

## **M.A. Economics 2 Years Programme**

### **Programme Specific Outcomes**

- PSO1 To impart in depth knowledge to students about economic theory regarding utilization and allocation of resources including labour, natural resources and capital.
- PSO 2 To develop students understanding about how market for goods and services function and how income is generated and distributed.
- PSO3 To give students in depth knowledge into special fields of choice like agricultural economics, industrial economics, financial market, development economics, international trade, urban economics econometrics, mathematical economics etc.
- PSO4 To make students familiar with economic theories and their relevance, econometrics, quantitative techniques and applied research in a wide variety of fields within economics.
- PSO5 Students would know how the economy is influenced by economic policy, technological advances and demographic conditions

### **Department of Economics**

#### **M.A. Economics (Semester I, II, III & IV)**

**(As per Choice Based Credit System w.e.f. the academic year 2016-17)**

The entire course will be of four semesters. In Semester I, there would be five Core courses. In Semester II, there would be five Core Courses. In semester III, there would be two Core course and three Discipline Specific courses. In semester IV, there would be two Core courses and three Discipline Specific courses. Each student will opt for at least one Foundation course (minimum 2 credits) in semester-II. Each student will opt for at least two Open Elective courses, one in 2<sup>nd</sup> & another in 3<sup>rd</sup> semester. Discipline Specific courses will be floated according to the administrative and academic convenience of the Department.

Sem	Paper Code	Nomenclature	Hours/ week L+T+P	Marks			Exami nation Hours	Credits L+T+P
				Int. Mar ks	Sem. Exam	Total		

**1<sup>st</sup> Semester**

16ECO21C1	Micro Economics-I	4+1+0	20	80	100	3 hrs.	4+1+0
16ECO21C2	Macro Economics-I	4+1+0	20	80	100	3 hrs.	4+1+0
16ECO21C3	Economics of Growth and Development-I	4+1+0	20	80	100	3 hrs.	4+1+0
16ECO21C4	Mathematics for Economists-I	4+1+0	20	80	100	3 hrs.	4+1+0
16ECO21C5	Statistical Methods-I	4+1+0	20	80	100	3 hrs.	4+1+0
Credits	C=25	Total Credits: 25					

**2<sup>nd</sup> Semester**

16ECO22C1	Micro Economics-II	4+1+0	20	80	100	3 hrs.	4+1+0
16ECO22C2	Macro Economics-II	4+1+0	20	80	100	3 hrs.	4+1+0
16ECO22C3	Economics of Growth and Development-II	4+1+0	20	80	100	3 hrs.	4+1+0
16ECO22C4	Mathematics for Economists-II	4+1+0	20	80	100	3 hrs.	4+1+0
16ECO22C5	Statistical Methods-II	4+1+0	20	80	100	3 hrs.	4+1+0

**Foundation Elective**

To be Chosen from the pool of foundation electives provided by the university	2 Credits
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**Open Elective**

To be Chosen from the pool of open electives provided by the university	3 Credits
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**Soft Open Elective for those students who will not opt for open elective**

16ECO22SO1	Gender Economics	2+1+0	20	80	100	3 hrs.	2+1+0
16ECO22SO2	Managerial Economics	2+1+0	2	80	100	3 hrs.	2+1+0
Total Credits	C=25; F=2; O=3	Total Credits= 30					

**3<sup>rd</sup> Semester**

**w.e.f. Session 2017-18**

	17ECO23C1	Indian Economy-I	4+1+0	20	80	100	3 hrs.	4+1+0
	17ECO23C2	International Trade and Finance-I	4+1+0	20	80	100	3 hrs.	4+1+0
Any three of the following Discipline Specific Course								
	17ECO23D1	Agricultural Economics-I	3+1+0	20	80	100	3 hrs.	4+1+0
	17ECO23D2	Mathematical Economics-I	3+1+0	20	80	100	3 hrs.	4+1+0
	17ECO23D3	Econometrics-I	4+1+0	20	80	100	3 hrs.	4+1+0
	17ECO23D4	Financial Institutions and Markets-I	4+1+0	20	80	100	3 hrs.	4+1+0
	17ECO23D5	Public Economics-I	4+1+0	20	80	100	3 hrs.	4+1+0
	17ECO23D6	Urban Economics-I	4+1+0	20	80	100	3 hrs.	4+1+0
Open Elective								
To be Chosen from the pool of open electives provided by the university								3 Credits
Soft Open Elective for those students who will not opt for open elective								
	17ECO23SO1	Haryana Economy	2+1+0	20	80	100	3 hrs.	2+1+0
	Credits	C=10, D=15; O=3	Total Credits= 28					
<b>4<sup>th</sup> Semester</b>								
	17ECO24C1	Indian Economy-II	4+1+0	20	80	100	3 hrs.	4+1+0
	17ECO24C2	International Trade and Finance-II	4+1+0	20	80	100	3 hrs.	4+1+0
Any three Any three of the following Discipline Specific Course								
	17ECO24D1	Agricultural Economics-II	3+1+0	20	80	100	3 hrs.	4+1+0
	17ECO24D2	Mathematical Economics-II	3+1+0	20	80	100	3 hrs.	4+1+0

	17ECO24 D3	Econometrics-II	4+1+0	20	80	100	3 hrs.	4+1+0
	17ECO24 D4	Financial Institutions and Markets-II	4+1+0	20	80	100	3 hrs.	4+1+0
	17ECO24D5	Public Economics-II	4+1+0	20	80	100	3 hrs.	4+1+0
	17ECO24D6	Urban Economics-II	4+1+0	20	80	100	3 hrs.	4+1+0
	Total Credits	C=10; D=15	Total Credits= 25					

**M.A. (Semester-I ) Micro Economics-I (2016-2018)**

**Papers: 16ECO21C1**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

**Course Outcomes:**

- CO1. It will familiar students on creating an understanding among students on the basic reasoning of Economics.
- CO2. It will make students aware about how various economic agents behave optimally given the scarce economic resource and other constraints.
- CO3. Students are better able to understand various economic issues and applied part of the economics.
- CO4. A comprehensive knowledge of Micro Economics will empower students to explain the social reality with better arguments and optimum solutions.

**Unit-I**

Nature and scope of Economics and Microeconomics. Positive and normative analysis. Role of assumptions in economic analysis. Circular flow of economic activity. Concepts of: household,

firm, factors of production, equilibrium – partial and general, static, comparative static and dynamic analysis, margin and slope.

Elasticity – need and measures – Relationship between revenue and elasticity.

### **Unit-II**

Analysis of consumer behaviour, demand function, law of demand – cardinal, ordinal and revealed preference approaches, income-consumption curve, Engel curve, substitute and complimentary goods.

Market demand curve; consequences of Bandwagon, Snob and Veblen effect. Concept of consumer surplus.

### **Unit-III**

Laws of Production: short run and long run. Internal and External economies and diseconomies.

Concept of cost, derivation of short and long run cost curves. Optimum input combination

Simple case of a multiproduct firm. Technical progress and production function – Hick's classification. Elasticity of substitution. Properties of Cobb-Douglas and CES production function.

### **Unit-IV**

Pricing process and equilibrium of firm and industry under perfect competition, monopoly (including discriminating and bilateral monopoly), monopolistic competition. Welfare effects of price control, price support and production quota.

#### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

#### **.Reading List:**

- Koutsoyiannes. A. “Modern Microeconomics” (Macmillan)

- Lipsey, R.G. and Chrystal, K. Alec “An Introduction to Positive Economics” (OUP)- Salvatore, D. “Microeconomics Theory” (Schaum’s Outline series, Tata McCraw Hill)

## **MA (Economics)**

### **Semester-I**

#### **16ECO21C2- Macro Economics-I**

**Max. Marks: 100**

**Time: 3 Hrs.**

#### **Course Outcomes:**

CO1. Students will be able to explain the concept of opportunity costs, trade –off and benefits of economics.

CO2. Students will learn the concept of fiscal and monetary policies and their effect on economy.

CO3. It will demonstrate knowledge of laws of supply and demand and equilibrium.

CO4. Students will be familiar about a clear picture of circular flow model.

**Written Exam:80**

**Internal Assessment: 20**

#### **Unit-I**

Determination of Output and Employment: Classical Approach – Output and Employment in Classical Theory; The Quantity Theory of Money and the Price Level; Classical Model without saving and investment; Classical Model with saving and investment;

Keynesian Approach \_ Two Sector Model, Three Sector Model and Four Sector Model.

#### **Unit-II**

Determination of Output and Employment: The Extended Model (Hicks-Henson Synthesis): Fixed Price Level – The goods Market and The Money Market; Equilibrium in Goods Market and Money Market; Changes in Aggregate Demand; Govt. spending, Taxation and Aggregate Demand; The IS-LM Elasticities and Monetary Fiscal Policies.

### **Unit-III**

The Extended Model: Variable Price Level – Deviation of Aggregate Demand Curve and Determination of equilibrium price and output levels; wage-price flexibility and the Full Employment equilibrium; Monetary – Fiscal policies and the Full-Employment Equilibrium.

### **Unit-IV**

Behavioral Foundation: Theories of consumption – The Absolute Income Hypothesis, The Relative Income Hypothesis; The Permanent Income Theory of Consumption; The Life cycle theory of consumption; Theories of Investment – The Present Value of Criterion for investment; The Marginal Efficiency of Capital and Investment; the accelerator theory; financial Theory of investment.

