies; Agricultural Price Policy (APP): Nature of demand and supply of agricultural products: Need for state intervention; objectives of APP; instruments and evaluation; Food security in India and public distribution system.

Module 7 : 50 Years of Indian Agriculture

An overview of agricultural development; Under-employment and unemployment in the rural economy; Globalization of Indian Economy and its effects on Indian agriculture.

BASIC READING LIST

- Bilgrami, S.A.R. (2000), An Introduction to Agricultural Economics, (2nd edition), Himalaya Publishing House, Mumbai.
- Sadhu, A.N. and J. Singh (2000), Agricultural Problems in India, (3rd edition), Himalaya Publishing House, Mumbai.
- Sundaram, I.S. (1999), Rural Development, (3rd Edition), Himalaya Publishing House, Mumbai.

ADDITIONAL READING LIST

- Government of India, Economic Survey (Annual), New Delhi.
- Government of India, Ninth Five Year Plan (1997-2000), Vol. I & II, Planning Commission, New Delhi.
- Reserve Bank of India, Hand Book of Statistics on Indian Economy (Annual).
- Soni, R.N. (2000), Leading Issues in Agricultural Economics, Arihant Press, Jalandhar.

**B.A. (Honours)
Optional Paper
Paper-VII
INDUSTRIAL ECONOMICS**

PREAMBLE

In the contemporary world with globalization and liberalization more and more attention is given to industry. This course intends to provide knowledge to the students on the basic issues such as productivity, efficiency, capacity utilization and debates involved in the industrial development in India.

Module 1 : Introduction

Industry and economic development; Industry and sectoral linkages; Industrial classification and data information.

Module 2 : Industrial Organization and Ownership Structure

Public, private, joint and cooperative sectors; Private corporate sector; MNCs and their role; Industrial competition and monopoly; Corporate governance.

Module 3 : Pricing of Industrial Products

Industrial pricing and market structure; Pricing in India.

Module 4 : Location and Dispersion

Locations of Industries — Theories of location; Diversification; Integration and merger of industrial units; Dispersion and problem of regional imbalance.

Module 5 : Composition of Industrial Sector

Significance of size; Major large-scale industries — Sugar, cement, cotton, iron and steel, jute, agro-processing industries; Small-scale industries; Cottage and village industries and rural industrialization — emerging global competition and Indian industry.

Module 6 : Industrial Productivity

Concept and measurement of productivity — Productivity in Indian industries; Industrial sickness; Under-utilization of capacity — factors accounting for it and consequences.

Module 7 : Financing of Industry

Mode of financing — Equity and debt; Institutional Finance; Bank finance.

Module 8 : Indian Industry in the International Context

Globalization and Indian industry; International competitiveness of Indian industry; Privatization and issues relating to disinvestment policy.

Module 9 : Industrial Development in India

Industrial structure at the time of Independence; Industrial policy (Role of state); New industrial policy and economic reforms; Industrial growth and pattern.

Module 10 : Industrial Labour

Structure of industrial labour; Employment dimensions of Indian industry; Industrial legislation; Industrial relations; Exit policy and social security; Wages and problems of bonus.

BASIC READING LIST

- Barthwal, R.R. (1992), Industrial Economics : An Introductory Text Book, Wiley Eastern Ltd., New Delhi.

- Cherunilam, F. (1994), Industrial Economics: Indian Perspective (3rd Edition), Himalaya Publishing House, Mumbai.
- Desai, B. (1999), Industrial Economy in India (3rd Edition), Himalaya Publishing House, Mumbai.
- Kuchhal, S.C. (1980), Industrial Economy of India (5th Edition), Chaitanya Publishing House, Allahabad.
- Singh, A. and A.N. Sadhu (1988), Industrial Economics, Himalaya Publishing House, Bombay.

ADDITIONAL READING LIST

- Ahluwalia, I.J. (1995), Industrial Growth in India, Oxford University Press, New Delhi.
- Brahmananda, P.R. and V.R. Panchamukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Clarkson, K.W. and R. Miller (1985), Industrial Organization : Theory, Evidence and Public Policy, McGraw Hill, Kogakusha, Tokyo.
- Devine, P.J. et. al (1978), An Introduction to Industrial Economics, (3rd Edition), George Allen and Unwin, London.
- Government of India, Economic Survey (Annual), New Delhi.
- Government of India, Ninth Five Year Plan (1997-2000), Vols. I & II, Planning Commission, New Delhi.
- Mamoria and Mamoria (2000), Dynamics of Industrial Relations in India, (15th Edition), Himalaya Publishing House, Mumbai.
- Naidu K.M. (1999), Industrialization and Regional Development in India, Reliance Publishing House, New Delhi.
- Reserve Bank of India, Report on Currency and Finance (Annual), Mumbai.

**B.A. (Honours)
Optional Paper
Paper-VIII
ECONOMICS OF SOCIAL SECTOR AND
ENVIRONMENTAL ISSUES**

PREAMBLE

This paper provides an exposure to the graduate students of economics the basics of environmental and social sector economics. This paper and a similar paper offering advanced compulsory course to the postgraduate students in economics provides necessary training to the students of economics and equips them to deal with the public policy issues in the social and environmental sectors. It has three modules, one each for environment, education and health.

Module 1 : Environmental Issues

Elementary ecology, entropy law, laws of thermodynamics, two-way environment-economy linkages; Basic concepts — elements of capital theory, externality, public goods, uncertainty and irreversibility, renewable and non-renewable resources, common property resources, social cost-benefit analysis; Causes and effects of environmental degradation, degradation of land, forest and natural resources, pollution from energy use — effects on health, land, water and air; Valuation of environmental damages/benefits, direct and indirect methods; Pollution prevention, control and abatement; Legal institutions and instruments; Command and control vs. market-based instruments; taxes vs. permits; direct and indirect instruments of pollution control; Pollution control system and policy in India — Legislation, standards and enforcement; Concepts and indicators of sustainable development.

Module 2 : Educational Economics

Human capital — Human capital vs. physical capital, components of human capital; Determinants of demand for education; Costs and benefits of education; Educational planning and economic growth; Educational financing; Education and labour market; Economics of education planning in developing countries with special emphasis on India.

Module 3 : Health Economics

Determinants of health; Economic dimensions of health care; Appraisal of health care financing; The concept of human life value; Benefit-cost and cost effectiveness approaches; Inequalities in health and class and gender perspectives; Institutional issues in health care delivery.

BASIC READING LIST

- Baru, R. V. (1998), Private Health Care in India: Social Characteristics and Trends, Sage Publications, New Delhi.
- Bhattacharya, R.N. (Ed.) (2001), Environmental Economics: An Indian Perspective, Oxford University Press, New Delhi.
- Blaug, M. (1970), An Introduction to Economics of Education, Cambridge University Press, Cambridge.
- Cohn, E. and T. Gaske (1989), Economics of Education, Pergamon Press, London.
- Klarman, H.E. (1965), The Economics of Health, Columbia University Press, New York.
- Kolstad, C.D. (2000), Environmental Economics, Oxford University Press, Oxford.
- Markandya, A. and J. Richardson (Eds.), The Earth Scan Reader in Environmental Economics, Earth Scan, London.
- Panchmukhi, P.R. (1980), Economics of Health: A Trend Report in ICSSR, A Survey of Research in Economics, Vol. VI, Infrastructure, Allied Publishers, Delhi.
- Pearce, D.W. and R.K. Turner (1991), Economics of Natural Resource Use and Environment, Johns Hopkins University Press, Baltimore.
- Schultz, T.W. (1963), Economic Value of Education, Columbia University Press, New York.

ADDITIONAL READING LIST

- Beman, P. and M.E. Khan (1993), Paying for India's Health Care, Sage Publications, New Delhi.

- Cooms, P.H. and J. Hallak (1988), Cost Analysis in Education, John Hopkins University Press, Baltimore.
- Murty, M.N., A.J. James and S. Misra (1999), The Economics of Water Pollution in India, Oxford University Press, New Delhi.
- Sengupta, R.P. (Ed.) (2001), Ecology and Economics : An Approach to Sustainable Development, Oxford University Press, New Delhi.
- Woodhall, M. (1992), Cost-Benefit Analysis in Educational Planning, UNESCO, Paris.
- World Bank (1993), The World Development Report, 1993: Investing in Health, Oxford University Press, New York.

B.A. (Honours)
Optional Paper
Paper-IX
COMPUTER AND ITS APPLICATIONS

PREAMBLE

The growth and spread of computer and its invasive presence in every sphere of intelligent human activity is forcing every educational system and discipline to adopt and integrate its fundamentals into course curricula. It is to produce computer literate and well-educated graduates who can get not only employment but also create work and produce value added output in the society, for which present syllabus is being designed. We believe this will make our new graduates more proficient, suitable and fit to face the future challenges in society.

Module 1 : Basics of Computers

Computer fundamentals; Organization and components of a computer; Computer hardware — CPU; Memory; Disk drives; Input and output devices; Keyboard; Mouse and VDU; Computer peripherals like printer, scanner, digitizer, etc.; Computer software — Operating system, application software and packages.

Module 2 : Use of Computer for Office Automation

Text editors and word processor software packages; Operative familiarization with any one package like MS-word; Concept and use of spread sheet; Operation and use of MS-excell; Basics of Database; Table; Records and fields; Data entry and query processing; Operative principles of MS-access; Document formation and presentation through MS-power point.

Module 3 : Data Analysis and Trend Forecasting

Basics of statistical functions and analysis — Mean, median, mode, standard deviation; Distribution function and density function; Statistical package handling and command description for SPSS; Regression and auto-regression; Correlation and auto-correlation; Covariance and Auto covariance.

Module 4 : Applications

Text and mail communication using computers; E-mail; Chat; Coice mail; Document transfer and delivery; Internet; World Wide Web (WWW) and use for business and commercial activities like e-business and e-commerce; Electronic stock market and exchanges; B2B and B2C Concepts.

BASIC READING LIST

- Kerns (1993), Essentials of Microsoft windows, Word and Excell, Prentice Hall of India, New Delhi.
- Rajaraman, V. (1996), Fundamentals of Computers, Prentice Hall (Ind.) New Delhi.
- Schied, F. (1983), Theory and Problems of Computers and Programming, Schaum's Outline Series, McGraw Hill, New Delhi.

ADDITIONAL READING LIST

- Intrilligator, M.D. (1978), Econometric Models, Techniques & Applications, Prentice Hall, Englewood Cliffs, N.J.

MASTER OF ARTS COMPULSORY PAPERS

**M.A. Compulsory Paper
Paper-I
MICRO ECONOMIC ANALYSIS**

PREAMBLE

This paper analyses the economic behaviour of individuals, firms and markets. It is mainly concerned with the objective of equipping the students in a rigorous and comprehensive manner with the various aspects of consumer behaviour and demand analysis, production theory and behaviour of costs, the theory of traditional markets and equilibrium of firm in modern non-profit maximizing framework. The paper also deals with the micro and macro theories of distribution, welfare economics, general equilibrium in closed and open systems and analysis of economic behaviour under uncertainty.

Module 1 : Introduction and Basic Concepts

Basic Economic Problem — Choice and Scarcity; Deductive and Inductive Methods of Analysis; Positive and Normative Economics; Economic Models; Characteristics of Equilibrium and Disequilibrium Systems.

Module 2 : Demand Analysis

Elasticities (price, cross, income) of demand — theoretical aspects and empirical estimation; elasticity of supply; Theories of demand — utility; indifference curve (income and substitution effects, Slutsky theorem, compensated demand curve) and their applications; Revealed preference theory; Revision of demand theory by Hicks; Characteristics of goods approach; consumer's choice involving risk; Indirect utility functions (duality theory); Recent developments in demand analysis (pragmatic approach and linear expenditure systems); Consumer's surplus; Inter-temporal consumption; Recent developments in demand; Elementary theory of price formation — demand and supply equilibrium; Cobweb theorem; lagged adjustment in interrelated markets.

Module 3 : Theory of Production and Costs

Production function — short period and long period; law of variable proportions and returns to scale; Isoquants — Least cost combination of inputs; Returns to factors; Economies of scale; Multi-product firm; Elasticity of substitution; Euler's theorem; Technical progress and production function; Cobb-Douglas, CES, VES and Translog production functions and their properties; Empirical work on production functions; Traditional and modern theories of costs — Empirical evidence; Derivation of cost functions from production functions; derived demand for factors.

Module 4 : Price and Output Determination

Marginal analysis as an approach to price and output determination: perfect competition — short run and long run equilibrium of the firm and industry, price and output determination, supply curve; Monopoly — short run and long run equilibrium, price discrimination, welfare aspects, monopoly control and regulation; Monopolistic competition — general and Chamberlin approaches to equilibrium, equilibrium of the firm and the group with product differentiation and selling costs, excess capacity under monopolistic and imperfect competition, criticism of monopolistic competition; Oligopoly — Non-collusive (Cournot, Bertrand, Edgeworth, Chamberlin, kinked demand curve and Stackelberg's solution) and collusive (Cartels and mergers, price leadership and basing point price system) models; Price and output determination under monopsony and bilateral monopoly; Workable competition — Structure, conduct and performance norms.

Module 5 : Alternative Theories of the Firm

Critical evaluation of marginal analysis; Baumol's sales revenue maximization model; Williamson's model of managerial discretion; Marris model of managerial enterprise; Full cost pricing rule; Bain's limit pricing theory and its recent developments including Sylos-Labini's model; Behavioural model of the firm; Game theoretic models.

Module 6 : Distribution

Neo-classical approach — Marginal productivity theory; Product exhaustion theorem; Elasticity of technical substitution, technical progress and factor shares; Theory of distribution in imperfect product and factor markets; Determination of rent, wages, interest and profit; Macro theories of distribution — Ricardian, Marxian, Kalecki and Kaldor's.

Module 7 : Welfare Economics

Pigovian welfare economics; Pareto optimal conditions; Value judgement; Social welfare function; Compensation principle; Inability to obtain optimum welfare — Imperfections, market failure, decreasing costs, uncertainty and non-existent and incomplete markets; Theory of Second Best — Arrow's impossibility theorem; Rawl's theory of justice, equity-efficiency trade off.

Module 8 : General Equilibrium

Partial and general equilibrium, Walrasian excess demand and input-output approaches to general equilibrium, existence, stability and uniqueness of equilibrium and general equilibrium, coalitions and monopolies; Production without consumption — one sector model, homogeneous functions, income distribution; Production without consumption — two sector model, relationship between relative commodity and factor prices (Stolper-Samuelson theorem), relationship between output mix and real factor prices, effect of changes in factor supply in closed economy (Rybczynski theorem), production and consumption.

Module 9 : Economics of Uncertainty

Individual behaviour towards risk, expected utility and certainty equivalence approaches, risk and risk aversion — sensitivity analysis, gambling and insurance, the economics of insurance, cost and risk, risk pooling and risk spreading, mean-variance analysis and portfolio selection, optimal consumption under uncertainty, competitive firm under uncertainty, factor demand under price uncertainty, the economics of search — different models, the efficient market hypothesis, stochastic models of inventory demand; Market with incomplete information, search and transaction costs, the economics of information.

BASIC READING LIST

- Kreps, David M. (1990), A Course in Microeconomic Theory, Princeton University Press, Princeton.
- Koutsoyiannis, A. (1979), Modern Microeconomics, (2nd Edition), Macmillan Press, London.
- Layard, P.R.G. and A.W. Walters (1978), Microeconomic Theory, McGraw Hill, New York.
- Sen, A. (1999), Microeconomics : Theory and Applications, Oxford University Press, New Delhi.
- Stigler, G. (1996), Theory of Price, (4th Edition), Prentice Hall of India, New Delhi.
- Varian, H. (2000), Microeconomic Analysis, W.W. Norton, New York.

ADDITIONAL READING LIST**Module 1**

- Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 2

- Baumol, W.J. (1982), Economic Theory and Operations Analysis, Prentice Hall of India, New Delhi.
- Green, H.A.G. (1971), Consumer Theory, Penguin, Harmondsworth.
- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 3

- Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Healthfields and Wibe (1987), An Introduction to Cost and Production Functions, Macmillan, London.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 4

- Archibald, G.C. (Ed.) (1971), Theory of the Firm, Penguin, Harmondsworth.
- Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 5

- Archibald, G.C. (Ed.) (1971), Theory of the Firm, Penguin, Harmondsworth.
- Bain, J. (1958), Barriers to New Competition, Harvard University Press, Harvard.

Module 6

- Bronfenbrenner, M. (1979), Income Distribution Theory, Macmillan, London.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

Module 7

- Broadway, R.W. and N. Bruce (1984), Welfare Economics, Basil Blackwell, London.
- Graff, J. De V. (1957), Theoretical Welfare Economics, Cambridge University Press, Cambridge.

- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Mishan, E.J. (1969), Welfare Economics : An Assessment, North Holland, Amsterdam.

8Module 8

- Da Costa, G.C. (1980), Production, Prices and Distribution, Tata McGraw Hill, New Delhi.
- Green, H. and V. Walsh (1975), Classical and Neo-Classical Theories of General Equilibrium, Oxford University Press, London.
- Hansen, B. (1970), A Survey of General Equilibrium Systems, McGraw Hill, New York.
- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.
- Quirk, J. and R. Saposnik (1968), Introduction to General Equilibrium Theory and Welfare Economics, McGraw Hill, New York.
- Weintrub, E.R. (1974), General Equilibrium Theory, Macmillan, London.

Module 9

- Arrow, K.J. and M.D. Intrilligator (Eds.) (1981), Handbook of Mathematical Economics, Vol. I, North Holland, Amsterdam.
- Borch, K.H. (1968), The Economics of Uncertainty, Princeton University Press, Princeton.
- Diamond and Rothschild (Eds.) (1978), Uncertainty in Economics, Academic Press, New York.
- Hirshleifer, J. and A. Glazer (1997), Price Theory and Applications, Prentice Hall of India, New Delhi.

**M.A. Compulsory Paper
Paper-II
MACRO ECONOMIC ANALYSIS**

PREAMBLE

Macroeconomics or aggregative economics analyses and establishes the functional relationship between the large aggregates. The aggregate analysis has assumed such a great significance in recent times that a prior understanding of macroeconomic theoretical structure is considered essential for the proper comprehension of the different issues and policies. Macroeconomics now is not only a scientific method of analysis; but also a body of empirical economic knowledge.

The paper entitled “Macro Economic Analysis” equips the students at the postgraduate level to understand systemic facts and latest theoretical developments for empirical analysis.

Module 1 : National Income and Accounts

Circular Flow of Income in two-, three- and four-sector economy; different forms of national income accounting — social accounting, input-output accounting, flow of funds accounting and balance of payments accounting.

Module 2 : Consumption Function

Keynes’ psychological law of consumption — implications of the law; short-run and long-run consumption function; Empirical evidence on consumption function; Income-consumption relationship — absolute income, relative income, life cycle and permanent income hypotheses.

Module 3 : Investment Function

Marginal efficiency of investment and level of investment; Marginal efficiency of capital and investment — long run and short run; The accelerator and investment behaviour — impact of inflation; Influence of policy measures on investment — empirical evidence.

Module 4 : Supply of Money

Financial intermediation — a mechanistic model of bank deposit determination; A behavioural model of money supply determination, a demand determined money supply process; RBI approach to money supply; High powered money and money multiplier; budget deficits and money supply; money supply and open economy; control of money supply.

Module 5 : Demand for Money

Classical approach to demand for money — Quantity theory approach, Fisher's equation, Cambridge quantity theory, Keynes's liquidity preference approach, transaction, precautionary and speculative demand for money — aggregate demand for money; Derivation of LM curve.

Module 6 : Neo-classical and Keynesian Synthesis

Neo-classical and Keynesian views on interest; The IS-LM model; Extension of IS-LM model with government sector; Relative effectiveness of monetary and fiscal policies; Extension of IS-LM models with labour market and flexible prices.

Module 7 : Post-Keynesian Demand For Money

Post-Keynesian approaches to demand for money — Patinkin and the Real Balance Effect, Approaches of Baumol and Tobin; Friedman and the modern quantity theory; Crisis in Keynesian economics and the revival of monetarism.

Module 8 : Macroeconomics in an Open Economy

Mundell-Fleming model — Asset markets, expectations and exchange rates; Monetary approach to balance of payments.

Module 9 : Theory of Inflation

Classical, Keynesian and Monetarist approaches to inflation; Structuralist theory of inflation; Philips curve analysis — Short run and long run Philips curve; Samuelson and Solow — the natural rate of unemployment hypothesis; Tobin's modified Philips curve; Adaptive expectations and rational expectations; Policies to control inflation.

Module 10 : Business Cycles

Theories of Schumpeter, Kaldor, Samuelson and Hicks, Goodwin's model; Control of business cycles — relative efficacy of monetary and fiscal policies.

Module 11 : New Classical Macroeconomics

The new classical critique of micro foundations, the new classical approach; Policy implications of new classical approach — empirical evidence.

