



**PANJAB UNIVERSITY, CHANDIGARH-160014 (INDIA)**

**(Estd. under the Panjab University Act VII of 1947—enacted by the Govt. of India)**

**FACULTY OF ARTS**

**SYLLABI**

*FOR*

**M.A. ECONOMICS (SEMESTER SYSTEM)  
EXAMINATIONS, 2019-20, 2020-21 & 2021-22**

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## **APPLICABILITY OF REGULATIONS FOR THE TIME BEING IN FORCE**

Notwithstanding the integrated nature of a course spread over more than one academic year, the regulations in force at the time a student joins a course shall hold good only for the examinations held during or at the end of the academic year. Nothing in these regulations shall be deemed to debar the University from amending the regulations subsequently and the amended regulations, if any, shall apply to all the students whether old or new.

**GUIDELINES FOR CONTINUOUS INTERNAL ASSESSMENT (20%) FOR REGULAR STUDENTS**

**OF POST-GRADUATE COURSES of M.A. Economics (Semester System)**

*(Effective from the First Year Admissions for the Academic Session 2005-2006)*

1. The Syndicate has approved the following guidelines, mode of testing and evaluation including Continuous Internal Assessment of students :
  - (i) Terminal Evaluation : 80 %  
Continuous
  - (ii) Assessment : 20 %
  - (iii) Continuous Assessment may include written assignment, snap tests, participation in discussions in the class, term papers, attendance etc.
  - (iv) In order to incorporate an element of Continuous Internal Assessment of students, the Colleges/Departments will conduct **one** written test as quantified below :
    - (a) Written Test : 25 (reduced to 5)
    - (b) Snap Test : 25 (reduced to 5)
    - (c) Participation in Class Discussion : 15 (reduced to 3)
    - (d) Term Paper : 25 (reduced to 5)
    - (e) Attendance : 10 (reduced to 2)

**Total : 100 reduced to 20**

2. Weightage of 2 marks for attendance component out of 20 marks for Continuous Assessment shall be available only to those students who attend 75% and more of classroom lectures/seminars/workshops. The break-up of marks for **attendance component** for theory papers shall be as under :

<i>Attendance Component</i>		<i>Mark/s for Theory Papers</i>
(a)	75 % and above upto 85 %	1
(b)	Above 85 %	2

3. It shall **not be compulsory** to pass in Continuous Internal Assessment. Thus, whatever marks are secured by a student out of 20% marks, will be carried forward and added to his/her score out of 20 %, i.e. the remaining marks allocated to the particular subject and, thus, he/she shall have to secure pass marks both in the University examinations as well as total of Internal Continuous Assessment and University examinations.
4. Continuous Internal Assessment awards from the affiliated Colleges/Departments must be sent to the Controller of Examinations, by name, **two weeks before** the commencement of the particular examination on the Performa obtainable from the Examination Branch.

**SPECIAL NOTE:**

- (i) The theory paper will be of 80 marks and 20 marks will be for internal assessment.
- (ii) In the case of Postgraduate Courses in the Faculties of Arts, Science, Languages, Education, Design & Fine Arts, and Business Management & Commerce, falling under the purview of Academic Council, where such a provision of Internal Assessment/Continuous Assessment already exists, the same will continue as before.

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## OUTLINES OF TESTS, SYLLABI AND COURSES OF READING FOR M.A. ECONOMICS (SEMESTER SYSTEM) FOR THE EXAMINATION OF 2019-2020

### Course Structure:

The M.A. in Economics will be a four semester full time programme. The course will be organized over two years, each year consisting of two semesters—the summer semester and the winter semester.

The programme of study consists of sixteen courses out of which **12** are core courses—**compulsory** for all students—and **4** are **elective courses**. Each of these courses will carry 100 marks, of which 20 marks will be for internal assessment and 80 marks for the end semester examinations to be held in December (Semesters I and III) and May (Semesters II and IV). The teaching hours will be 50 per course per semester. The courses will be offered according to the following schedule:

### SEMESTER-I

#### All Compulsory Papers :

MAECO-101	Micro Economics-I	100 Marks
MAECO-102	Macro Economics-I	100 Marks
MAECO-103	Quantitative Methods-I	100 Marks
MAECO-104	International Economics	100 Marks

### SEMESTER-II

#### All Compulsory Papers :

MAECO-201	Micro Economics-II	100 Marks
MAECO-202	Macro Economics-II	100 Marks
MAECO-203	Quantitative Methods-II	100 Marks
MAECO-204	Public Finance	100 Marks

### SEMESTER-III

#### There will be two Compulsory Papers:

MAECO-301	Economics of Growth and Development-I	100 Marks
MAECO-302	Indian Economic Issues -I	100 Marks

Any *two* of the following options for Papers **MAECO-303 & 304**

(i)	Economics of Agriculture-I	100 Marks
(ii)	Economics of Industry-I	100 Marks
(iii)	Environmental Economics	100 Marks
(iv)	History of Economic Thought	100 Marks
(v)	Econometrics -I	100 Marks
(vi)	Mathematical Economics-I	100 Marks
(vii)	Economics of Population	100 Marks

## SEMESTER-IV

### There will be two Compulsory Papers:

MAECO-401	Economics of Growth and Development-II	100 Marks
MAECO- 402	Indian Economic Issues-II	100 Marks

Any *two* of the following options for Papers **MAECO-403 & 404**

(i)	Economics of Agriculture-II	100 Marks
(ii)	Economics of Industry-II	100 Marks
(iii)	Research Methods	100 Marks
(iv)	Public Policy	100 Marks
(v)	Econometrics -II	100 Marks
(vi)	Mathematical Economics-II	100 Marks
(vii)	Economics of Money and Banking	100 Marks

**Note:** The students who opt for Economics of Agriculture-I / Economics of Industry-I/ Econometrics-I/ Mathematical Economics –I in M.A. Semester III will have to opt for Economics of Agriculture-II / Economics of Industry-II/ Econometrics-II/ Mathematical Economics-II necessary in M.A. Semester –IV. However, no one can opt for Economics of Agriculture-II / Economics of Industry-II/ Econometrics-II/ Mathematical Economics-II in M.A. Semester-IV without having studied Economics of Agriculture-I / Economics of Industry-I/ Econometrics-I/ Mathematical Economics –I in M.A. Semester-III.

## SEMESTER-I

### PAPER-MAECO-101: MICRO ECONOMICS-I

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

#### **Objective:**

The objective of the paper is to rigorously and comprehensively equip the students with theoretical concepts, methodology and process of reasoning involved in analyzing economic behavior of individuals, firms and markets using, in general, a static and partial equilibrium framework.

The students would be evaluated at the end of each semester through subjective type questions/ answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

#### **Pedagogy of the Course Work:**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

#### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT-I

#### ***Central Ideas of Economics:***

How do People Make Decisions? People: face 'Trade Offs'; Incur Opportunity Costs and Gain Benefits of Decisions; Think at the Margin and Respond to Incentives. How do People Interact? Specialization and Exchange can make each party 'Better Off' Market often work efficiently, The Invisible Hand; Three Coordination Tasks in the Economy: Which Commodity be Produced and How much of it? Who should produce it and how? Who should Consume and How much of it?

*Methodology of Economics as a Social Science:* Alternative Processes of Construction of Positive Economic Theories.

*Equilibrium:* Concept, Stability, Existence and Uniqueness of Equilibrium.

*Types:* Static and Dynamic Equilibrium. Partial and General Equilibrium.

*Stability Analysis:* Marshallian and Walrassian Approaches.

### UNIT- II

*Analysis of Consumer Choice under Certainty:*

Cardinal Analysis,  
Ordinal Utility Approach; Revisiting Consumer Equilibrium and Effects of Changes in Relative Prices and Money Incomes and Derivation of 'Marshallian' and 'Compensated' Demand Curves.

