

**JAI PRAKASH UNIVERSITY
CHAPRA**



REGULATION AND COURSES OF STUDIES

FOR

M.A. (ECONOMICS)

BASED ON SEMESTER SYSTEM

w.e.f. The Session-2012-13

Study Raw.Com

MA Economics Syllabus

Study Raw.Com

The courses leading to the award of M.A. degree in Economics shall be of two years duration consisting of four semesters having 80 (eighty) credits with 1600 marks of 16 papers (100 marks each).

The duration of semester and distribution of semester and distribution of credits and papers will be as follows :-

1. 1st Semester July to December 20 credits 4 papers (100 marks each)
2. 2nd Semester January to June 20 credits 4 papers (100 marks each)
3. 3rd Semester July to December 20 credits 4 papers (100 marks each)
4. 4th Semester January to June 20 credits 4 papers (100 marks each)
4. The M.A. Economics courses shall comprise of :
 - (a) Core Subjects - Compulsory for all : 14 papers of five credits each.
 - (b) Elective Subjects (Specialisation) - Each student has to opt for only one elective out of the list of five options given in the papers in the third semester and the same option shall have to be compulsorily exercised in the fourth semester.
5. The semester-wise break up of the course structure shall be as under.

Semester 1

Core courses :

- Paper 1 : Micro Economic Analysis I - 100 Marks
- Paper 2 : Macro Economic Analysis I - 100 Marks
- Paper 3 : Quantitative Methods - 100 Marks
- Paper 4 : History of Economic Thoughts - 100 Marks

Semester 2

Core Courses :

- Paper 5 : Micro Economic Analysis II - 100 Marks
- Paper 6 : Macro Economic Analysis II - 100 Marks
- Paper 7 : Economics of Growth and Development - 100 Marks
- Paper 8 : Statistics - 100 Marks.

Semester 3

Core Courses :

- Paper 09 : Public Economics - 100 Marks
- Paper 10 : International Economics - 100 Marks
- Paper 11 : Indian Economy since 1991 - 100 Marks

Elective Course

- Paper 12 (A) Labour Economics I - 100 Marks
- (B) Econometrics I - 100 Marks

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- (C) Agricultural Economics I 100 Marks
 - (D) Population Studies I 100 Marks
 - (E) Environmental Economics I - 100 Marks

Semester 4

Core Courses

Paper 13 : Social Sector and Environment - 100 Marks

Paper 14 : Economy of Bihar - 100 Marks

Paper 15 : Research Methods - 100 Marks

Elective Course

Paper 16 : (A) Labour Economics II - 100 Marks

(B) Econometrics II - 100 Marks

(C) Agricultural Economics II - 100 Marks

(D) Population Studies II - 100 Marks

(E) Environmental Economics II - 100 Marks

6. Admission

I. That no candidate who had not passed the B.A. Exam with Honours in Economics in the three year degree course stream and allied subjects shall be admitted to the M.A. Economics Semester system.

II. The academic council of the university shall decide the allied subject.

III. That the degree shall be awarded only to the students who complete a total of eighty credits in a minimum of two years completing on an average twenty credits per semester.

IV. That a student may offer courses equivalent to twenty five percent during 3rd and 4th semesters from any other allied subject than the one which he or she is registered in. In case, a student wishes to take all courses from the parent department, he/she can also do so.

V. That each credit will be equivalent to 26 periods of 50 minutes duration each.

VI. Paper-wise distribution of credits and marks shall be as follow :

Semester Time/SI. No. of Paper	Paper/Care Papers	Marks		Total	No. of Credits
		University Exam	Internal Exam		
Semester I					
Paper 1	Micro Economics I	70	30	100	05
Paper 2	Macro Economics I	70	30	100	05
Paper 3	Quantitative Methods	70	30	100	05
Paper 4	History of Economic Thought	70	30	100	05
Total	4 Papers	280	120	400	20

Semester II

Paper 5	Micro Economics II	70	30	100	05
Paper 6	Macro Economics II	70	30	100	05
Paper 7	Economics of Growth and Development	70	30	100	05
Paper 8	Statistics	70	30	100	05
Total	4 Papers	280	120	400	20

Semester III Core Courses

Paper 9	Public Economics	70	30	100	05
Paper 10	International Economics	70	30	100	05
Paper 11	Indian Economy since 1991	70	30	100	05

Effective Paper / Specialisation

Paper 12 (A)	Labour Economics I	70	30	100	05
Paper 12 (B)	Econometrics I	70	30	100	05
Paper 12 (C)	Agricultural Economics I	70	30	100	05
Paper 12 (D)	Population Studies I	70	30	100	05
Paper 12 (E)	Environmental Economics I	70	30	100	05