BASIC READING LIST

- Ackley, G. (1978), Macroeconomics : Theory and Policy, Macmillan, New York.
- Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World (2 Vols.), Oxford University Press, London.
- Branson, W.A. (1989), Macroeconomic Theory and Policy, (3rd Edition), Harper and Row, New York.
- Dornbusch, R. and F. Stanley (1997), Macroeconomics, McGraw Hill, Inc., New York.
- Hall, R.E. and J.B. Taylor (1986), Macroeconomics, W.W. Norton, New York.
- Heijdra, B.J. and V.P. Fredericck (2001), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
- Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., New Delhi.

- Romer, D.L. (1996), Advanced Macroeconomics, McGraw Hill Company Ltd., New York.
- Scarfe, B.L. (1977), Cycles, Growth and Inflation, McGraw Hill, New York.
- Shapiro, E. (1996), Macroeconomic Analysis, Galgotia Publications, New Delhi.
- Surrey, M.J.C. (Ed.) (1976), Macroeconomic Themes, Oxford University Press, Oxford.

ADDITIONAL READING LIST

Module 1

- Edey, M. and A.T. Peacock (1967), National Income and Social Accounts, Hutchinson University Library, London.
- Powelson, J.P. (1960), National Income And Flow of Funds Analysis, McGraw Hill, New York.
- Rao, V.K.R.V. (1983), India's National Income : 1950 to 1980, Sage Publications, New Delhi.
- Ruggles, R. and N. Ruggles (1956), National Income Accounts and Income Analysis, McGraw Hill, New York.
- United Nations (1974), Year Book of National Account Statistics.

Module 2

- Duesenberry, J.S. (1949), Income, Saving and the Theory of Consumer Behaviour. Harvard University Press, Harvard.
- Friedman, M. (1957), The Theory of Consumption Function, Princeton University Press, Princeton.
- Keynes, J.M. (1936), The General Theory of Employment, Interest and Money, Macmillan, London.
- Mueller, M.G. (1966), Readings in Macroeconomics, Holt Rinehart and Winston, New York.

Module 3

- Gordon, R. and S.G. Harris (1998), Macroeconomics, Addison Wesley.
- Culbertson, J.M. (1968), Macroeconomic Theory and Stabilization Policy, McGraw Hill, Kogekosh, Tokyo.

Module 4

- Chakravarty, S.C. (1985), Report of the Committee to Review the Working of the Monetary System, Reserve Bank of India, Bombay.
- Gupta, S.B. (1995), Monetary Planning in India, Oxford University Press, New Delhi.
- Gurley, J. and E.S. Shaw (1960), Money in a Theory of Finance, Brookings Institution, Washington.
- Mckinen, G.E. (1978), Money, The Price Level and Interest Rates, Prentice Hall of India, New Delhi.
- Reddy, Y.V. (2000), A Review of Monetary and Financial Sector Reforms in India — A Central Banker's Perspective, UBSPD, New Delhi.

Module 5

- Friedman, M. (1956), Studies in the Quantity Theory of Money, The University of Chicago Press, Chicago.
- Keynes, J.M. (1936), The General Theory of Employment, Interest and Money, Macmillan, London.
- Laidler, D.E.W. (1977), Demand for Money : Theory and Evidence, Dum-Don Valley, New York.
- Mckinen, G.E. (1978), Money, The Price Level and Interest Rates, Prentice Hall of India, New Delhi.

Module 6

- Leijonhufvud, A. (1968), On Keynesian Economics and Economics of Keynes, Oxford University Press, London.
- Levacic, R. and A. Rebman (1986), Macroeconomics : An Introduction to Keynesian and Neo-classical Controversies, Macmillan, London.
- Mankiw, N.G. and D. Romer (Eds.) (1991), New Keynesian Economics, (2 Vols.), MIT Press, Cambridge.
- Rakshit, M. (1998), Studies in the Macroeconomics of Developing Countries, Oxford University Press, New Delhi.

Module 7

- Friedman, M. (1956), Studies in the Quantity Theory of Money, The University of Chicago Press, Chicago.
- Hicks, J.R. (1974), The Crisis in Keynesian Economics, Oxford University Press, New Delhi.
- Jha, R. (1999), Contemporary Macroeconomic Theory and Policy, New Age International (P) Ltd., New Delhi.
- Laidler, D.F.W. (1977), Demand for Money : Theory and Evidence, Dum-Don Valley, New York.
- Leijonhufvud, A. (1968), On Keynesian Economics and Economics of Keynes, Oxford University Press, London.
- Patinkin, D. (1965), Money, Interest and Prices, Harper and Row, New York.

Module 8

- Gordon, R. and S.G. Harris (1998), Macroeconomics, Addison Wesley, Massachusetts.
- Mankiw, N.G. and D. Romer (Eds.) (1991), New Keynesian Economics, (2 vols.), MIT Press, Cambridge.

Module 9

- Frisch, H. (1983), Theories of Inflation, Cambridge University Press, Cambridge.
- Hagger, A.J. (1977), Inflation : Theory and Policy, Macmillan, London.
- Hudson, J. (1982), Inflation : A Theoretical Survey and Synthesis, George Allen and Unwin, London.
- Sheffrin, S.M. (1996), Rational Expectations, Cambridge University Press, Cambridge.

Module 10

- Gordon, R.A. (1961), Business Fluctuations, Harper and Row.
- Gordon, R.A. and L.R. Klein (Eds.) (1965), Readings in Business Cycles, Irwin, Homewood.
- Hicks, J.R. (1950), A Contribution to the Theory of Trade Cycles, Clarendon Press, Oxford.
- Lucas, R. (1981), Studies in Business Cycle Theory, M.I.T. Press, Cambridge, Massachusetts.

Module 11

- Taylor, L. (1983), Structuralist Macroeconomics, Basic Books, New Longman.
- Turnovsky, S.J. (1977), Macroeconomic Analysis and Stabilization Policy, Cambridge University Press, Cambridge.

**M.A. Compulsory Paper
Paper-III
QUANTITATIVE METHODS**

PREAMBLE

The main objective of this paper is to train the students to use the techniques of mathematical and statistical analysis, which are commonly applied to understand and analyze economic problems. The emphasis of this paper is on understanding economic concepts with the help of mathematical methods rather than learning mathematics itself. Hence in this paper a student will be initiated into various economic concepts, which are amenable to mathematical treatment. The paper also deals with simple tools and techniques, which will help a student in data collection, presentation, analysis and drawing inferences about various statistical hypotheses.

Module 1 : Mathematical Methods — 1

Concept of function and types of functions; Limit, continuity and derivative; Rules of differentiation; Interpretation of revenue, cost, demand, supply functions; Elasticities and their types; Multivariable functions; Concept and types of production functions; Rules of partial differentiation and interpretation of partial derivatives; Problems of maxima and minima in single and multivariable functions; Unconstrained and constrained optimization in simple economic problems; Simple problems in market equilibrium; Concept of integration; Simple rules of integration; Application to consumer's surplus and producer's surplus; Growth rates and simple properties of time path of continuous variables.

Module 2 : Mathematical Methods — 2

Determinants and their basic properties; Solution of simultaneous equations through Cramer's rule; Concept of matrix — their types, simple operations on matrices, matrix inversion and rank of a matrix; Concept of vector — its properties; Matrices and vectors; Concept of quadratic forms — Eigen roots and Eigen vectors; Introduction to input-output analysis; Difference equations — Solution of first order and second order difference equations; Applications in trade cycle models; Growth models and lagged market equilibrium models.

Module 3 : Mathematical Methods — 3

Linear programming — Basic concept; Formulation of a linear programming problem — Its structure and variables; Nature of feasible, basic and optimal solution; Solution of linear programming through graphical and simplex method; Statement of basic theorems of linear programming; Formulation of the dual of a 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.

Module 4 : Statistical Methods — 1

Meaning, assumptions and limitations of simple correlation and regression analysis; Pearson's product moment and spearman's rank correlation coefficients and their properties; Concept of the least squares and the lines of regression; Standard error of estimate; Partial and multiple correlation and regression (applications only); Methods of estimation of non-linear equations — parabolic, exponential, geometric, modified exponential, Gompertz and logistic relationships.

Module 5 : Statistical Methods — 2

Deterministic and non-deterministic experiments; Various types of events — classical and empirical definitions of probability; Laws of addition and multiplication; Conditional probability and concept of interdependence; Baye's theorem and its applications; Elementary concept of random variable; Probability, mass and density functions; Expectations, moments and moment generating functions; Properties (without derivations) of Binomial, Poisson and Normal distributions.

Module 6 : Statistical Methods — 3

Basic concept of sampling — random and non-random sampling; Simple random; stratified random and p.p.s. sampling; Concept of an estimator and its sampling distribution; Desirable properties of an estimator; Formulation of statistical hypotheses — Null and alternative; Goodness of fit;

Confidence intervals and level of significance; Hypothesis testing based on Z, t, χ^2 (Chi-square) and F tests; Type 1 and Type 2 errors.

BASIC READING LIST

- Allen, R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press and ELBS, London.
- Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics, McGraw Hill, New York.
- Gupta, S.C. (1993), Fundamentals of Applied Statistics, S. Chand & Sons, New Delhi.
- Handry, A.T. (1999), Operations Research, Prentice Hall of India, New Delhi.
- Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book Co., London.
- Taha, H.A. (1997), Operations Research : An Introduction (6th Edition), Prentice Hall of India Pvt. Ltd., New Delhi.
- Yamane, Taro (1975), Mathematics for Economists, Prentice Hall of India, New Delhi.

ADDITIONAL READING LIST

Module 1

- Baumol, W.J. (1984), Economic Theory and Operations Analysis, Prentice Hall, Englewood Cliffs, New Jersey.
- Monga, G.S. (1972), Mathematics and Statistics for Economists, Vikas Publishing House, New Delhi.
- Vygodsky, G.S. (1971), Mathematical Handbook (Higher Mathematics), Mir Publishers, Moscow.

Module 2

- Mathur, P.N. and R. Bharadwaj (Eds.) (1967), Economic Analysis in Input-Output Research, Input-Output Research Association of India, Pune.

Module 3

- Hadley, G. (1962), Linear Programming, Addison Wesley Publishing Co., Massachusetts.
- Kothari, C.R. (1992), An Introduction to Operations Research, Vikas Publishing House, New Delhi.
- Mustafi, C.K. (1992), Operations Research : Methods and Practice, Wiley Eastern, New Delhi.

Module 4

- 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.
- Nagar, A.L. and R.K. Das (1993), Basic Statistics, Oxford University Press, New Delhi.

Module 5

- Chou, Y. (1975), Statistical Analysis, Holt, Reinhart and Winston, New York.
- Goon, A.M., M.K. Gupta and B. Dasgupta (1993), Fundamentals of Statistics, Vol. 1, The World Press Ltd., Calcutta.

- Hogg, R.V. and A.T. Craig (1970), Introduction to Mathematical Statistics (3rd Edition), Macmillan Publishing Co., New York.

Module 6

- Hogg, R.V. and A.T. Craig (1970), Introduction to Mathematical Statistics (3rd Edition), Macmillan Publishing Co., New York.
- Millar, J. (1996), Statistics for Advanced Level, Cambridge University Press, Cambridge.
- Sukhatme, P.V. and B.V. Sukhatme (1970), Sampling Theory of Survey with Applications, Iowa State University Press, Ames.

**M.A. Compulsory Paper
Paper-IV
PUBLIC ECONOMICS**

PREAMBLE

Role and functions of the Government in an economy have been changing with the passage of time. The term 'Public Finance' has traditionally been applied to the package of those policies and operations which involve the use of tax and expenditure measures while budgetary policy is an important part to understand the basic problems of use of resources, distribution of income, etc. There are vast array of fiscal institutions — tax systems, expenditure programmes, budgetary procedures, stabilization instruments, debt issues, levels of government, etc., which raise a spectrum of issues arising from the operation of these institutions. Further, the existence of externalities, concern for adjustment in the distribution of income and wealth, etc. require political processes for their solution in a manner which combines individual freedom and justice. This paper combines a thorough understanding of fiscal institutions with a careful analysis of the issues which underline budgetary policies in general and Indian experience in particular.

Module 1: Introduction

Role of Government in organized society; Changing perspective — government in a mixed economy: public and private sector, cooperation or competition; Government as an agent for economic planning and development; Government as a tool for operationalizing the planning process; private goods, public goods, and merit goods; Market failure — imperfections, decreasing costs, externalities, public goods; Uncertainty and non-existence of futures markets; Informational assymetry — Theory of second best.

Module 2: Public Choice

Private and public mechanism for allocating resources; Problems for allocating resources; Problems of preference revelation and aggregation of preferences; Voting systems; Arrow impossibility

theorem; An economic theory of democracy; Politico-eco-bureaucracy; Rent seeking and directly unproductive profit seeking (DUP) activities.

Module 3: Rationale for Public Policy

Allocation of resources — provision of public goods; Voluntary exchange models; Impossibility of decentralized provision of public goods (contributions of Samuelson and Musgrave); Demand-revealing schemes for public goods — Contributions of Clarks, Groves and Leyard, Tiebout model, theory of club goods; Stabilization Policy — Keynesian case for stabilization policy; Uncertainty and expectations; Failure of inter-temporal markets; Liquidity preference; Social goals; Poverty alleviation; Provision of infrastructural facilities, removing distributional inequalities and regional imbalances.

Module 4: Public Expenditure

Wagner's law of increasing state activities; Wiesman- Peacock hypothesis; Pure theory of public expenditure; Structure and growth of public expenditure; Criteria for public investment; Social cost-benefit analysis — Project evaluation, Estimation of costs, discount rate; Reforms in expenditure budgeting; Programme budgeting and zero base budgeting.

Module 5: Taxation

Theory of incidence; Alternative concepts of incidence — Allocative and equity aspects of individual taxes; Benefit and ability to pay approaches; Theory of optimal taxation; Excess burden of taxes; Trade off between equity and efficiency; Theory of measurement of dead weight losses; The problem of double taxation.

Module 6: Public Debt

Classical view of public debt; Compensatory aspect of debt policy; Burden of public debt; Sources of public debt; Debt through created money; Public borrowings and price level; Crowding out of private investment and activity; principles of debt management and repayment.

Module 7: Fiscal Policy

Objectives of fiscal policy — full employment, anti-inflation, economic growth, redistribution of income and wealth; Interdependence of fiscal and monetary policies; Budgetary deficits and its implications; Fiscal policy for stabilization — automatic vs. discretionary stabilization; Alternative measures of resource mobilization and their impact on growth, distribution and prices; Balanced budget multiplier.

Module 8: Fiscal Federalism

Principles of multi-unit finance; Fiscal federalism in India; Vertical and horizontal imbalance; Assignment of function and sources of revenue; Constitutional provisions; Finance Commission and Planning Commission; Devolution of resources and grants; Theory of grants; Resource transfer from Union to States — Criteria for transfer of resources; Centre-State financial relations in India; Problems of states' resources and indebtedness; Transfer of resources from Union and States to local bodies.

Module 9: Indian Public Finances

Indian tax system; Revenue of the Union, States and local bodies; Major taxes in India: base of taxes, direct and indirect taxes, taxation of agriculture, expenditure tax, reforms in direct and indirect taxes, taxes on services; Non-tax revenue of Centre, State and local bodies; Analysis of Central and State government budgets; Lack of flexibility in Central and State budgets, shrinking size of development finance through budgets; Trends in public expenditure and public debt; Fiscal crisis and fiscal sector reforms in India; Reports of Finance Commissions in India.

BASIC READING LIST

- Atkinson, A.B. and J.E. Siglitz (1980), Lectures on Public Economics, Tata McGraw Hill, New York.
- Auerbach, A.J. and M. Feldstern (Eds.) (1985), Handbook of Public Economics, Vol. I, North Holland, Amsterdam.

- Buchanan, J.M. (1970), The Public Finances, Richard D. Irwin, Homewood.
- Goode, R. (1986), Government Finance in Developing Countries, Tata McGraw Hill, New Delhi.
- Houghton, J.M. (1970), The Public Finance : Selected Readings, Penguin, Harmondsworth.
- Jha, R. (1998), Modern Public Economics, Routledge, London.
- Menutt, P. (1996), The Economics of Public Choice, Edward Elgar, U.K.
- Musgrave, R.A. (1959), The Theory of Public Finance, McGraw Hill, Kogakusha, Tokyo.
- Musgrave, R.A. and P.B. Musgrave (1976), Public Finance in Theory and Practice, McGraw Hill, Kogakusha, Tokyo.
- Shoup, C.S. (1970), Public Finance, Aldine, Chicago.
- Shome, P. (Ed.) (1995), Tax Policy : Handbook, Tax Division, Fiscal Affairs Department, International Monetary Fund, Washington D.C.

ADDITIONAL READING LIST

Module 1

- Cornes, R. and T. Sandler (1986), The Theory of Externalities, Public Goods and Club Goods, Cambridge University Press, Cambridge.
- Duff, L. (1997), Government and Market, Orient Longman, New Delhi.
- Herber, B.P. (1967), Modern Public Finance, Richard D. Irwin, Homewood.
- Spulber, N. (1998), Redefining the State, Cambridge University Press, Cambridge.

Module 2

- Buchanan, J.M. (1968), The Demand and Supply of Public Goods, Rand McNally, Chicago.

- Mueller, D.C. (1979), Public Choice, Cambridge University Press, Cambridge.
- Spulber, N. (1998), Redefining the State, Cambridge University Press, Cambridge.
- Stiglitz, J.E. (1986), Economics of Public Sector, Norton, New York.

Module 3

- Dorfman, R. (Ed.) (1970), Measuring the Benefits of Government Investment, Brookings Institution, Washington.
- Duff, L. (1997), Government and Market, Orient Longman, New Delhi.
- Friedman, A. (1986), Welfare Economics and Social Choice Theory, Martins Nijhoff, Boston.
- Glennester, H. and J. Hills (1998), The State of Welfare : The Economic and Social Spending, Oxford University Press, London.

Module 4

- Mishan, E.J. (1982), Cost-Benefit Analysis : An Informal Introduction, George Allen and Unwin, London.
- Peacock, A. and D.J. Robertson (Eds.) (1963), Public Expenditure : Appraisal and Control, Oliver and Boyd, Edinburgh.
- Phyr, P. (1970), Zero Base Budgeting : A Practical Management Tool for Evaluating Expenses, John Wiley, New York.
- Premchand, A. (1966), Control of Public Expenditure in India, Allied Publishers, New Delhi.
- Sahni, B.S. (Ed.) (1972), Public Expenditure Analysis: Selected Readings, Rotherdam University Press.

Module 5

- Bird, R. and O. Oldman (1967), Readings on Taxation in Developing Countries, the John Hopkins University Press, Baltimore.

- Cutt, J. (1969), Taxation and Economic Development in India, Frederick A Praegar Publishers, New York.
- Kaldor, N. (1955), An Expenditure Tax, George Allen and Unwin, London.
- Musgrave, R.A. and C. Shoup (Eds.) (1970), Readings in the Economics of Taxation, George Allen and Unwin, London.

Module 6

- Barman, K. (1986), Public Debt Management in India, Uppal Publishing House, New Delhi.
- Buchanan, J.M. (1958), Public Principles of Public Debt, A Defence and Restatement, Richard D. Irwin Homewood.
- Ferguson, J.M. (Ed.) (1964), Public Debt and Future Generations, North Carolina University Press, Chapel Hill.
- Sreekantaradhya, B.S. (1972), Public Debt and Economic Development in India, New Delhi.

Module 7

- American Economic Association (1955), Readings in Fiscal Policy, George Allen and Unwin, London.
- Chelliah, Raja J. (1971), Fiscal Policy in Underdeveloped Countries, George Allen and Unwin, London.
- Government of India (1985), Long Term Fiscal Policy, New Delhi.
- Peacock, A. and G.K. Shaw (1976), The Economic Theory of Fiscal Policy, George Allen and Unwin, London.

Module 8

- Bhargava, R.N. (1967), The Theory and Working of Union Finance in India, Chaitanya Publishing House, Allahabad.

- Bhargava, P.K. (1982), Centre State Resource Transfers in India, The Academic Press, Gurgaon.
- Chelliah, Raja J. et. al (1981), Trends and Issues in India's Federal Finance, National Institute of Public Finance and Policy, New Delhi.
- Gulati, I.S. (1979), Centre State Financial Relations : An Assessment of the Role of Finance Commission, M.S. University of Baroda, Baroda.
- Lakdawala, D.T. (1967), Union State Financial Relations, Lalwani Publishing House, Mumbai.
- Musgrave, R.A. (1977), Essays in Fiscal Federalism, Greenwood West Port.
- Oates, W.E. (1972), Fiscal Federalism, Harcourt Brace and Johanowich, New York.
- Reports of various Finance Commissions
- Srivastava, D.K. (Ed.) (2000), Fiscal Federalism in India, Har-Anand Publications Ltd., New Delhi.