*Consumer Surplus:* Hicks' and Marshall's Approach.

*Application of Indifference Curves:* Cash Subsidy Vs. Kind Subsidy; Income Leisure Choice; Inter-temporal Choice of Consumption.  
Revealed Preference Theory and Consistency of Choice.

### UNIT- III

Market Demand: The Role of Network Externalities; 'Bandwagon', 'Veblen' and 'Snob' Effects.

*Analysis of Consumer Choice under Uncertainty:*  
Measurement of Risk. Expected Utility and Preferences towards Risk. Why do people gamble (insure)? Risk Return Trade Off. Reducing Risk.

*Analysis of Consumer Behavior under Asymmetric Information:*  
*Hidden Actions:* Principals, Agents and Moral Hazard.  
*Hidden Characteristics:* Adverse Selection Problem. Market and Government Responses to the Problems of Moral Hazard and Adverse Selection.

### UNIT-IV

*Theory of Production and Costs:*  
Production, Input Choice and Cost with One Variable Input. Law of Returns to Variable Proportions and Choice of Optimum Quantity of an Input. Derivation of Short Run Cost Curves from Productivity Curves of a Variable Factor of Production. Reserve Capacity and the Shape of Short Run Cost Curves.

*Multiple Input Decisions:* The Choice of Optimal Techniques of Production and Factor Combinations. Factor Price Changes: Substitution and Output Effects. Elasticity of Input Substitution. Constant, Increasing and Decreasing Returns to Scale. Expansion Path and derivation of Long Run Cost of Production Curves.

Economies and Diseconomies of Scale: Shape of Short and Long Run Costs Curves: Theory versus Empirical Evidence. Multi Product Firms and Dynamic Changes in Costs: Economies of Scope; The Learning Curve Analysis.

#### **Recommended Readings:**

##### **Essential Readings:**

Maddala, G. S. & Miler, E. (2004). *Micro-Economic Theory and Applications*, Tata McGraw Hill.

Mankiw, G. N. (2017). *Principles of Economics* (3rd ed.). Thomson.

Pindyck, Robert, S., Rubinfeld, D. L. & Gupta, P.L. (2017). *Micro-Economics*. New Delhi: Prentice Hall of India.

##### **Further Readings:**

Boumol, W. J. & Blinder, A. S. (2007). *Macroeconomics: Principles and Policy* (9<sup>th</sup>ed.). Thomson.

Briet, W. & Hochman, H. M. (1977). *Readings in Micro Economics*. Dryden Press.

Ferguson, C. E. & Gould, J. P. (1989). *Micro Economic Theory* (6<sup>th</sup> ed.). All India Book Seller.

Koutsoyiannis, A. (2016). *Modern Micro Economics*. London: McMillan Press.

Ryan, W. J. L. & Pearce, D. W. (1989). *Price Theory*. New Delhi: McMillan India.

Salvatore, D. (2007). *Microeconomics: Theory and Applications*, (4<sup>th</sup> ed.). Oxford University Press.

## **PAPER- MAECO-102: MACRO ECONOMICS-I**

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### **Objective:**

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

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

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### **Pedagogy of the Course Work:**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).



4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry 15 marks ( $15 \times 4 = 60$ ).

### UNIT-I

#### (Fundamental Theories of Income and Employment Determination)

**Income and Employment Determination:** Integrated Classical and Keynesian Models of Income and Employment Determination; commodity, money (including bond market of Keynes), and labour markets.

**Wage-Price Flexibility and Automatic Full Employment:** Classical Versus Keynesian Approach.

### UNIT-II

#### (Consumption Theories)

**Consumption and Consumption Function:** Keynes Consumption and saving functions under Psychological law of consumption, Consumption Puzzle: Absolute Income hypothesis, Relative Income hypothesis, Permanent Income hypothesis and Life Cycle Hypothesis.

**Consumption under Uncertainty:** Random Walk Hypothesis; Interest Rate and Saving; Consumption and Risky Asset: Consumption CAPM.

### UNIT-III

#### (Investment Theories)

**Investment and Investment Function:** Type of Investment, Role of investment using Investment Multiplier, Classical and Keynesian Theories of Investment, Accelerator Theory of Investment, Neo-Classical Theory of Investment, and Tobin's-q Theory of Investment. Effects of Uncertainty, Kinked and Fixed Adjustment Costs, Investment in the Housing Market.

### UNIT-IV

#### (Money Supply and Demand)

**Supply of Money:** Theoretical Debate and Empirical Attempts to define money; Components of Supply of Money, Credit Creation by Commercial Banks, Money Multiplier.

**Demand for Money:** Classical Quantity Theory, Keynesian Theory, Baumol and Tobin's Contributions. Friedman's Restatement of Quantity Theory of Money.

#### Recommended Readings:

##### Essential Readings:

Ackley, G. (2007). *Macroeconomic Theory*. Macmillan.

Allen, R.G.D. (1967). *Macro-Economic Theory: A Mathematical Treatment*. Palgrave Macmillan.

Blanchard, O. (2009). *Macroeconomics*. New Delhi: Pearson Education Inc.

Blanchard, O.J. & Fischer. (1996). *Lectures on Macroeconomics*, Delhi: PHI Learning Pvt. Ltd.

Branson, W. H. (1989). *Macro Economic Theory and Policy* (3<sup>rd</sup> ed.). Harper Collins.

D'Souza, E. (2008). *Macroeconomics*. Pearson Education.

Dornbusch, R., Fisher, S & Startz, R. (2002). *Macroeconomics*, (9<sup>th</sup> ed.). New Delhi: Tata McGraw Hills.

Levacic, R. & Rebmann, A. (1982). *Macroeconomics: An Introduction to Keynesian Neoclassical Controversies*. Macmillan.

Miller, R. L. & Pulsinelli, R. (1986). *Macroeconomics*. New York: Harper & Row.

Ola Olsson (2010). *Essentials of Advanced Macroeconomic Theory*, Routledge.

Romer, D. (1996). *Advanced Macroeconomics*. McGraw-Hill.

**Further Readings:**

Abel, A. B., Bernanke, B. S. (2007). *Macroeconomics*. New Delhi: Pearson Education Inc.

Dornbusch, R. (1980). *Open Economy Macroeconomics*. New York: Weltwirtschaftliches Archive.

Frisch, H. (1983). *Theories of Inflation*. Cambridge: Cambridge University Press.

Froyen, R. T. (2002). *Macro Economics*. New Delhi: Pearson Education Inc.

Gordon, R. J. (2012). *Macroeconomics*. Delhi: PHI Learning Pvt. Ltd.

Heijdra, B. J. (2017). *The Foundations of Modern Macroeconomics*. Oxford University Press.

Hicks, J. R. (1950). *A Contribution to the Theory of Trade Cycle* Oxford: Clarendon Press.

Lucas, R. (1981). *Studies in Business Cycle Theory*. , Massachusetts: MIT Press Cambridge.

Makin, A. J. (2002). *International Macroeconomics*. Princeton Hall.

Mankiw, N. G. & Romer, D. (1991). *New Keynesian Economics. MIT, 2 Volumes*.

Mathews, R. C. O. (1964). *The Trade Cycle*. Cambridge: Cambridge University Press.

Pentecost, E. (2000). *Macroeconomics – An Open Economy Approach*. MacMillan Press Ltd.

Raghbendra, J. (1964). *Contemporary Macroeconomics: Theory and Policy*. New Age International Publishers.

Sherffrin, S. (1999). *Rational Expectations*. Cambridge University Press.

Snowden, B & Vane, H. R. (2005). *Modern Macroeconomics: Its Origin, Development and Current Stat.*, UK: Edward Press.