#### **Note:**

- (A) Nine questions would be set in all.
- (B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.
- (C) There would be two questions (16 marks each) from each of four units.
- (D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

#### **Reading List:**

- Ackley, G (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
- Banson, W.A. (1989), *Macroeconomic Theory and Policy, (3<sup>rd</sup> Edition)*, Harper and Row, New York.
- Dorn Busch, R. and F. Stanley (1997), *Macroeconomics*, McGraw Hill, Inc. New York.
- Heijdra, B.J. and V.P. Fredericck (2001), *Foundation of Modern Macroeconomics*, Oxford University Press, New Delhi.
- Jha, R. (1991), *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., New Delhi.
- Shapiro, E. (1996), *Macroeconomic Analysis*, Galgotia Publication, New Delhi.

- Survey, M.J.C. (Ed.) (1976), *Macroeconomic Themes*, Bo and Reed Geoffrey (1994), *International Economics*, Macmillan Press Ltd.
- Peterson, W.C. (1978), *Income, Employment and Economic Growth*, Norton, New York.
- Sheffrin, Steven M. (1996), *Rational Expectations*, 2<sup>nd</sup> edition, Cambridge University Press.

**M.A. (Semester-I ) Economics of Growth and Development -I**

**2016-2018**

**Paper-16ECO21C3**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes:**

- CO1 Students would be acquainted with the various perspectives of economic growth and its relevance.
- CO2 Students would become familiar with factors affecting economic growth and development.
- CO3 Students would understand the conceptual bases of income measurement, physical quality of life index, poverty, inequality and development gap and role of various institutions in economic growth and development.
- CO4 Students would have knowledge about the nature and classical theories of development. Students would be able to apply economic theories and concepts to contemporary social issues, as well as formulation and analysis of policy and recognize the role of ethical values in economic decisions.
- CO5 Students would learn the key tools to analyze agricultural economies, with an eye towards understanding a wide array of impacts, from agricultural policies to trade and climate change and what the role agriculture and industry have in economic development.



## **Unit 1**

### **Economic Growth and Development**

Factors affecting Economic Growth: capital, labour and technology; Historical Perspective of Economic Growth and its relevance; Structural Diversity and common characteristics of developing nations.

## **Unit-II**

### **Development and Underdevelopment**

Measuring Development: Income Measures, Basic Needs Approach, PQLI and HDI and Capabilities Approach; Poverty, Inequality and Development: Measurement, Impact and Policy options; Development Gap: concepts and measurement.

## **Unit-III**

### **Classical Theories of Development**

Contributions of Adam Smith, Ricardo, Karl Marx and Schumpeter.

## **Unit-IV**

### **Growth Models**

Harrod and Domar: Instability of equilibrium; Neo Classical Growth Models: Solow and Meade; Growth Models of Joan Robinson and Kaldor.

### **Basic Reading List**

- Adelman, I. (1961), Theories of Economic Growth and Development, Stanford University Press, Stanford.
- Barro, R. and X. Sala-i-Martin, Economic Growth, McGraw Hill, New York.
- Behrman, S. and T.N. Srinivasan (1995), Handbook of Development Economics, Vol. 3, Elsevier, Amsterdam.
- Brown, M. (1966), On the Theory and Measurement of Technical Change, Cambridge, University Press, Cambridge, Mass.
- Chakravarti, S. (1982), Alternative Approaches to the Theory of Economic Growth, Oxford University Press, New Delhi.
- Chenery, H. and T.N. Srinivasan (Eds.) (1989), Handbook of Development Economics, Vols. 1 & 2, Elsevier, Amsterdam.

- Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.
- Gillis, M., D.H. Perkins, M. Romer and D.R. Snodgrass (1992), Economics of Development, (3rd Edition), W.W. Norton, New York.
- Higgins, B. (1959), Economic Development, W.W. Norton, New York.
- Jones, HG.(1975), An Introduction to Modern Theories of Economic Growth, Nelson, London.
- Kindleberger, C.P. (1977), Economic Development, (3rd Edition), McGraw Hill, New York.
- Meier, G.M. and J.E.Rauch (2005), Leading Issues in Economic Development, (8<sup>th</sup> Edition), Oxford University Press, New Delhi.
- Sen, A.K. (Ed.) (1990), Growth Economics, Penguin, Harmondsworth.
- Todaro, M.P. and S.C. Smith (2003), (8th Edition), Economic Development, Pearson Education, Delhi.
- Thirwal, A.P. (1999), (6th Edition), Growth and Development, Macmillan, U.K

**Reading List:**

- Meir, G.M. (1995), Leading Issues in Economic Development, Oxford University Press, New Delhi.
- Mishra S.K. and V.K. Puri, Economics of Development and Planning, Himalaya Publishing House, Mumbai.
- Todaro, M.P. Economic Development, Latest Edition, Longman, London.
- Thiwal, A.P. (2003), (6<sup>th</sup> Edition), Growth and Development, Seventh Edition, Macmillan, New York.
- Hogendorn, J. (1996), Economic Development, Addison, Wesley, New York.

**MA (Economics)**

**Semester-I**

**16ECO21C4 -Mathematics for Economists-I**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes:**

- CO1. Students will learn different types of functions and their applications.
- CO2 Students will be familiar with the maxima and minima of functions.
- CO3 it will impart knowledge about the use of lagrange multiplier methods.
- CO4 Students will gain knowledge about the use of net present value and other related concepts.

**Unit-I**

Basics: real number system, sets and set operations, relations and functions, inverse functions; solution of linear equations in two variables, solution of quadratic equations, logarithms and exponents; exogenous and endogenous variables.

**Unit-II**

Fundamentals of Matrices; Determinants. Solution of a system of upto 3 equations by matrix inversion and Cramer's rule. Input-Output analysis – Static open model.

**Unit-III**

Differentiation – idea of limit (but not its evaluation) meaning and economic interpretations of derivative. Rules of differentiation including logarithmic and exponential functions. Unconstrained optimization – single choice variable, global and local.

## **Unit-IV**

Calculus of multivariable functions, higher order derivatives, constrained optimization with upto 2 equality constraints

**Note 1: Purpose of the course is to learn application of mathematical tools with understanding in economics. Derivations and proofs are to be avoided.**

**Note 2:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)).

### **Reading List:**

- Chiang, Alpha C. “Fundamental Methods of Mathematical Economics” (Mc-Graw Hill)
- Dowling, Edward T “Mathematics for Economists” (Schaum’s outline Series, Tata Mc-Graw Hill)

### **M.A. (Semester-I) Statistical Methods - I**

**2016-2018**

**Papers-16ECO21C5**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

### **Course Outcomes:**

CO1. Students would learn the common statistical techniques and terminologies used in the course and understand the concept of a frequency distribution for sample data, and able to summarise the distribution by diagrams and statistics.

- CO2 Students would be able to apply fundamental concepts and use appropriate software tools for data summary and exploratory data analysis.
- CO3 Students would gain knowledge to interpret examples of methods for summarising data sets, including common graphical tools and summary statistics.
- CO4 Students would develop an understanding of the basic concepts of probability, random variables, and sampling distribution of a statistic.
- CO5 Students would learn the measurement of central tendency, hypothesis testing, analysis of variance and multiple regression and correlation analysis.
- CO5 Students would become familiar with the sources of vital statistics data, how to interpret such data and how to perform basic tests to evaluate them which will help students in their doctoral research.

**Note:**

- (A) Nine questions would be set in all.
- (B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.
- (C) There would be two questions (16 marks each) from each of four units.
- (D) Candidates would be required to attend five questions (one compulsory and selecting one from each unit))

**Unit –I**

Diagrammatic and graphic representation of statistical data. Measures of central tendency: A.M., G.M., H.M., Median, quartiles, deciles, percentiles, mode, relationship between A.M., G.M. and H.M., Selection of an average, Limitations of Averages.

**Unit-II**

Measures of dispersion: range, interquartile range, quartile deviation, mean deviation, standard deviation, standard deviation of the combined series, variance, coefficient of variation, relation between various measures of dispersion, Lorenz curve, skew ness and Kurtosis, moments

**Unit-III**

Index numbers: Problems and methods of construction of various types of indices, Laspeyres, Pasche's and Fisher's ideal index numbers, Time reversal, factor reversal and circular tests;

chain base indices, base shifting splicing and deflating the index nos., costs of living index numbers and consumer price index numbers. Time series: components of time series and their decomposition, Methods of measuring trend, cyclical, seasonal and irregular variation.

#### **Unit-IV**

Random experiment, random variable, sample space, events, fundamental principles of counting, classical, relative frequency and axiomatic approaches to probability, basic results on probability, conditional probability, Baye's theorem.

#### **Reading List:**

- Gupta S.C. "Fundamentals of Statistics" S. Chand & Sons New Delhi (1993)
- Spiegel, Murry R "Theory and problems of Statistics" (Schaum's outline series, McGraw Hill, 1992)
- Karmal P.H. and Polasek M. "Applied Statistics for Economists (4<sup>th</sup> edition), Pitman, Australia.

### **MA (Economics)**

#### **Semester-II**

#### **16ECO22C1–Micro Economics-II**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

#### **Course Outcomes:**

- CO1. It will familiarized the students with different types of economic models..
- CO2 Students will get to know the different market structure..
- CO3 It will provide information to the students about the distribution of income and wealth.