Module 9

- Bhargava, R.N. (1969), Indian Public Finances, B.D. Bhargava and Sons, Chandausi.
- Bhargava, P.K. (1976), Taxation of Agriculture in India, Vora and Co. Bombay.
- Bhargava, P.K. (1984), Some Aspects of Indian Public Finances, Uppal Publishing House, New Delhi.
- Bhargava, P.K. (1991), India's Fiscal Crisis, Ashish Publishing House, New Delhi.
- Borkar, V.V. (1971), Income Tax Reform in India, Popular Prakashan, Bombay.
- Chelliah, R.J. (Ed.) (1997), Towards Sustainable Growth, Oxford University Press, New Delhi.
- Datt, R. (Ed.) (2001), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
- Gandhi, V.P. (1970), Some Aspects of India's Tax Structure, Vora and Company, Bombay.
- Government of India (1992), Reports of the Tax Reforms Committee — Interim and Final (Chairman : Raja J. Chelliah).

- Jain, A.K. (1975), Taxation of Income in India, Macmillan Company of India Ltd., New Delhi.
- Jain, I. (1988), Resource Mobilization and Fiscal Policy in India, Deep & Deep Publications, New Delhi.
- Kumar, A. (1999), The Black Economy in India, Penguin, Harmondsworth.
- Mundle, S. (1999), Public Finance Policy : Issues for India, Oxford University Press, New Delhi.
- Singh, T. (2000), The Corporation Tax in India, Classical Publishing Company, New Delhi.

**M.A. Compulsory Paper
Paper-V
INDIAN ECONOMIC POLICY**

PREAMBLE

The objective of this Paper at the postgraduate level would be to sharpen the analytical faculty of the student, by highlighting an integrated approach to the functioning aspects of the Indian economy, keeping in view the scope for alternative approaches. Such an analysis is essential because the Indian economy is a unique amalgam of alternative competing and often conflicting theories and a proper understanding of its working is imperative if the student is to comprehend the ramifications that underlie most of the observed phenomena in the Indian economic set-up. The emphasis of the paper is on overall social, political and economic environment influencing policy decisions. To develop all these themes, the course is divided into specific modules.

Module 1: Economic Development and its Determinants

Approaches to economic development and its measurement — sustainable development; Role of State, market and other institutions; Indicators of development — PQLI, Human Development Index (HDI), gender development indices.

Module 2: Planning in India

Objectives and strategy of planning; Failures and achievements of Plans; Developing grass-root organizations for development — Panchayats, NGOs and pressure groups.

Module 3: Demographic Features, Poverty and Inequality

Broad demographic features of Indian population; Rural-urban migration; Urbanization and civic amenities; Poverty and Inequality.

Module 4: Resource Base and Infrastructure

Energy; Social infrastructure — education and health; Environment; Regional imbalance; Issues and policies in financing infrastructure development.

Module 5: The Agricultural Sector

Institutional Structure — land reforms in India; Technological change in agriculture — pricing of agricultural inputs and output; Terms of trade between agriculture and industry; Agricultural finance policy; Agricultural Marketing and Warehousing; Issues in food security — policies for sustainable agriculture.

Module 6: The Industrial Sector

Industrial policy; Public Sector enterprises and their performance; Problem of sick units in India; Privatisation and disinvestment debate; Growth and pattern of industrialisation; Small-scale sector; Productivity in industrial sector; Exit policy — issues in labour market reforms; Approaches for employment generation.

Module 7: Public Finances

Fiscal federalism — Centre-state financial relations; Finances of central government; Finances of state governments; Parallel economy; Problems relating to fiscal policy; Fiscal sector reforms in India.

Module 8: Money, Banking and Prices

Analysis of price behaviour in India; Financial sector reforms; Interest rate policy; Review of monetary policy of RBI; Money and capital markets; Working of SEBI in India.

Module 9: External Sector

Structure and direction of foreign trade; Balance of payments; Issues in export-import policy and FEMA; Exchange rate policy; Foreign capital and MNCs in India; The progress of trade reforms in India.

Module 10: Economic Reforms

Rationale of internal and external reforms; Globalisation of Indian economy; W.T.O. and its impact on the different sectors of the economy; Need for and issues in good governance; Issues in competition and safety nets in Indian economy.

BASIC READING LIST

- Ahluwalia, I.J. and I.M.D. Little (Eds.) (1999), India's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
- Bardhan, P.K. (9th Edition) (1999), The Political Economy of Development in India, Oxford University Press, New Delhi.
- Bawa, R.S. and P.S. Raikhy (Ed.) (1997), Structural Changes in Indian Economy, Guru Nanak Dev University Press, Amritsar.
- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy : Inter-State Perspectives, Bookwell, Delhi.
- Chakravarty, S. (1987), Development Planning : The Indian Experience, Oxford University Press, New Delhi.
- Dantwala, M.L. (1996), Dilemmas of Growth : The Indian Experience, Sage Publications, New Delhi.

- Datt, R. (Ed.) (2001), Second Generation Economic Reforms in India, Deep & Deep Publications, New Delhi.
- Government of India, Economic Survey, (Annual), Ministry of Finance, New Delhi.
- Jain, A.K. (1986), Economic Planning in India, Ashish Publishing House, New Delhi.
- Jalan, B. (1992), The Indian Economy — Problems and Prospects, Viking, New Delhi.
- Jalan, B. (1996), India's Economic Policy — Preparing for the Twenty First Century, Viking, New Delhi.
- Joshi, V. and I.M.D. Little (1999), India : Macro Economics and Political Economy, 1964-1991, Oxford University Press, New Delhi.
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**M.A. Compulsory Paper
Paper-VI
ECONOMICS OF GROWTH AND DEVELOPMENT**

PREAMBLE

The study of economic development has gained importance because of sustained interest of the developing countries in uplifting their economic conditions by restructuring their economies to acquire greater diversity, efficiency and equity in consonance with their priorities. While few success stories can be counted, many have grappled with chronic problems of narrow economic base, inefficiency and low standard of living. For this and other reasons, there have been many approaches to economic development. In recent times, besides hardcore economic prescriptions to development, concerns hitherto relegated to background like education, health, sanitation and infrastructural development, have found a place of pride in explaining the preference of various economies.

Modules incorporated in this paper are devoted to the theories of growth and development, social and institutional aspects of development, importance of agriculture, and the rationale and pattern of industrialization in developing countries. The other important issues in the context of development such as infrastructure-linkages, role of international trade, importance of domestic macroeconomic policies, investment criteria, and relevance of planning have been included in the modules of this paper.

Module 1: Economic Growth — I

Economic growth and development — Factors affecting economic growth : capital, labour and technology; Growth models — Harrod and Domar, instability of equilibrium; Neo-classical growth models — Solow and Meade, Mrs. Joan Robinson's growth model; Cambridge criticism of Neo-classical analysis of growth, The capital controversy.

Module 2: Economic Growth — II

Technological progress — embodied and disembodied technical progress; Hicks, Harrod; learning by doing, production function approach to the economic growth; Total factor productivity and growth accounting; Growth models of Kaldor and Pasinetti, optimal savings and Ramsay's rule, golden rule of accumulation, two-sector model of Ujawa, Stability of equilibrium; money in economic growth, Tobin, Levhari, Patinkin and Johnson; Endogenous growth; Intellectual capital: role of learning, education and research; AK model — Explanations of cross country differentials in economic growth.

Module 3: Social and Institutional Aspects of Development

Development and underdevelopment — Perpetuation of underdevelopment; Poverty — Absolute and relative; Measuring development and development gap — Per capita income, inequality of income, Human development index and other indices of development and quality of life — Food security, education, health and nutrition; Human resource development; Population problem and growth pattern of population — Theory of demographic transition; Population as limits to growth and as ultimate source — Population, poverty and environment; Economic development and institutions — markets and market failure, state and state failure, issues of good governance.

Module 4: Theories of Development

Classical theory of development — contributions of Adam Smith, Ricardo, Malthus and James Mill; Karl Marx and development of capitalistic economy — theory of social change, surplus value and profit; Immutable laws of capitalist development; Crisis in capitalism — Schumpeter and capitalistic development; innovation — role of credit, profit and degeneration of capitalism; Structural analysis of development; Imperfect market paradigm.

Module 5: Approaches to Development

Partial theories of growth and development — vicious circle of poverty, circular causation, unlimited supply of labour, big push, balanced growth, unbalanced growth, critical minimum effort thesis,

low-income equilibrium trap; Dualism — technical, behavioural and social; Ranis and Fei model; Dixit and Marglin model, Kelly et. al. Model; Dependency theory of development; Structural view of development.

Module 6: Sectoral Aspects of Development

Role of agriculture in economic development; Efficiency and productivity in agriculture, New technology and sustainable agriculture; Globalization and agricultural growth; Rationale and pattern of industrialization in developing countries; The choice of techniques and appropriate technology and employment; Efficiency of small-scale vs. large-scale production; Terms of trade between agriculture and industry; Infrastructure and its importance; Labour markets and their functioning in developing countries.

Module 7: Trade and Economic Development

International trade as engine of growth; Static and dynamic gains from trade; Prebisch, Singer and Myrdal thesis vs. free trade; Export-led growth; Dual gap analysis; Balance of payments; Tariffs and effective protection; Post-GATT international economic order; WTO and developing countries.

Module 8: Macroeconomic Policies and Development

Role of monetary and fiscal policies in developing countries — Prior savings, inflation and growth — Empirical evidence; External resources — FDI, aid vs. trade, technology inflow; MNC activity in developing countries; Borrowings — domestic and external; Burden of borrowing — IMF and World Bank policies in developing countries.

Module 9: Allocation of Resources

Need for investment criteria in developing countries — present vs., future, Alternative investment criteria; Cost-benefit analysis, Shadow prices, Project evaluation and UNIDO guidelines.

Module 10: Planning and Development

Need for planning — democratic, decentralized and indicative planning, micro-level planning; Review of Indian Plan models and planning.

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Modules 3 & 4

- Dasgupta, P. (1993), An Enquiry into Well-being and Destitution, Clarendon Press, Oxford.
- Hirsch, A.O. (1958), The Strategy of Economic Development, Yale University Press, New York.

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- Bhagwati, J. and P. Desai (1970), India : Planning for Industrialization, Oxford University Press, London.
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**M.A. Compulsory Paper
Paper-VII
INTERNATIONAL TRADE AND FINANCE**

PREAMBLE

The course provides a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital — both short-term and long-term — at the global level. Besides, preparing the students about the relevance and limitations of these principles, the contents of the paper spread over different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both at the national and international levels as also their welfare implications at macro level and the distribution of gains from trade to North and South with particular reference to India. The study of the paper under the present era of globalization will train the students about the likely consequences on income, employment and social standards and possible policy solutions as the world will move into the 21st century.

Module 1: Theory of International Trade

The pure theory of international trade — Theories of absolute advantage, comparative advantage and opportunity costs, modern theory of international trade; Theorem of factor price equalization; Empirical testing of theory of absolute cost and comparative cost — Heckscher-Ohlin theory of trade. Kravis and Linder theory of trade, Role of dynamic factors, i.e., changes in tastes, technology and factor endowments in explaining the emergence of trade; The Rybczynski theorem — concept and policy implications of immiserizing growth; Causes of emergence and measurement of intra-industry trade and its impact on developing economies.

Module 2: Measurement of Gains and Theory of Interventions

Measurement of gains from trade and their distribution; Concepts of terms of trade, their uses and limitations; Hypothesis of secular deterioration of terms of trade, its empirical relevance and policy implications for less developed countries; Trade as an engine of economic growth; Welfare

implications — Empirical evidence and policy issues; The Theory of Interventions (Tariffs, Quotas and non-tariff barriers); Economic effects of tariffs and quotas on national income, output, employment, terms of trade, income distribution; Balance of payments on trading partners both in partial and general equilibrium analysis. The political economy of non-tariff barriers and their implications; nominal, effective and optimum rates of tariffs — their measurement, impact and welfare implications; Trade under imperfectly competitive market.

Module 3: Balance of Payments

Meaning and components of balance of payments; Equilibrium and disequilibrium in the balance of payments; The process of adjustment under systems of gold standard, fixed exchange rates and flexible exchange rates; Expenditure-reducing and expenditure-switching policies and direct controls for adjustment; Policies for achieving internal and external equilibrium simultaneously under alternative exchange rate regimes; A critical review of the monetary approach to the theory of balance of payments adjustment; Foreign trade multiplier with and without foreign repercussions and determination of national income and output; Relative merits and demerits of fixed and flexible exchange rates in the context of growth and development in developing countries.

Module 4: The Theory of Regional Blocs

Forms of economic cooperation; Reforms for the emergence of trading blocks at the global level; Static and Dynamic effects of a customs union and free trade areas; Rationale and economic progress of SAARC/SAPTA and ASEAN regions. Problems and prospects of forming a customs union in the Asian region. Regionalism (EU, NAFTA); Multilateralism and WTO; Rise and fall of gold standard and Bretton-woods system; Need, adequacy and determinants of international reserves; Conditionality clause of IMF; Emerging International Monetary System with special reference to Post-Maastricht developments and developing countries; Reform of the International Monetary System, India and developing countries; Theory of short-term capital movements and East-Asian Crisis and lessons for developing countries; International trade and financial institutions— Functions of GATT/WTO (TRIPS, TRIMS), UNCTAD, IMF, World Bank and Asian Development Bank — Their achievements and failures; WTO and World Bank from the point of view of India.

Module 5: Trade Policies in India

Trade problems and trade policies in India during the last five decades; Recent changes in the direction and composition of trade and their implications; Rationale and impact of trade reforms since 1991 on balance of payments, employment and growth. Problems of India's international debt; Working and regulations of MNCs in India; Instruments of export promotion and recent import and export policies and agenda for future.

BASIC READING LIST

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Module 1

- Bhagwati, J. (Ed.) (1981), International Trade : Selected Readings, Cambridge University Press, Mass.
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Module 2

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Module 3

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Module 4

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- Grable, J.O. (1996), International Financial Markets, Prentice Hall, Englewood Cliffs, New York.
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- Whalley, John (1985), Trade Liberalization Among Major Trading Areas, Cambridge University Press, Mass.

Module 5

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- Satyanarayan, B. (1986), India's Trade with Asia and the Far East Countries, B.R. Publishing Corp., New Delhi.
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**M.A. Compulsory Paper
Paper-VIII
ECONOMICS OF SOCIAL SECTOR AND ENVIRONMENT**

PREAMBLE

This course is meant to provide some insights into the application of economic theory in the design and implementation of public policy related to the management of environment and social sectors. The course finds roots in welfare economics, national income accounting, macroeconomic policies and trade and development.

Modules incorporated in this paper are devoted to issues of environmental economics, environmental and social services and the problem of valuation of these services, and designing of instruments and institutions for the management of environment. The models of optimal use of natural resources, macroeconomic issues, sustainable development, environmental resource problems in India and the economics of health and education constitute the other areas of the modules of this paper.

Module 1: Welfare Economics, Social Sectors and Environment

Pareto optimality and competitive equilibrium; Fundamental theorems of welfare economics; Externalities and market inefficiency — externalities as missing markets; property rights and externalities, non-convexities and externalities; Pareto optimal provision of public goods — Lindahl's equilibrium, preference revelation problem and impure and mixed public goods, common property resources.

Module 2: Measurement of Environmental Values

Use values; Option values and non-use values; Valuation methods — Methods based on observed market behaviour; Hedonic property values and household production models (travel cost method and household health production function), Methods based on response to hypothetical markets, contingent valuation methods.

Module 3: The Theory of Environmental Policy

Environmental externalities — Pigouvian taxes and subsidies, marketable pollution permits and mixed instruments (the charges and standards approach), Coase's bargaining solution and collective action; Informal regulation and the new model of pollution control, Monitoring and enforcement of environmental regulation, Environmental institutions and grass root movements; Global environmental externalities and climatic change — Tradable pollution permits and international carbon tax, Trade and environment in WTO regime.

Module 4: Economics of Natural Resource Management and Sustainable Development

Theories of optimal use of exhaustible and renewable resources; Environmental and development trade off and the concept of sustainable development; Integrated environmental and economic accounting and the measurement of environmentally corrected GDP; Macroeconomic policies and environment.

Module 5: Environmental and Natural Resource Problems in India

Mechanism for environment regulation in India; Environmental laws and their implementation; Policy instruments for controlling water and air pollution and forestry policy; People's participation in the management of common and forest lands; The institutions of joint forest management and the joint protected area management; Social forestry — rationale and benefits.

Module 6: Economics of Education

Education as an instrument for economic growth; Human capital — Human capital vs. Physical capital, components of human capital; Demand for education — private demand and social demand, Determinants of demand; Cost of Education — Expenditure on education, private costs and social costs and wastage and stagnation; Benefits of education — Direct and indirect benefits, private and social benefits; Educational planning and economic growth — Cost-benefit analysis, production function models, growth accounting equations of Schultz and Denison, Manpower requirements approach, programming and input-output models; Educational financing — Resource mobilization

and utilization, pricing and subsidies and effects of educational financing on income distribution; Education and labour market — Effects of education, ability and family background on earnings, poverty and income distribution, education and employment; Economics of educational planning in developing countries with special emphasis on India.

Module 7: Health Economics

Health dimensions of development; Determinants of health — poverty, malnutrition and environmental issues; Economic dimensions of health care — demand and supply of health care; Financing of health care and resource constraints; The concept of human life value; Theory and empirical studies of production of health care; Inequalities in health — class and gender perspectives; Institutional issues in health care delivery.

BASIC READING LIST

- Baumol, W.J. and W.E. Oates (1988), The Theory of Environmental Policy, (2nd Edition), Cambridge University Press, Cambridge.
- Berman, P. (Ed.) (1995), Health Sector Reform in Developing Countries : Making Health Development Sustainable, Boston: Harvard Series on Population and International Health.
- Blaug, M. (1972), Introduction to Economics of Education, Penguin, London.
- Bromely, D.W. (Ed.) (1995), Handbook of Environmental Economics, Blackwell, London.
- Cohn, E. and T. Gaske (1989), Economics of Education, Pergamon Press, London.
- Fisher, A.C. (1981), Resource and Environmental Economics, Cambridge University Press, Cambridge.
- Hanley, N., J.F. Shogern and B. White (1997), Environmental Economics in Theory and Practice, Macmillan.
- Hussen, A.M. (1999), Principles of Environmental Economics, Routledge, London.
- Jeroen, C.J.M. van den Bergh (1999), Handbook of Environmental and Resource Economics, Edward Elgar Publishing Ltd., U.K.

- Klarman, H.E. (1965), The Economics of Health, Columbia University Press, New York.
- Kolstad, C.D. (1999), Environmental Economics, Oxford University Press, New Delhi.
- Pearce, D.W. and R. Turner (1991), Economics of Natural Resource Use and Environment, John Hopkins University Press, Baltimore.
- Perman, R. Ma and J. McGilvary (1996), Natural Resource and Environmental Economics, Longman, London.
- Sankar, U. (Ed.) (2001), Environmental Economics, Oxford University Press, New Delhi.
- Schultz, T.W. (1971), Investment in Human Capital, Free Press, New York.
- Tietenberg, T. (1994), Environmental Economics and Policy, Harper Collins, New York.

ADDITIONAL READING LIST

Module 1

- Arrow, K.J. (1970), 'The Organization of Economic Activity : Issues Pertinent to Choice of Market versus Non-market Allocation' in Public Expenditure and Policy Analysis, (Ed.), Haveman, R.H. and J. Margolis, Markham, Chicago.
- Crones, R. and T. Sandler (1989), The Theory of Externalities and Public Goods, Cambridge University Press, Cambridge.

Module 2

- Hanley, N. (1997), Environmental Economics in Theory and Practice, Macmillan, London.
- Mitchell, R.C. and R.T. Carson (1993), Using Surveys to Value Public Goods : Resources for the Future, Washington, D.C.
- Smith, V. Kerry (1996), Estimating Economic Values for Nature : Methods for Non-market Valuation, Edward Elgar, Cheltenham, U.K.

Case Studies (India)

- Chopra, K. (1998), Valuation of Bio-diversity within Protected Areas : Alternative Approaches and a Case Study, Institute of Economic Growth, Delhi.
- Hadker, N. et. al. (1997), Willing to Pay for Borivili National Park : Evidence form Contingent Valuation, Ecological Economics, Vol. 21.
- Markandya, A. and M.N. Murty (2000), Cleaning up the Ganges : Cost-Benefit Analysis of Ganga Action Plan, Oxford University Press, New Delhi.