Wendy, Carlin/Soskice, D. (2007). *Macroeconomics: Imperfections, Institutions and Policies*. Oxford University Press.

## PAPER –MAECO–103: QUANTITATIVE METHODS –I

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

The objective of this paper is to train the students in the use of mathematical and statistical tools in analyzing economic problems. The course content contains simple tools and techniques, thought necessary for data collection, presentation, analysis and drawing inferences about various statistical hypotheses.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussion of numerical examples, academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain four units. Each unit shall have two questions and the candidates shall be required to attempt one question from each unit – 4 in all. Each question shall carry 15 marks ( $15 \times 4 = 60$ ).
5. Candidates are allowed to use Simple, Non-Scientific and Non-Programmable Calculator in the Examination Hall.
6. It is compulsory for paper setter to mention about the requirement of log, anti log and statistical tables.

### UNIT - I

*Differentiation*: Review of Simple differentiation; Partial and total derivatives; Homogenous function; Euler's theorem, Maxima and Minima of a function of two independent variable; Constrained optimization; Lagrange's method.

*Application of Derivatives in Economics*: Elasticity of demand; Partial elasticities; Competitive and Complementary Commodities; Optimization Problems in cost, Revenue etc.

## UNIT – II

*Growth Rate and its Measurement*; Present Value and its Applications.

*Matrices*: Review of adjoint and inverse of matrices; Rank of Matrix; Linear Independence and Dependence of Vectors/Matrices; Solutions of Equations (upto three) by Matrix Inverse and Gauss elimination Methods; Consistency of Equations; Quadratic Forms – Types and Properties. Simple Economic Applications.

## UNIT – III

*Correlation and Regression Analysis*: Multiple and Partial Correlation involving three Variables. The Linear Regression Model; Finding the Multiple Linear Regression Equation and Coefficients upto two explanatory variables: Interpretation of the Coefficients,  $R^2$  and adjusted  $R^2$ .

*Time Series Analysis*: Definition and components. Methods of Trend Measurement: Quadratic, Exponential and Modified Exponential. Seasonal Indices by Methods of Simple Average, Ratio to moving Average and Ratio to Trend.

## UNIT – IV

*Index Numbers*: Concepts of Price Relative, Quantity Relative and Value Relative. Laspeyer's, Paasche's and Fisher Index Numbers. Test of an Ideal Index Number. Base shifting, Splicing and deflating of Index Numbers. Problems in the Construction and Limitation of Index Numbers.

*Probability Theory*: Classical, empirical and Axiomatic Definitions of Probability. Laws of Addition and Multiplication (with examples); Bayes Theorem and its applications. Concept of Random Variable; probability mass and density functions; Expected Values, Moments (definition and types); Moments Generating Function (definition and properties).

### **Recommended Readings:**

#### ***Essential Readings:***

Allen, R. G. D. (latest edition). *Mathematical Analysis for Economists*. New Delhi: Trinity Press.

Allen, R. G. D. (1986). *Mathematical Analysis for Economists*. Macmillan Publisher India Ltd.

Arora, P. N., Arora, S., Arora, S. & Arora, A. (2007). *Comprehensive Statistical Methods*. New Delhi: S. Chand & Company Ltd.

Chiang, A. C. & Wainwrigth, K. (2005). *Fundamental Methods of Mathematical Economics* (4th ed.). New York: McGraw Hill.

Devore, J. L. (2012). *Probability and Statistics for Engineering and the Sciences*, (8<sup>th</sup> ed.), Cengage Learning India.

Gupta, S. C. (latest edition). *Fundamentals of Statistics* (7<sup>th</sup> ed.). Himalaya Publications.

Spiegel, M. R. & Stephens L. J. (2000). *Theory and Problems of Statistics: Schaum's Series*, (3<sup>rd</sup> ed.). New Delhi: Tata McGraw Hill.

Weber, J. E. (1982). *Mathematical Analysis (Business and Economic Applications)* (4th ed.). New York: Harper and Row.

Yamane, T. (2006). *Mathematics for Economist-an Elementary survey* (2nd ed.). New Delhi: Prentice-Hall.

Yamane, T. (1972). *Fundamental Methods for Mathematical Economics*. New Delhi: Prentice-Hall.

**Further Readings:**

Freund, J. E. (1992). *Mathematical Statistics*. (5<sup>th</sup> ed.). New Delhi: Prentice-Hall, Cengage Learning, India.

Gupta, S. P. (2014). *Statistical Methods*. New Delhi: Sultan Chand & Sons.

Kandoi, B. (2012). *Mathematics for Business and Economics with Applications*, Vol. 1. Mumbai: Himalaya.

Simon, C. P. & Lawrence, B. (2006). *Mathematics for Economists* (Indian ed.). Viva –Norton Student edition: Norton and Company.

**PAPER – MAECO-104: INTERNATIONAL ECONOMICS**

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

**Objective:**

The course intends to provide a deep understanding about the broad principles and theories, which tend to govern the free flow of trade in goods, services and capital – both short-term and long-term – at the global level. The contents of the paper spread over different modules, lay stress on the theory and nature of the subject which, in turn, will greatly help them to examine the impact of the trade policies followed both at the national and international levels as also their welfare implications at macro level and the distribution of gains from trade.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/options concerned.

**Pedagogy of the Course Work:**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi.

**INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.

3. The first question would be **compulsory**, shall be short answer type (word limit 25-30 each).  
It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks (10x2=20).
4. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be required to attempt one question from each Unit – 4 in all. Each question shall carry 15 marks (15 x 4 = 60).

#### UNIT – I

***International Trade Theory:***

Trade Based on Absolute Advantage: (Adam Smith), Comparative Advantage (David Ricardo) Advantage and Opportunity Costs (Haberler's theory, Gains from trade under constant cost as well as increasing costs).

Resources and Trade: Heckscher-Ohlin Model, Leontief Paradox.

Imperfect Competition and International Trade (Intra-industry trade), Trade Based on Dynamic Technological Differences (Technological Gap and Product Cycle Models)

#### UNIT – II

***International Trade Policy:***

Theory of Tariffs: Partial Equilibrium analysis of Tariff (both small country and large country case), General Equilibrium analysis of a Tariff (both small country and large country case). Optimum tariff.

Non-Tariff Barriers and Neo-protectionism.

Economic Integration: Theory of Customs Unions. Static effects (Trade creation and trade diversion).

Dynamic effects of custom unions.

#### UNIT – III

***The Balance of Payments:***

Concept and Components of Balance of Payment.

The Price Adjustment Mechanism with Flexible and Fixed Exchange Rates, Marshall-Lerner conditions, J-curve effect, Gold Standard (Price-Species Flow Mechanism).

The Income Adjustment Mechanism, Foreign Trade Multiplier.

Open-Economy Macroeconomics and Adjustment Policies: Equilibrium in the Goods Market, in the Money Market and in the Balance of Payments (Mundell-Fleming Model).

#### UNIT – IV

***Foreign Exchange Markets and International Monetary System:***

Foreign Exchange Rates, Arbitrage, Spot and Forward Rates, Currency Swaps, Futures and Options, Foreign Exchange Risks, Hedging and Speculation. Euro currency Markets.

The International Monetary System: Past, Present and Future.

**Recommended Readings:**

***Essential Readings:***

Bhagwati, J. (1987). *International trade: Selected readings. (Vol. I)*. MIT Press.

Clement, M.O., Pfister, R. L., & Rothwell, K. J. (1967). *Theoretical issues in international economics*. Consolete and Company Ltd.

Dunn, R.M., & Mutti, J. H. (Latest Edition). *International economics*. New Jersey: John Wiley & Sons. Inc.

Jones, R. W., & Kenen, P.B. (1984). *Handbook of international economics. Vol. I, II and III*. New York: Elsevier.