#### **Unit-I**

Oligopoly: non collusive models – Cournot, Bertrand, kinked demand model; collusive models – joint profit maxmising, market sharing and leadership cartels. Critique of neo-classical theory of firm. Theory of Games – Twp-person, Zero-sum game, Pure and Mixed strategy, Saddle Point Solution.

## **Unit-II**

Alternative theories of firm: Baumol's Sales maximization model (simple, static without advertisement model) Morris and Williamson Average/full cost pricing, Bain's limit pricing model, behaviouralist model of Cyert and March.

## **Unit-III**

Neoclassical theory of factor pricing under competitive conditions, with monopolistic power in product market, monoposonistic power in factor market, bilateral monopoly in factor market, monopoly in factor market. Product exhaustion problem. Neoclassical theory of rent, quasi-rent, interest and profit. Issues in General Equilibrium analysis.

## **Unit-IV**

Concept of social welfare, some early criteria, Pareto optimality criterion and efficiency conditions, Bergson's social welfare function, idea of theory of second best and Arrow's impossibility theorem, compensation criterion. Market structure and welfare maximization. Market failure – case of externality and public goods; and ways of correcting it.

### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

### **Reading List:**

- Koutsoyiannes. A. "Modern Microeconomics" (Macmillan)
- Lipsey, R.G. and Chrystal, K. Alec "An Introduction to Positive Economics: (OUP)
- Salvatore, D. "Microeconomics Theory" (Schaum's Outline series, Tata McCraw Hill)

**MA (Economics)**

**Semester-II**

**16ECO22C2 –Macro Economics-II**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

**Course Outcomes:**

- CO1. It will help the students to apply supply and demand models to analyze responses of market to external events.
- CO2 It will help students to describe ISLM model.
- CO3 The course will illustrate the role of financial institutions in the economy.
- CO4 Students will be able to explain concept of gross domestic product, inflation and unemployment.

**Unit-I**

The Demand for and supply of money: Classical Approach to Demand for Money – Quantity Theory Approach; ;Fisher's equilibrium; Cambridge Quantity theory; Keynes Liquidity Approach – Transaction; Precautionary and Speculative Demand for Money Aggregate Demand for Money; Friedman, Patinkin Baumol and Tobin.

Determinants of money supply, High-powered money, Money multipliers.

**Unit-II**

Inflation: Definition of Inflation; Economics effects of Inflation – The effect of Inflation of the distribution of Income and Wealth, The effect of Inflation on output, Employment and the Growth Rate; Demand Side and Supply Side theories of inflation.

**Unit-III**

Inflation and unemployment: The Phillips Curve, The Inflationary Pressure Curve: Phillips Curve, Inflationary Pressure Curve and the Rate of Inflation. The Phillips Curve; Trade off and Non Trade Off. Adaptive Expectation and Rational Expectation Keynesianism Vs Monetarism.



## Unit-IV

Trade Cycles – Models of Samuelson, Hicks and Kaldor, Economic Growth: Harrod- Doman Model; Neo-Classical Model (with money & without money). International Adjustment: The Determination of National Income in Open Economy; The International Transmission of Disturbance: Transmission under Fixed Exchange Rate; Transmission under Floating Exchange Rate (Mudel Fleming Model).

### Note:

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

### Reading List:

- Ackley, G (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
- Banson, W.A. (1989), *Macroeconomic Theory and Policy, (3<sup>rd</sup> Edition)*, Harper and Row, New -York.
- Dorn Busch, R. and F. Stanley (1997), *Macroeconomics*, McGraw Hill, Inc. New York.
- Heijdra, B.J. and V.P. Fredericck (2001), *Foundation of Modern Macroeconomics*, Oxford - University Press, New Delhi.
- Jha, R. (1991), *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., New Delhi.
- Shapiro, E. (1996), *Macroeconomic Analysis*, Galgotia Publication, New Delhi.
- Survey, M.J.C. (Ed.) (1976), *Macroeconomic Themes*, Bo and Reed Geoffrey (1994), - *International Economics*, Macmillan Press Ltd.
- Peterson, W.C. (1978), *Income, Employment and Economic Growth*, Norton, New York.
- Sheffrin, Steven M. (1996), *Rational Expectations*, 2<sup>nd</sup> edition, Cambridge University Press.

**MA (Economics)**

**Semester-II**

**16ECO22C3 -Economics of Growth & Development – II**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes**

- CO1 Impart understanding of the basic assumption and features of economic growth and development.
- CO2 Provide understanding of the relevance of historical perspective of economic growth.
- CO3. To impart theoretical knowledge about the concepts of poverty, inequality and development gap.
- CO4. To explore diverse dimension and measures of development, as well as the application of microeconomic analysis to issues of development in poor countries, including the study of household decisions and the analysis of institutions and norms influencing development.

**Note:**

- (A) Nine questions would be set in all.
- (B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.
- (C) There would be two questions (16 marks each) from each of four units.
- (D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

**Unit –I**

Sectoral Aspects of development; Importance of agriculture and industry in economic development.

Role of institutions – government and markets.

Poverty – indicators and measurement.

## **Unit-II**

Trade and development: trade as an engine of growth, two gap analysis, Prebisch, Singer and Murdal views, gains from trade and LDCs; Role of foreign Direct investment (FDI) and Multi-national corporations (MNCs) in the emerging scenario.

## **Unit-III**

Objects and role of monetary and fiscal policies in economics development; Choice of techniques and appropriate technology; Investment Criteria; Cost-benefits analysis.

## **Unit-IV**

Techniques of planning; Plan Models in India; Planning in a market-oriented economy; Endogenous growth; role of education research and knowledge – Explanation of Cross country differentials in economic development and growth.

### **Reading List:**

- Behrman, S. and T.N. Srivasan (1995), Handbook of Development Economics, Vol.-3, Elsevier, Amsterdam.
- Chenery, H.B. et. al. (Eds.) (1974), Redistribution with Growth, Oxford University Press, Oxford.
- Higgins, B. (1959), Economic Development, W.W. Norton, New York.
- Chatak, S. (1986), An introduction to Development Economics, Allen and Unwin, London.
- Kindleberger, C.P. (1977), Economic Development, (3<sup>rd</sup> Edition), McGraw Hill, New York.
- Todaro, M.P. (1996), (6<sup>th</sup> Edition), Economic Development, Longman, London.
- Thiwal, A.P. (1999), (6<sup>th</sup> Edition), Financing Economic Development.
- Singh S.P (ed.), From underdevelopment to Development.

**MA (Economics)**

**Semester-II**

**16ECO22C4 -Mathematics for Economists-II**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes:**

- CO1. The course will introduce the concepts of differentiation and integration and application in economics.
- CO2 The course will impart knowledge of matrices and determinants to the students and their applications in economics.
- CO3 The course will form the base for higher studies in research work.

**Unit-I**

Integration – meaning and economic interpretation. Indefinite and definite integration. Simple techniques including integration by substitution and integration by parts.

**Unit-II**

Differential equation – basic concepts, solution of first order linear differential equation. Non-linear differential equation – exact and variable separable type only. Linear differential equation of second order with constant coefficient and term.

**Unit-III**

Difference equation – basic concepts, solution of first and second order linear difference equation with constant term and coefficient.

**Unit-IV**

Linear Programming – Relevance and basic concepts, Graphic, simplex and dual solution.  
Economic interpretation of dual

**Note 1: Purpose of the course is to learn application of mathematical tools with understanding in economics. Derivations and proofs are to be avoided.**

**Note 2:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

**Reading List:**

- Chiang, Alpha C. “Fundamental Methods of Mathematical Economics” (Mc-Graw Hill)
- Dowling, Edward T “Mathematics for Economists” (Schaum’s outline Series, Tata Mc-Graw Hill)

**MA (Economics)**

**Semester-II**

**16ECO22C5 -Statistical Methods-II**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes**

- CO1 To make the students familiar with the terminology of statistical terms: Population, Sample, Parameter, Statistic, and Descriptive Statistic.
- CO2 The objective of this course is to impart knowledge of probability and standard statistical distributions to students and make them able to perform complex data management and analysis.
- CO3 To provide an understanding for the students on statistical concepts to include measurements of location and dispersion, probability, probability distributions, sampling, estimation, hypothesis testing, regression, and

correlation analysis, multiple regression and business/economic forecasting and to make them familiar with binomial, Poisson, normal and log-normal probability distributions.

**Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

**Unit –I**

Probability distribution of a random variable, concept and use of mathematical expectation, mean and variance of a distribution in terms of expectation, moments, density functions. Joint and marginal probability distributions. Binomial, Poisson and Normal distributions, properties and inter relationships. Fitting of distributors.

**Unit-II**

Census versus sample enumeration. Methods and types of sampling, sampling error, small and large sample, concept of an estimator and its sampling distribution; properties of a good estimator, concepts of point and interval estimation, OLS and ML estimators of regression parameters.

**Unit-III**

Elements of statistical Inference: Parameter and estimators; concepts of sampling distribution of a statistic, standard error, hypothesis testing, tests of significance, Type I and Type II errors, level of significance, Power of a test, z, t, chi-square and F tests.

**Unit-IV**

Correlation and regression: simple correlation, Pearson, spearman's correlation coefficients, multiple and partial correlation analysis, specification of a simple linear regression model,

least square estimation of linear regression coefficients, interpretation of correlation and regression coefficients and their properties.