Module 3

- Baland, J.M. and J.P. Plateau (1994), Halting Degradation of Natural Resources : Is There a Role for Rural Communities, Oxford University Press, Oxford.
- Hoel, M. (1997), 'International Coordination of Environmental Policies' in New Dimensions in the Economic Theory of Environment, Carrao Carlo and Domenico Siniscalco (Eds.), Cambridge University Press, Cambridge.
- Larsen, B. and A. Shaw (1994), Global Tradable Carbon Permits, Participation Incentives, and Transfers, Oxford Economic Papers, Vol. 46.
- Ostrom, E. (1990), Governing the Commons : The Evolution of Institutions for Collective Actions, Cambridge University Press, Cambridge
- Whalley, J. and R. Wigle (1997), 'The International Incidence of Carbon Taxes,' in Tietenberg, T. (Ed.), Economics of Global Warming, 1997, Edward Elgar, U.K.

Case Studies (India)

- Chopra, K., G.K. Kadekodi and M.N. Murty (1990), Participatory Development : An Approach to the Management of Common Property Resources, SAGE, New Delhi.
- Mehata, S., S. Mundle and U. Sankar (1995), Controlling Pollution : Incentives and Regulation, SAGE, New Delhi.

- Murty, M.N., A. James. and S. Misra (1999), The Economics of Water Pollution in India, Oxford University Press, New Delhi.

Module 4

- Dasgupta, P.S. and G.M. Heal (1985), Economic Theory and Exhaustible Resources, Cambridge University Press, Cambridge.
- Dasgupta, P.S. and K.G. Maler (Ed.) (1997), Environment and Emerging Development Issues, Cambridge University Press, Cambridge, Mass.
- ESCAP (1997), Accounting and Valuation of Environment — A Primer for Developing Countries, Volume I, United Nations, New York.
- Markandya, A. and J. Richardson (Eds.), The Earth Scan Reader in Environmental Economics, Earth Scan, London.
- United Nations (1993), Integrated Environmental and Economic Accounting, United Nations, New York.

Module 5

- Bhattacharya, R.N. (Ed.) (2001), Environmental Economics : An Indian Perspective, Oxford University Press, New Delhi.
- Chopra, K., G.K. Kadekodi and M.N. Murty (1990), Participatory Development : An Approach to the Management of Common Property Resources, SAGE, New Delhi.
- Chopra, K. and G.K. Kadekodi (1999), Operationalising Sustainable Development : Economic-Ecological Modelling for Developing Countries, Sage, New Delhi.
- Chopra, K. and S.C. Gulati (2000), Migration and the Management of Common Property Resources : A Study in Western India, Sage, New Delhi.
- Kerr, J.M. et. al. (Eds.) (1997), Natural Resource Economics : Theory and Applications in India, Oxford and IBH Publication Co. Pvt. Ltd., New Delhi.

- Mehta, S., S. Mundle and U. Sankar (1995), Controlling Pollution : Incentives and Regulation, SAGE, New Delhi.
- Murty, M.N., A. James and S. Misra (1999), The Economics of Water Pollution in India, Oxford University Press, New Delhi.
- Sengupta, R.P. (2001), Ecology and Economics : An Approach to Sustainable Development, Oxford University Press, New Delhi.

Module 6

- Becker, G.S. (1974), Human Capital (2nd Edition), National Bureau of Economic Research, New York.
- McMohan, W.W. (1999), Education and Development : Measuring the Social Benefits, Oxford University Press, Oxford.
- Padmanabhan, C.B. (1984), Financial Management in Education, Select Books, New Delhi.
- Tilak, J.B.G. (1994), Education for Development in Asia, Sage Publications, New Delhi.
- Vaizey, J. (1962), Economics of Education, Faber and Faber, London.
- Woodhall, M. (1992), Cost Benefit Analysis in Educational Planning, UNESCO, Paris.

Module 7

- Baru, R.V. (1998), Private Health Care in India : Social Characteristics and Trends, Sage Publications, New Delhi.
- Berman, P. and M.E. Khan (1993), Paying for India's Health Care, Sage Publications, New Delhi.
- Panchamukhi, P.R. (1980), Economics of Health : A Trend Report in ICSSR, A Survey of Research in Economics, Vol. VI, Infrastructure, Allied, Delhi.
- World Bank (1993), The World Development Report, 1993 : Investing in Health, Oxford University Press, New York.

MASTER OF ARTS OPTIONAL PAPERS

**M.A. Optional Paper
Paper-I
INDUSTRIAL ECONOMICS**

PREAMBLE

In the contemporary world with globalization and liberalization more and more attention is being given to industry. This course intends to provide knowledge to the students on the basic issues such as productivity, efficiency, capacity utilization and debates involved in the industrial development of India. The objective is to provide a thorough knowledge about the economics of industry in a cogent and analytical manner, particularly in the Indian context.

Module 1: Framework and Problems of Industrial Economics

Concept and organization of a firm — ownership, control and objectives of the firm; Passive and active behaviour of the firm.

Module 2: Market Structure

Sellers' concentration; Product differentiation; Entry conditions; Economies of scale; Market structure and profitability; Market structure and innovation; Theories of industrial location — Weber and Sargent Florence; Factors affecting location.

Module 3: Market Conduct

Product pricing — Theories and evidence; Investment expenditure — Methods of evaluating investment expenditure; Theories and empirical evidence on Mergers and acquisitions (M & As) and diversification.

Module 4: Market Performance

Growth of the firm — Size and growth of a firm; Growth and profitability of the firm; Constraints on growth; Productivity, efficiency and capacity utilization — Concept and measurement, Indian situation.

Module 5: Indian Industrial Growth and Pattern

Classification of industries; Industrial policy in India — Role of Public and private sectors; Recent trends in Indian industrial growth; MNCs and transfer of technology; Liberalization and privatization; Regional industrial growth in India; Industrial economic concentration and remedial measures; Issues in industrial proliferation and environmental preservation; Pollution control policies.

Module 6: Industrial Finance

Owned, external and other components of funds; Role, nature, volume and types of institutional finance — IDBI, IFCI, SFCs, SIDC, commercial banks, etc.; Financial statement — Balance sheet, Profit and loss account; assessment of financial soundness, ratio analysis.

Module 7: Project Appraisal

Cost-benefit analysis — Net Present Value (NPV) and internal rate of return (IRR) criteria — balancing private and social returns.

Module 8: Industrial Labour

Structure of industrial labour; Employment dimensions of Indian industry; Industrial legislation; Industrial relations; Exit policy and social security; Wages and problem of bonus — labour market reforms.

Module 9: Current Problems of Selected Industries

Iron and Steel; Cotton textiles; Jute; Sugar; Coal; Cement and engineering goods; Development of small-scale and cottage industries in India.

BASIC READING LIST

- Ahluwalia, I.J. (1985), Industrial Growth in India, Oxford University Press, New Delhi.
- Barthwal, R.R. (1985), Industrial Economics, Wiley Eastern Ltd., New Delhi.
- Cherunilam, F. (1994), Industrial Economics : Indian Perspective (3rd Edition), Himalaya Publishing House, Mumbai.
- Desai, B. (1999), Industrial Economy in India (3rd Edition), Himalaya Publishing House, Mumbai.
- Divine, P.J. and R.M. Jones et. al. (1976), An Introduction to Industrial Economics, George Allen and Unwin Ltd., London.
- Government of India, Economic Survey (Annual).
- Hay, D. and D.J. Morris (1979), Industrial Economics : Theory and Evidence, Oxford University Press, New Delhi.
- Kuchhal, S.C. (1980), Industrial Economy of India (5th Edition), Chaitanya Publishing House, Allahabad.
- Reserve Bank of India, Report on Currency and Finance (Annual).
- Singh, A. and A.N. Sadhu (1988), Industrial Economics, Himalaya Publishing House, Bombay.

ADDITIONAL READING LIST**Module 1**

- Bains, J.S. (1996), Industrial Organization, Cheltenham, U.K.
- Harndeen, J.B. (1975), The Economics of Corporate Economy, Dunellen Publishers, New York.
- Kamien, M.T. and N.L. Schwartz (1982), Market Structure and Innovation, Cambridge University Press, Cambridge.
- Wiles, P.J.D. (1963), Price, Cost and Output, Praeger, New York.

Module 2

- Harndeen, J.B. (1975), The Economics of Corporate Economy, Dunellen Publishers, New York.
- Kirkpatrick, C.M., N. Lee and E.I. Nixon (1984), Industrial Structure and Policy in Less Developed Countries, ELBS/George Allen and Unwin, London.
- Menon, K.S.V. (1979), Development of Backward Areas Through Incentives, Asia Publishing House, Bombay.
- Smith, D.M. (1971), Industrial Location : An Economic and Geographic Analysis, John Wiley, New York.

Module 3

- Bagchi, A. and M. Banerjee (Eds.) (1979), Change and Choice in Indian Industry, Bagchi Publications, Calcutta.
- Kelkar, V.L. and V.V. Bhanoji Rao (Eds.) (1996), India Development Policy Imperatives, Tata McGraw Hill, New Delhi.

Module 4

- Bhagwati J. and P. Desai (1972), India: Planning for Industrialization, Oxford University Press, London.
- Brahmananda, P.R. and V.R. Panchamukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Chakravarty, S. (1987), Development Planning : The Indian Experience, Oxford University Press, New Delhi.
- Datta, B. (1992), Indian Planning at the Crossroads, Oxford University Press, New Delhi.
- Ghosh, P.K. (1977), Government and Industry, Oxford University Press, New Delhi.
- Joshi, V. and I.M.D. Little (1999), India : Macro Economics and Political Economy : 1964-1991, Oxford University Press, New Delhi.

Module 5

- Brahmananda, P.R. and V.R. Panchamukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Chakravarty, S. (1987), Development Planning : The Indian Experience, Oxford University Press, New Delhi.
- Datta, B. (1992), Indian Planning at the Crossroads, Oxford University Press, New Delhi.
- Dhameeja, N. and K.S. Sastry (1998), Privatization : Theory and Practice, A.H. Wheeler, New Delhi.
- Jalan, B. (1996), India's Economic Policy, Viking, New Delhi.
- Joshi, V. and I.M.D. Little (1999), India : Macro Economics and Political Economy : 1964-1991, Oxford University Press, New Delhi.
- Kelkar, V.L. and V.V. Bhanoji Rao (Eds.) (1996), India Development Policy Imperatives, Tata McGraw Hill, New Delhi.
- Rama Murti, R. and R. Vernan (Eds.) (1991), Privatization and Control of State-owned Enterprises, The World Bank, Washington.
- Sandesara, J.C. (1992), Industrial Policy and Planning — 1947-1991 : Tendencies, Interpretations and Issues, Sage Publications, India Pvt. Ltd., New Delhi.

Module 6

- Gupta, L.C. (1969), The Changing Structure of Industrial Finance in India, Oxford University Press, New Delhi.
- Khan, M.Y. (1981), Indian Financial Systems, Allied Publishers, New Delhi.
- Sen, R. and B. Chatterjee (2001), Indian Economy : Agenda for the 21st Century (Essays in honour of Professor P.R. Brahmananda), Deep and Deep Publications Pvt. Ltd., New Delhi.

Module 7

- Dasgupta, P.S., Marglin and A. Sen (1972), Guideline for Project Evaluation, Unido Publications, New York.
- Fog, B. (1959), Industrial Pricing Policies, North Holland, Amsterdam.
- Koutsoyiannis, A. (1979), Modern Microeconomics, Macmillan, New York.

Module 8

- Das, N. (1969), The Public Sector in India, Vora and Company, Bombay.
- Mamoria and Mamoria (2000), Dynamics of Industrial Relations in India (15th Edition), Himalaya Publishing House, Mumbai.
- Sen, R. and B. Chatterjee (2001), Indian Economy : Agenda for the 21st Century (Essays in honour of Professor P.R. Brahmananda), Deep and Deep Publications Pvt. Ltd., New Delhi.

Module 9

- Ghosh, P.K. (1977), Government and Industry, Oxford University Press, New Delhi.
- Sandesara, J.C. (1982), Industrial Growth in India : Performance and Prospects, Lala Lajpat Rai College, Bombay.

**M.A. Optional Paper
Paper-II
LABOUR ECONOMICS**

PREAMBLE

Issues pertaining to the labour market, wage theories, employment policies, trade unions and collective bargaining in the globalized economy have become vitally important for developing countries. In a country like India where the bulk of the labour force is in the unorganized sector and the organized sector is witnessing “jobless” growth, the importance of issues such as employment and unemployment as well as livelihood and social security for the growing millions continues to assume significance. This Paper exposes students to theoretical as well as empirical issues relating to the labour market with special reference to India.

Module 1: Labour Markets

Nature and characteristics of labour markets in developing countries like India; Paradigms of labour market analysis — Classical, neo-classical and dualistic economy; Demand for labour in relation to size and pattern of investment; Choice of technologies and labour policies; Supply of labour in relation to growth of labour force; Labour market policies; Mobility and productivity of labour; Rationalization; Methods of recruitment and placement; Employment service organization in India.

Module 2: Employment

Employment and development relationship — Poverty and unemployment in developing countries; Unemployment — Concept, Types, and Measurement, particularly in India; Impact of rationalization, technological change and modernization on employment in organized private industry, Public sector and employment in agricultural sector; Analysis of educated unemployment; Employment policy in Five Year Plans and its evaluation.

Module 3: Wage Determination

Classical, neo-classical and bargaining theories of wage determination; Concepts of minimum wage, living wage and fair wage in theory and practice; Discrimination in labour markets; Wage determination in various sectors — rural, urban, organized, unorganized and in informal sectors; Non-wage component of labour remuneration; Inflation-wage relationship at micro and macro levels; Productivity and wage relationship; Analysis of rigidity in labour markets; Asymmetric information and efficiency of labour markets in wage determination; National wage policy; Wages and Wage Boards in India; Bonus system and profit sharing.

Module 4: Industrial Relations

Theories of labour movement — Growth, pattern and structure of labour unions in India, Achievements of labour unions; Causes of industrial disputes and their settlement and prevention mechanism; Role of tripartism; Current trends in collective bargaining; Role of judicial activism; Labour legislation in India; Indian labour laws and practices in relation to international labour standards.

Module 5: State and Labour

State and social security of labour — Concept of social security and its evolution; Social assistance and social insurance; Review and appraisal of states policies with respect to social security and labour welfare in India; Special problems of labour: Child labour, female labour, Discrimination and gender bias in treatment of labour; Receding state and its effect on working of labour markets; Labour market reforms — Exit policy, need for safety nets, measures imparting flexibility in labour markets; Second National Commission on Labour; Globalization and labour markets.

BASIC READING LIST

- Datt, G. (1996), Bargaining Power, Wages and Employment: An Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.

- Hajela, P.D. (1998), Labour Restructuring in India: A Critique of the New Economic Policies, Commonwealth Publishers, New Delhi.
- Jhabvala, R. and R.K. Subrahmanya (Eds.) (2000), The Unorganised Sector : Work Security and Social Protection, Sage Publications, New Delhi.
- Lester, R.A. (1964), Economics of Labour, (2nd Edition), Macmillan, New York.
- McConnell, C.R. and S.L. Brue (1986), Contemporary Labour Economics, McGraw-Hill, New York.
- Papola, T.S., P.P. Ghosh and A.N. Sharma (Eds.) (1993), Labour, employment and Industrial Relations in India, B.R. Publishing Corporation, New Delhi.
- Rosenberg M.R. (1988), Labour Markets in Low Income Countries in Chenery, H.B. and T.N. Srinivasan, (Eds.), The Handbook of Development Economics, North-Holland, New York.
- Venkata Ratnam, C.S. (2001), Globalization and Labour-Management Relations: Dynamics of Change, Sage Publications/Response Books, New Delhi.

ADDITIONAL READING LIST

Module 1

- McCormick, B. and Smith (Eds.) (1968), The Labour Market, Penguin, Harmondsworth.
- Papola, T.S. and Rodgers, G. (Eds.) (1992), Labour Institutions and Economic Development in India, International Institute for Labour Studies, Geneva.
- Rees, A. (1973), Economics of Work and Pay, Harper and Row, New York.
- Sen, A.K. (1975), Employment, Technology, and Development, Oxford University Press, New Delhi.
- Solow, R.M. (1990), Labour Market as an Institution, Blackwell, London.

Module 2

- Das, N. (1960), Unemployment, Full Employment and India, Asia Publishing House, Bombay.
- Deshpande, L.K., P.R. Brahmananda, E.A.G. Robinson, (Eds.) (1983), Employment Policy in a Developing Economy, Vol. I & II Macmillan, London.
- Kannapon, S. (1983), Employment Problems and Urban Labour Markets in Developing Countries, University of Michigan, Ann Arbor.
- Papola, T.S. and Sharma, A.N. (Eds.) (1999), Gender and Employment in India, Vikas Publishing House, New Delhi.
- Sharma, A.N. and A. Kundu (Ed.) (2001), Informal Sector in India : Emerging Perspectives, Institute for Human Development, New Delhi.

Module 3

- Binswanger H.P. and M.R. Rosenzweig (Eds.) (1984), Contractual Arrangements, Employment, and Wages in Rural Labor Markets in Asia, Yale University Press, New Haven.
- Deshpande L.K. and J.C. Sandesara, (Eds.) (1970), Wage Policy and Wages Determination in India, Bombay University Press, Bombay.
- Foster, A.D. and M.R. Rosenberg, (1993), Information Flows and Discrimination in Labour Markets in Rural Areas in Developing Countries, Annual Conference on Development Economics, World Bank, Washington D.C.
- Hicks J.R. (1932), The Theory of Wages, Clarendon Press, Oxford.
- Madan, B.K. (1977), The Real Wages of Industrial Workers in India, Management Development Institute, New Delhi.
- Mazumdar, D. (1989), Micro-economic Issues of Labour Markets in Developing Countries, EDI Services Paper No. 40, World Bank, Washington D.C.

Module 4

- Breman, J. (1996), Footloose Labour: Working in India's Informal Economy, Cambridge University Press, Cambridge.
- Memoria, C.B. (1966), Labour Problems and Social Welfare in India, Kitab Mahal, Allahabad.
- Punekar, S.D. (1978), Labour Welfare, Trade Unionism and Industrial Relations, Himalaya Publishing House, Bombay.
- Sach, J. (1990), 'Social Conflict and Populist Policies in Latin America,' in R. Brunnetta and C.D. Aringa (Eds.) Labour Relations and Economic Performance, Macmillan, Basing Stoke.
- Singh V.B. (Ed.) (1970), Industrial Labour in India, Popular Prakashan, Bombay.

Module 5

- Deshpande, S., G. Standing, and L.K. Deshpande, (1998), Labour Flexibility in a Third World Metropolis, Commonwealth Publishers, New Delhi.
- Hauseman, S. (1991), Industrial Restructuring with Job Security, Harvard University Press, Cambridge, Mass.
- MHRD, GOI (1987), Shram Shakti: Report of the National Commission on Self-employed Women and Women Workers in the Informal Sector, Ministry of Human Resources Development, New Delhi.
- Misra, L. (2000), Child Labour in India, Oxford University Press, New Delhi.
- Riveros, L. (1990), Labour Market Policies and Labour Market Reforms in Socialist Economies, World Bank, Washington D.C.
- Standing G. and V. Tokman (Eds.) (1991), Towards Social Adjustment, ILO, Geneva.

**M.A. Optional Paper
Paper-III
MATHEMATICAL ECONOMICS**

PREAMBLE

This course is designed to equip students to understand the economic concepts and theories which use mathematical tools and techniques to refine the verbal logic. The use of calculus has permitted formulation of economic problems in multivariable mode and yield valuable insight about optimizing human behaviour. Modern algebraic tools allow convenient handling of simultaneous equations in the context of linear programming, game theory and input-output analysis.

Mathematical economics deals with various applications of mathematical tools and techniques in defining and developing economic relationships. This course has been accordingly designed to include various mathematical techniques/methods/models related to the different parts of economic theory like consumer theory, theory of production, pricing, trade cycles, growth models, etc. The paper covers important aspects of microeconomics, macroeconomics and development theory and the various modules have been accordingly designed.

Module 1: Theory of Consumer Behaviour

Cardinal and ordinal utility; Ordinal utility maximization; Slutsky equation, compensated demand functions, income, substitution, and price effects; Concept of elasticities — generalizations to n variable case; Separable and additive utility functions; homogeneous and homothetic utility functions; constant elasticity of substitution (CES) and transcendental logarithmic utility functions; indirect utility functions; duality theorem; consumer's surplus; Theory of revealed preference and index numbers; Linear expenditure systems; Treatment of demand for durable goods; Empirical demand functions; Consumer behaviour under risk and uncertainty.

Module 2: Theory of Production

Production function — homogeneous and non-homogeneous; Properties of Cobb-Douglas production function; CES; VES and trans-log production function; Simple derivation of short and long run cost functions; Modern approach to theory of costs; Cost function; Producer's equilibrium — Laws of return and returns to scale; Constrained optimization of a producer; Generalization to n variable case; Input demand functions; Adding up theorem; Technical progress through production function; Analysis of joint profit maximization and multi-product firm; Production possibility curve; Empirical uses of production function analysis.