Krugman, P.R., & Obstfeld, M.(Latest Edition). *International economics: Theory and policy*. United States: Pearson Publication.

Salvatore, D. (Latest Edition). *International economics*. New Jersey: John Wiley& Sons Inc.

Souderton, B., & Geoffrey R. (1994). *International economics*. London : McMillan.

***Further Readings:***

Ellsworth, P T & Clark L. (1975). *The International economy*. London: McMillan Press.

Mikic, M. (1998). *International trade*. London: McMillan Press.

Peter H L. (1969). *International economics*. New Jersey : Princeton University Press.

Shenkar, O., Luo, Y., & Chi, T. (2014). *International business*. London: Routledge.

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## SEMESTER-II

### PAPER – MAECO-201: MICRO ECONOMICS-II

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

#### Objective:

The objective of this paper is to rigorously and comprehensively equip the students with theoretical concepts, methodology and process of reasoning involved in analyzing economic behavior of individuals, firms and markets using, in general, a static and partial equilibrium framework.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

#### Pedagogy of the Course Work :

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

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4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

#### UNIT-I

*Analysis of Competitive Markets:* Profit Maximization and Equilibrium of a Firm and Industry in the Short Run and Long Run under Perfect Competition including the Supply Curve.

Consumers' and Producers' Surplus and Efficiency of Perfect Competition. Welfare Effects of an Excise Tax, Import Tariff, Price controls (supports) and Production Quotas.

*Monopoly:* Source, Measurement and Welfare Costs and Dynamic benefits of Monopoly Power. Monopoly Price Discrimination. Output and Welfare Comparisons with Single Price Monopoly. Inter-temporal Price Discrimination and Peak Load Pricing. Two part tariffs and Tie-in Sales.

*Public Policy toward Monopoly*

#### UNIT-II

*Monopolistic Competition:* Characteristics. A firm's Short and Long Run Equilibrium with Differentiated Products and Selling Costs (Advertisement). Group equilibrium. The Issue of Excess Capacity under Monopolistic Competition. The debate over Advertising.



*Oligopoly*: Cournot, Stackellberg and Kinked demand Curve. Leadership Models. Collusion and Cartels.

Game Theory and Economics of Cooperation: Dominant Strategy and Nash Equilibrium. The Prisoner's Dilemma, Mixed Strategies, Repeated Games, Collusion and Tit-for-Tat Strategy. Public Policy towards Oligopoly. Contestable Markets.

### UNIT-III

#### **Markets for Factor Inputs:**

*Factor Pricing under Perfect Competition:*

Demand for a Factor Input when One Input is Variable. Demand for a Factor Input when Several Inputs are Variable. Market Demand for a Labour. Supply of Labour by an Individual: Trade Off between Work and Leisure. Wage rate determination.

*Factor Pricing under Imperfect Competition:*

Wage rate determination with Monopolistic Power in Product Market, Monoposonistic Power in Factor Market; Bilateral Monopoly.

Competitive Buyer Firm versus Monopoly Union.

### UNIT-IV

#### **Welfare Economics:**

*Social Welfare Function:* Utilitarian, Rawlsian and Bergson-Samuelson Social Welfare Functions and Optimization of Social Welfare.

*General Equilibrium and Efficiency:* Pareto-Optimality Conditions. Perfect Competition and Economic Efficiency. First and Second Theorem of Welfare Economics. Compensation Criteria and Arrow's Impossibility Theorem.

*Externalities & Efficiency:* Externalities in Production and Consumption. Coase Theorem and Public Policies towards Externalities. Common Property: Overuse of Common Property, Solving Common Problems.

#### **Recommended Readings:**

##### ***Essential Readings:***

Boumol, W. J. & Blinder, A. S. (2007). *Macroeconomics: Principles and Policy*, (9<sup>th</sup> ed.). Thomson.

Ferguson, C. E. and Gold J. P. (1989). *Micro Economic Theory* (6<sup>th</sup> ed.). All India Book Sellers.

Mankiw, G. N. (2017). *Principles of Economics*, (3<sup>rd</sup> ed.). Thomson.

Pindyck, Robert, S., Rubinfel, D. L. & Gupta, P.L. (2017). *Micro-Economics*. New Delhi: Prentice Hall of India.

Salvatore, D. (2007). *Microeconomics: Theory and Applications* (4<sup>th</sup> ed.). Oxford University Press.

##### ***Further Readings:-***

Briet, W. & Hochman, H.M. (1977). *Readings in Micro Economics*. Hindsala: Dryden Press.

Koutsoyiannis, A. (2016). *Modern Micro Economics*. London: McMillan Press.

Maddala, G. S. & Miler, E. (2004). *Micro-Economic Theory and Applications*. Tata McGraw Hill.

Ryan, W. J. L. & Pearce, D. W. (1989). *Price Theory*. New Delhi : McMillan India.

## PAPER – MAECO-202: MACRO ECONOMICS-II

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

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

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

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### Pedagogy of the Course Work :

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit — 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT-I

#### (Simultaneous Equilibrium & Tatonnement Process under Closed and Open Economies)

**IS and LM Framework:** Derivation, Properties, Shifts, and Rotations of IS and LM Curves under closed and open economy systems. Derivation, Properties, Shifts, and Rotations of BP Curve. Simultaneous Equilibrium in Money and Product Markets. Impact of Opening-up on simultaneous equilibrium (i.e., IS-LM-BP simultaneous equilibrium).

**Monetary and Fiscal Policies:** Objectives, Conflicts among Objectives. Relative Effectiveness of Monetary and Fiscal Policies under Different Situations in IS-LM-BP Framework. International Trinity and Quadrilemma choices under IS-LM-BP framework.

## UNIT-II

### (Inflation Theories and Philips Curve)

**Inflation:** Effects of Inflation. Theories of Inflation: Quantity Theory, Keynesian Theory, Monetarist views on Inflation, Modern theory of Inflation, Structural Theory. The menu of policy choices: Philips Curve Analysis –Short Run and Long Run views. The Monetarist-Keynesian Debate and the Phillips Curve.

## UNIT-III

### (Trade Cycle Models/Theories)

**Trade Cycle:** Hansen–Samuelson Accelerator–Multiplier Interaction Model, Hicks Model, Kaldor Model, Goodwin model of endogenous cycles.

## UNIT – IV

### (The New Macroeconomics)

**The New Classical School:** Rational Expectations Hypothesis: Dynamic Time Inconsistency, Policy Ineffectiveness Proposition.

**The Random Walk of GDP:** The Relative Importance of AD and AS.

**Real Business Cycle Model:** Disturbances and Propagation mechanism. Macroeconomic Policy in Real Business Cycle Model.

**The New-Keynesian School:** Real and Nominal Wage-Price Rigidity Models - Menu Costs Model, Implicit Wage Contract Models, Efficiency Wage Models, Insider-Outsider Models.

### Recommended Readings:

#### Essential Readings:

Ackley, G. (2007). *Macroeconomic Theory*. Macmillan.

Allen, R.G.D. (1967). *Macro-Economic Theory: A Mathematical Treatment*. Palgrave Macmillan.

Blanchard, O. (2009). *Macroeconomics*. New Delhi: Pearson Education Inc.

Blanchard, O.J. & Fischer. (1996). *Lectures on Macroeconomics*, Delhi: PHI Learning Pvt. Ltd.

Branson, W. H. (1989). *Macro Economic Theory and Policy* (3<sup>rd</sup> ed.). Harper Collins.

D'Souza, E. (2008). *Macroeconomics*. Pearson Education.

Dornbusch, R., Fisher, S & Startz, R. (2002). *Macroeconomics*, (9th ed.). New Delhi: Tata McGraw Hills.