**Reading List:**

- Gupta S.C. “Fundamentals of Statistics” S. Chand & Sons New Delhi (1993)
- Spiegel, Murry R “Theory and problems of Statistics” (Schaum’s outline series, McGraw Hill) (1992)
- Karmal P.H. and Polasek M. “Applied Statistics for Economists (4<sup>th</sup> edition), Pitman, Australia.

**MA (Economics)**

**Semester-II**

**16ECO02 - Basics of Economics (Open Elective Paper)**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment:20**

**Course Outcomes:**

CO1. The students would know about the consumer behaviour.

CO2 This course will impart complete knowledge of all concepts related to demand.

CO3 The students would know about all concepts related to cost.

**Unit -1**

What is an Economy? Control problems of an Economy: What, how and for whom to produce, concept of production possibility function and opportunity cost.

**Unit-II**

Consumer’s equilibrium – meaning of utility, marginal utility, conditions of consumer’s equilibrium.

**Unit-III**

Demand, market demand, determinants of demand, demand schedule, price elasticity of demand, factors effecting price elasticity of demand.

**Unit-IV**

Cost and Revenue: Total cost, Total fixed cost, Total variable cost.

Average cost: Average fixed cost, average variable cost

Revenue- Total revenue and marginal revenue,-meaning their relationship

**Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit).

**Reading List:**

- D.N. Divedi: Principles of Economics, 2<sup>nd</sup> Edition, Vikas Publication House.
- R Dutta and K P M Sundaram: Indian Economy, S Chand  
A.N.Agarwal: Indian Economy, Problems of Development and Planning, New Age.
- Mishra and Puri: Indian Economy, Himalaya.

**M.A. (Semester- II) Managerial Economics  
(2016-2018)  
Paper-16ECO22SO2**

**Managerial Economics**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam: 80**

**Internal Assessment: 20**

**Course Outcomes**

CO1. The students would be trained about economic application of economic theory.

CO2. It would facilitate students learning by allowing students to see how economics can be used in decision making.

CO3. It would help students in knowing how managerial economics can be treated as a special branch of economics.



### **Unit-I**

Meaning and nature of Managerial Economics; How does economics contribute to Managerial functions, Business decisions and Economic analysis, the scope of Managerial Economics: Application of Micro Economics to operational issues, Applications of Macro Economics to Business environment, The gap between theory and practice and the Role of Managerial Economics.

### **Unit-II**

Analysis of Market Demand: Meaning of Market Demand, Types of Demand, Determinants of market Demand, Demand Elasticities: importance of the elasticity concept, Price elasticity of demand, measuring price elasticity from a Demand function, Determinants of price elasticity of Demand, Price elasticity and total revenue, Price elasticity and marginal revenue, cross-elasticity of demand, Income-Elasticity of Demand, Elasticity of Price Expectations, Promotional elasticity of sales.

### **Unit-III**

Demand forecasting: why demand forecasting, Techniques of demand forecasting survey methods: complete enumeration, sample survey and end-use methods, opinion poll methods: Expert-opinion method, Delphi method and market studies and experiments, statistical methods: Trend projections methods based on time series data, Econometric Methods.

### **Unit-IV**

Cost and Break-even Analysis - Some Accounting and Analytical cost concepts; Economies and diseconomies of scale; Break-even Analysis: linear and non-linear cost and Revenue functions; Contribution Analysis, Profit Volume Ratio, Margin of Safety.

**Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight

short answer questions of two marks each.

**(C)** There would be two questions (16 marks each) from each of four units.

**(D)** Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

**Reading List:**

- Haynes and Benry, Managerial Economics
- Baumol, Economic Theory and Operations Analysis
- Koutsoyiannis, Modern Micro Economics
- J. Dean, Managerial Economics
- Mote, Paul and Gupta, Managerial Economics
- Biarman & Smith, The Capital Budgeting Decisions.
- Varsghney and Maheswari, Managerial Economics

**M.A. (Semester- 3<sup>rd</sup>) Indian Economy-I**

**Papers: 17ECO23C1**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment:20**

**Course Outcomes**

- CO1 To have knowledge about the issues in Indian Economy like planning, poverty, unemployment etc.
- CO2 To know about relationship between monetary policy, fiscal policy and economic development.
- CO3 To know about framework of policy making for the development of Indian economy
- CO4 To know about the preparation of budgeting and its utilization for Indian economy.

**Unit-I**

Features of Indian economy; Nature and Characteristics of Indian economy; Planning; objectives and strategies; failures and achievements of plans.

Basic economic indicators-National income, performance of different sectors. Trends in prices and money supply.

**Unit-II**

Institutional structure: Land-reforms in India; Agricultural marketing and warehousing; Issues in food security - policies for sustainable agriculture; Agricultural finance policy; Agricultural price policy.

**Unit-III**

Malthusian theory of population, optimum theory of population, theory of demographic transition, population as 'Limits to Growth' and as 'Ultimate Source'

Concepts of Demography- Vital rates, life tables, composition and uses.

Measurement of fertility - Total fertility rate, gross and net reproduction rate - Age pyramids, population projection stable, stationary and quasi-stationary population; Characteristics of Indian population through recent census.

#### **Unit-IV**

Financial Sector: Monetary policy of RBI; Money and Capital markets; Growth and problem; Role of commercial banks in India; Banking sector reforms since 1991

#### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

#### **Reading List:**

- Bardhan. P.K. (9th Edition) (1999), The Political Economy of Development in India, Oxford University Press, New Delhi. .
- Brahmanada, P.R. and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy: Inter-State Perspectives, Bookwell, Delhi.
- Datta, R. and KP.M. Sundhram (2003), Indian Economy. S. Chand & Company Ltd. New Delhi.
- Government of India, Economic Survey, (Annual), Ministry of Finance, New Delhi.
- Mishra, S.K and V.K Puii Indian Economy- 151 Development Experience, Himalaya Publishing House, Mumbai, Latest Edition.
- Rudra Ashok, Indian Plan Models.
- Todaro, P. Development Planning: Models and Methods.
- United Nations, Guidelines for Project Evaluation.

**M.A. (Semester-III) International Trade and Finance-I Papers: 17ECO23C2**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes**

- CO1 Students would know the country's position regarding international trade, payments and foreign exchange.
- CO2 The students would learn the methods regarding improvement in terms of trade, international debt and balance of payments positions.
- CO3 Students would know about the policies regarding increase in exports, to deal with international institutions and to maintain relation with other countries. Since globalization and international relations can increase the rate of growth and solve domestic problems like inflation, unemployment and value of currency etc.

**Unit-I**

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 the theory of absolute cost and comparative cost-Heckscher-Ohlin theory of trade. Kravis and Linder theory of trade Role of dynamic factors, i.e. change in tastes, technology and factor endowments in explaining the emergence of trade;

**Unit-II**

The Rybczynski theorem-concept and policy implications of immiserizing growth; Causes of emergency and measurement of intra-industry trade and its impact on developing economies. Measurement of gains from trade and their distribution; Concepts of terms of trade, their uses and limitations for less developed countries; Trade as an engine of economic growth; Welfare implications - empirical evidence and policy issues;

**Unit-III**

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 and Balance of payments on trading partners both in partial and general equilibrium analysis. The

political economy of non-tariff barriers and their implications; Trade under imperfectly competitive market.

#### **Unit-IV**

Meaning and components of balance of payments; Equilibrium and disequilibrium in the balance of payments; The process of adjustment under system 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 Absorption and monetary approaches to the theory of balance payment adjustment;

#### **Note:**

**(A)** Nine questions would be set in all.

**(B)** Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

**(C)** There would be two questions (16 marks each) from each of four units.

**(D)** Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

#### **Reading List:**

- Bhagwani, J. (Ed.) (1981), International Trade, Selected Readings, Cambridge University press, Massachusetts.
- Carbooth, M. (1999), International Economics, International Thompson Publishing, New York.
- Chacholiades, M. (1990), International Trade: Theory and Policy, McGraw Hill, Kogakusha, Japan.
- Dana, M.S. (2000), International Economics: Study Guide and Work Book (5th Edition), Rutledge Publishers, London.
- Dunn, R.M. and J.H. Mutt (2000), International Economics, Rutledge Publishers, London.
- Kenen, P.B. (1994), The international Economy, Cambridge University Press, London.
- Kindleberger, C.P. (1973), International Economics, R.D. Irwin, Homewood.
- King, P.G. (1995), International Economics and International Economic Policy: A Reader, McGraw Hill International, Singapore.

- Krufnan, P.R. and M. Obstfeld (1994), International Economic: Theory and Policy, Glenview, Foresman.
- Salvatore, D. (1997), International Economics, Prentice Hall, Upper Saddle River, N.J. New York.
- Soderston, BO (1991), International Economics, The Macmillan Press Ltd., London

**M.A. Final**  
**Semester-III**

**17ECO23D1 -Agricultural Economics-I (Discipline Specific Course)**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes**

- CO1 Course provides knowledge agricultural background , farm and agro business activities, agri finance and management.
- CO2 It introduces learner applied part of economics instead theoretical, which deals with allocation of land under various crops, specialization, diversification and other policy amplifications.
- CO3 Course offer relevant production and various techniques to understand agri production, cost benefit analysis and enhance learner to make frontier-production function at least cost.

**Unit-I**

Agricultural Economics and Economic Development: Definition of agricultural Economics, its scope and nature; Regional disparities in Indian agriculture; Difference between agriculture and Industry; Need for a separate study of Agricultural Economics. Agriculture and Economic Development: Role of agriculture in Economic Development; Contribution of industry to the development of agriculture; Interdependence of agriculture and industry.