Module 3: Price Determination in Various Markets

Price determination in perfect competition, monopoly, monopolistic competition, duopoly, oligopoly and monopsony; Pricing of factors of production; Bilateral monopoly.

Module 4: Market Equilibrium

Single market equilibrium — Marshallian and Walrasian equilibrium conditions; Lagged market equilibrium; Multi-market equilibrium — General equilibrium systems of Walras and Debreu; Conditions of stability of equilibrium.

Module 5: Determination of Income and Fluctuations in Income

Classical and Keynes' macro system; Static and dynamic multiplier; Determinants of investment; Accelerator; Trade cycle model of Samuelson and Hicks, Goodwin, Kalecki and Philips; Stabilization policy; Rational expectations and economic policy; Lucas's model.

Module 6: Growth Models

Harrod problem; Neoclassical model of growth; Solow and Meade growth models with technical progress; Optimal growth; and golden rule of accumulation; Turnpike theorem; Endogenous growth.

Module 7: Game Theory and Linear Programming and Input-output Analysis

Concept of game — Two-person zero-sum game, Pay-off matrix, pure and mixed strategies, Maximin and minimax solutions, Saddle point solution; Non-constant sum game; Prisoner's dilemma; Linear programming — Primal and dual problem, Simplex method; transport and storage problems and other applications of linear programming in economics; Input-output analysis — Open and closed systems, Hawkins-Simon conditions; Leontief's dynamic system; Testing consistency of planning models.

BASIC READING LIST

- Allen, R.G.D. (1976), Mathematical Economics, Macmillan, London.
- Arrow, K.J. and M. Intrilligator (Eds.) (1982), Handbook of Mathematical Economics, Volumes I, II and III, North Holland, Amsterdam.
- Henderson, J.M. and R.E. Quandt (1980), Microeconomic Theory : A Mathematical Approach, McGraw Hill, New Delhi.

ADDITIONAL READING LIST**Modules 1 and 2**

- Chung, J.W. (1993), Utility and Production : Theory and Applications, Basil Blackwell, London.
- Ferguson, C.E. (1976), Neo-classical Theory of Production and Distribution,

Modules 3 and 4

- Allen, R.G.D. (1974), Mathematical Analysis for Economists, Macmillan Press and ELBS, London.
- Chiang, A.C. (1986), Fundamental Methods of Mathematical Economics, McGraw Hill, New York.

Modules 5 and 6

- Abel, A., B.S. Bernanke and B. Mcnabb (1998), Macroeconomics, Addison Wesley, Massachusetts.
- Barro, R.J. and H. Grossman (1976), Money, Employment and Inflation, Oxford University Press, Oxford.
- Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., New Delhi.
- Jones, H.G. (1976), An Introduction to the Modern Theory of Economic Growth, McGraw Hill-Kogakusha, Tokyo.
- Mankiw, N.G. and D. Romer (Eds.) (1991), New Keynesian Economics (2 Vols.), MIT Press, Cambridge, Mass.

Module 7

- Hadley, G. (1962), Linear Programming, Addison Wesley Publishing Co., Massachusetts.
- Hiller, F.S. and G.J. Lieberman (1985), Operations Research, C.B.S., New Delhi.
- Kothari, C.R. (1992), An Introduction to Operations Research, Vikas Publishing House, New Delhi.
- Kuhn, Harold W. (Ed.) (1997), Classics in Game Theory, Princeton, University Press, Princeton.
- Mustafi, C.K. (1992), Operations Research : Methods and Practice, Wiley Eastern, New Delhi.
- Nash, J.F. (1996), Essays on Game Thoery, Cheltenham, U.K.

M.A. Optional Paper Paper-IV ECONOMETRICS

PREAMBLE

Applications of economic theory need a reasonable understanding of economic relationships and relevant statistical methods. The econometric theory thus becomes a very powerful tool for understanding of applied economic relationships and for meaningful research in economics. This paper accordingly is devoted to equip the students with basic theory of econometrics and relevant applications of the methods. The topics covered in the course include various problems faced in estimation of both single equations and simultaneous equations models.

The course also covers various econometric methods applicable to different topics in economics and those needed for applied economic research. An introductory module on multivariate methods has also been included in the course which constitutes an important tool for analysis in multivariable data in development-related studies.

Module 1: Basic Econometrics

Nature, meaning and scope of econometrics; Simple and general linear regression model — Assumptions, Estimation (through OLS approach) and properties of estimators; Gauss-Markov theorem; Concepts and derivation of R^2 and adjusted R^2 ; Concept and analysis of variance approach and its application in regression analysis; Estimation of non-linear equations — parabolic, exponential, geometric, hyperbolic, modified exponential; Gompertz and logistic functions.

Module 2: Problems in Regression Analysis

Nature, test, consequences and remedial steps of problems of heteroscedasticity; Multicollinearity and auto-correlation; Problems of specification error; Errors of measurement.

Module 3: Regressions with Qualitative Independent Variables

Dummy variable technique — Testing structural stability of regression models comparing to regressions, interaction effects, seasonal analysis, piecewise linear regression, use of dummy variables, regression with dummy dependent variables; The LPM, Logit, Probit and Tobit models — Applications.

Module 4: Dynamic Econometric Model

Autoregressive and distributed lag models — Koyak model, Partial adjustment model, adaptive expectations; Instrumental variables; Problem of auto-correlation — Application; Almon approach to distributed-lag models; Error correlation mechanism, Causality test, Granger test and Sim's test.

Module 5: Simultaneous Equation Models

Introduction and examples; The simultaneous equation bias and inconsistency of OLS estimators; The identification problem; Rules of identification — order and rank conditions; Methods of estimating simultaneous equation system; Recursive methods and OLS; Indirect least squares (ILS); 2SLS, 3SLS and ML methods — Applications.

Module 6: Time Series Analysis

Stationarity, unit roots, co-integration-spurious regression, Dickey-Fuller test, Engle-Granger test, Random walk model, Forecasting with ARIMA modelling; Box-Jenkins methodology; Vector autoregression; Problems with VAR modelling — Applications; Time varying parameters and Kalman filter.

Module 7: Panel Data Techniques

Panel data techniques — Random coefficients model; Fix effects model; Random effect model.

Module 8: Multivariate Analysis

Multivariate probability distribution, marginal and conditional probability distribution, multivariate normal distribution and its properties; Hotelling T-scale; Discriminant analysis.

BASIC READING LIST

- Amemiya, T. (1985), Advanced Econometrics, Harvard University Press, Cambridge, Mass.
- Baltagi, B.H. (1998), Econometrics, Springer, New York.
- Dongherty, C. (1992), Introduction to Econometrics, Oxford University Press, New York.
- Goldberger, A.S. (1998), Introductory 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.
- Kennedy. P. (1998), A Guide to Econometrics (4th Edition), MIT Press, New York.
- Kmenta, J. (1997), Elements of Econometrics (Reprint Edition), University of Michigan Press, New York.
- Koutsoyiannis, A. (1977), Theory of Econometrics (2nd ed.), The Macmillan Press Ltd., London.
- Krishna, K.L. (Ed.) (1997), Econometric Applications in India, Oxford University Press, New Delhi.
- Maddala, G.S. (Ed.) (1993), Econometrics Methods and Application (2 Vols.), Aldershot U.K.
- Theil, H. (1981), Introduction to Econometrics, Prentice Hall of India, New Delhi.

ADDITIONAL READING LIST**Module 1**

- Croxton, F.E., D.J. Cowden and S. Klein (1973), Applied General Statistics, Prentice Hall, New Delhi.
- Maddala, G.S. (1997), Econometrics, McGraw Hill, New York.

Module 2

- Intrilligator, M.D. (1978), Econometric Methods, Techniques and Applications, Prentice Hall, Englewood Cliffs, New Jersey.
- Johnston, J. (1991), Econometric Methods, McGraw Hill Book Co., London.

Module 3

- Chow, G.C. (1983), Econometrics, McGraw Hill, New York.
- Pindyck, R.S. and D.L. Rubinfeld (1976), Econometric Models and Economic Forecasts, McGraw Hill Kogakusha, Tokyo.

Module 4

- Chow, G.C. (1983), Econometrics, McGraw Hill, New York.
- Franses, P.H. (1998), Time Series Models for Business and Economic Forecasting, Cambridge University Press, New York.
- Hamonda, O.F. and J.C.R. Roley (1997), Time Series Model, Causality and Exogeneity, Cheltenham, U.K.

- Hansen, P.R. and S. Johanson, (1998), Workbook on Cointegration, Oxford University Press, New York.
- Harvey, A.C. (1981), Econometric Analysis of Time Series, Phillip Allen, London.
- Johnston, J. (1991), Econometric Methods, McGraw Hill Book Co., London.
- Maddala, G.S. (1997), Econometrics, McGraw Hill, New York.

Module 5

- Chow, G.C. (1983), Econometrics, McGraw Hill, New York.
- Intriligator, M.D. (1978), Econometric Methods, Techniques and Applications, Prentice Hall, Englewood Cliffs, New Jersey.
- Pindyck, R.S. and D.L. Rubinfeld (1976), Econometric Models and Economic Forecasts, McGraw Hill-Kogakusha, Tokyo.

Module 6

- Dhrymes, P.J. (1970), Econometrics — Statistical Foundations and Applications, Harper and Row Publishers, New York.
- Franses, P.H. (1998), Time Series Models for Business and Economic Forecasting, Cambridge University Press, Cambridge.
- Hansen, P.R. and S. Johanson, (1998), Workbook on Cointegration, Oxford University Press, New York.
- Intriligator, M.D. (1978), Econometric Methods, Techniques and Applications, Prentice Hall, Englewood Cliffs, New Jersey.

Module 7

- Draper, N.R. and H. Smith (1966), Applied Regression Analysis, John Wiley, New York.
- Harvey, A.C. (1981), Econometric Analysis of Time Series, Phillip Allen, London.
- Pindyck, R.S. and D.L. Rubinfeld (1976), Econometric Models and Economic Forecasts, McGraw Hill Kogakusha, Tokyo.

Module 8

- Anderson, T.W. (1958), Introduction to Multivariate Statistical Analysis, Chapman and Hall, London.
- Chatfield, C. and A.J. Collins (1980), Introduction to Multivariate Analysis, Chapman and Hall, London.

M.A. Optional Paper Paper-V DEMOGRAPHY

PREAMBLE

The main objective of this paper is to make the students aware of the importance of population in economic development and the various theories that explain the growth of population in a country. The paper also enlightens the student on the quantitative and the qualitative aspects and characteristics of the population through various demographic techniques. In recent times, gender characteristics of the population have acquired importance and these have also been included in the framework of study. Migration and urbanization are the characteristics of structural change taking place in a society. Their study is essential to understand the dynamics of this change. The paper exposes the students to sources of population and related characteristics as also to the rationale, need and evolution of population policy.

Module 1: Population and Development

Meaning and scope of demography; Components of population growth and their inter-dependence; Measures of population change; Structure, distribution and sources of population data; Theories of population — Malthus, Optimum theory of population; Theory of demographic transition — Views of Medows, Enke and Simon; Population and development.

Module 2: Structure of Population

Population trends in the twentieth century; Population explosion — Threatened or real, distant or imminent; International aspects of population growth and distribution; Pattern of age and sex structure in more developed and less developed countries; Determinants of age and sex structure;

Demographic effects of sex and age structure, economic and social implications; Age pyramids and projections — Individual aging and population aging.

Module 3: Fertility, Nuptiality and Mortality

Importance of study of fertility — Total fertility rate, Gross reproduction rate and net reproduction rate; Levels and trends of fertility in more and less developed countries; Factors affecting fertility — Socio-economic factors, economic status, health, education, nutrition, caste, religion, race, region, rural-urban and status of husband and wife; Nuptiality — Concept and analysis of marital status, single mean age at marriage; Synthetic cohort methods; Trends in age at marriage; Mortality — Death rates, crude and age-specific; Mortality at birth and infant mortality rate; Levels and trends in more and less developed countries; Sex and age pattern of mortality; Factors for decline in mortality in recent past; Life table — Construction and uses; Concepts of stable population; Methods of population projection.

Module 4: Migration and Urbanization

Concept and types — Temporary, internal and international; International migration — Its effect on population growth and pattern; Factors affecting migration; Theories of migration related to internal migration; Urbanization — Growth and distribution of rural-urban population in developed and developing countries.

Module 5: Demographic Data Base in India

Study of census in India— Methodology and characteristics of census; Nature of information collected in 1971, 1981, 1991 and 2001 census in India; National Family Health Survey 1 and 2 and Rapid Household Survey; Changing characteristics of population in India; Population growth rates, trends and regional variations in sex ratio; Age structure of population, foetal, infant and child mortality rates; Maternal mortality rates; Life expectancy; Appraisal of Kerala model; Pattern of Migration and Urbanization in India.

Module 6: Population and Development with Reference to India

Population, economy and environment linkages — Population, health, nutrition, productivity nexus; Population and human development issues; Culture and fertility; Education and fertility, Demography and household economic behaviour.

Module 7: Population Policy in India

Evolution of population policy in India — The shift in policy from population control to family welfare, to women empowerment; Family planning strategies and their outcomes; Reproductive health, maternal nutrition and child health policies; Population and strategies for human development of different social groups; Social impact of new reproductive technologies and their regulation; The new population policy; Tasks before the National Population Commission.

BASIC READING LIST

- Agarwala S.N. (1972), India's Population Problem, Tata McGraw-Hill Co., Bombay.
- Bose, A. (1996), India's Basic Demographic Statistics, B.R. Publishing Corporation, New Delhi
- Bogue, D.J. (1971), Principles of Demography, John Wiley, New York
- Chenery H. and T.N. Srinivasan (Eds.) (1989), Hand Book of Development Economics, Vol. 1 & 2 Elsevier, Amsterdam.
- Choubey, P.K. (2000), Population Policy in India, Kanishka Publications, New Delhi.
- Coale A.J. and E.M. Hoover (1958), Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects, Princeton University Press, Princeton.
- Gulati, S.C. (1988), Fertility in India: An Econometric Study of a Metropolis, Sage, New Delhi.

- Simon, J.L. (1992), Population and Development in Poor Countries, Princeton University Press.
- Srinivasan, K. (1998), Basic Demographic Techniques and Applications, Sage, New Delhi
- Srinivasan, K. and A. Shariff (1998), India: Towards Population and Demographic Goals, Oxford University Press, New Delhi
- Sryrock, H. et. al (1973), The Methods and Materials of Demography, US Department of Commerce, Washington, D.C.
- United Nations (1973), The Determinants and Consequences of Population Trends, Vol. 1, UNO Publications, New York

ADDITIONAL READING LIST

Modules 1 and 2

- Coale A.J. and E.M. Hoover (1958), Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects, Princeton University Press, Princeton.
- Simon, J.L. (1992), Population and Development in Poor Countries, Princeton University Press.

Modules 3 and 4

- Bogue, D.J. (1971), Principles of Demography, John Wiley, New York.
- Chiang, C.L. (1974), Life Tables and Mortality Analysis, W.H.O., Geneva.
- Gulati, S.C. (1988), Fertility in India: An Econometrics Study of a Metropolis, Sage, New Delhi.
- Novell, C. (1988), Methods and Models in Demography, Bellhaven Press, London.
- Srinivasan, K. (1998), Basic Demographic Techniques and Applications, Sage, New Delhi.

Modules 5 and 6

- Agnihotri, S.B. (2000), Sex ratio in Indian Population: A Fresh Exploration, Sage, New Delhi.
- Amsden, A.H. (Ed.) (1980), The Economics of Women and Work, Penguin, Harmondsworth.
- Baud, I.S.A. (1992), Form of Production and Women's Labour, Gender Aspects of Industrialization in India and Mexico, Sage, New Delhi.
- Boserup, E. (1970), Women's Role in Economic Development, George Allen and Unwin, London.
- Jhabwala, R. and R.K. Subramanya (2000) (Eds.), The Unorganized Sector : Work Security and Social Protection, Sage, New Delhi.
- King M. and M.A. Hill (Eds.) (1993), Women's Education in Developing Countries: Barriers, Benefits and Politics, John Hopkins, Baltimore.
- Krishnaji M., R.M. Sudarshan and A. Shariff (1999), Gender Population and Development, Oxford University Press, New Delhi.
- Lewis (Ed.) (1989), Strengthening the Poor: What Have We Learnt, OECD, Paris.
- Sudarshan and A. Shariff (1999), Gender Population and Development, Oxford University Press, New Delhi.

Module 7

- Gupta, J.A. (2000), New Reproductive Technologies, Women's Health and Autonomy, Indo Dutch Studies on Development Alternatives, Sage, New Delhi.

- Mishra S. (2000), Voluntary Action in Health and Population : The Dynamics of Social Transition, Sage, New Delhi.
- Mitra, A. (1979), Implications of Declining Sex Ratio in India's Population, Allied, New Delhi.
- Seth M. (2000), Women and Development : The Indian Experience, Sage, New Delhi.

**M.A. Optional Paper
Paper-VI
AGRICULTURAL ECONOMICS**

PREAMBLE

The objective of this course is to provide a detailed treatment of issues in agricultural economics to those intending to specialize in this area. Its objective is to familiarize students with policy issues that are relevant to Indian agricultural economics and enable them to analyze the issues, using basic micro-economic concepts.

Module 1: Agriculture and Economic Development

Nature and scope of agricultural and rural economics; Traditional agriculture and its modernization; Role of agriculture in economic development; Interdependence between agriculture and industry — some empirical evidence; Models of interaction between agriculture and the rest of the economy; Agricultural development, poverty and environment.

Module 2: Diversification of Rural Economic Activities

Livestock economics — Livestock resources and their productivity; Problems of marketing; White revolution; Fishery and poultry development; Forestry, horticulture and floriculture; Issues and problems in rural industrialization and development of agro-based industries.

Module 3: Economics of Rural Infrastructure

Use of land, water and energy; Rural transport, communication, banking, extension services, role, modes and problems of rural electrification; Rural social infrastructure, — education and health and information dissemination.

Module 4: Agricultural Production and Productivity

Agricultural production — Resource use and efficiency; Production function analyses in agriculture; Factor combination and resource substitution; Cost and supply curves; Size of farm and laws of returns — Theoretical and empirical findings; Farm budgeting and cost concepts; Supply response of individual crops and aggregate supply; Resource use efficiency in traditional agriculture; Technical change, labour absorption and gender issues in agricultural services,

Module 5: Land Reforms and Land Policy

Principles of land utilization; Land distribution — Structure and trends; Land values and rent; Land tenures and farming systems — Peasant, capitalist, collective and state farming; Tenancy and crop sharing — Forms, incidence and effects; Land reform measures and performance; Women and land reforms; Problems of marginal and small farmers.

Module 6: Rural Labour Market

Rural labour supply; Interlocking of factor markets; Mobility of labour and segmentation in labour markets; marginalisation of rural labour; Nature, extent and trends in rural unemployment; Agricultural wages in India; Male-female wage differences; Non-agricultural rural employment — Trends and determinants.

Module 7: Rural Finance

Role of capital and rural credit; Organized and unorganized capital market; Rural savings and capital formation; Characteristics and sources of rural credit — Institutional and non-institutional; Reorganization of rural credit — cooperatives, commercial banks, regional rural banks; Role of NABARD.

Module 8: Cooperation in India

Cooperative movement; Genesis and growth of cooperative sector; Agricultural cooperation in India; Problems and prospects of cooperative institutions.

Module 9: Agricultural Prices

Marketing and state policy; Agricultural markets and marketing efficiency — Marketing functions and costs; Market structure and imperfections; Regulated markets; Marketed and marketable surplus; Behaviour of agricultural prices — Cobweb model; Price and income stability; State policy with respect to agricultural marketing; Warehousing; Prices; Taxation and crop insurance; Terms of trade between agricultural and non-agricultural prices; Need for state intervention; Objectives of agricultural price policy — Instruments and evaluation; Food security in India and public distribution system.

Module 10: Agricultural Growth in India

Recent trends in agricultural growth in India; Inter-regional variations in growth of output and productivity; Cropping pattern shifts; Supply of inputs — Irrigation, power, seed and fertilizers; Pricing of inputs and role of subsidies; Distribution of gains from technological change; Role of Public investment and capital formation in Indian agriculture; Strategy of agricultural development and technological progress; Sustainable agriculture — indigenous practices; Bio-technological practices and growth potential.