Levacic, R. & Rebmann, A. (1982). *Macroeconomics: An Introduction to Keynesian Neoclassical Controversies*. Macmillan.

Miller, R. L.& Pulsinelli, R. (1986). *Macroeconomics*. New York: Harper & Row.

Ola Olsson (2010). *Essentials of Advanced Macroeconomic Theory*, Routledge.

Romer, D. (1996). *Advanced Macroeconomics*. McGraw-Hill.

**Further Readings:**

- Abel, A. B., Bernanke, B. S. (2007). *Macroeconomics*. New Delhi: Pearson Education Inc.
- Dornbusch, R. (1980). *Open Economy Macroeconomics*. New York: Weltwirtschaftliches Archive.
- Frisch, H. (1983). *Theories of Inflation*. Cambridge: Cambridge University Press.
- Froyen, R. T. (2002). *Macro Economics*. New Delhi: Pearson Education Inc.
- Gordon, R. J. (2012). *Macroeconomics*. Delhi: PHI Learning Pvt. Ltd.
- Heijdra, B. J. (2017). *The Foundations of Modern Macroeconomics*. Oxford University Press.
- Hicks, J. R. (1950). *A Contribution to the Theory of Trade Cycle* Oxford: Clarendon Press.
- Lucas, R. (1981). *Studies in Business Cycle Theory*. , Massachusetts: MIT Press Cambridge.
- Makin, A. J. (2002). *International Macroeconomics*. Princeton Hall.
- Mankiw, N. G. & Romer, D. (1991). *New Keynesian Economics. MIT, 2 Volumes*.
- Mathews, R. C. O. (1964). *The Trade Cycle*. Cambridge: Cambridge University Press.
- Pentecost, E. (2000). *Macroeconomics – An Open Economy Approach*. MacMillan Press Ltd.
- Raghbendra, J. (1964). *Contemporary Macroeconomics: Theory and Policy*. New Age International Publishers.
- Sherffrin, S. (1999). *Rational Expectations*. Cambridge University Press.
- Snowden, B & Vane, H. R. (2005). *Modern Macroeconomics: Its Origin, Development and Current Stat.*, UK: Edward Press.
- Wendy, Carlin/Soskice, D. (2007). *Macroeconomics: Imperfections, Institutions and Policies*. Oxford University Press.

**PAPER – MAECO-203: QUANTITATIVE METHODS – II**

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

**Objective:**

The objective of the paper is to rigorously and comprehensively equip the students with theoretical concepts, methodology and process of reasoning involved in analyzing economic behavior of individuals, firms and markets using, in general, a static and partial equilibrium framework.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### **Pedagogy of the Course Work:**

The course relies on a combination of lectures, solving problems, and discussion of numerical examples, academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be required to attempt one question from each Unit – 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).
5. Candidates are allowed to use Simple, Non-Scientific and Non-Programmable Calculator in the Examination Hall.
6. It is compulsory for paper setter to mention about the requirement of log, anti log and statistical tables.

### **UNIT – I**

*Integration:* Indefinite and Definite, Integration of a Function of only one Variable; Methods of Integration; Substitution and Partial Fraction. Application of Integration in Economics; Consumers' and Producers' Surplus; Finding Demand Function, Maximum Profit and Capital Growth Equation.

*Differential Equations:* Introduction, Solution of Differential equations – Variable-separable, Homogenous, Exact, Linear and Bernoulli's form cases; Solution of Linear Differential Equation with Constant Coefficients.

Economic Applications w.r.t. Demand, Revenue, Cost Functions and Simple Market Equilibrium Models.

### **UNIT – II**

*Difference Equations:* Solution of a Difference Equation and Simple Economic Applications.

*Linear Programming:* Definition, Assumptions, Formulation and Solution of LPP (Feasible, Basic and Optimal Solutions) by graphical and simplex method. Dual Problem: Solution of Primal and Dual Problems by Simplex Method and their Interpretation.

### **UNIT – III**

*Probability Distributions:* Properties (including derivation of mean and variance) and Applications of Binominal, Poisson and Normal Distributions.

*Statistical Inferences:* Concepts of parameter, statistic and standard error (including its utility). Sampling Distribution of a Statistic, Distribution of Sample Mean, Properties of an Ideal Estimator; Unbiasedness, Consistency, Efficiency and Minimum Variance. Interval Estimation and Confidence Interval for mean, difference of means, single proportion and difference of proportions.

## UNIT – IV

*Tests of Significance:* Large and Small Sample Tests based on Normal and t Distribution, Test of Significance of Mean, Difference between means, Single Proportion, Difference between two proportions, Simple Correlation Coefficient and Simple Regression Coefficient, test based on F and Z Distribution (Fisher's Z Statistics).

*Chi-Square Tests:* Conditions for Chi-Square Test; Application of  $\chi^2$  Distribution – Test for Goodness of Fit, Independence and Specified Value of the Variance.

*Analysis of Variance:* Applications with regard to one way and two way classifications.

### **Recommended Readings:**

#### **Essential Readings:**

Allen, R. G. D. (1986). *Mathematical Analysis for Economists*. Macmillan Publisher India Ltd.

Allen, R. G. D. (latest edition). *Mathematical Analysis for Economists*. New Delhi: Trinity Press.

Arora, P. N., Arora, S., Arora, S. & Arora, A. (2007). *Comprehensive Statistical Methods*. New Delhi: S. Chand & Company Ltd.

Chiang, A. C. & Wainwright, K. (2005). *Fundamental Methods of Mathematical Economics* (4th ed.). New York: McGraw Hill.

Devore, J. L. (2012). *Probability and Statistics for Engineering and the Sciences*, (8<sup>th</sup> ed.), Cengage Learning India.

Gupta, S. C. (latest edition). *Fundamentals of Statistics* (7<sup>th</sup> ed.). Himalaya Publications.

Spiegel, M. R. & Stephens L. J. (2000). *Theory and Problems of Statistics: Schaum's Series*, (3<sup>rd</sup> ed.). New Delhi: Tata McGraw Hill.

Weber, J. E. (1982). *Mathematical Analysis (Business and Economic Applications)* (4th ed.). New York: Harper and Row.

Yamane, T. (1972). *Fundamental Methods for Mathematical Economics*. New Delhi: Prentice-Hall.

Yamane, T. (2006). *Mathematics for Economist-an Elementary survey* (2nd ed.). New Delhi: Prentice-Hall.

#### **Further Readings:**

Freund, J. E. (1992). *Mathematical Statistics*. (5<sup>th</sup> ed.). New Delhi: Prentice-Hall, Cengage Learning, India.

Gupta, S. P. (2014). *Statistical Methods*. New Delhi: Sultan Chand & Sons.

Kandoi, B. (2012). *Mathematics for Business and Economics with Applications*, Vol. 1. Mumbai: Himalaya.

Simon, C. P. & Lawrence, B. (2006). *Mathematics for Economists* (Indian ed.). Viva –Norton Student edition: Norton and Company.

## PAPER – MAECO-204: PUBLIC FINANCE

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objectives:

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

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/options concerned.

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2marks (10x2=20).
4. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be required to attempt one question from each Unit – 4 in all. Each question shall carry **15** marks (15 x 4 = 60).

### UNIT – I

Comparison of Provision of Private Goods and Public Goods in General Equilibrium (Pareto's Optimality criteria.)

Equity in Distribution. Various approaches to distributive Justice.

Public Choice and Fiscal Policies. Voting rules.

### UNIT – II

Various Approaches of Equity in Taxation: Benefit Principle including Lindahl Theory. Ability to Pay Approach.

Incidence analysis of taxation in various markets.

Effects of Taxation on Work Effort, Savings and Investment.