**Unit-II**

Approaches to Agriculture Development: Schultz, Mellor, Boserup, Lewis and Ranis-Fie.

### **Unit-III**

Economics of Agriculture Production: The Production Function; Factor-Product Relationship; Factor-Factor Relationship; Product- Product Relationship. Equilibrium of the capitalist form, peasant family farm and share tenant farm.

### **Unit-IV**

Analysis for Farm Management: The Production Function Approach; Farm-budgeting Approach. Measures of Farm Efficiency; Supply response in agriculture; Size of the farm and Productivity Debate.

#### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)).

#### **Reading List:**

- South-worth, H.M. and B.F. Johnston (ed.) Agricultural Development and Economic Growth (Cornell University Press, London, 1974).
- Heady, E.O. Economics of Agricultural Production and Resources Use (Prentice Hall India Ltd. New Delhi - 1964).
- Schult, T.Z. Transforming Traditional Agriculture (Yale University Press, 1964).
- Metacalf D. The Economics of Agriculture.
- Basu, K. Agrarian Structure and Economic Under Development (Harwood Academic, London 1980).
- Sadhu, AN. and A Singh, Agricultural Problems in India (Himalaya Publishing House, Bombay).
- Mellor, J. W. The Economics of Agricultural Development (Vora and Co. Bombay, 1966).



- Donner, Peter: Land Reforms and Economic Development.
- Kahlon, AS. and Tyagi, D.S. Agricultural Price Policy in India (Allied Pub. New Delhi, 1983).
- Patnaik, Utsa (ed) Agrarian Relations and Accumulation. The mode of production in India.
- Kaur, Rajbans Agricultural Price Policy in Economic Development.
- The Indian Society of Agricultural Economics, Agricultural Development in Developing Countries in Asia and south East Asia since World War II.
- Ellis, Frank Peasant Economics (Cambridge University Press 1963).
- Bhalla G.S. and Y.K. Alagh Performance of Indian Agriculture a district-wise Study.
- Rao, C.H.H. Technological change and Distribution of gains in Indian Agriculture.
- Lehman, Davir (ed) Agrarian Reform and Agrarian reformism in India.
- Ghatak, S. and Ken Ingersent Agriculture and Economic Development.
- Bilgrami, SAR An Introduction to Agricultural Economics (Himalaya Pub. House, Bombay).
- Rudra Ashok Indian Agricultural Economics: Myth and Realities (Allied Pub. New Delhi 1982).
- Soni, RN. Leading Issues in Agricultural Economics (Sohan Lal Nagin Chand Co. Jalandhar, 2006).
- Khusro, AM. Reading in agricultural Development.
- Vandana Shiva The Violence of Green Development.
- Frankel, Francis, R India's Green Revolution, Economic Gain and Political Costs (OUP Bombay 1971).
- Dantwala, M.L. (ed.). Indian Agricultural Development Since Independence.
- Hayami, Y and Rattan, V.W. Agricultural Development: An International Perspective.
- ICSSR Alternative in Agricultural Development.
- Ellis, F. Agricultural Policies in Developing Countries.
- Lekhi R.K. & Singh Joginder, Agricultural Economics, Kalyani Publishers, New Delhi.
- Sankhayan P.L., Introduction to the Economics of Agricultural Production, Prentice Hall of India Private Limited, New Delhi.

- Johl S.S. & Kapur T.R, Fundamentals of Farm Business Management, Kalyani Publishers, Ludhiana. .
- Reddy S. Subha, Raghu Ram P. Sastry T.V. Neelakanta & Devi I Bhavani, Agricultural Economics, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
- Acharya, S.S. & Agarwal N.L., Agricultural Prices - analysis and policy, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.

**M.A. (3<sup>rd</sup> Semester) Mathematical Economics-I**

**Papers: 17ECO23D6**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes:**

- CO1. Students would learn how to deal economic problems with the help of mathematics.
- CO2 Students would know different types of economic functions like utility functions, production functions etc.
- CO3 It will impart knowledge about the use of lagrange multiplier methods in various economic problems of maximization and minimization.

**Unit-I**

Cardinal and ordinal utility maximization: Sudy equation, compensated demand function, income, substitution, and price effects; Concept of elasticities; Consumer services.

**Unit-II**

Separable and additive utility functions; homogeneous and homothetic utility functions; Indirect utility functions; transcendental logarithmic utility functions; duality theorem;

### **Unit-III**

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.

### **Unit-IV**

Production function - homogeneous and non-homogeneous; Laws return & return to scale; Properties of Cobb-Douglas production function; CES/VES and Translog (TL) production;

#### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

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

## **M.A. (3<sup>rd</sup>) Econometrics-I**

**Papers: 17ECO23D3**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

### **Course outcomes**

- CO1 Course work provides a path to follow research in general area of economics and business.
- CO2 Students would gain understanding of primarily about estimation and hypothesis testing. What is different and generally much more interesting and useful is that parameter being estimated and tested are not just means and variances but relationship between variables, which is much of economics and other social sciences.
- CO3 To familiarise the students to study economics with an applied approach.

### **Unit-I**

Nature and meaning of econometrics; Difference between mathematical economics, statistics and econometrics; Goals of econometrics; classical linear regression model (Two variable) Sources of disturbance terms, assumption and their significance, least square estimators and their properties; Gauss markov's theorem.

### **Unit-II**

General linear regression model: Definition, assumptions, least - squares estimation, Gauss markov's theorem; testing significance of regression coefficients, concepts of R<sup>2</sup> and adjusted R<sup>2</sup>

### **Unit-III**

Problems of multicollinearity, autocorrelation and heteroscedasticity: Nature, consequences, test and remedies (proofs not required)

## Unit-IV

Simple Applications of Least Square: Estimation of consumption function, Cobb-Douglas and CES production functions, Estimation of semi-log and double log function; simple and compound rates of growth.

### Note:

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)).

### Reading List:

- Gujarati, D.N. (1995), Basic Econometrics (2nd Edition), McGraw Hill, New Delhi.
- Koutsoyiannis, A. (1997), Theory of Econometrics (2nd Edition), The Macmillan Press Ltd., London.
- Johnston, J. (1991), Econometric Methods, McGraw Hill Book Company, London.
- Maddala, G.S. (1993), Econometrics Methods and Applications, (2 Vol.), Alder shot, U.K.
- Krishna K.L. (1997), Econometrics Application in India, Oxford University Press, New Delhi.
- Kmenta, J. (1997), Elements of Econometrics, University of Michigan Press, New York.
- Intriligator, M.D. (1978), Econometrics Techniques and Applications, Prentice Hall, New Jersey.
- Pindyck, R.S. and D.L. Rubinfeld (1976), Econometric Models and Economic Forecasts, McGraw Hill, Tokyo.
- Frances, P. H. (1998), Time Series Models/or Business and Economic Forecasting, Cambridge University Press, Cambridge.
- Harvey, A.C. (1981), Econometric Analysis of Time Series, Phillip Allen, London.
- Madnani, G.M.K. (1999), Introduction of Econometrics.

- Intrilligator, M.J. and Hasio Badkin (1996), Econometric Models, Techniques and Applications, Prentice Hall.

**M.A. 3<sup>rd</sup> semester**

**M.A. Financial Institutions and Markets - I**

Papers: 17ECO23D4

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

**Course outcomes**

- CO1 Students would have knowledge regarding money market, capital market, stock exchange i.e. Indian Financial System which is the backbone of the country.
- CO2 To familiar students about the relationship between financial development and economic development.
- CO3 To impart knowledge to students about controller of financial system, e.g. RBI, SEBI, IRDA and TERI.

**Unit-I**

Nature and Role of Financial System and Structure of Interest Rates - Money and finance-Money and near-money-Financial intermediation and financial intermediaries - The structure of the financial development.

**Unit-II**

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.

### **Unit-III**

Theories of interest rate determination - Level of interest rates - Long period and Short period rates Term Structure of Interest rates - Theories of interest rates structure - Expectational theory - Segmentation theory; Administered interest rates - Appropriate interest rate policy.

### **Unit-IV**

Banks, Monetary Policy and Non-Bank Financial Interest diaries: Functions of Central Bank - The aims and objectives of the monetary policy in developed and developing countries.

#### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)).

#### **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, Market 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.
- Karker, 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 Systems, Tata McGraw Hill, New Delhi.
- Machiraju, M.R. (1999), Indian Financial System, Vikash Publishing House, New Delhi.

- Ohlson, J.A. (1987), The Theory of Financial Markets and Institutions, 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-Cilffs, New Jersey.

### **M.A. 3<sup>rd</sup> Public Economics-I**

**Papers: 17ECO23D5**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

#### **Course Outcomes**

- CO1 The students would learn of the features of the federal structure and financial relationship among them.
- CO2 The course would develop the analytical ability of students to distinguish between beneficial and detrimental effects of a government policy and their effect on the macroeconomic framework of an economy.
- CO3 It will help students to critically analyse the fiscal reforms and policy choices of the government in developed and developing countries.

#### **Unit-I**

Economic rationale of government, fiscal functions; market failures: imperfections, decreasing costs, externalities and public goods; concepts of private goods, pure public goods, mixed goods and merit goods; theory of public goods; free rider's problem, the optimal provision of public goods, contributions of Samuelson and Musgrave. Lindahl equilibrium; public choice and fiscal decision making, voting systems, majority voting.