Semester IV Core Courses

Paper 13	Social Sector and Environment	70	30	100	05
Paper 14	Economy of Bihar	70	30	100	05
Paper 15	Research Methodology	70	30	100	05

Effective Paper / Specialisation

Paper 16 (A)	Labour Economics II	70	30	100	05
Paper 16 (B)	Econometrics II	70	30	100	05
Paper 16 (C)	Agricultural Economics II	70	30	100	05
Paper 16 (D)	Population Studies II	70	30	100	05
Paper 16 (E)	Environmental Economics II	70	30	100	05

Exam Rules :

7. (I) That each candidate shall be examined in four theory papers each of 100 marks including 30 marks for internal evaluation at each semester. The duration of theory examination/Term end exam shall be of three hours.

- (II) That, there shall be continuous internal evaluation of the student. Learning and performance by the teacher of the Department in each semester. Internal evaluation in all the core and elective courses except for paper 4,8,12 and 16 shall comprise of the following : Seminar : 10 Marks

Group Discussion : 10 Marks

Attendance : 10 Marks

The internal evaluation of paper 4, 8, 12 and 16 shall be based on the performance in the viva-voce of 30 marks to be conducted by the Department.

8. Question Pattern

The question pattern for each End Term Examination shall be as follows :

Sl. No.	Question No.	No. of Questions	Marks per Questions	Answer to be written in
1	2	3	4	5
1	01 (Compulsory)	05	02	50 Words
2	02 to 05	04 (Two to be answered)	10	250 Words
3	06 to 10	05 (Two to be answered)	20	250 Words

9. All other provision made in the University regulation shall remain in application in the manner stated therein.

10. Course-wise / Semester-wise Syllabi :

SEMESTER-I

Paper -I

M I C R O E C O N O M I C A N A L Y S I S - I

Consumer's Behaviour - Utility and Indifference Curve, Consumer's Optimum, Slutsky's Theorem, Compensated Demand Curve; Modern Utility Analysis of Consumer's Choices Under Risk and Uncertainty- The Neumann- Morgenstern Method; Revealed Preference Theory; Recent Developments in Demand Theory- The Pragmatic Approach, The Linear Expenditure System.

Producer's Equilibrium and Production Functions- Homogeneous Production Function, Elasticity of Input Substitution, Homothetic Production Function, Cobb-Douglas, CES and VES Production Functions. Cost Analysis- Theories of cost and related concepts.

Equilibrium of Firm under Monopolistic Competition; Oligopoly- Non -Collusive (Cournot, Sweezy), Collusive (Cartels, Price Leadership); The Marginalist Controversy- Full Cost Pricing Theory (The Hall & Hitch Approach); Limiting Pricing Theory(Bain's Theory); Marginal Theory of Firm(Baumol's Theory of Sales Revenue Maximization).

Reading List-

- ◆ Koutsoyiannis, A: Modern Microeconomics
- ◆ Prasad, A.R.: Working Tools of Microeconomics
- ◆ Jain, T.R.: Microeconomics and Basic Mathematics
- ◆ Henderson, J and R.E.Quandt : Microeconomic Theory- A Mathematical Approach.
- ◆ Baumol, W.J.: Economic Theory and Operational Analysis.
- ◆ Kreps, D. (1990). A Course in Microeconomic Theory. Princeton, N.J.: Princeton University Press.
- ◆ Hal R. Varian(1993), Intermediate Microeconomics, a Modern Approach, Affiliated East-West Press.
- ◆ H.L. Ahuja, Advance Economic Theory.
- ◆ Jhingan, M.L.: Micro- Economic Theory.
- ◆ आहुजा, एच.एल. : उच्चतर अर्थिक सिद्धांत
- ◆ लाल, एस. एन. : व्यक्ति अर्थशास्त्र ।
- ◆ झिंंगन, एम. एल., उच्चतर आर्थिक सिद्धांत।

Paper -II

MACRO ECONOMIC ANALYSIS-I

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.

Keyne's Psychological law of consumption- implication 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 hypothesis.

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.