Module 11: Agriculture and External Sector

International trade in agricultural commodities; Commodity agreements — Role of World Trade Organization; Issues in liberalization of domestic and international trade in agriculture — Nature

and features of agri-business; Role of MNCs; Globalization of Indian economy and problems and prospects of Indian agriculture; Impact of World Trade Organisation on Indian agriculture

BASIC READING LIST

- Bhaduri, A. (1984), The Economic Structure of Backward Agriculture, Macmillan, Delhi.
- Bilgrami, S.A.R. (1996), Agricultural Economics, Himalaya Publishing House, Delhi.
- Dantwala, M.L. et.al (1991), Indian Agricultural Development Since Independence, Oxford & IBH, New Delhi.
- Government of India (1976), Report of the National Commission on Agriculture, New Delhi.
- Government of India, Economic Survey (Annual), New Delhi.
- Gulati, A. and T. Kelly (1999), Trade Liberalisation and Indian Agriculture, Oxford University Press, New Delhi.
- Joshi, P.C. (1975), Land Reforms in India: Trends and Prospects, Allied Publishers, Bombay.
- Kahlon, A.S. and Tyagi D.S. (1983), Agriculture Price Policy in India, Allied Publishers, New Delhi.
- Rao, C.H. Hanumantha (1975), Agricultural Growth, Rural Poverty and Environmental Degradation in India, Oxford University Press, New Delhi.
- Reserve Bank of India, Report on Currency and Finance (Annual), Mumbai.
- Rudra, A. (1982), Indian Agricultural Economics : Myths and Reality, Allied Publishers, New Delhi.
- Saini, G.R. (1979), Farm Size, Resource Use Efficiency and Income Distribution, Allied Publishers, New Delhi.

ADDITIONAL READING LIST**Module 1**

- Bardhan, P. (1984), Land, Labour and Rural Poverty, Oxford University Press, New Delhi.
- Chadha, G.K. and A.N. Sharma (1997), Growth, Employment and Poverty: Change and Continuity in Rural India, Vikas Publishing, New Delhi.
- Chakravarty, S. (1987), Development Planning: The Indian Experience, Oxford University Press, New Delhi.
- Chaudhary, P. (1972), Readings in Indian Agricultural Development, George Allen & Unwin, London.
- Chelliah, Raja J. and R. Sudarshan (1999), Income, Poverty and Beyond : Human Development in India, Social Science Press, New Delhi.
- Dantwala, M.L. (1996), Dilemmas of Growth : The Indian Experience, Sage Publications, New Delhi.
- Ghatak, S. and K. Ingerscent (1984), Agriculture and Economic Development, Selectbooks, New Delhi.
- Government of India, Five Year Plans, New Delhi.
- Meier, G.M. (1995), Leading Issues in Economic Development, Oxford University Press, New Delhi.
- Raj, K.N. et.al (1988), Essays in the Commercialization of Indian Agriculture, Oxford University Press, New Delhi.
- Thamarajakshi, R. (1994), Intersectoral Relationship in a Developing Economy. Academic Foundation, Delhi.

Module 2

- Papola, T.S. (1982), Rural Industrialisation in India, Himalaya Publishing House, Bombay.
- Soni, R.N. (1995), Leading Issues in Agricultural Economics, Arihant Press, Jalandhar.

Module 3

- Wanmali S. and C. Ramasamy (Eds.) (1995), Developing Rural Infrastructure, Macmillan, New Delhi.

Module 4

- Bhardwaj, K. (1974), Production Conditions in Indian Agriculture, Cambridge University Press, Cambridge.
- Brahmananda, P.R. and V.R. Panchumukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Chakravarty, S. (1987), Development Planning : The Indian Experience, Oxford University Press, New Delhi.
- Dantwala, M.L. (1996), Dilemmas of Growth : The Indian Experience, Sage Publications, New Delhi.
- Desai, G. and A. Vaidyanathan (Eds.) (1995), Strategic Issues in Future Growth of Fertiliser Use in India, Macmillan, New Delhi.
- Ghatak, S. and K. Ingerscent (1984), Agriculture and Economic Development. Selectbooks, New Delhi.
- Raj, K.N. et.al. (1988), Essays in the Commercialisation of Indian Agriculture, Oxford University Press, New Delhi.
- Soni, R.N. (1995), Leading Issues in Agricultural Economics, Arihant Press, Jalandhar.

Module 5

- Appu, P.S. (1996), Land Reforms in India, Vikas, New Delhi.
- Bardhan, P. (1984), Land, Labour and Rural Poverty, Oxford University Press, New Delhi.
- Brahmananda, P.R., B.K. Narayan and A. Kalappa (Ed.) (1987), Dimensions of Rural Development in India, Himalaya Publishing House, New Delhi.
- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Chadha, G.K. and A.N. Sharma (1997), Growth, Employment and Poverty : Change and Continuity in Rural India, Vikas Publishing House, New Delhi.
- Chakravarty, S. (1987), Development Planning: The Indian Experience, Oxford University Press, New Delhi.
- Chaudhary, P. (1972), Readings in Indian Agricultural Development, George Allen & Unwin, London.
- Dantwala, M.L. (1996), Dilemmas of Growth: The Indian Experience, Sage Publications, New Delhi.
- Ghatak, S. and K. Ingerscent (1984), Agriculture and Economic Development, Selectbooks, New Delhi.
- Haque, T. and A.S. Sirohi (1986), Agrarian Reforms and Institutional Changes in India, Concept Publishing Company, Delhi.
- Khusro, A.M. (1973), The Economics of Land Reforms and Farm Size in India, Macmillan, New Delhi.
- Soni, R.N. (1995), Leading Issues in Agricultural Economics, Arihant Press, Jalandhar.

- Uppal, J.S. (Ed.) (1987), India's Economic Problems — An Analytical Approach, Tata McGraw Hill, New Delhi.

Module 6

- Raghvan and L. Sarkar (Eds.) (1996), Poverty and Employment, New Age, New Delhi.
- Visaria, P. and R. Basant (1994), Non-Agricultural Employment in India : Trends and Prospects, Sage Publications, New Delhi.

Module 7

- Jodhar N. (Ed.) (1996). Challenges to Indian Banking, Macmillan, New Delhi.
- Reserve Bank of India (1989), Report of the Agricultural Credit Review Committee, Bombay.

Module 8

- Reserve Bank of India (1989), Report of the Agricultural Credit Review Committee, Reserve Bank of India, Bombay.

Module 9

- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Chaudhary, P. (1972), Readings in Indian Agricultural Development, George Allen & Unwin, London.
- Dantwala, M.L. (1996), Dilemmas of Growth : The Indian Experience, Sage Publications, New Delhi.

- Desai, G. and A. Vaidyanathan (Eds.) (1995), Strategic Issues in Future Growth of Fertiliser Use in India, Macmillan, New Delhi.
- Ghatak, S. and K. Ingerscent (1984), Agriculture and Economic Development, Selectbooks, New Delhi.
- Kaur, R. (1975), Agricultural Price Policy in Economic Development, Kalyani Publishers, Delhi.
- Mitra, A. (1977), Terms of Trade and Class Relations, Frank Cass Co. Ltd., London.
- Raj, K.N. et.al. (1988), Essays in the Commercialisation of Indian Agriculture, Oxford University Press, New Delhi.
- Soni, R.N. (1995), Leading Issues in Agricultural Economics, Arihant Press, Jalandhar.
- Subbarao, K. and De Janvry (1986), Agricultural Price Policy and Income Distribution in India, Oxford University Press, New Delhi.
- Vaidyanathan, A. (1995), The Indian Economy : Crisis, Response and Prospects, Orient Longmans, New Delhi.

Module 10

- Bhalla, G.S. (1994), Economic Liberalisation and Indian Agriculture, Institute for Studies in Industrial Development, New Delhi.
- Brahmananda, P.R. and V.R. Panchmukhi (Eds.) (1987), The Development Process of the Indian Economy, Himalaya Publishing House, Bombay.
- Chadha, G.K. and A.N. Sharma (1997), Growth, Employment and Poverty : Change and Continuity in Rural India, Vikas Publishing House, New Delhi.
- Chaudhary, P. (1972), Readings in Indian Agricultural Development, George Allen & Unwin, London.

- Chelliah, Raja J. and R. Sudarshan (1999), Income, Poverty and Beyond : Human Development in India, Social Science Press, New Delhi.
- Dantwala, M.L. (1996), Dilemmas of Growth : The Indian Experience, Sage Publications, New Delhi.
- Desai, G. and A. Vaidyanathan (Eds.) (1995), Strategic Issues in Future Growth of Fertiliser Use in India, Macmillan, New Delhi.
- Dhawan, B.D. (1988), Irrigation in India's Agricultural Development, Sage Publications, New Delhi.
- Raj, K.N. et.al. (1988), Essays in the Commercialisation of Indian Agriculture, Oxford University Press, New Delhi.
- Rao, C.H. Hanumantha (1975), Technological Change and Distribution of Grains from Agriculture, Macmillan, New Delhi.
- Rao, C.H. Hanumantha (1994), Agricultural Growth, Rural Poverty and Environmental Degradation in India, Oxford University Press, New Delhi.
- Uppal, J.S. (Ed.) (1987), India's Economic Problems — An Analytical Approach, Tata McGraw Hill, New Delhi.
- Vaidyanathan, A. (1995), The Indian Economy : Crisis, Response and Prospects, Orient Longmans, New Delhi.

Module 11

- Bhalla, G.S. (1994), Economic Liberalisation and Indian Agriculture, Institute for Studies in Industrial Development, New Delhi.
- Chelliah, Raja J. and R. Sudarshan (1999), Income, Poverty and Beyond : Human Development in India, Social Science Press, New Delhi.

- Dantwala, M.L. (1996), Dilemmas of Growth : The Indian Experience, Sage Publications, New Delhi.
- Desai, G. and A. Vaidyanathan (eds.) (1995), Strategic Issues in Future Growth of Fertiliser Use in India, Macmillan, New Delhi.
- Soni, R.N. (1995), Leading Issues in Agricultural Economics, Arihant Press, Jalandhar.
- Vaidyanathan, A. (1995), The Indian Economy : Crisis, Response and Prospects, Orient Longmans, New Delhi.

**M.A. Optional Paper
Paper-VII
ECONOMICS OF GENDER AND DEVELOPMENT**

PREAMBLE

Gender biases in societal practices and development policies have resulted in persistent gender inequalities. It is increasingly being realized that mitigating such inequalities and enhancing women's capabilities and entitlements are crucial to the overall development of the country. This course "Economics of Gender and Development" would provide students an understanding of the nature of the economic role of women and their contribution to the national economy on the basis of a scientific and non-sexist analysis. The modules incorporated in this course provide an analysis of issues at the theoretical level and also with regard to specificity of issues prevailing in the Indian context.

Module 1: Introduction to Gender Studies

Importance and concepts of women studies — Women in patriarchal and matriarchal societies and structures, patrilineal and matrilineal systems and relevance to present day society in India; Economic basis and functioning of patriarchy in developed and LDCs, particularly India; Gender bias in the theories of value, distribution, and population.

Module 2: Demographic Aspects

Demography of female population: Age structure, mortality rates, and sex ratio — Causes of declining sex ratios and fertility rates in LDCs and particularly India — Theories and measurement of fertility and its control; Women and their access to nutrition, health, education, and social and community resources, and their impact on female mortality and fertility, economic status, and in work participation rate.

Module 3: Women in Decision Making

Factors affecting decision making by women; property rights, access to and control over economic resources, assets; Power of decision making at household, class, community level; Economic status of women and its effect on work-participation rate, income level, health, and education in developing countries and India; Role of kinship in allocating domestic and social resources.

Module 4: Conceptualization of Women's Work

Concept and analysis of women's work: Valuation of productive and unproductive work; visible and invisible work; paid and unpaid work; economically productive and socially productive work — Economic status, private property, and participation of women in pre-industrial and industrial societies — Female contribution to National Income.

Module 5: Women and Labour Markets

Factors affecting female entry in labour market; Supply and demand for female labour in developed and developing countries, particularly India; Studies of female work participation in agriculture, non-agricultural rural activities, informal sector, cottage and small-scale industries, organized industry, and services sector; Wage differentials in female activities; Determinants of wage differentials; gender, education, skill, productivity, efficiency, opportunity; Structures of wages across regions and economic sectors.

Module 6: Women, Technology and Environment

Impact of technological development and modernization on women's work participation in general and in various sectors such as agriculture, non-agriculture rural activities, small and cottage industries and organized industry — Female activities and ecological and environmental concerns: the two way relationship — Role of new technologies for helping women — Provision of information and training for simple harvesting of economic services.

Module 7: Social Security and Social Protection for Women

Social security of women: entitlements, ensuring economic independence and risk coverage, access to credit and insurance markets; Role of voluntary organizations, self help groups in providing social security; Labour market biases and gender discrimination; effectiveness of collective bargaining; Review of legislation for women's entitlements, protection of property rights, social security — Schemes for safety net for women; Need for female labour unions; affirmative action for women and improvement in their economic and social status.

Module 8: Gender Planning, Development Policies and Governance

Gender and development indices; Mainstreaming gender into development policies; Gender-planning techniques; Gender sensitive governance; Paradigm shifts from women's well being to women's empowerment; Democratic decentralization (panchayats) and women's empowerment in India.

BASIC READING LIST

- Boserup E. (1970), Women's Role in Economic Development, George Allen and Unwin, London.
- Desai, N. and M.K. Raj. (Eds.) (1979), Women and Society in India, Research Centre for Women Studies, SNDT University, Bombay.
- Government of India (1974), Towards Equality — Report of the Committee on the Status of Women in India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
- Krishnaraj, M., R.M. Sudarshan and A. Shariff (1999), Gender, Population and Development, Oxford University Press, New Delhi.
- Seth, M. (2000), Women and Development : The Indian Experience, Sage Publications, New Delhi.

- Srinivasan K. and A. Shroff (1998), India : Towards Population and Development Goals, Oxford University Press, New Delhi.
- Venkateswaran, S. (1995), Environment, Development and the Gender Gap, Sage Publications, New Delhi.
- Wazir, R. (2000), The Gender Gap in Basic Education : NGOs as Change Agents, Sage Publications, New Delhi.

ADDITIONAL READING LIST

Module 1

- Kabeer, N. (1994), Reversed Realities : Gender Hierarchies in Development Thought, Kali for Women, New Delhi.
- Kabeer, N. and R. Subrahmanyam (Ed.) (1999), Institutions, Relations and Outcomes : A Framework and Case Studies for Gender-aware Planning, Kali for Women, New Delhi.
- Mies, M. (1986/1998), Patriarchy and Accumulation on a World Scale: Women in the International Division of Labour, Zed books, London.
- Sen, G. and K. Brown (1985/1987), Development, Crises and Alternate Visions, Monthly Review Press, New York.

Module 2

- Agnihotri, S.B. (2000), Sex ratio in Indian Population: A Fresh Exploration, Sage Publications, New Delhi.
- Gulati, S.C. (1998), Fertility in India: An Econometric Analysis of a Metropolis, Sage Publications, New Delhi.

- Gupta, J.A. (2000), New Reproductive Technologies, Women's Health and Autonomy, Indo Dutch Studies on Development Alternatives, Sage Publications, New Delhi.
- Mishra S. (2000), Voluntary Action in Health and Population : The Dynamics of Social Transition, Sage Publications, New Delhi.
- Mitra, A. (1979), Implications of Declining Sex Ratio in India's Population, Allied, New Delhi.
- Srinivasan, K. (1998), Basic Demographic Techniques and Applications, Sage Publications, New Delhi
- Young K., et. al. (Eds.) (1987), Serving Two Masters, Routledge & Kegan Paul, London.

Module 3

- Agarwal, B. (1994), A Field of One's Own : Gender and Land Rights in South Asia, Cambridge University Press, Cambridge.
- Dwyer, D. and J. Bruce (Eds.) (1988), A Home Divided : Women and Income in the Third World, Stanford University Press, Stanford.
- Evans H. and C. Ungerson, (Eds.) (1983), Sexual Divisions, Patterns and Processes, Tavistock, London.
- Kabeer, N. (1994), Reversed Realities: Gender Hierarchies in Development Thought, Kali for Women, New Delhi.
- Redcliff, N. and E. Mingione, (Eds.) (1985), Beyond Employment : Household, Gender and Subsistence, Basil Blackwell, Oxford.
- Sen, A.K. (1990), 'Gender and Cooperative Conflicts' in Tinker (Ed.) Persistent Inequalities : Women and World Development, Oxford University Press, New York.

Module 4

- Amsden, A.H. (Ed.) (1980), The Economics of Women and Work, Penguin, Harmondsworth.
- Engels, F. (1985), The Origin of the Family, Private Property and the State, Progress Publications, Moscow.
- ILO (1978), Women's Participation in the Economic Activity of Asian Countries, ILO, Geneva.
- Jain, D. and N. Banerjee (1985), Tyranny of the Household, Vikas Publishing House, New Delhi.
- Kuhn, A. and A.N. Wolpe (Eds.) (1978), Feminism and Materialism, Routledge and Kegan Paul, London.
- Papola, T.S. and A.N. Sharma (Eds.) (1999), Gender and Employment in India, Vikas Publishing House, New Delhi.

Module 5

- Baud, I.S.A. (1992), Forms of Production and Women's Labour : Gender Aspects of Industrialization in India and Mexico, Sage Publications, New Delhi.
- Custers, P. (1997), Capital Accumulation and Women's Labour in Asian Economies, Vistaar, New Delhi.
- Kalpagam, U. (1994), Labour and Gender: Survival in Urban India, Sage Publications, New Delhi.
- King M. and M.A. Hill (Eds.) (1993), Womens' Education in Developing Countries : Barriers, Benefits and Politics, John Hopkins, Baltimore.
- MHRD, GOI (1987), Shram Shakti : Report of the National Commission on Self-employed Women and Women Workers in the Informal Sector, Ministry of Human Resource Development, New Delhi.

- Papola, T.S. and A.N. Sharma (Eds.) (1999), Gender and Employment in India, Vikas Publishing House, New Delhi.
- Schultz, T.P. (1988), 'Education Investments and Returns' in Chenery, H.B. and T.N. Srinivasan, The Handbook of Development Economies, North Holland, New York.

Module 6

- Agarwal, B. (1986), Cold Hearths and Barren Slopes : The Wood Fuel Crisis in the Third World, Allied Publishers, Delhi.
- Ahmed, I. (Ed.) (1985), Technology and Rural Women : Conceptual and Empirical Issues, George Allen & Unwin, London.
- International Rice Research Institute (1983), Women in Rice Farming Systems, I.R.R.E. Press, Manila.

Module 7

- Agarwal, B. (1994), A Field of One's Own : Gender and Land Rights in South Asia, Cambridge University Press, Cambridge.
- Dantwala, M.L., H. Sethi and P. Visaria (1998), Social Change Through Voluntary Action, Sage Publications, New Delhi.
- Jhabwala, R. and R.K. Subramanya (2000) (Eds.) The Unorganized Sector: Work Security and Social Protection, Sage Publications, New Delhi.

Module 8

- Buvinic M. and M.A. Lycette (1989), 'Women, Poverty and Development in the Third World,' in Lewis J.P. (Ed.) Strengthening the Poor: What Have We Learnt, OECD.

- Carr, M., C. Martha and R. Jhabvala (Eds.) (1997), Speaking Out : Women's Economic Empowerment in South Asia, Vistaar Publications, New Delhi.
- Kabeer, N. and R. Subrahmaniam (Eds.) (1999), Institutions, Relations and Outcomes, Kali for Women, New Delhi.
- Mazumdar, V. (1979), Symbols of Power : Studies on the Political Status of Women in India, Allied, Delhi.
- Narasimhan, S. (1999), Empowering Women : An Alternative Strategy from Rural India, Sage Publications, New Delhi.
- Purushothaman, S. (1998), The Empowerment of Women in India : Grassroots Women's Networks and the State, Sage Publications, New Delhi.

**M.A. Optional Paper
Paper-VIII
FINANCIAL INSTITUTIONS AND MARKETS**

PREAMBLE

The positive and significant role of financial institutions in the process of growth and development has been very well recognized in the literature and indeed has become more important during the last two decades as the financial systems of different countries have become integrated in the process of globalization. India is no exception and has taken far reaching measures since 1991 in this direction. It is, therefore, essential that the student of economics should be well conversant with the theory and practice of different financial institutions and markets to understand and analyse the interconnection between the monetary forces and real forces, their developmental role and limitations in shaping and influencing the monetary and related policies both at the national and international levels.

Module 1: Nature and Role of Financial System

Money and finance — Money and near-money — Financial intermediation and financial intermediaries — The structure of the financial system — Functions of the financial sector — Indicators of financial development — Equilibrium in Financial Markets — Financial System and Economic Development — Criteria to evaluate assets: Risk and financial assets, types of risk, return on assets, Risk — Return trade off — Valuation of Securities.

Module 2: Structure of Interest Rates

Theories of interest rate determination — Level of interest rates — Long period and Short period rates — Term Structure of Interest rates — Spread between lending and deposit rates — Administered interest rates — Appropriate interest rate policy.