## **Unit-II**

**Budgeting:** various concepts, reforms in expenditure budgeting, zero based budgeting and performance budgeting. Budgets of the Union Government in India, budget making process in India; public expenditure in India: trends and issues.

## **Unit-III**

**Public Expenditure:** structure and growth of public expenditure; Wagner's hypothesis, Peacock-Wiseman hypothesis; economic effects of public expenditure; criteria for public investment, social cost-benefits analysis: valuation of benefits and costs, discount rate.

## **Unit-IV**

**Theory of Taxation:** Various approaches to taxation, neutrality, equity, ability to pay, benefit principle, revenue maximization, income maximization; analysis of incidence of taxes, elasticity, buoyancy and taxable, capacity, efficient tax design: optional taxation, effects of taxation on work effort, savings, investment and growth; classification of taxes: direct and indirect taxes, progressive, proportionate and regressive taxes, Advalorem and specific taxes; tax systems in India; structure, composition and various economic issues.

**Note: (A)** Nine questions would be set in all.

**(B)** Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

**(C)** There would be two questions (16 marks each) from each of four units.

**(D)** Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

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### **Reading List:**

- Masgrave R.A and Masgrave P.B., Public Economics in Theory and Practice, McGraw Hill.
- Stiglitz, J.E., Economics of Public Sector, J.W. Norton & Company.
- Singh, S.K., Public Finance in Theory and Practice, S. Chand & Co.

- Government of India, Ministry of Finance: Economics Survey (of various years).
- Raja J. Chaliah, Towards Sustainable Growth, Essays in Fiscal and Financial Sector Reforms in India,
  - o Oxford University Press, Delhi, 1996
- Deena Khatkhate (ed.), Money and Finance: Issue, Institutions, Policy, Sameeksha Trust, Orient Longman, 1998.
- Kunal Sen & Rajendra R. Vidya (ed.), Process of Financial Liberalization in India, Oxford University
  - o Press, 1997.
- Mundel Sudipto (ed.) Public Finance: Policy Issue of India.
- Brown C.V. and Jackson P.M. (1990), Public Sector Economic, Basil Balackwell, Oxford.
- M. Govindia Rao and Tapan Sen (1998), Financial Federalism in India.
- Atkinson A.B. and Stightz, J.E. (1980), Lectures on Public Finance, Tata Mcgraw Hill
- Auerbach, A.J. and M. Feldstern (ed.) (1985), Handbook of Public Economics, Vol-I, North Holland,
  - o Amsterdam.
- Raghavendra Jha (1999), Modern Public Economics, Rotledge, London.
- Srivaslava D.K. (ed.) (2000), Fiscal Federalism in India, Har-Anand Publication Ltd., New Delhi.
- Bhargava P.K. (1991), India's Fiscal Critis, Ashish Publishing House, New Delhi.
- Govt. of India, Ministry of Finance (1988), Sarkaria Comission Report on Centre-State Finance Relations.

**M.A. (3<sup>rd</sup> Semester) Urban Economics-I**

**Papers: 17ECO23D6**

**Course work in Urban Economics**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

## Course Outcomes

- CO1 The students are trained to comprehend issue and opportunities associated with urbanization. They are better suited to research and administrative job that require understanding of finer aspects of an increasing globalization and urbanizing world.
- CO2 It will impart a more calibrated understanding of economic phenomena and urban issues.
- CO3 It will familiarize about the critique policies in world with a majority of population already living in urban areas

### Unit-I

The concept and definition of urban and urbanisation.

Analytical and historical perspective of the origin and evolution of urban settlements.

### Unit-II

Analytical and historical perspective of the patterns of urbanisation.

Urban transition and the components of urban growth.

### Unit-III

Economic development and urbanisation: The role of urbanisation in economic development ;  
Role of economic development in redistribution of population.

### Unit-IV

Rural-urban relationship: theory of urban bias, terms of trade and resource flow; the over-urbanisation debate.

**Note: (A)** Nine questions would be set in all.

**(B)** Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

**(C)** There would be two questions (16 marks each) from each of four units.

**(D)** Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)

**Reading list:**

- O'Sullivan, A (2003) Urban Economics (3<sup>rd</sup>Edn.), IRWIN, London. (Chapters 1-4)
- HABITAT, 1996, An Urbanizing World- Global Report on Human Settlements 1996, Oxford University Press: New York
- Richardson, H.W (1988) New Urban Economics, Dryden Press, Hinsdale
- Balchin, Paul N, Issac, David and Chen, Jean (2000) Urban Economics: a global perspective, Palgrave, New York.
- United Nations, Department of Economic and Social Affairs, Population Division (2015). World Urbanization Prospects: The 2014 Revision, United Nations New York, 2015.
- Ratnoo, H.S. (2016) Migration of Labour in India: The Squatter Settlements of Delhi routledge: Abingdon, Oxford.

Note: A more comprehensive reading list will be provided during the course.

**( 16ECOO1) Principles of Economics (Open Elective Paper)****Max. Marks: 100****Written Exam:80****Time: 3 Hrs.****Internal Assessment: 20****Course Outcomes**

- CO1 Students would know about the economy of India since British period to independence of India.
- CO2 Student would know about the functioning of economic system.
- CO3 It will impart knowledge about the trends and pattern in the structure of population and agriculture overtime.

**Unit -1**

Why study economics? The scope and method of economics; scarcity and choice; questions of what, how and for whom to produce and how to distribute output.

**Unit-II**

Indian Economy on the eve of Independence, British rule and its impact on Indian Economy, Emergence and development of Planning exercise in India – historical debates.

### Unit-III

Trends and patterns in structure of population over time – growth rate, gender, rural-urban, literacy, regional; Structure and trends of Poverty and Inequality (interpersonal and regional); Inflation – trends, structure and causes; Unemployment – trends, structure and types.

### Unit-IV

Trends in Agricultural Production and Productivity; Land Reforms – Genesis, Progress and current status; Green Revolution – Measures and its effects. Trends and Patterns of Industrial Sector; Changes in the structure of Indian Industry.

Note:

- (A) Nine questions would be set in all.
- (B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.
- (C) There would be two questions (16 marks each) from each of four units.
- (D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit.)

Reading List:

- D.N. Divedi: Principles of Economics, 2<sup>nd</sup> Edition, Vikas Publication House.
- R Dutta and K P M Sundaram: Indian Economy, S Chand  
A.N.Agarwal: Indian Economy, Problems of Development and Planning, New Age.
- Mishra and Puri: Indian Economy, Himalaya.
- Planning Commission: Twelfth Five Year Plan, Vol I, II and III, Academic Foundation.
- Government of India: Economic Survey (latest issue).

### Semester-III

#### 17ECO23SO1 Haryana Economy

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

#### Course Outcomes

CO1 Students would know about the economy of India since British period to independence of India.

- CO2 Student would know about the functioning of economic system.
- CO3 It will impart knowledge about the trends and pattern in the structure of population and agriculture overtime.

### **Unit-I**

Regional Economics: Concept, Scope and Framework; Regional Economic Problems; Different Approaches to Regional Economic Analysis; Role of Transport Costs in Locational Decisions; Weber and Isard's theories, Agglomeration Economies and Diseconomies

### **Unit-II**

Economic Structure of Haryana Economy; Agriculture in Haryana, Green Revolution Strategy, Growth and Productivity Levels; Irrigation strategy & levels, Agricultural Diversification, Rural Credit and Rural Indebtedness, Agricultural Marketing, Alternative Sustainable Agricultural Development Approaches; W.T.O. and Haryana Agriculture

### **Unit-III**

Industry in Haryana: Pattern, Performance, Constraints and Challenges; Small Scale Industries: Role, Problems and future prospects; State and Industrial Development. State Finances: Sources of Revenue and Expenditure Pattern, Budgetary Deficits/Surplus, Financial Health of the State.

### **Unit-IV**

Infrastructure: Power Sector: Organisational Structure, Performance, Haryana Electricity Regulatory Commission, Pricing Policies & Finances; Rural Electrification, Transport Sector, Urban Infrastructure, Haryana Urban Development Authority.

**Note: (A)** Nine questions would be set in all.

**(B)** Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)

**Reading List:**

- Harry W. Richardson: Regional Economics, Weidenfeld and Nicolson, London.
  - Edger M. Hoover: An Introduction to Regional Economics, Alfred A. Knopf, New York.
  - Harry W. Richardson: Elements of regional economics Penguin.
  - D.R. Choudhary (2007), Haryana At Cross Roads: Problems and Prospects National Book Trust, India, New Delhi.
  - S.P. Gupta, Three Decades of Haryana Economy, S P Publications, 144, Shivalik Enclave (NAC) Manimajra – 160101
  - Ministry of Finance; Government of Haryana: Haryana Statistical Abstract (various issues)
  - Ministry of Finance; Government of Haryana: Economic Survey (various Issues)
  - Planning Commission, Govt. of India (2009): Haryana Development Report, Govt. of India, New Delhi.
  - Various research papers and research studies.
- 
- Provide understanding of the basics of underdevelopment persistence and what helps development succeed.
  - To develop analytical and critical thinking skills and use them to judge the appropriateness of economic development policy options.