Reading List-

- ◆ Gupta, S.B.; Monetary Economics
- ◆ Dornbusch, Fisher & Swartz, Macroeconomics, Tata McGraw-Hill Publishing Co.Ltd.
- ◆ Shapiro, Edward, Macroeconomic Analysis.
- ◆ Blanchard, Oliver, Macroeconomics, Pearson Education.
- ◆ Lewis M.K. and P.D. Mizen (2000), Monetary Economics, 1st Edition, Oxford University Press.
- ◆ Levasis, R. and A. Rebman: Macroeconomic: An Introduction to Keynesian and Neo-Classical Controversies.
- ◆ R.D.Gupta, Keynesian and Post Keynesian Economics.
- ◆ S.K. Singh, Monetary Economics- Theory and Policy.
- ◆ Jhingan, M.L.; Macro Economics.
- ◆ सिंगई, जी ॰सी॰ एवं मिश्रा, जे॰ पी॰, समष्टि आर्थिक विश्लेषण ।
- ◆ आहुजा, एच॰ एल॰, समष्टि आर्थिक विश्लेषण ।
- ◆ झिंगन, एम॰ एल॰, समष्टि अर्थशास्त्र ।

Paper -III

QUANTITATIVE METHODS

Concept of Function and types of functions; Rules of differentiation and its implications in Economic Theories; Multivariable functions, Rules of Partial Differentiation and its implications in Economics; Problems of Maxima and Minima in single and multivariable functions; Unconstrained and constrained optimization in economic problems; Problems in Market Equilibrium; Concept and Rules of Integration.

Concept of Determination and Cramer's Rule; Concept of matrix- Linear and quadratic forms, Eigen roots and Eigen vector; Matrix inversion and rank of a matrix.

Logrange Multiplier and Bordered Hessian conditions; Optimization in economics: Consumers' and Producers' equilibrium; Homogeneous and Homothetic functions.

Reading List-

- ◆ Alpha C. Chiang: Fundamental Methods of Mathematical Economics, (McGraw Hill, New Delhi).
- ◆ Edward T. Dowling: Introduction to Mathematical Economics. (Tata McGraw-Hill Publishing Company Ltd).
- ◆ RGD Allen : Mathematical Analysis for Economists (Macmillan India Ltd)
- ◆ J.M. Handerson & R.E. Quant : Micro Economic Theory : A Mathematical Approach (Macgraw Hill, New Delhi)
- ◆ Taro Yamane: Mathematical Analysis for Economist : An Elementary Survey (Prentice Hall of India).
- ◆ Mehta & Madnani; Mathematics For Economists.

Paper -IV

HISTORY OF ECONOMIC THOUGHT

Classical economists- Adam Smith, David Ricardo, T.R. Malthus, Marginal Utility School, Karl Marx, Alfred Marshall, J.M. Keynes, J.R. Hicks, Gunnar Myrdal.

Indian Economic Thinkers- Dada Bhai Naoroji, M. N. Roy, M. K. Gandhi, Jawahar Lal Nehru, Amartya Sen.

Reading List-

- ◆ Gide & Rist - A History of Economic Doctrine.
- ◆ B.N. Ganguli- Indian Economic Thought.
- ◆ Haney, H.L.; History of Economic Thought.
- ◆ Leakachman, R.; History of Economic Thought.
- ◆ Eric Roll; History of Economic Thought.
- ◆ चतुर्वेदी एवं चतुर्वेदी, आर्थिक विचारों का इतिहास ।
- ◆ राय, एल० एम०, बीसवीं शताब्दी के महान आर्थिक विचारक एवं नोबेल पुरस्कार विजेता ।

SEMESTER-II

Paper -V

MICRO ECONOMIC ANALYSIS II

The Theory of General Equilibrium: Problem of Existence, Uniqueness and Stability of General Equilibrium. The Walrasian General Equilibrium Model: $2 \times 2 \times 2$ Graphical General Equilibrium Model.

Theory of distribution under imperfect product and factor markets; Modern theory of Rent & Wages under imperfect competition and collective bargaining, Modern theory of interest, Knight's theory of Profit.

Factor Pricing- Elasticity of Factor Substitution and the Shares of Factors of Production; Euler's Product Exhaustion Theorem.

Macro Theories of distribution- Ricardian, Marxian, Kalecki and Kaldor.

Pegouvian Welfare Economics; The Paretian Optimum; Value Judgement; Social Welfare Function; Compensation Principle.

Reading List-

- ◆ As per Micro Economic Analysis I.

Paper -VI

MACRO ECONOMIC ANALYSIS II

Post Keynesian Theories of Demand for Money- Patinkin and Real Balance Effect; Boumol, Tobin; Friedman and the Modern Quantity Theory.

Financial Intermediation- a mechanistic model of bank deposit determination, RBI approach to money supply; High Powered Money and Money Multiplier.