### UNIT - III

Deficit Financing: Concept and its relation with Inflation, Deficit Financing in India.  
Issues relating to Public Debt: Debt Burden Analysis and Management of Public Debt, Domar's concept of Debt Sustainability Public Debt in India.  
Need for rule based fiscal consolidation. Fiscal Responsibility and Budget management (FRBM) act, 2003. Recent amendments to FRBM act.

### UNIT – IV

Theories of Public Expenditure: Wagner's Law and Peacock - Wiseman Hypothesis. Structure and Classification of Public expenditure in India.  
Principles of Multiunit Finance (Central, State and regional level)  
Centre – State Financial Relations in India: Assessment of Horizontal and vertical imbalances. Role of Finance commissions.

#### Essential Readings:

Atkinson, A.B., & Stiglitz, J.E.(2007). *Lectures on public economics*. New Jersey: Princeton University Press.

Bhatia, H. L. (2006). *Public finance*. Vikas Publishing House Private Ltd.

Cullis, J., Jones, P., & Jones, P.R. (2009). *Public finance and public choice: Analytical perspectives*. New York: Oxford University Press.

Musgrave, R.A., & Musgrave, P.B. (1989). *Public finance in theory and practice*. New York: McGraw Hill Book Company.

Rao, M.G., & Sen, T. K. (1996). *Fiscal federalism in India: Theory and practice*. Macmillan India.

#### Recommended Readings:

Aronson, J.R. (1985). *Public finance*. New York: McGraw-Hill International.

Basu, K., & Maertens, A. (2012). *The new Oxford companion to economics in India*. New York: Oxford University Press.

Brown, C.V., & Jackson, P. M. (1990). *Public sector economics*. United Kingdom: Wiley-Blackwell.

Buchanan, J. M. (1958). *Public principles of public debt*. Homewood, Illinois: Richard D. Irwin.

Buchanan, J. M., & Musgrave, R. A. (1999). *Public finance and public choice: Two contrasting visions of the state*. Cambridge, Massachusetts: MIT Press.

Chelliah, R.J. (1996). *Towards sustainable growth: Essays in fiscal and financial sector reforms in India*. New York: Oxford University Press.

Datt, R., & Sundaram, K.P.M. (2003). *Indian economy*. New Delhi: S. Chand & Company.

Houghton, R. W. (1970). *Public finance: Selected readings*. Penguin.

Ulbrich, H.H. (2013). *Public finance in theory and practice Second edition*. London: Routledge.

Kurian, N. J. (1999). State government finances: A survey of recent trends. *Economic and Political Weekly*, 34 (19), 1115-1134.

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## SEMESTER-III

### PAPER – MAECO-301: ECONOMICS OF GROWTH AND DEVELOPMENT – I

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

#### **Objective:**

As a sequel to the post-second war developments, the study of Economic Development gained impetus because three-fourths of humanity was experiencing wretched conditions of existence. There was a pressing need in those countries for uplifting their economic conditions by restructuring their economies to acquire greater diversity, efficiency and equity, in consonance with their priorities.

Since a variety of perspectives were available, the policy makers were eager to acquaint themselves with various policy options in their bid to re-construct their dilapidated economies. In addition, various international bodies were also keen to help and guide the laggards. Consequently, the study of development economics assumed greater significance.

In recent times, the resurgence of marketism and greater focus on areas like education, health, sanitation, energy and environment, and infrastructure development, hitherto relegated to the background, have reopened some of the old debates besides opening up new areas of investigation. Growth and Development economists are making earnest efforts at theorizing to break fresh grounds. Consequently, study of this discipline continues to be of prime importance.

Modules incorporated in this paper are devoted to the theories of growth and development, importance of agriculture, and the rational and pattern of industrialization in developing countries. The other important issues in the context of development such as infrastructure – linkages, role of international trade, importance of economic policies and relevance of planning have been included in the modules of this paper.

The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/options concerned.

#### **Pedagogy of the Course Work:**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

#### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks (10x2=20).

4. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be required to attempt on question from each Unit – 4 in all. Each question shall carry **15** marks (15 x 4 = 60).

### UNIT – I

#### ***Understanding Development:***

Measuring Inequalities in a heterogeneous World – Islands of Prosperity and how the other half Lives. Dividing the World and levels of development. Development as an evolving concept.

Goulet’s Three Core Values of Development. Sen’s Conception of Development.

Income based Measures and their Inadequacies. PQLI and HDI as indicators of development.

### UNIT-II

#### ***Common Characteristics of Developing Nations:***

The Vicious Circle of Poverty (Nurkse), Low Level Equilibrium Trap (Nelson), Critical Minimum Effort Theory (Lebenstein).

Dualism (Social and Technological).

Institutions and Economic Development ( D.C. North).

#### ***Development in Historical Perspective:***

Dependency theory: its forms and effects.

Neo Imperialism and Neo colonialism.

### UNIT – III

#### ***Theories and Models of Development:***

Classical, Karl Marx, Schumpeter, Rostow’s Theory of stages of Economic growth.

Harrod-Domar Model , Solow Model, Endogenous growth models.

### UNIT – IV

#### ***Population Growth, Economic Development and Environment:***

Theory of Demographic Transition, Interrelation between Population Growth and Economic Development, Urban Development and Environment. Natural resources, Environmental degradation and Sustainable Economic Development.

#### **Recommended Readings:**

Agarwala, A. N., & Singh, S. P. (Eds.). (1963). *Economics of underdevelopment: A series of articles and papers*. London : Oxford University Press.

Cypher, J. (2014). *The process of economic development*. London: Routledge.

Lucas Jr, R. E. (1988). On the mechanics of economic development. *Journal of Monetary Economics*, 22(1), 3-42.

Meier, G. M., & Rauch, J. E. (Eds.). (1995). *Leading issues in economic development (Vol. 6)*. New York: Oxford University Press.

Ray, D. (1998). *Development economics*. New Jersey: Princeton University Press.

Romer, P. M. (1986). Increasing returns and long-run growth. *Journal of Political Economy*, 94(5), 1002-1037.

Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, 98(5, Part 2), S71-S102.

Schultz, T. W. (1982). *Investing in people: The economics of population quality*. USA: University of California Press.

Sen, A. (1999). *Development as freedom*. New Delhi : Oxford University Press.

Thirlwall, A.P. (Latest edition). *Economics of development: Theory and evidence*. New York: Palgrave Macmillan.

Todaro, M. P., & Stephen, C. S. (Latest edition). *Economic Development*. New York: Addison-Wasley Logman.

### **PAPER – MAECO 302: INDIAN ECONOMIC ISSUES– I**

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

#### **Objective:**

The objective of this paper is to acquaint the students with the performance of different sectors of the Indian economy and the policy framework governing them. This will provide them an insight into the past, present and future functioning of the Indian economy and strengthen their analytical capability.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The script would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned

#### **Pedagogy of the Course Work:**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

#### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.

3. The first question would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks (10x2=20).
4. Rest of the paper shall contain 4 units. Each Unit shall have two questions and the candidates shall be required to attempt one question from each Unit – 4 in all. Each question shall carry **15** marks (15 x 4 = 60).

### UNIT- I

#### **Indian Economy in Pre-Reforms Era:**

Economic Consequences of British Rule in India (1850-1947).

Features of Indian Economy during Pre-Reforms Era (1947-1991).

State of Indian Economy in 1990-91: Features and Appraisal of Economic Reforms Programme.

### UNIT- II

#### **Labour Force, Poverty and Unemployment in India:**

Labour Force Growth and Occupational Structure since Economic Reforms.

Poverty and Unemployment: Nature, Extent and Estimates and Policy Initiatives since Economic Reforms.

Inter-state Disparities in the Pattern of Development in the Post-Reform Period.