Module 3: The Central Bank, Commercial Banks and Monetary Policy

Functions of Central Bank — The aims and objectives of the monetary policy in developed and developing countries — Instruments of monetary policy — Proliferation of banking and non-bank financial intermediaries — Effectiveness of monetary policy — Credit creation and its control; Profitability and efficiency of banks; Development banks — role and functions; Investment banking and merchant banking; Financial sector reforms in India.

Module 4: Non-bank Financial Intermediaries

Definition and types of non-bank financial institutions: Their growth and impact on India's economic development, Measures taken to control their operations.

Module 5: Financial Markets

Role and structure of money market and capital market — Call money market. Treasury bill market, Commercial bill market including commercial paper and certificate of deposits, Discount market — Government securities market — Markets for derivatives: futures and options, and other derivatives: types, uses and pricing of derivatives — Primary and secondary market for securities; SEBI: its impact on the working of capital market in India; IRDA and its role in financial markets.

Module 6: International Financial Markets

Nature, organization and participants — Exchange rates — devaluation, and depreciation — Working of floating exchange rates since 1973 — Risk hedging and futures in exchange rates — International Financial Flows, forms and volume — Rise and fall of Brettonwood Institutions — International Liquidity — Post Maastricht developments — Reforms in International monetary system for developing countries — Lending operation of World Bank and its affiliates — Working of IDA and IFC. The Theory of optimum currency areas — Growth of Regional financial institutions. Asian

Development bank and its lending activities; Asian Development Bank and India. Euro-dollar and Euro-Currency markets: their developmental role and regulation at the International level.

BASIC READING LIST

- Bhole, L.M. (1999), Financial Institutions and Markets, Tata McGraw Hill Company Ltd., New Delhi.
- Bhole, L.M. (2000), Indian Financial System, Chugh Publications, Allahabad.
- Edminster, R.O. (1986), Financial Institutions, Markets and Management, McGraw Hill, New York.
- Goldsmith, R.W. (1969), Financial Structure and Development, Yale, London.
- Hanson, J.A. and S. Kathuria (Eds.) (1999), India : A Financial Sector for the Twenty-first Century, Oxford University Press, New Delhi.
- Harker, P.T. and S.A. Zenios (2000) (Ed.), Performance of Financial Institutions, Cambridge University Press, Cambridge.
- Johnson, H.J. (1993), Financial Institutions and Markets, McGraw Hill, New York.
- Khan, M.Y. (1996), Indian Financial System, Tata McGraw Hill, New Delhi.
- Machiraju, M.R. (1999), Indian Financial Systems, Vikas Publishing House, New Delhi.
- Ohlson, J.A. (1987), The Theory of Financial Markets and Institution, North Holland, Amsterdam.
- Prasad, K.N. (2001), Development of India's Financial System, Sarup & Sons, New Delhi.
- Robinson, R.I. and D. Wrightman (1981), Financial Markets, McGraw Hill, London.
- Smith, P.F. (1978), Money and Financial Intermediation : The Theory and Structure of Financial System, Prentice Hall, Englewood-Cliffs, New Jersey.

ADDITIONAL READING LIST**Module 1**

- Bishop, P. and D. Dixon (1992), Foreign Exchange Handbook, McGraw Hill, New York.
- Chandra, P. (1997), Financial Markets, (4th Edition), Tata McGraw Hill, New Delhi.
- Farrell, J.L. (1997), Portfolio Management, (2nd Edition), McGraw Hill, New York.
- Machiraju, H.R. (1997), International Financial Markets in India, Wheeler Publishing, Allahabad.
- Shaw, E.S. (1983), Financial Deepening in Economic Development, Oxford University Press, London.

Module 2

- Fenstermaker, J.V. (1969), Readings in Financial Markets and Institutions, Appleton, New York.
- Shaw, E.S. (1983), Financial Deepening in Economic Development, Oxford University Press, London.
- Smith, P.F. (1978), Money and Financial Intermediation : The Theory and Structure of Financial System, Prentice Hall, Englewood-Cliffs, New Jersey.

Module 3

- Chandler L.V., and S.M. Goldfeld (1977), The Economics of Money and Banking, Harper & Row, New York.
- Gupta, S.B. (1983), Monetary Economics, S. Chand & Company, New Delhi.
- Rangaranjan, C. (1999), Indian Economics : Essays on Money and Finance, UBS Publication, New Delhi.

- RBI (1983), Functions and Working of RBI.
- Sayers, R.S. (1967), Modern Banking, Oxford University Press, New Delhi.
- Verma, J.S. (1989), A Manual of Merchant Banking, Bharat Law House, New Delhi.

Module 4

- Bhatt, R.S. (1996), Unit Trust of India and Mutual Funds : A Study, UTI Institute of Capital Markets, Mumbai.
- Sahadevan, K.G. and M.T. Thiripalraju (1997), Mutual Funds, Prentice Hall of India, New Delhi.

Module 5

- Fisher, G.E. and R.J. Jordon (1992), Security Analysis and Portfolio Management, Eastern Economy Edition, New Delhi.
- Goss, B.A. and B.S. Yamey (1978), The Economics of Futures Trading, Macmillan, London.
- R.B.I. (1985), Report of The Committee to Review the Working of the Monetary system (Chakravarty Committee), Bombay.
- Weller P. (1992), The Theory of Future Markets, Blackwell, Oxford.
- Gupta, L.C. (Ed.) (1999), India's Financial Markets and Institutions, Society for Capital Research and Development, Delhi.

Module 6

- Brahmananda, P.R. (1982), IMF Loan and India's Economic Future, Himalaya Publishing House, Bombay.
- Chamberlain, G. (1981), Trading in Options, Woodhed-Faulker, Cambridge.
- Crocker, A. (1982), International Money: Issues and Analysis, The English Language Book Society, Nelson, London.

- Kindleberger, C.P. (1996), A History of Financial Crisis, Manias, Panics and Crashes, John Wiley & Sons, New York.
- Mackinnon, R.J. (1979), Money in International Exchange, Oxford University Press, Oxford.
- Niehans, J. (1984), International Monetary Economics, John Hopkins University Press, New York.
- R.B.I. (1995), Report of the Working Group on Foreign Exchange Market in India, (Sodhani Group), Mumbai.
- Redseth, A. (2000), Open Economy Macroeconomics, Cambridge University Press, Cambridge.
- Yeager, L.B. (1976), International Monetary Relations : Theory, History and Policy, Harper and Row, New York.

**M.A. Optional Paper
Paper-IX
ECONOMICS OF INFRASTRUCTURE**

PREAMBLE

The important role infrastructure plays in a country's development need not be reiterated. In case of developing countries, lack of adequate infrastructure has been held as a major obstacle to growth. Of the various categories of infrastructure, the category of social overhead capital has gained particular prominence. The contents of the paper 'Economics of Infrastructure' exposes the student wholly to issues involved in development of infrastructure in developing countries like India.

Module 1: Introduction

Infrastructure and economic development — Infrastructure as a public good; Social and physical infrastructure; Special characteristics of public utilities. The peak-load, Off-Load Problem, Dual Principle Controversy; Economies of scale of Joint supply; Marginal Cost Pricing vs. other methods of pricing in public utilities; Cross-subsidization — free prices, equity and efficiency.

Module 2: Transport Economics

The structure of Transport Costs and Location of Economic Activities. Demand for Transport. Models of Freight and Passenger Demand. Model Choice; Cost Functions in the Transport Sector. Principle of Pricing. Special Problems of Individuals Modes of Transport; Inter-modal condition in the Indian Situation.

Module 3: Communications

Rate-making in Telephone Utilities. Principles of Decreasing Costs in Telephone Industry. Characteristics of Postal Services. Criteria for Fixation of Postal Rates. Measurement of Standards of Service in Telephone and Postal Utilities.

Module 4: Energy Economics

Primacy of Energy in the Process of Economic Development. Factors Determining Demand for Energy; Effects of Energy Shortages. Energy Conservation. Renewable and Non-conventional Sources of Energy. Energy Modelling. The Search for an Optimal Energy Policy in the Indian Context.

Module 5: Electricity, Gas and Water Supply

Bulk Supply and Pricing of Electricity. The Relative Economics of Thermal, Hydel and Nuclear Power Plants. The Case for a National Power Grid. Financing Water Utilities. Urban and Rural Water Supply. The Exploitation of Natural Gas. Pricing Problem.

Module 6: Social Infrastructure

Organization and Financing of Supply of Social Services. Private vs. Public Sector Financing; Recent debate about the fixation of prices of social services. Development of social services in the successive Indian Plans.

Module 7: Education and Health

Education and Economic Growth. Approaches to Educational Planning. Social Demand. Rate of Return and Manpower Balance Approaches. The Case for Universal, Free, Primary Education; Structure of higher education and problems of its financing in India; Human Resources and Human Capital Development. The issues in education policy; Health dimensions of development; Determinants of Health — poverty, malnutrition, illiteracy and lack of information; Economic dimensions of health care — Demand and supply of health care; Financing of health care and resource constraints; Inequalities in health — class and gender perspectives; Institutional issues in health care delivery.

BASIC READING LIST

- Crew, M.A. and P.R. Kleindorfer (1979), Public Utility Economics, Macmillan, London.
- Indian Council of Social Sciences Research (ICSSR) (1976), Economics of Infrastructure, Vol. VI, New Delhi.
- National Council of Applied Economic Research (NCAER) (1996), India Infrastructure Report : Policy Implications for Growth and Welfare, NCAER, New Delhi.
- Parikh, K.S. (Ed.) (1997), India Development Report 1997, Oxford, New Delhi.
- Parikh, K.S. (Ed.) (1999), India Development Report — 1999-2000, Oxford, New Delhi.
- Turvey, R. (Ed.) (1968), Public Enterprises, Penguin, Harmondsworth.

ADDITIONAL READING LIST**Module 1**

- Nelson, J.R. (1964), Marginal Cost Pricing in Practice, Prentice-Hall, Englewood-Cliff.
- Phillips, A. and O.E. Williamson (Eds.) (1967), Prices : Issues in Theory, Practice and Public Policy, University of Pennsylvania Press, Philadelphia.

Module 2

- Kneafsey, J.T. (1975), Transportation Economic Analysis, Lexington, Torouts.
- Munty, D. (Ed.) (1968), Transport : Selected Readings, Penguin, Harmondsworth.
- Norton, H.S. (1971), Modern Transport Economics, C.E. Merrill, London.

Module 3

- Fariss, M.T. and R. Sampson (1975), Public Utilities, Houghton Mifflin, Boston.
- Garfield, P.J. and W. Lovjoy (1964), Public Utility Economics, Prentice-Hall, Englewood Cliffs.
- Government of India (1968), Interim Report of P&T Enquiry Committee, Government of India, New Delhi.
- Jha, R., M.N. Murty and S. Paul (1990), On Fixing Prices for Postal Services in India, National Institute of Public Finance and Policy, New Delhi.

Module 4

- Aronofsky, J., A. Rao and M. Shakeen (Eds.) Energy Policy, North Holland, Amsterdam.
- Centre for Monitoring Indian Economy (1996), India : Energy Sector, CMIE, Mumbai.
- Government of India (1980), Report of the Committee on Power (Rajadhyaksha Committee), New Delhi.
- McCrakis, M.S. (Ed.) (1974), Energy : Demand Conservation and Institution Problems, Macmillan, London.
- Nordhaus, W.D. (Ed.) (1974), International Studies of the Demand for Energy, North Holland, Amsterdam.
- Pachauri, R.K. (Ed.) (1980), Energy Policy for India, Macmillan Co. of India, New Delhi.
- Parikh, J. (Ed.) (1997), Energy Models for 2000 and Beyond, Tata McGraw-Hill, New Delhi.
- Tata Energy Research Institute (1995), Environmental Considerations and Options in Managing India's Long-term Energy Strategy, Mumbai.

Module 5

- Eckstein, O. (1958), Water Resource Development, Harvard University Press, Cambridge.
- Parikh, K.S. (Ed.) (1997), Indian Development Report 1997, Oxford, New Delhi.
- Parikh, K.S. (Ed.) (1999), India Development Report, 1999-2000, Oxford, New Delhi.
- Turvey, R. and D. Anderson (1977), Electricity Economics, John Hopkins University Press, Baltimore.

Module 6

- Goyal, S.K. (Ed.) (1985), Public Enterprises, Indian Institute of Public Administration, New Delhi.
- Naik, J.P. (1975), Equality, Quality and Quantity, Allied Publishers, Bombay.

Module 7

- Becker, G.S. (1974), Human Capital (2nd Edition), National Bureau of Economic Research, New York.
- Baru, R.V. (1998), Private Health Care in India : Social Characteristics and Trends, Sage Publications, New Delhi.
- Berman, P. and M.E. Khan (1993), Paying for India's Health Care, Sage Publications, New Delhi.
- McMohan, W.W. (1999), Education and Development : Measuring the Social Benefits, Oxford University Press, Oxford.
- Padmanabhan, C.B. (1984), Financial Management in Education, Select Books, New Delhi.
- Panchamukhi, P.R. (1980), Economics of Health : A Trend Report in ICSSR, A Survey of Research in Economics, Vol. VI, Infrastructure, Allied, Delhi.

- Tilak, J.B.G. (1994), Education for Development in Asia, Sage Publications, New Delhi.
- Vaizey, J. (1962), Economics of Education, Faber and Faber, London.
- Woodhall, M. (1992), Cost Benefit Analysis in Educational Planning, UNESCO, Paris.
- World Bank (1993), The World Development Report, 1993 : Investing in Health, Oxford University Press, New York.

**M.A. Optional Paper
Paper-X
COMPUTER APPLICATION IN ECONOMIC ANALYSIS**

PREAMBLE

The direction towards the knowledge society shall be resting on a healthy economics and proper use of Information Technology. Economics being an empirical science, computers have emerged as the pivotal instruments of economic analysis, research and forecasting. Therefore, the future economists must be equipped with skills and tools based on computers, which this course shall provide to them. This will not only enhance their employability but also prepare them for the challenges of the future.

Module 1: Introduction to Computers and Peripherals

Basic components of computer — CPU, input-output devices, keyboard, mouse and scanner, video display, printers and plotters, data storage and retrieval, hard disk, floppy disk and CD ROM; Types of computers and their applications; Computer networking and resource sharing, hardware, software and firmware, examples and techniques in programming languages like C, C++, Visual, Basic and Java

Module 2: Data Processing, Techniques and Algorithms

Concept of data, record and file; Types of data and data structures, data analysis; File handling and operations like opening, appending and cascading, closing and attribute control; Data storage and retrieval; Data operations; Algorithms like sorting, merging, joining and bifurcation; Database concepts and operation on database; DBMS and RDBMS.

Module 3: Statistical Processing Techniques and Methods

Series, groups, tables, graphs and objects; Time and frequency series, regression methods and techniques; Regression analysis; Data validation; Trends and cyclicity forecasting; System modelling

and description; System equation; Specification; Error and correction strategies, Statistical modelling and descriptive statistics; Distribution functions, Regression statistics,

Module 4: IT Application to Finance

On line banking; ATM's Electronic stock exchange; Electronic trading; Data sharing and decimation; Electronic transaction; Document delivery; Authentication and validation transaction processing.

Module 5: IT Application to Commerce

Electronic trading and marketing; On line shopping and malls, B2B, B2C, C2B and G2B models and their applications; Document and transaction security and digital signature; Integrated transaction on mobile platforms.

BASIC READING LIST

- Rajasekaran, S. (1986), Numerical Methods in Science and Engineering, A.H. Wheeler, Allahabad.
- Sanders, D.H. (1988), Computers Today, McGraw Hill (3rd Edition), New York.
- Sinha, P.K. (1992), Computer Fundamentals, BPB Publications, New Delhi.

ADDITIONAL READING LIST

Module 1

- Rajaraman, V. (1996), Fundamentals of Computers, Prentice Hall of India, New Delhi.

Module 2

- Lipschultz, M.M. and S. Lipschultz (1982), Theory and Problems of Data Processing, Schum's Outline Series, McGraw Hill, New York.
- Schildt, H. (1987), C Made Easy, McGraw Hill Co., New York.

Module 3

- Levin, R.I. and C.A. Kirkpatrick (1975), Quantitative Approaches to Management (3rd Edition), McGraw Hill.
- Mirsky, L. (1955), Introduction to Linear Algebra, Oxford University Press.

Modules 4 and 5

- Intrilligator, M.D. (1978), Econometric Models, Techniques and Applications, Prentice Hall, Englewood Cliffs, NJ.
- Wood, M.B. (1983), Introducing Computer Security, Broadman Associates, Delhi.

**M.A. Optional Paper
Paper-XI
ECONOMICS AND LAW**

PREAMBLE

In order to understand the basic tools and methods of economic analysis both at the micro and macro levels, it is imperative to understand the basic provisions of law relating to consumer activities, business organizations, environment, custom duties, public sector undertakings, direct foreign investment and the law relating to international organizations and vice versa. However, economists have often taken for granted the various legal provisions which affect the economic behaviour which is not true. In order to meet this requirement, this course is essential and has been designed in a way that the students of economics would be able to comprehend the basic economic issues affecting the economy along with the related legal provisions. This would enable the economists to frame their models that are closer to reality, besides making them understand the consequences of legal rules, primarily as an exercise in applied microeconomics, macroeconomics, industrial and international economics.

Module 1: Introduction

Economic analysis of law — Introduction to legal reasoning, Efficiency; Markets and efficiency; Market failure; Coase theorem and related ideas, welfare economics; Compensation principles; Social welfare function; Maximization problem; Nature of economic reasoning; Economic approach to law — History and criticism.

Module 2: An Introduction to Law and Legal Institutions

The Civil Law and the Common Law Traditions; The institutions of the federal and State Court systems; The nature of legal dispute, how legal rules evolve.

Module 3: Law Relating to Consumer Activities

Bargain theory; Economic role of contract; Economic theory of contract; Remedies as incentives, formation, defences and performance excuses; Duress; Bargaining power and unconscious ability; Defining tort law, economics of tort liability; Tort liability and economic models; Economics of accidents, fault, victim; fault and strict liability; Function of damages; Consumer protection; Consumer courts.

Module 4: Law of Business Organizations

Structure of firm — Kinds, Corporations, Corporate vest, Capital, Shares, Debentures, Insiders' trading, Antitrust, RBI, IRDA, MRTTP, Role of SEBI, Economics of mergers, Amalgamations and takeovers.

Module 5: Economic Theory of Crime and Punishment

The traditional theory of criminal law; Economic theory of crime and punishment; Does punishment deter crime? Efficient punishment; Efficacy of capital sentence; Addictive drugs and crime; Plea bargaining; Reforms of criminal procedure and Futility Thesis; Law relating to economic offences, corruption and human rights.

Module 6: Macroeconomics and Law

Law and distribution of income and wealth; Inequality; Contract theory of Distributive justice; Economic and social costs of poverty; Wealth distribution by Liability Rules; Taxation and efficiency; Personal and corporate taxation; Progressive principle; Economics of federalism; Freedom of Inter-state trade and commerce; National and global environmental problems and international environmental agreements — their legal and economic implications; Economics of social sector, disinvestment in PSUs.

Module 7: International Aspects

GATT/WTO — TRIPS and TRIMS; Export-import policy; Custom duties; MNCs and Direct foreign investment; FEMA.

BASIC READING LIST

- Bouckaert, B. and G. De Geest (Ed.) (1999), Encyclopaedia of Law and Economics, (Volume I to V), Edward Elgar Publishing Ltd., U.K.
- Cooter, R.D. and T.S. Ulen, (2000), Law and Economics, (3rd Edition), Addison Wesley, New York.
- Dan-Schmidt, K.G. and T.S. Ulen (Ed.) (2000), Law and Economic Anthology, Addison Wesley, New York.
- Newman, P. (Ed.) (1998), The New Palgrave Dictionary of Economics and Law, Stockton Press, New York.
- Oliver, J.M. (1979), Law and Economics, George Allen and Unwin, London.
- Posner, R.A. (1998), Economic Analysis of Law, (5th Edition), Little Brown, Boston.
- Posner, R.A. and F. Parisi (Eds.) (1997), Law and Economics, Edward Elgar Publishing Ltd., U.K.
- Massey, I.P. (1995), Administrative Law, Eastern Book Company, Lucknow.
- Indian Law Institute, Annual Survey of Indian Law, Indian Law Institute, New Delhi.

ADDITIONAL READING LIST**Module 1**

- Burrows, P. and C.G. Veljanovski (Eds.) (1981), The Economic Approach to Law, Butterworths, London.

- Coase, R.H. (1993), 'Law and Economics,' Journal of Law and Economics, Vol. 36, Chicago.
- Coase, R.H. (1960), 'The Problem of Social Cost,' Journal of Law and Economics, Vol. 3, Chicago.
- Posner, R.A. (1998), 'Values and Consequences : An Introduction to the Economic Analysis of Law,' Chicago Law and Economics Working Paper.
- Simpson, A.W.B. (1996), 'Coase V. Pigeon Reexamined,' Journal of Legal Studies, Vol. 25.
- Samuels, W.J. (1971), 'Interrelations Between Legal and Economic Process,' Journal of Law and Economics, Vol. 14, Chicago.
- Zerbe, R.O. (2000), Economic Efficiency in Law and Economics, Edward Elgar Publishing Co., U.K.