Monetarist and Structurlist's approaches to inflation, Phillips Curve analysis- short run and long run Phillips Curve.

Business Cycle- Theories of Hicks and Kaldor.

Effectiveness of Monetary and Fiscal Policies in Controlling Fluctuations.
New Classical School- Basic Approach.

Reading List- As per Macro Economic Analysis I.

Paper -VII

ECONOMICS OF GROWTH AND DEVELOPMENT

Economic Growth and development - Factor affecting economic growth.

Human Development Index and other indices of development and quality of life- Food security, education, health and nutrition.

Growth Models: R.M.Solow, Meade, Mrs Joan Robinson; Neo- Keynesian Models of Growth - N. Kaldor, L. pasinetti

Partial theories of growth and development : Dualism - technical, behavioural and social; Ranis and Fei model; dependency theory of development.

Concepts of Commodities, Capabilities, Functionings and Entitlement.

Reading List-

- ◆ A.P.Thirlwall: Growth and Development, OUP.
- ◆ D Ray: Development Economics, OUP.
- ◆ S. Ghatak : Introduction to Development Economics, Routledge.
- ◆ P. Dasgupta : In Inquiry into Well Being and Destitution, OUP.
- ◆ Sen A.K.(ed), Growth Economics.
- ◆ Amartya Sen : Development as Freedom, OUP.
- ◆ Kaushik Basu : Analytical Development Economics, The Less Developed Economy Revisited, OUP.
- ◆ हनीफ, डब्लू ए, आर्थिक विकास के सिद्धांत ।

Paper -VIII STATISTICS

Correlation and Regression Analysis, Rank Correlation Coefficient and their properties, Standard error of estimate, Partial and Multiple Correlation and Regression (application only).

Types of Events- Classical and Empirical Definition of Probability, Laws of Addition and Multiplication, Conditional Probability, Bays Theorem; Concept of Random Variable and its Probability Distribution, Expectation of a Random Variable, Properties of Binomial, Poisson and Normal Distribution.

Simple Random Sampling; Desirable Properties of an Estimator; Statistical Hypothesis- Null and Alternative; Type I and Type II errors; Confidence Intervals; Testing of Hypothesis Based on t, χ^2 and F statistics.

Reading List-

- ◆ Gupta, S.C. and Kapoor, V.K.(2005) : Fundamentals of Mathematical Statistics (New Delhi: Sultan Chand & Sons)
- ◆ Goon, A.M., M.K. Gupta and B. Gupta : Fundamentals of Statistics.
- ◆ Monga, G.S. : Mathematics and Statistics for Economics.
- ◆ Speigal, M.R., Theory and Problems of Statistics.
- ◆ सिंह, एस पी, सांख्यिकी ।

SEMESTER-III

Paper -IX

PUBLIC ECONOMICS

Role of Government in an Economy- The allocation, distribution, and the stabilization functions. Private Goods, Public Goods, and Merit Goods; Market Failure- Imperfections, Decreasing Costs, Externalities.

Public Expenditure- Wagner's Law of Increasing State Activities; Wiseman- Peacock Hypothesis; Pure Theory of public expenditure, Leviathan hypothesis; Criteria for Public Investment, Cost-Benefit Analysis- Project evaluation; Reforms in Expenditure Budgeting : Performance and Programme Budgeting and Zero Base Budgeting.

Taxation- Principle of Taxation: Benefit and Ability to Pay Approach; Indices of Ability to Pay; Incidence of Taxation- Impact, Incidence and Effects of a Tax, Backward and Forward Shifting.

Sources of Public Debt; Debt Through Created Money; Public Borrowing and Price Level; Classical View of Public Debt; Compensatory Aspect of Debt Policy; Burden of Public Debt; Crowding Out of Private Investment and Activity; Principles of Public Debt Management and Repayment.

Reading List-

- ◆ Buchanan J.M., The Public Finance.
- ◆ Houghton J.M., The Public Finance.
- ◆ Mugrave, R.A., The Theory of Public Finance.
- ◆ Musgrave R.A. & P.B. Musgrave, Public Finance in Theory and Practice.
- ◆ Bhargav R.N., The Theory and Working of Union Finance in India.
- ◆ सिंह, एस० के०, लोक वित्त ।
- ◆ त्यागी, बी० पी०, लोक वित्त ।
- ◆ सिंह, एस० के०, विकासशील अर्थव्यवस्थाओं के सन्दर्भ में लोक वित्त ।

Paper -X

INTERNATIONAL ECONOMICS

Theories of International Trade : Heckscher-Ohlin Theory of Trade; Theorem of Factor Price Equalization, The Rybezynsky Thorem; Kravis and Linder Theories of Trade.