### UNIT- III

#### **Performance of Indian Agriculture:**

Agriculture: Pattern of Growth of Indian Agriculture since 1950. Economic Reforms and Agricultural Growth in India. Regional Imbalances in Indian Agriculture.

Secondary Agriculture: Need, Potential and Role in India. Food Security – Problems and Policy Options.

### UNIT- IV

#### **Performance of Indian Industry:**

Industry: Trends in Growth and Structure of Indian Industry since 1950. Industrial Policy Initiatives during Post-Reform Period. Economic Reforms and Manufacturing Sector Growth in India.

#### **Recommended Readings:**

##### **Essential Readings:**

##### **Books:-**

Acharya, S. & Rakesh, M. (2011). *India's Economic Performance and Challenges: Essay's in Honour of Montek S Ahluwalia*. New Delhi: Oxford University Press.

Ahluwalia, I. J. & Little, IMD. (2008). *India's Economic Reforms & Development (Essays in Honour of Manmohan Singh)*. New Delhi : Oxford University Press.

Datt, G & Ashwani, M. (Latest Edition). *Indian Economy*. New Delhi: S.Chand.

Dhar, P.K. (Latest Edition) *Indian Economy-Its Growing Dimensions*. Kalyani Publisher.

Fernando, A.C. (2016). *Indian Economy*. India: Pearson.

Kapila, U. (Latest Edition) *Indian Economy since Independence*. New Delhi: Academic Foundation.

Kapila, U. (Latest Edition) *Indian Economy: Performance and Policies*. New Delhi: Academic Foundation.

Krueger, A.O. (2002). *Economic Policy Reforms and the Indian Economy*. New Delhi: Oxford University Press.

Kumar, D & Raychaudhary, T. (Eds) (1983) *The Cambridge Economic History of India (1751-1970)*, Vol. 2, Cambridge University Press.

Mishra, S.K. & Puri, V.K. (Latest Edition). *Indian Economy*. Mumbai: Himalya Publisher House.

Roy, T. *Economic History of India (1857-1947)*, (3<sup>rd</sup> ed.). India: Oxford University Press.

*Economic and Political Weekly*, Various Issues.

Government of India, *Economic Survey* (Various Issues). New Delhi: Oxford University Press.

### **Research Papers :-**

Himanshu. (2011). Employment Trend in India: A Re-Examination. *Economic & Political Weekly*, XLVI (37), 43-59.

Mani, S. (2011). National Manufacturing Policy: Making India a Power House. *Economic & Political Weekly*, XLVI (53), 16-19.

Mehrotra, S., Gandhi, A., Saha, P & B. K. S. (2013). Turnaround in India's Employment Story Silver Lining amidst Joblessness and Informalisation? *Economic and Political Weekly*, XLVIII (35), 87-96.

Nayyar, G. (2008). Economic Growth and Regional Inequality in India. *Economic & Political Weekly*, 43(06).

Panagariya, A. (2004). Growth and Reforms during 1980's and 1990's. *Economic & Political Weekly*, 29 (25), 2581-2594.

Paranjape, H.K. (1991). New Industrial Policy: A Capitalist Manifesto. *Economic & Political Weekly*, 26 (43).

Patnaik, U. (2013). Poverty Trends in India 2004-05 to 2009-10. *Economic and Political Weekly*, XLVIII (40), 43-58.

Singh, M. (2018). *Changing India*, Vol. 1-5. Oxford University Press.

### **Further Readings**

Ahluwalia, M.S. (2002). Economic Reforms in India since 1991: Has Gradualism worked? *Journal of Economic Perspectives*, summer, 16(3), 67-88.

Bhagwati, J & Arvind P. (2012). *India's Tryst with Destiny*. India Harper Collins.

Bhalla, G.S. & Gurmail Singh. (2009). Economic Liberalisation and Indian Agriculture: A State wise Analysis. *Economic & Political Weekly*, 44(52), 34-44.

Dreze J. & Sen, A. (2013). *An uncertain Glory-India & its Contradictions*. New Delhi: Penguin Books.

*Essays from EPW-Quarter Century of Liberalisation in India* (2018). Oxford University Press.

## PAPER-MAECO-303 & 304: Option (i) - ECONOMICS OF AGRICULTURE-I

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

The focus of this course is to introduce students to the importance of agricultural sector and to the issues associated with agricultural transformation, agricultural production, and demand of and supply for agricultural commodities. The objective is to equip students to analyze and critically assess issues, policies and programmes in these areas with particular emphasis on Indian agriculture.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/options concerned

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT-I

**Introduction:** Nature and Scope of Economics of Agriculture; Specificities of Farm Organization and Agricultural Production and Markets; Inter-sector Linkages of Agriculture [Backward and Forward Linkages].

**Role of Agriculture in Economic Development:** Contribution of Agriculture to Economic Development; Historical Perspective [Experience of England, Japan, and India]; Declining Role of Agriculture and Dilemmas of Development.

### UNIT-II

**Agricultural Production:** Uniqueness of Agricultural Production; Various Types of Factor-Product, Factor-Factor, and Product-Product Relations; Cobb-Douglas and CES Production Functions. Role of Farm Size and Structure in Equilibrium, Productivity, and Return to Scale. Sources and Barriers to Agricultural Development.

### UNIT-III

**Agricultural Transformation:** Schultz Theory of Transformation of Traditional Agriculture Mellor's Model of Agricultural Development; Hayami- Ruttan Induced Innovation Model of Agricultural Development. Agricultural Transformation: Indian Experience.

### UNIT-IV

**Risk and Uncertainty in Agriculture:** Nature and Types of Risks and Uncertainties in Agriculture, Public Policies and Farm Level Measures to Reduce Risk and Uncertainties.

**Demand for Farm Products:** Characteristics of Demand for Farm Products; Quantity and Quality Components of Demand for Food; Forecasting of Demand for Food Products.

**Supply of Farm Products:** Characteristics of Supply of Farm Products, Supply Response of Farm Products; Role of Price and Non-Price Factors in Inducing Aggregate Supply, Empirical Supply Response Functions and Evidence.

#### Recommended Readings:

##### Essential Readings:

Bruce L. G. & Gordon C. R. (2002). *Handbook of Agricultural Economics Vol.2A, Agricultural and Its External Linkages*. Amersterdam, Elsevier Science B.V.

Bruce L. G. & Gordon C. R. (2002). *Handbook of Agricultural Economics Vol. 2B, Agricultural and Policy*. Amersterdam, Elsevier Science B.V.

Bruce L. G. & Gordon C. R. (2002). *Handbook of Agricultural Economics Vol.1A, Agricultural Production*. Amersterdam, Elsevier Science B.V.

Bruce L. G. & Gordon C. R. (2002). *Handbook of Agricultural Economics Vol.1B, Marketing Distribution and Consumption*. Amersterdam, Elsevier Science B.V.

Karl, E. & Witt, L. (1964). *Agriculture and Economic Development*. New York: McGraw Hill Company.

Southworth, H. & Johnston, B. (2011). *Agricultural Development and Economic Growth*. New York : Cornell University Press.

Subrata, G. & Ingersent, K. (1984). *Agriculture and Economic Development*. London : Harvester Press Ltd.

Tsakok, I. (2011). *Success in Agricultural Transformation: What It Means and What Makes It Happen*. New York: Cambridge University Press.