Module 2

- Jain, M.P. (1990), Outlines of Indian Legal History, (5th Edition), N.M. Tripathi (P) Ltd., Bombay.
- Spitzer, M. and E. Hoffman (1999), 'A Reply to Consumption Theory, Production and Ideology in the Coase Theory,' S. California Law Review, Vol. 53.

Module 3

- Agarwal, V.K. (2000), Bharat's Consumer Protection (Law and Practice), (4th Edition), B.L.H. Publishers Distributors Pvt. Ltd., New Delhi.
- Ayres, I. And R. Gevtner (1989), 'Filling Gaps in Incomplete Contracts : An Economic Theory of Default Rules,' Yale Law Journal, Vol. 99.
- Friedman, D. (1989), 'The Efficient Breach Fallacy,' Journal of Legal Studies, Vol. 18.

- Kaplow, L. and S. Shavell (1996), 'Property Rules versus Liability Rules : An Economic Analysis,' Harvard Law Review, Vol. 109.
- Lando, H. (1997), 'An Attempt to Incorporate Fairness into an Economic Model of Tort Law,' International Review of Law and Economics, Vol. 17.
- Polinsky, M.A. and S. Shavell (1998), Punitive Damages: An Economic Analysis, Harvard Law Review, Vol. 111.
- Posner, R.A. (1977), 'Gratuitous Promises in Economics and Law,' Journal of Legal Studies, Vol. 6.
- Renner, S. (1999), Inflation and the Enforcement of Contracts, Edward Elgar Publishing Ltd., U.K.
- Schwals, S. (1998), 'A Coasean Experiment on Contract Presumptions,' Journal of Legal Studies, Vol. 27.
- Street, H. (1953), Government Liability : A Comparative Study, Cambridge University Press, Cambridge.
- Verma, G.P. (1993), State Liability in India : Retrospect and Prospect, Deep and Deep Publications, New Delhi.

Module 4

- Apte, P.G. (1998), International Financial Management, (2nd Edition), Tata McGraw Hill Publishing Co. Ltd., New Delhi.
- Ghosh, T.P. (1999), Buy Back of Shares, Taxmann Allied Services Pvt. Ltd., New Delhi.
- Gompers, P. and J. Lerner (1999), 'Conflict of Interest in the Issuance of Public Securities : Evidence from Venture Capital,' Journal of Law and Economics, Vol. 42.

- Horne, J. (1997), Financial Management and Policy, (10th Edition), Prentice Hall of India Pvt. Ltd., New Delhi.
- Nabhi's Manual of SEBI (Vols. I and II), Nabhi Publication, New Delhi.
- Pike, R. and B. Neale (1999), Corporate Finance and Investment : Decisions and Strategies, (2nd Edition), Prentice Hall of India Pvt. Ltd., New Delhi.
- Taxmann's SEBI Manual (2001), Taxmann Allied Services Pvt. Ltd., New Delhi.

Module 5

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**M.A. Optional Paper
Paper-XII
HISTORY OF MODERN ECONOMIC ANALYSIS
(Contribution of Nobel Laureates in Economics)**

PREAMBLE

A critical study of the economic theories of the past and economic ideas of the great economic thinkers of the past is at once challenging and illuminating and enlightening. A historical reconstruction of the ideas of economic thinkers is essential for understanding and appreciating the many controversial questions in the history of economic ideas and development of social thought of which economic thought is only one part — significantly important part.

The subject of history of economic analysis or history of economic thought, as is taught in Universities and colleges, covers the analysis of economic ideas from Mercantilism to Keynesianism. As is well known, the progress of the subject of economics and evolution and development of economic ideas has not come to a stop with Keynesianism. The subject has shown rapid progress since then and is showing further healthy developments in the present also.

The paper “History of Modern Economic Analysis” is an attempt to make the student of economics acquainted with the ideas and works of economists and thinkers who received Nobel Memorial Prize in Economics. The development of ideas by the Nobel Laureates in Economics is breathtaking and covers almost all areas of economic analysis, a relatively new branch.

In a semester or year course it will be, of course, not possible to cover this paper which is divided into eight modules. The University/College concerned will have to choose one or two modules, on the basis of faculty availability and student interest, among others.

Module 1: Theory of Value, General Equilibrium, Game Theory, Welfare

Samuelson, Paul A.

Hicks, John R.

Arrow, Kenneth J.

Debreu, Gerard G.

Allais, Maurice

Coase, Ronald H.

Nash, John F.

Harsanyi, John C.

Selten, Reinhard

Module 2: Statics, Dynamics, Macromodels, Econometrics

Frisch, Ragner

Tinbergen, Jan

Klein, Lawrence R.

Haavelmo, Trygve

Module 3: Macroeconomics, Monetary Economics and Financial Economics

Friedman, Milton

Tobin, James

Modigliani, Franco

Markowitz, Harry M.

Sharpe, William F.

Miller, Merton H.

Scholes, Myron

Merton, Robert C.

Module 4: Economic Development and Economic Growth

Kuznets, Simon

Schultz, Theodore W.

Lewis, Sir W. Arthur

Solow, Robert M.

Module 5: Input-Output Analysis, Programming, Social Accounts, Economic and Social Systems

Leontief, Wassily W.

Kantorovich, Leonid

Koopmans C. Tjalling

Stone, Sir Richard

Hayek, Fredriech

Myrdal, Gunnar

Module 6: International Trade and Capital Movement

Meade, James E.

Ohlin, Bertil

Mundell, Robert A.

Module 7: Quantitative Economic History

North, Douglas C.

Fogel, Robert W.

Module 8: Others

Simon, Herbert A. — Decision-making within Economic organisations

Stigler, George J. — Industrial Economics

Buchanan, James M. — Theory of Public Choice

Backer, Gary S. — Extension of Economic Rationality to sister social sciences

Lucas, Robert J. — Rational Expectations Approach to Macro economics

Vickery, William J. — Asymmetric Information and Auction Theory.

Mirrlees, James — Asymmetric Information and Tax Theory

Sen, Amartya K. — Applied Welfare Economics

READING LIST**Module 1**

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Module 6

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Module 7

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Module 8

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**M.A. Optional Paper
Paper-XIII
WELFARE ECONOMICS**

PREAMBLE

Evaluation of normative significance of economic events and issues forms the framework of welfare economics. Many applied branches of economics such as public finance, cost-benefit analysis, industrial economics and economics of government policy use welfare economic criteria as their foundation. The paper is divided into three modules — Pre-Paretian Welfare Economics, Paretian Welfare Economics and Later Developments.

Module 1: Pre-Paretian Welfare Economics

Benthamite Approach to Aggregate Welfare; Optimum Resource Allocation and Welfare Maximization, Assumption of Uniform Income — Utility Function of Individuals; Question of Income Distribution; Issue of Interpersonal Comparisons of Utility; Marshallian Welfare Economics; Consumer's Surplus; Measurement of Consumer's Surplus — Difficulties involved, Criticism; Principle of Compensating Variation; Hicks's Four Consumer's Surpluses; Concept of Consumer's Surplus; Consumer's Surplus and Tax-Bounty Analysis

Module 2: Paretian Welfare Economics

Pareto optimality — Optimum exchange conditions, The production optimum, The consumption optimum; Concept of contract curve; Top level optimum; Infinite number of non-comparable optima vs. unique social optimum; Compensation criteria — Contributions of Barone, Kaldor and Hicks; The Scitovsky double criterion; Concept of community indifference map, Samuelson's utility possibility curve; Value judgements and welfare economics; Bergson's social welfare function, Arrow's possibility theorem.

Module 3: Some Later Developments

Divergence between private and social costs; Problems of non-market interdependence; Externalities of production and consumption; External economies and diseconomies; Problem of public goods; Pigovian welfare economics; Second-best optima; Marginal cost pricing; Cost-benefit analysis; Interdependent utilities; Attempts to develop dynamic welfare analysis.

BASIC READING LIST

- Arrow, K.J. (1951), Social Choice and Individual Values, Yale University Press, New Haven,
- Baumol, W.J. (1965), Welfare Economics and the Theory of the State (Second Edition), Longmans, London.
- Baumol, W.J. (ed.) (2001), Welfare Economics, Edward Elgar Publishing Ltd. U.K.
- Broadway, R.W. and N. Bruce (1984), Welfare Economics, Basil Blackwell, Oxford.
- Duesenberry, J.S. (1949), Income, Saving and the Theory of Consumer Behaviour, Harvard University Press, Cambridge, Mass.
- Feldman, A.M. (1980), Welfare Economics and Social Choice Theory, Martinus Nijhoff, Boston.
- Graaff J. de V. (1957), Theoretical Welfare Economics, Cambridge University Press, Cambridge.
- Little, I.M.D. (1939), A Critique of Welfare Economics (2nd Edition), Oxford University Press, Oxford.
- Marshall, A. (1946), Principles of Economics, Macmillan, London.
- Myint, H. (1948), Theories of Welfare Economics, Longmans, London.
- Ng Y.K. (1979), Welfare Economics, Macmillan, London.
- Nicholas, B. (Ed.) (2001), Economic Theory and the Welfare State, Edward Elgar Publishing Ltd., U.K.
- Pigou, A.C. (1962), The Economics of Welfare (4th Edition), Macmillan.

- Quirk, J. and R. Saposnik (1968), Introduction to General Equilibrium Theory and Welfare Economics, McGraw Hill, New York.
- Samuelson, P.A. (1947), Foundations of Economic Analysis, Harvard University Press, Cambridge, Mass.

ADDITIONAL READING LIST

Module 1

- Bishop, R.L. (1943), Consumer's Surplus and Cardinal Utility, Quarterly Journal of Economics, Vol. 57.
- Boulding, K.E. (1945), The Concept of Economic Surplus, American Economic Review, Vol. 35.
- Hicks, J.R. (1939), Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory, Clarendon Press, Oxford.
- Hicks, J.R. (1944), The Four Consumers' Surpluses, Review of Economic Studies, Vol. XI.
- Lerner, A.P. (1963), Consumer's Surplus and Micro-Macro, Journal of Political Economy, Vol. 61.

Module 2

- Bator, F.M. (1957), The Simple Analytics of Welfare Maximization, American Economic Review, Vol. 47.
- Bergson, A. (1938), A Reformulation of Certain Aspects of Welfare Maximization, Quarterly Journal of Economics, Vol. 52.
- Hicks, J.R. (1939), The Foundations of Welfare Economics, Economic Journal, Vol. 49.
- Hicks, J.R. (1956), A Revision of Demand Theory, Clarendon Press, Oxford.
- Kaldor, N. (1939), Welfare Propositions in Economics, Economic Journal, Vol. 49.

- Little, I.M.D. (1949), The Foundations of Welfare Economics, Oxford Economic Papers, Vol. 1.
- Mishan, E.J. (1960), A Survey of Welfare Economics, 1939-59, Economic Journal, reprinted in Surveys of Economic Theory, Vol. I AEA and RES, Macmillan, 1965.
- Scitovsky, T. (1942), A Note on Welfare Propositions in Economics, Review of Economic Studies, Vol. IX.

Module 3

- Baumol, W.J. and D. Bradford (1970), Optimal Departures from Marginal Cost Pricing, American Economic Review, Vol. 60.
- Coase, R.H. (1946), The Marginal Cost Controversy, Economica, Vol. 13.
- Coase, R.H. (1947), The Marginal Cost Controversy: Some Further Comments, Economica, Vol. 14.
- Lancaster, K. and Lipsey, R.G. (1957), The General Theory of Second Best, Review of Economic Studies, Vol. XXIV.
- Ruggles, N. (1949), The Welfare Basis of Marginal Cost Pricing Principle, Review of Economic Studies, Vol. XVI.
- Ruggles, N. (1949), Recent Developments in the Theory of Marginal Cost Pricing, Review of Economic Studies, Vol. XVI.

**M.A. Optional Paper
Paper-XIV
ECONOMICS OF INSURANCE**

PREAMBLE

The vital role of insurance in the task of risk-bearing and risk-elimination in the economic affairs has not been appreciated adequately in our country. Given that the element of risk or uncertainty is a universal and fundamental phenomenon in our economic life, the importance of insurance as a means of reducing uncertainty and risk in regard to personal and business activities cannot be overemphasized.

The role of insurance sector in mobilizing a country's saving for channeling them into capital formation and thus contribute to a country's economic development is also documented. There is a wide spread recognition that insurance, particularly life insurance, is a prominent segment of applied economics. Insurance industry is an important constituent of financial services industry in India and is a major investment institution and prominent player in the capital market. However, in our country, study of the subject of insurance has largely remained neglected.

With the opening of the insurance sector for private Indians and foreign players, the interest in the subject has been kindled. This course on Insurance Economics attempts to give a fairly comprehensive view of the subject to the postgraduate students in Economics and pave the way for possible future expansion of the teaching of an important branch of economics.

Module 1: Introduction

Economic security; Human quest for economic security through time; Exposure to losses; Role of insurance; Definition of insurance; Risk pooling and risk transfer; Economic and legal perspectives, Social vs. private insurance; Life vs. non-life insurance; Classification of life, health and general insurance policies.

Module 2: Risk and Risk Management

Fundamentals of uncertainty and risk; Pure risk and speculative risk; Expected utility and decision-making under uncertainty; Expected utility and the demand for insurance; Moral hazard and insurance demand; Concept of risk management; Essentials of risk management; Elements of risk management — Risk assessment; Risk control and risk financing; World wide risk sharing — Concept of reinsurance, Fundamentals of reinsurance, Types of reinsurers; Reinsurance distribution systems, Reinsurance markets in developing countries.

Module 3: Insurance and Economic Development

Risk management and insurance in economic development, Insurance institutions as financial intermediaries; Insurance institutions as investment institutions; Insurance institutions in Indian capital market; Regulations governing investments of insurance institutions in India; IRDA rules in this regard.

Module 4: Essentials of Life and Health Insurance

Fundamentals of life and health insurance; Functions of life and health insurance; Mathematical basis of life insurance; Plans of life insurance; Legal aspects of life insurance; Provisions of policies; Selection and classification of risks; Basics of premium construction; Valuation and distribution of surplus; Individual health insurance; Uses, Types of evaluation; Principles of underwriting of life and health insurance; Group insurance and superannuation (pension) schemes; Set-up and management of insurance companies.

Module 5: Essentials of General Insurance

Definition of general insurance; Types of general insurance; Importance of general insurance; Importance of general insurance in a country's economic development; Concept of short-term risk; Fundamentals of the following concepts — Common law, Equity, Proposal/Accedence, Indemnity, Insurable interest, Contribution subrogation, Representation; Utmost good faith, Material fact, Physical hazard, Moral hazard; Policy endorsements conditions/warranties; Selection of risks;

Inspection of risks; Rating and calculation of premiums; Tariffs and non-tariffs; Marketing of general insurance; Technology development and general insurance.

Module 6: Planning for Wealth Accumulation and Retirement Needs

Wealth accumulation planning; Life cycle planning; Planning for accumulation, objectives; Purchase of insurance and accumulation planning; Investments — Tax-advantaged and tax non-advantaged; Essentials of individual retirement planning; Analysis of retirement; Income needs; Retirement planning strategies; Investing for retirement, Pension plans; Basic principles of pension plans; Pension plans in India; Estate Planning; Process of estate planning; Estate planning tools; Life insurance for estate liquidity.

Module 7: Regulation of Insurance

Regulation of insurance; Purpose of government intervention in markets; Theories of regulation; Insurance regulation in India; Insurance Regulation and Development Authority (IRDA).

BASIC READING LIST

- Bailey, R. (Ed.) (1999), Underwriting in Life and Insurance, LOMA, Atlanta, Ga.
- Bhole, L.M. (1990), The Indian Financial System, Tata McGraw Hill, New Delhi.
- Bickelhaupt, D.L. (1992), General Insurance, Irwin Inc., Burr Ridge, Ill.
- Black, K. Jr. and H.D. Skipper Jr. (2000), Life and Health Insurance, Prentice Hall, Upper Saddle River, New Jersey.
- Finsinger, J. and M.V. Pauly (Eds.) (1986), The Economics of Insurance Regulation : A Cross National Study, Macmillan, London.
- Graves, E.E. and L. Hayes (Eds.) (1994), McGill's Life Insurance, The American College, Blyn Mawr, Pa.

- Head, G.L. and S. Horn II (1991), Essentials of Risk Management, Volume I, Insurance Institute of America, Malvern, Pa.
- Skipper, Jr., H.D. (Ed.) (1998), International Risk and Insurance : An Environmental Managerial Approach, Irwin McGraw Hill, Boston.
- Tacchino, K.B. and D.A. Little (1993), Planning for Retirement Needs, The American College, Bryn Mawr, Pa.

ADDITIONAL READING LIST

Module 1

- Dionne, G. and S.E. Harrington (Eds.) (1997), Foundations of Insurance Economics, Kluwer Academic Publishers, Boston.
- Pteffer, I. And D.R. Klock (1974), Perspectives on Insurance, Prentice Hall Inc., Englewood, Cliffs.
- Yaari. M.E. (1965), 'Uncertain Life Time, Life Insurance and the Theory of Consumer,' Review of Economic Studies, Volume 32.

Module 2

- Brockelt, P.L., R.C. Witt and P.R. Hind (1991), An Overview of Reinsurance and the Reinsurance Markets, Journal of Insurance Regulation, Volume 9, No. 3.
- Elliot, M.W., B.L. Webb, H.N. Anderson and P.R. Kensicki (1995), Principles of Reinsurance, Insurance Institute of America, Malvern, Pa.

- Friedmann, M. and L.J. Savage (1947), The Utility Analysis of Choices Involving Risk, Journal of Political Economy, Vol. 56.
- Ward, G.L., C.C. Lilly III, D.S. Malecki and J.S. Rosenbloom (1984), Personal Risk Management and Insurance, Volume I, American Institute of Property and Liability Underwriters, Malvern, Pa.
- Williams Jr., C.A. M.L. Smith and P.C. Young (1995), Risk Management and Insurance, McGraw Hill, New York.
- Wu, C. and P. Colwell (1988), 'Moral Hazard and Moral Imperative,' Journal of Risk and Insurance, Volume 55, No. 1.

Module 3

- Collier, P. and C. Mayer (1989), Financial Liberalization, Financial Systems and Economic Growth, Oxford Review of Economic Policy, Volume 6, No. 4.
- Outreville, J.F. (1990), The Economic Significance of Insurance Markets in Developing Countries, The Journal of Risk and Insurance, Volume 57, No. 3.
- Skipper, Jr., H.D. (Ed.) (1998), International Risk and Insurance : An Environmental Managerial Approach, Irwin McGraw Hill, Boston.
- United Nations Conference on Trade and Development (1987), The Promotion of Risk Management in Developing Countries, UNCTAD, Geneva.

Module 4

- Black, K. Jr. and H.D. Skipper Jr. (2000), Life and Health Insurance, Prentice Hall, Upper Saddle River, New Jersey.

- Insurance Institute of India, Life Assurance Underwriting, (IC-22), Mumbai.
- Skipper, Jr., H.D. (Ed.) (1998), International Risk and Insurance : An Environmental Managerial Approach, Irwin McGraw Hill, Boston.

Module 5

- Benjamin, B. (1991), General Insurance, Heinemann, London.
- Drofman, M.S. (1994), Risk and Insurance, Prentice Hall, Englewood-Cliffs.
- Insurance Institute of India, General Insurance (IC-34), Mumbai.

Module 6

- Black, K. Jr. and H.D. Skipper Jr. (2000), Life and Health Insurance, Prentice Hall, Upper Saddle River, New Jersey.
- Casner, A.J. (1995), Estate Planning, Little Brown, Boston.
- Government of India (1998), Old Age and Income Security (OASIS) Report (Dave Committee Report), Government of India, New Delhi.
- Ivers, J.I. III and E.T. Johnson (Eds.) (1991), Readings in Wealth Accumulation Planning, The American College, Bryn Mawr, Pa.

Module 7

- Insurance Regulation and Development Authority (2001), IRDA Regulations, New Delhi.
- Klein, R.W. (1995), Insurance Regulation in Transition, Journal of Risk and Insurance, Volume 62, No. 3.

- Meier, K.J. (1988), The Political Economy of Regulation : The Case of Insurance, The State University of New York Press, Albany, N.Y.
- Peltzman, S. (1976), Towards a More General Theory of Regulation, Journal of Law and Economics. Vol. 19, No. 2.
- Stigler, G.J. (1971), The Theory of Economic Regulation, Bell Journal of Economics, Vol. 7.