Effect of trade on Welfare, Income distribution and growth.

International Technology Transfer and Foreign Trade.

International Factor Mobility and Wage Convergence.

Effects of Tariffs and non Tariffs Barriers. Dumping, Subsidies, and other regulations.

Debate on globalization, Integration of Trade and Diversification of Production.

Balance of Payments: Components, equilibrium and disequilibrium in the balance of payment, the process of adjustment under fixed and flexible exchange rates

International trade and financial institutions - WTO (TRIPS, TRIMS) UNCTAD, IMF, IBRD - Their achievements and failures with special reference to India.

Reading List-

- ◆ Salvatore, Dominick, International Economics.
- ◆ Dennis A., Alfred Field Jr., International Economics, Theory and Policy, McGraw- Hill UK, 2001.
- ◆ Bhagwati, J., International Trade, Selected Readings.
- ◆ Krugman P.R. and M. Obstfeld- International Economics: Theory and Policy.
- ◆ Kindelberger, C.P., International Economics.
- ◆ मिश्रा, जे. पी., अन्तर्राष्ट्रीय अर्थशास्त्र ।

Paper -XI

INDIAN ECONOMY SINCE 1991

India's Macro Economic Policy till 1991: Nehru Mahalanobis Model, Expansion in role of State, Political Economy of India till 1991, Evaluation of Planning, Development Strategy of India till 1991 and its evaluation.

Economic Reforms after 1991: Rationale of Economic Reforms, Political Economy of Reforms and Neo-Liberalism, State vs. Market debate, Components and sequencing of Reforms, Neo-Liberalism in India and Global Capitalism/ Corporate Capitalism, Phase of Neo-Liberalism.

Impact of Economic Reforms on Poverty, Unemployment, Regional as well as Interpersonal Inequality, Impact of Reforms on Agriculture, Industry and Service Sector of Indian Economy.

Institutional structure of Agriculture, Technological Change in agriculture, Pricing of agricultural inputs and outputs, Agricultural finance, marketing and policies for sustainable agriculture.

Evaluation of performance of large scale industries - Iron and Steel, Cotton Textile, Sugar, Cement and Jute Industries; Small Scale and Cottage industries - evaluation of role and performance during re-form period in India.

Progress of trade reforms since 1991 in Indian and evaluation of impact thereof. Globalisation of Indian Economy, WTO and its impact on the different sectors of the Indian Economy.

Reading List-

- ◆ Ahluwalia I.J. and I.M.D. Littele, India's Economic Reforms and Development.
- ◆ Bawa R.S. and P.S. Raikhy, Structural Change in Indian Economy.
- ◆ Datta, R., Second Generation Economic Reforms in India.
- ◆ Jalan B., Indian Economic Policy.
- ◆ Misra & Puri, Indian Economy.
- ◆ Datta & Sundaram, Indian Economy.
- ◆ दत्ता एवं सुन्दरम, भारतीय अर्थव्यवस्था ।
- ◆ मिश्रा एवं पूरी, भारतीय अर्थव्यवस्था ।

SEMESTER-III

Paper -XII
Specialization I
Group - A

LABOUR ECONOMICS - I

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.

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.

Wage Determination :

Classical, neo-classical and bargaining theories of wage determination; Concept of minimum wage, living wage and fair wage in theory and practice; Discrimination in labour market; 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.

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. Effects of Tariffs and non Tariffs Barriers. Dumping, Subsidies, and other regulations.

Reading List-

- ◆ Bhagoliwal, T.N.: Economics of Labour and Social Welfare.
- ◆ Dunlop, J.T. (Ed.): The Theory of Wage Determination.
- ◆ Government of India: Report of the National Commission on Labour.
- ◆ Allen, G.C.: Dynamics of Social Security.
- ◆ Hicks J.R.: The Theory of Wages.
- ◆ Lester, R.A.: Economics of Labour (2nd Edition).
- ◆ भगोलीवाल, टी. एन., श्रम अर्थशास्त्र एवं औद्योगिक सम्बन्ध ।

SEMESTER-III

Paper -XII

Group - B

ECONOMETRICS I

Simple and General Linear Regression Model- Assumption, Estimation (OLS) and Properties of Estimators; Gauss-Markov Theorem; Specification Error; Errors of Measurement; Dummy Variable, Instrumental Variable, Restricted Least Squares.