## **Semester- IV**

### **17ECO24C1 Indian Economy-II**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

#### **Course Outcomes**

- CO1 To have knowledge about the issues in Indian Economy like planning, poverty, unemployment etc.
- CO2 To know about relationship between monetary policy, fiscal policy and economic development.
- CO3 To know about framework of policy making for the development of Indian economy
- CO4 To know about the preparation of budgeting and its utilization for Indian economy.

#### **Unit -I**

Agriculture: Role and features of Indian agriculture; Technological change in agriculture; Trends in agricultural productions and productivity; WTO and Indian agriculture.

Poverty in India - Absolute and relative analysis of poverty.

#### **Unit-II**

Industry: Growth and pattern of industrialization; New industrial policy and liberalisation - impact on Indian economy; Public Sector enterprises - trends and performance; Small and cottage industries; issues of privatization.

Unemployment and Migration in India.

#### **Unit-III**

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.



## **Unit-IV**

Environment as necessity-amenity and public goods; causes of environmental and ecosystem degeneration-policies for controlling pollution-economic and persuasive; their relative effectiveness in LDCs; Relation between population, poverty and environment degradation-micro-planning for environment and eco-preservation-water sheds, joint forest management and self-help groups.

Role of State in environmental preservation -f Review of environmental legislation in India.

### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)).

### **Reading List:**

- **Sen, R.K. and B. Chatterjee (2001), Indian Economy: Agenda/or 21st Century:**
- **Dhar, P.K., Indian Economy - Its growing dimensions, Kalyani Publishers, New Delhi (Latest Edition) Mishra, S.K. and V.K. Puri Indian Economy - 1st Development Experience, Himalaya Publishing House, Mumbai, Latest Edition.**
- **Economic Surveys, Governrnnet of India, various issues.**
- **Reserve Bank ofIndia, Report on Currency and Finance (Annual).**

## **M.A. Economics**

### **Semester-IV**

#### **17ECO24C2 International Trade and Finance-II**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

## **Course Outcomes**

- CO1 Students would know the country's position regarding international trade, payments and foreign exchange.
- CO2 The students would learn the methods regarding improvement in terms of trade, international debt and balance of payments positions.
- CO3 Students would know about the policies regarding increase in exports, to deal with international institutions and to maintain relation with other countries. Since globalization and international relations can increase the rate of growth and solve domestic problems like inflation, unemployment and value of currency etc.

### **Unit-I**

Foreign trade multiplier with and without foreign repercussions and determination of national income and output; Relative merits and demerits of fixed and flexible exchange rate in the context of growth and development in developing countries. Forms of economic cooperation; Static and Dynamic effects of a custom union and free trade areas.

### **Unit-II**

International Monetary System and Trade Policies in India: Multilateralism and WTO; Rise and fall off gold standard and Bretton-Wood system; Need, adequacy and determinants of international reserves; Conditionality clause of IMP; Emerging International Monetary System with special reference to Post Maastricht developments and developing countries; Reforms of the International Monetary System, Theory of regionalism at global level - collapse of Brettonwood system. Optimum currency Areas - Theory and impact in the developed and developing countries.

### **Unit-III**

Indian and developing countries; Functions of GATT/WTO (TRIPS; TRIMS); Recent changes in the direction and composition of trade and their implication; Rationale and impact of trade reforms since 1991 on balance of payments, employment and growth.

### **Unit-IV**

Problems of India's International debt; Working and regulations of MN9 in India, Instrument of export promotion and recent import and export policies and agenda for future.

**Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

**Reading List:**

- Bhagwani, J. (Ed~) (1981), International Trade, Selected Readings, Cambridge University press, Massachusetts.
- Carboth, M. (1999), International Economics, International Thompson Publishing, New York.  
Chacholiades, M. (1990), International Trade: Theory and Policy, McGraw Hill, Kogakusha, Japan.
- Dana, M.S. (2000), International Economics: Study Guide and Work Book (5/1 Edition), Rutledge Publishers, London.'
- Dunn,R.M. and I.H. Mutt (2000), International Economics, Rutledge Publishers, London.
- Kenen, P.B. (1994), The International Economy, Cambridge University Press, ~ondon.

**M.A. Economics**

**Semester-IV**

**17ECO24D1 Agricultural Economics-II (Discipline Specific Course)**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

**Course Outcomes**

CO1 Course provides knowledge agricultural background , farm and agro business activities, agri finance and management.

- CO2 It introduces learner applied part of economics instead theoretical, which deals with allocation of land under various crops, specialization, diversification and other policy amplifications.
- CO3 Course offer relevant production and various techniques to understand agri production, cost benefit analysis and enhance learner to make frontier-production function at least cost.

### **Unit-I**

Land Reforms in India: Agricultural Development and Tenorial conditions: Land Reforms - The Theoretical Issues (Meaning, Important changes caused by Land Reform and Objectives of Land Reforms); Land Reforms; Ceiling on Land Holdings; Implementation of Land Reforms in India. Strategy for Development of Indian Agriculture; The Green Revolution; Factors responsible for Green Revolution; Economics Benefits of Green Revolution; Measures for making Green Revolution all pervasive; Regional disparities created by Green Revolution; Inter-farm disparity in Income; Green Revolution and Employment. Trends in Migration and Labour markets; Minimum Wages Act.

### **Unit-II**

Terms of Trade between Agriculture and Industry: Meaning; Impact of change in terms of trade in favour of and against agriculture; changes in terms of trade between agriculture and industry during the course of economic development; Terms of trade between agriculture and industry in India since Independence; Agricultural Marketing: Need for an efficient system of agricultural marketing; Efficiency of agricultural Marketing system in India; Measures to improve the efficiency of agricultural marketing in India. Cooperative movement in India - organization structure and development of different types of cooperatives in India.

### **Unit-III**

Agricultural Credit: Importance of agricultural credit; Sources (formal and informal), problems and Government policies since Independence. Capital formation in the rural sector - savings, assets and credits. Issues in Agriculture price policy: objectives of Agricultural Price Policy; Main elements of Agricultural Price Policy; Agricultural Price Policy in India: Its evolution; objectives of Price policy in India; Important constitution of Agriculture Price Policy in India;

Critical Evaluation of India's Agriculture Price Policy; Need for Revision of Agricultural Price Policy in India.

#### **Unit-IV**

The New Economic Policy and Indian Agriculture: Macro Economic Stabilization measures; structural Adjustments in the Agricultural Sector. World Trade Organization and Indian Agriculture; Model of Production Debate: Private V /s Public investment in Agriculture; Trends in public and private investment in Indian Agriculture.

#### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

**Reading List:** As suggested in Semester 3<sup>rd</sup>.

#### **Semester-IV**

#### **17ECO24D2 Mathematical Economics-II (Discipline Specific Course)**

**Max. Marks: 100**

**Time: 3 Hrs.**

**Written Exam:80**

**Internal Assessment: 20**

#### **Course Outcomes**

CO1            The course would help the students to meet the needs of those who have a strong quantitative background wishing to study economics.

- CO2            The advance and technically rigorous nature of course would serve as an excellent foundation for students for studying economic with the help of mathematical tools.
- CO3            To familiarise the students to study economics with the help of mathematics.

### **Unit-I**

Constrained optimization of a producer; Generalization of n variable case; Input demand function; Adding up theorem; Technical progress through production function; Analysis of joint profit maximization and multiproduct firm; Production possibility curve; Empirical uses of production function analysis.

### **Unit-II**

Idea of self dual functional form; derivation of short run -long run cost function; Cobb-Douglas (CD) and Translog (TL) cost functions.

### **Unit-III**

Price determination in perfect competition, monopoly, monopolistic competition, duopoly, oligopoly;

Pricing of factors of production; Bilateral monopoly; Single market equilibrium - Marshallian and Walrasian equilibrium conditions; Lagged market equilibrium: Multi-market equilibrium system of Walras;

### **Unit-IV**

Classical and Keynes' macro system; Static and dynamic multiplier; Determinants of investment; Accelerator; trade cycle model of Samuelson and Hicks; harrod problem; Neoclassical model of growth; Solow and Meade growth models with technical progress; Optimal growth; and golden rule of accumulation.

#### **Note:**

**(A)** Nine questions would be set in all.

**(B)** Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)).

#### Suggested Reading

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

### Semester-IV

#### 17ECO24D3 Econometrics –II (Discipline Specific Course)

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

#### Course outcomes

- |     |  |
|-----|--|
| CO1 | Course work provides a path to follow research in general area of economics and business.  |
| CO2 | Students would gain understanding of primarily about estimation and hypothesis testing. What is different and generally much more interesting and useful is that parameter being estimated and tested are not just means and variances but relationship between variables, which is much of economics and other social sciences. |
| CO3 | To familiarise the students to study economics with an applied approach.   |

### **Unit-I**

Dynamic Econometric Models: Autoregressive and distributed lag models - Koyck Model, Adaptive expectation and Partial Adjustment approaches for rationalization of Koyck models, Estimation of Auto-regressive models, Granger causality and cointegration.

### **Unit-II**

Dummy variable Regression Models: The Nature of Dummy variable, caution in the use of Dummy variables, ANOVA MODELS with two qualitative variables, ANCOVA MODELS, The use of Dummy variables in seasonal analysis and Interaction Effects.

### **Unit-III**

Simultaneous equations model: The simultaneous equation bias and inconsistency of OLS estimators; The identification problem; Rules of identification - order and rank conditions (statement only), Methods of estimating simultaneous equation system: Indirect Least squares (ILS), 2 SLS (Two stage least squares), Least variance ratio method, Sure (seemingly unrelated regression method). Estimation of Translog Production and Translog cost function.