Generalised Least Square, Grouping of Observations Equations, Heteroscedasticity, Auto Correlation, Multi Co- linearity; Seemingly Unrelated Regression Estimator.

Distributed Lag Model - Koyak Reduction, Partial Adjustment and Adaptive Expectation, Almon's Approach.

Reading List-

- ◆ Koutsoyiannis, A. : Theory of Econometrics(2nd Edition)
- ◆ Baltagi, B.H. : Econometrics.
- ◆ Gujarati, D.N. : Basic Econometrics (2nd Edition).
- ◆ Johnson, J. : Econometrics Method.
- ◆ Dongherty, C. : Introduction to Econometrics.
- ◆ Theil, H.: Introduction to Econometrics.

SEMESTER-III

Paper -XII

Group - C

ENVIRONMENTAL ECONOMICS I

Introduction to Environmental Economics: Historical Perspectives (Classical, Neo Classical, and Modern).

Interface between Economy, Environment and Development; Environment versus development controversy.

Economics of environmental degradation: Population as a market failure, Pigovian Solution, Buchanan's theory, Coase Theorem; Detrimental externality and non-convexities in production; Property rights, collective action.

Economic incentives for environmental protection; pollution taxes, subsidies, government spending, tradable permits, refundable deposits, recycling.

Valuing Environmental goods and services: Need for valuation, the concept of value, Method of environmental valuations.

Theory of sustainable development: Rules of sustainable development and its indicators: The Hartwick-Solow approach, Non-declining natural capital stock approaches, The SMS approach.

Reading List-

- ◆ Baumol, W.J. and W.E. Gates (1988), The Theory of Environmental Policy, Second Edition, Cambridge University Press, Cambridge, 299 pp
- ◆ Bhattacharya, R.N. (ed.) (2001), Environmental Economics: An Indian Perspective, Oxford University Press, New Delhi, 291 pp
- ◆ Common, M. (1988), Environmental and Resource Economics: An Introduction, Longman Group, UK Limited, London, 319 pp
- ◆ Hanley, N., J. Shogren, and B. White (1997), Environmental Economics in Theory and Practice, Macmillan Press, 464 pp.

SEMESTER-III

Paper -XII

Group - D

POPULATION STUDIES I

Theories of Population : - Karl Marx, Optimum Theory

Theory of demographic transition :- Herbert Spencer, Pearl & Reed, Dumont, Leibenstein.

Population Measurement : fertility and Its Measurements: Computation of Measures of Fertility Measures of Reproductivity, Relationship among fertility indicators, Models and Measures of birth intervals., Population Projection- Theory & Methods

Mortality and Its Measurement, Computation of basic and specific mortality indicators.

Measures of Marriage and Divorce: Indicators of Marriage, indicators of divorce.

Life Table: Construction of a life table, Different types of life tables, Use of Survival Ratios to project and reverse survival of populations

Migration and Urbanisation : 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; Urbanisation - Growth and distribution of rural-urban population in developed and developing countries.

Interrelationship between Nutrition, Health, Education. & Productivity

Reading List-

- ◆ United Nations; The Determinant and Consequences of population Trends Vol - I
- ◆ Srinivasan, K.; Basic Demographic Techniques and Applications.
- ◆ Krisharaj, M., R.M.Sudarhan, Gender, Population and Development and A Sharoff, Oxford University Press, New Delhi
- ◆ Bogue, D.J.; Principles of Demography.
- ◆ मिश्रा, जे.पी, जनांकिकी, साहित्य भवन, आगरा ।

SEMESTER-III

Paper -XII

Group - E

AGRICULTURAL ECONOMICS I

Agriculture and Economic Development : Nature and scope of agricultural economics, Role of agriculture in economic development interdependence between agriculture and industry; Models of interaction between agriculture and the rest of the economy, agricultural development and environment.

Agricultural production and productivity : Resource use and efficiency, production function analysis 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 concept, supply response of agricultural crops and aggregate supply; Resource use efficiency in traditional agriculture, Technical change, Land reforms and land policy; Principles of land utilization; Land distribution - structure and trends land tenures and farming systems - Peasant, capitalist collective and state farmings.

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 price; Need for state intervention objectives of agricultural price policy-instruments.

Reading List-

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|----|---------------------|--|
| 1. | S.A.R. Bilgrami | Agricultural Economics |
| 2. | M.L.Dantwala | Indian Agricultural Development Since Independence. |
| 3. | Government of India | Report on the National Commission on Agriculture. |
| 4. | P.C. Joshi | Land Reforms in India : Trends and Prospects |
| 5. | A.Rudra | Indian Agricultural Economics |
| 6. | G.R. Saini | Farms Size, Resource use Efficiency and Income Distribution. |
| 7. | Government of India | Report of the National Commission on Agriculture |
| 8. | A.Bhaduri | The Economic Structure of Backward Agriculture. |

Additional Book List

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| 1. | G.K. Chadha and A.N. Sharma | Growth, Employment and Poverty : Change and Continuity in Rural India. |
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SEMESTER-IV

Paper - XIII

SOCIAL SECTOR & ENVIRONMENT

Economics of education : Role of human capital in economic development, Human v/s physical capital; education as an instrument of economic development, determinants demand for education, measurement of returns therefrom and problems associated therewith. Educational planning in India. Economics of health: Economic dimensions of developing health and healthcare; Health care delivery system in India and need for health insurance. Health policy of the Govt. of India.

Measurement of Environmental Values, Methods based on observed market behavior, Hedonic property values and household production models (travel cost method and household health production function), and Methods based on response to hypothetical markets, contingent valuation methods.

The Theory of Environmental Policy- Pigouvian taxes and subsidies, Coase's bargaining solution and collective action; Monitoring and enforcement of environmental regulation, Environmental institutions and grass root movements; Global environmental externalities and climatic change.

Theories of optimal use of exhaustible and renewable resources; Environment and development trade of and the concept of sustainable development.

Mechanism for environment regulation in India; Environmental laws and their implementation; Policy instruments for controlling water and air pollution and forestry policy.

Reading List-

- ◆ Baumol W.J. and W.E. Oates- The Theory of Environmental Policy.
- ◆ Bromely D.W., Handbook of Environmental Economics.
- ◆ Fisher A.C., Resource and Environmental Economics.
- ◆ Hussen A.M., Principles of Environmental Economics
- ◆ Shankar U., Environmental Economics

Paper -XIV

ECONOMY OF BIHAR

Brief History of Bihar.

Theoretical Perspectives of Under-development and Regional Imbalances with special reference to India & Bihar.

Socio- Economic Perspectives of Bihar since Independence: Pre and Post Bifurcation.

Natural Resources of Bihar: Land, Water and Forest.

Human Resources of Bihar : Education and Health.

Economic Infrastructure of Bihar: Transport and Power.

Poverty and Unemployment in Bihar.

Sectoral Economy of Bihar: Agriculture, Industry and Service Sector.

Flood Control and Water Management.

Reading List-

- ◆ Sharma A.N. & Gupta, Bihar Economy.
- ◆ Ram L.N., Bihar.
- ◆ Ahmad, Enayat, Geography of Bihar.
- ◆ Yadav D.P., Bihar and Jharkhand.
- ◆ Kumar, Sarat and Praveen Jha, Development of Bihar & Jharkhand.
- ◆ Prasad, Jagdish, Bihar: Dynamics of Development.
- ◆ Department of Planning and Development, Govt. of Bihar, Planning Atlas of Bihar, 2010.
- ◆ WFP & IHD, Food Security Atlas of Bihar.
- ◆ Ministry of Finance, Govt. of Bihar, Economic Survey of Bihar.
- ◆ Department of Planning and Development, Govt. of Bihar, Approach to 11th Five Year Plan, Vision for Accelerated Inclusive Growth.

Paper -XV

RESEARCH METHODOLOGY

The Scientific Methods; Western and Indian Approaches, Introduction to Positivist, Interpretive and Critical Theory; Methods in Post Modern Period, empiricism, generalization and prediction.

Formulation of Research Problem : definition of key terms, genesis of problem, aim, objective and hypothesis - formulation and types of hypothesis, value neutrality of hypothesis, power of a hypothesis.

Data Collection and Sampling- Types of Sampling, Determination of Size of Sample, Sampling Procedure, Choice of Sampling Technique.

Analysis and Discussion; Use of Statistical tools and their limitations, Explanation of Result.

Computer and its Application; SPSS and Strata Packages.

Reading List-

- ◆ Kothari R. C., Research Methodology, Methods and Techniques, New Age International Publishers.
- ◆ Cooper D. and Schinder P., Business Research Methods, Tata McGraw Hill.
- ◆ Don E. Ehridge, Research Methodology in Applied Economics : Organizing, Planning and Conducting Research, Jon Wiley, John Wiley and Sons.