### **Unit-IV**

Time series Econometrics: Key concepts - stochastic process; stationarity and non stationarity process, purely random process, Random walk models co-integration, Integrated variables, Deterministic and stochastic trends and unit root.

Techniques of forecasting - ARMA, VARIMA Models, Box-Jenkins methodology.

#### **Note:**

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit)).



**Reading List:**

- Gujarati, D.N. (1995), Basic Econometrics (2nd Edition), McGraw Hill, New Delhi.
- Koutsoyiannis, A. (1997), Theory of Econometrics (2nd Edition), The Macmillan Press Ltd., London.
- Johnston, J. (1991), Econometric Methods, McGraw Hill Book Company, London.
- Maddala, G.S. (1993), Econometrics Methods and Applications, (2 Vol.), Alder shot, U.K.
- Krishna K.L. (1997), Econometrics Application in India, Oxford University Press, New Delhi.
- Kmenta, J. (1997), Elements of Econometrics, University of Michigan Press, New York.
- Intrilligator, M.D. (1978), Econometrics Techniques and Applications, Prentice Hall, New Jersey.
- Pindyck, R.S. and D.L. Rubinfeld (1976), Econometric Models and Economic Forecasts, McGraw Hill, Tokyo.
- Frances, P. H. (1998), Time Series Models for Business and Economic Forecasting, Cambridge University Press, Cambridg

**M.A. Economics****Semester-IV****Financial Institutions and Markets-II (Discipline Specific Course)****Paper- 17ECO24D4****Max. Marks: 100****Time: 3 Hrs.****Written Exam:80****Internal Assessment: 20****Course Outcomes**

- CO1 Course work provides a path to follow research in general area of economics and business.

- CO2 Students would gain understanding of primarily about estimation and hypothesis testing. What is different and generally much more interesting and useful is that parameter being estimated and tested are not just means and variances but relationship between variables, which is much of economics and other social sciences.
- CO3 To familiarise the students to study economics with an applied approach

### **Unit-I**

Proliferation of banking and non-bank financial intermediaries - Effectiveness of monetary Policy - Credit creation and its control; Profitability and efficiency of banks.

Commercial banks and Co-operative banks.

### **Unit-II**

Development banks- Role and functions; Investment and merchant banking; Financial sector reforms in India - Definition and types of non-bank financial institutions: Their growth and impact on India's economic development, Measures taken to control their operations.

### **Unit-III**

Role of money market and capital market: Call money market, Treasury bill market, Commercial bill market including commercial ECN and certificate of deposits, Discount market - Government securities market - Market for derivation: future and options, and other derivatives: types, uses and pricing of derivation - Primary and secondary market for securities.

### **Unit-IV**

SEBI: its impact on the working of capital market in India; IRDA and its role in financial markets - Theory of optimum currency areas - Euro-dollar and Euro-Currency markets - Their development role at international level.

**Note:**

**(A)** Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions (one compulsory and selecting one from each unit)).

### **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, Market 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.
- Karker, 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 Systems, Tata McGraw Hill, New Delhi.
- Machiraju, M.R. (1999), Indian Financial System, Vikash Publishing House, New Delhi.
- Ohlson, J.A. (1987), The Theory of Financial Markets and Institutions, 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-Cilffs, New Jersey.
- Harvey, A.C. (1981), Econometric Analysis of Time Series, Phillip Allen, London.
- Madnani, G.M.K. (1999), Introduction of Econometrics.
- Intrilligator, M.J. and Hasio Badkin (1996), Econometric Models, Techniques and Applications, Prentice Hall.

## Semester-IV

### 17ECO24D5 Public Economics-II (Discipline Specific Course)

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

#### Course Outcomes

- CO1 The students would learn of the features of the federal structure and financial relationship among them.
- CO2 The course would develop the analytical ability of students to distinguish between beneficial and detrimental effects of a government policy and their effect on the macroeconomic framework of an economy.
- CO3 It will help students to critically analyse the fiscal reforms and policy choices of the government in developed and developing countries.

#### Unit-I

**Fiscal Federalism:** Principles of multi-unit finance; principles of grant design; Indian fiscal federalism, vertical and horizontal imbalances, assignment of functions and sources of revenue; constitutional provisions; Finance Commission and Planning Commission.

#### Unit-II

Centre-State financial relations in India, problems of State's resources and indebtedness; transfer of resources from Union to States and, States to Local Bodies. Public Finance - Trends in revenue and expenditures of the Central and State Governments.

#### Unit-III

**Fiscal Policy:** Instruments and transmission mechanisms; fiscal policy for stabilization-automatic vs. discretionary stabilization; various concepts of budgetary deficits; fiscal deficit in India: extent, trend and, implication.

## Unit-IV

Public debts: India's public debt since 1951-growth, composition, ownership pattern and debt management.

Fiscal reforms in India.

### Note:

(A) Nine questions would be set in all.

(B) Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

(C) There would be two questions (16 marks each) from each of four units.

(D) Candidates would be required to attend five questions ( one compulsory and selecting one from each unit))

### Reading List:

- Masgrave R.A and Masgrave P.B., Public Economics in Theory and Practice, McGraw Hill.
- Stiglitz, J.E., Economics of Public Sector, J.W. Norton & Company.
- Smgh, S.K., Public Finance in Theory and Practice, S. Chand & Co.
- Government of India, Ministry of Finance: Economics Survey (of various years).
- Raja J. Chaliah, Towards Sustainable Growth, Essays in Fiscal and Financial Sector Reforms in India, Oxford University Press, Delhi, 1996
- Deena Khatkhate (ed.), Money and Finance: Issue, Institutions, Policy, Sameeksha Trust, Orient Longman, 1998. .
- Kunal Sen & Rajendra R. Vidya (ed.), Process of Financial Liberalization in India, Oxford University , Press, 1997.
- Mundel Sudipto (ed.) Public Finance: Policy Issue of India.
- Brown C.V. and Jackson P.M. (1990), Public Sector Economic, Basil Blackwell, Oxford.
- M. Govindia Rao and Tapan Sen (1998), Financial Federalism in India.
- Atkinson A.B. and Stightz, J.E. (1980), Lectures on Public Finance, Tata McGraw Hill.
- Auerbach, A.J. and M. Feldstern (ed.) (1985), Handbook of Public Economics, Vol-I, North Holland, Amsterdam.

- Raghavendra Jha (1999), Modern Public Economics, Rotledge, London.
  - Srivaslava D.K. (ed.) (2000), Fiscal Federalism in India, Har-Anand Publication Ltd., New Delhi.
  - Bhargava P.K. (1991), India's Fiscal Crisis, Ashish Publishing House, New Delhi.
- Govt. of India, Ministry of Finance (1988), Sarkaria Commission Report on Centre-State Finance Relations.

### **Semester-IV**

#### **17ECO24D6: Urban Economics-II (Discipline Specific Course)**

**Max. Marks: 100**

**Written Exam:80**

**Time: 3 Hrs.**

**Internal Assessment: 20**

#### **Course Outcomes**

- CO1            The students are trained to comprehend issue and opportunities associated with urbanization. They are better suited to research and administrative job that require understanding of finer aspects of an increasing globalization and urbanizing world.
- CO2            It will impart a more calibrated understanding of economic phenomena and urban issues.
- CO3            It will familiarize about the critique policies in world with a majority of population already living in urban areas

#### **Unit-I**

Migration and urbanisation: The concept and definition of migration. Classical and Marxist understanding of labour migration. Theories of migration in the context of the developing countries: Hoselitz; Harris and Todaro.

#### **Unit-II**

The alternative perspectives on labour migration: Williamson, Ellis and Harris, Stark.

#### **Unit-III**

Salient features of urbanisation: the World, India and the National Capital Region of India

#### **Unit-IV**

Issues and problems in the urbanisation: Urban poverty and productivity; Urban land and housing; Urban environment; Urban governance.

**Note: (A)** Nine questions would be set in all.

**(B)** Question No. 1 based on the entire syllabus, would be compulsory. It would contain eight short answer questions of two marks each.

**(C)** There would be two questions (16 marks each) from each of four units.

**(D)** Candidates would be required to attend five questions (one compulsory and selecting one from each unit).

#### **Reading list:**

- O'Sullivan, A (2003) Urban Economics (3<sup>rd</sup>Edn.), IRWIN, London. (Chapters 1-4)
- HABITAT, 1996, An Urbanizing World- Global Report on Human Settlements 1996, Oxford University Press: New York
- Richardson, H.W (1988) New Urban Economics, Dryden Press, Hinsdale
- Balchin, Paul N, Issac, David and Chen, Jean (2000) Urban Economics: a global perspective, Palgrave, New York.
- United Nations, Department of Economic and Social Affairs, Population Division (2015). World Urbanization Prospects: The 2014 Revision, United Nations New York, 2015.
- Breman, J. (2010). Outcast labour in Asia: Circulation and informalization of the work force at the bottom of the economy. New Delhi: Oxford University Press.
- Buchanan, D.H. (1966). The development of capitalist enterprise in India. London: Frank Cass & Co. Ltd.
- Ellis, F. and Harris, N. (2004). Development patterns, mobility and livelihood diversification. Keynote Paper for DFID Sustainable Development Retreat, University of Surrey, Guildford.