SEMESTER-IV

Paper - XIII

SOCIAL SECTOR & ENVIRONMENT

Economics of education : Role of human capital in economic development, Human v/s physical capital; education as an instrument of economic development, determinants demand for education, measurement of returns therefrom and problems associated therewith. Educational planning in India. Economics of health: Economic dimensions of developing health and healthcare; Health care delivery system in India and need for health insurance. Health policy of the Govt. of India.

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- ◆ Fisher A.C., Resource and Environmental Economics.
- ◆ Hussen A.M., Principles of Environmental Economics
- ◆ Shankar U., Environmental Economics

Semester IV

Paper XVI

Group - A

LABOUR ECONOMICS II

INDIAN LABOUR PROBLEMS

Growth of Labour Movement: Growth, Pattern and Structure of Labour Unions in India, -achieve-

ments and failures of Labour unions.

Industrial Relations - Industrial Disputes and Industrial Peace; Causes of Industrial Disputes and their settlement and prevention mechanism; Role of Tripartite machinery; Labour legislation in India; Indian labour laws and practices in relation to International Labour Standards.

State and Social Security of Labour - Concept of Social Assistance and Social Insurance; Review and appraisal of State Policy with respect to Social Security and Labour Welfare in India.

Wages and Employment - concept, types measurement and estimates of unemployment in India. Evolution of Employment policy in five year plans and its evaluation, various schemes to reduce unemployment and underemployment MNREGA. National wage policy, Minimum and fair wages in India, International Labour Organisation and India.

Special Problems of labour Child and Female labours, Agricultural and rural labour; Discrimination and gender bias in treatment of labour; Second National Commission on labour: Globalisation and labour market.

Reading List-

- ◆ Bhagoliwal, T.N. : Economics of Labour and Social Welfare.
- ◆ Dunlop, J.T. (Ed.) : The Theory of Wage Determination.
- ◆ Government of India : Report of the National Commission on Labour.
- ◆ Allen, G.C. : Dynamics of Social Security.
- ◆ Hicks J.R. : The Theory of Wages.
- ◆ Lester, R.A. : Economics of Labour (2nd Edition).
- ◆ भगोलीवाल, टी. एन., श्रम अर्थशास्त्र एवं औद्योगिक सम्बन्ध ।

Semester IV

Paper XVI

Group - B

ECONOMETRICS II

The Simultaneous Equation Bias and Inconsistency. The Identification Problem - Order and Rank Conditions Restrictions on Variances and Co-variances; Methods of Estimation: Recursive System and OLS; Indirect Least Squares (ILS); Two-stage Least Squares, k-class Estimator and Three-Stage Least Squares Method.

Ridge Regression, Random Coefficient Method of Estimation; Pooling of the Time Series and Cross-section Data; Specification and Estimation of Demand Functions - Engel's Law.

Error Correction Mechanism, Causality Test, Granger Test.

Reading List-

- ◆ Koutsoyannis, A. : Theory of Econometrics(2nd Edition)
- ◆ Baltagi, B.H. : Econometrics.
- ◆ Gujarati, D.N. : Basic Econometrics (2nd Edition).
- ◆ Johnston, J. : Econometrics Method.
- ◆ Dongherty, C. : Introduction to Econometrics.
- ◆ Theil, H. : Introduction to Econometrics

Semester IV

Paper XVI

Group - C

ENVIRONMENTAL ECONOMICS II

International environmental policy and global policies : Conventions and treaties, UN effort to protect the environment, Stockholm, Rio, Johannesburg, Agenda21, OECD, Environmental committee Report, Convention on bio-diversity, climatic convention, Kyoto and after.

Mechanism for environment regulation in India; Environmental laws and their implementation; policy instruments for controlling water and air pollution and forest policy, people's participation in the management of common and forest lands, Environmental governance; environmental impact assessment, state pollution control boards and local agencies.

NGOs and environmental protection in India, role of civil society, Macro economic policy and environment, Natural Resources accounting, Green GDP, why environmental accounting? From SNA to IEEA.

Reading List-

- ◆ Baumol, W.J. and W.E. Gates (1988), The Theory of Environmental Policy, Second Edition, Cambridge University Press, Cambridge, 299 pp.
- ◆ Bhattacharya, R.N. (ed.) (2001), Environmental Economics: An Indian Perspective, Oxford University Press, New Delhi, 291 pp
- ◆ Common, M. (1988), Environmental and Resource Economics: An Introduction, Longman Group, UK Limited, London, 319 pp
- ◆ Hanley, N., J. Shogren, and B. White (1997), Environmental Economics in Theory and Practice, Macmilan Press, 464 pp.