## PAPER - MAECO-303 & 304: option (ii) - ECONOMICS OF INDUSTRY-I

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

In the contemporary world with globalization and liberalization, more and more attention is being given to industry. Since industry performance critically depends on firms' behavior allowing equilibrium outcome, the course intends to provide a rigorous knowledge of different long-run equilibrium outcome of firms under different conditions from the point of view of public policy. The students are also equipped to deal with debates involved in the industrial development in a cogent and analytical manner, particularly in the Indian context. However, it should be noted that Game Theoretic approach to any topic/problem is outside the scope of the present syllabus.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT – I

Constraints of Proprietorship. Advantages of Modern Corporation. Critiques of Profit Maximization Hypothesis. Non-profit Maximization models: Boumol, Williamson, Marris and Cyert and March. Critical overview of Non-Profit Maximization Hypothesis

### UNIT – II

Monopoly Power and Oligopolistic Market Structure. Measures of Sellers' Concentration and advantages of the HHI index. Deterministic Explanation of Sellers' Concentration: Economies of Scale, Barriers to Entry, Mergers, Size and Growth of Markets; Stochastic Explanation



### UNIT – III

*Market Conduct under Oligopoly:* Concepts and Overview of Outcomes under Interdependence: Concepts of Cournot and Bertrand Rivalry, Collusive Conduct and Dominant Firm Behaviour and Potential Competition. Limit Price and Contestable Markets. Non-Price Competition with Reference to Advertising: Dorfman-Steiner Condition and its Critique. Evolution of Structure-Conduct-Performance Hypothesis.

### UNIT- IV

*Market Performance:* Market Structure and Profitability; Collusion versus Efficiency. Issue of Allocative Efficiency. Issues of Productive Efficiency and Sub-Optimal Capacity; factors explaining sub-optimal capacity.

#### **Recommended Readings:**

#### **Essential Readings :**

Bain, J. S. (1968). *Industrial Organizations* (2<sup>nd</sup> ed.). University of California.

Cohen, K. L. & Cyert R. M. (1976). *Theory of the Firm*. Prentice Hall.

Devine, P. J. & Others (1976). *Introduction to Industrial Economics*. George Allen & Unwin.

Hawkin, C. J. (1973). *Theory of the Firm*. Macmillan.

Hay, D. A. & Morris, D. J. (1991). *Industrial Economics: Theory and Evidence*. Oxford University Press.

Kansra, S. L. (1990). *Monopoly Power: Some Aspects of its Impact on Indian Industry* (Unpublished Ph.D. Thesis, P. U.).

Martin, S. (1989). *Industrial Economics: Economic Analysis and Public Policy*.

Scherer, F. M. & Ross, D. (1990). *Industrial Market Structure and Economic Performance*, Boston Houghton Mifflin Company.

Shepherd, W. G. (1990). *The Economics of Industrial Organisation*. New Jersey: Prentice Hall Englewood Cliffs.

Wildsmith, S. (1975). *Managerial Theories of the Firm*.

## PAPER -MAECO-303 & 304: option (iii) - ENVIRONMENTAL ECONOMICS

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

This paper aims to make aware students about the importance of environment in economics and vice-versa. It helps them to know the ways of sustaining our natural resources by optimally allocating them for future use.

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry 15 marks ( $15 \times 4 = 60$ ).

### UNIT – I

**Introduction:** Basic concepts of Environment, Natural Resources, Ecology and Ecosystem. Relation between Environment and Economy (inter linkages), the natural environment and the human economy; the neoclassical economics and an ecological perspectives. First two laws of thermodynamic and basic lessons.

**Markets for the Environment:** power of market; Market Failure associated with environment: reasons and solutions, common property resources and economic problem, environmental externalities and their consequences.

### UNIT- II

**Economics of Pollution Control:** Damage and abatement cost functions; Marginal decision; Optimum level of pollution.

**Economics of Environmental Regulations:** Regulating the environment through legal system- Liability Laws, Property Rights or Coasian Method and Emission Standards. Pollution Taxes and Markets for Transferable Pollution Permits.

### UNIT- III

**Cost-Benefit Analysis and Environment:** measuring the costs and benefits of environment protection.

**Review of Environment regulations and legislations in India:** Air, Water, Land, solid waste management and chemicals/pesticides. Understanding Environment Impact Assessment (EIA), Green National Accounts and Environmental Accounting.

### UNIT- IV

**Global Environmental Pollution:** acid rain, ozone depletion and global warming (causes, consequences and solutions or international responses); Earth Summits 1992 and 2002.

**Economic growth and development;** the environmental Kuznets curve; Economics of sustainable development; Trade and environment under WTO regime.

#### Recommended Readings:

##### Essential Readings

Eugene, T. (2005). *Environmental Economics*. Delhi: Varinda Publications.

Goodstein, E.S. (2002). *Economics and the Environment* (3<sup>rd</sup> ed.). John Wiley & Sons. Inc.

Hanley, N., Shorgen, J. F. & Ben, W. (2001). *Introduction to Environmental Economics*. Oxford University Press.

Hussen, A. (2004). *Principles of Environmental Economics* (2<sup>nd</sup> ed.). London & New York: Routledge, Taylore & Francis Group.

Kolstad. C.D. (2011). *Intermediate Environmental Economics (second edition)*. Oxford University Press Inc.

Nandimath, O.V. (2009). *Handbook of Environmental Decision Making in India*. Oxford University Press.

##### Further Readings

Bhattachrya, R. N. (2001). *Environmental Economics-An Indian Perspective*. Oxford University Press.

Biswas, M. (2007). *Environmental Economics*. New Delhi: Mittal Publications.

Karpagam, M. (1991). *Environmental Economics*. New Delhi: Sterling Publishers.

Sankar, U. (2001). *Environmental Economics*. Oxford University Press.

Singh, K. & Shishodia, A. (2007). *Environmental Economics: Theory and Applications*. Sage Publication.

Tietenberg, T. (2003). *Environmental and Natural Resource Economics*, (6<sup>th</sup> ed.). Pearson Education.

## PAPER -MAECO-303 & 304: Option (iv) - HISTORY OF ECONOMIC THOUGHT

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

Evolution of economic ideas is both a response to contemporary economic problems and a self-conscious attempt to refine earlier ideas to integrate them as a part of current social thought. The objective of this course is to familiarize the students with the historical evolution of economic ideas into the contemporary economics. The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate teaching experience in the paper/options concerned.

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

#### UNIT – I

*Adam Smith*: Theory of Value, Distribution and Growth.

*Ricardian Economics*: Value Analysis, Theory of Distribution, Views on Machinery and Employment.

*Malthus*: Theory of Population, Theory of Glut and Glut Controversy.

#### UNIT – II

*Marxian Economics*: Dialectical Materialism; Mode of Production and its Fundamentals; Labour Theory of Value; Development and Decay of Capitalism (commodity production, Accumulation, Surplus value and Organic Composition of Capital).

**Theories of Imperialism**: Hobson's Theory; Luxemburg's Theory; Lenin's Theory and a Comparison

### UNIT: III

**Marginalism:** Origin of Marginalist Revolution; Jevon's Mathematical Character of Economics; Jevon's Origin and Theory of Value

**Neoclassical Economics:** Main feature; Marshal's Scope and Method of Economics.

**Austrian Economics:** Main Features.

### UNIT- IV

**Keynesian Economics:** Keynes on Neoclassical ideology of Self-Adjusting Markets; Theoretical Setting of Keynes's Analysis; Analysis of Great Depression, Ideological Foundations of Keynes's Ideas.

**Kaleckian Version:** Political Aspects of Full Employment; Distribution of Income.

#### Recommended Readings:

Blaug, M. (1983). *Economic Theory in Retrospect*. Cambridge University Press.

Bottomore, T. (1985). *Dictionary of Marxist Thought*. Basic Black Well.

Dobb, M. (1975). *Theories of Value and Distribution since Adam Smith*. Cambridge University Press.

Ekelund, R. B. Jr & Hebert, R. F. (1990). *A History of Economic Theory and Method*. McGraw Hill Publication.

Harvey J. (2015). *Contending Perspectives in Economics*. Edward Elgar Publication.

Helbroner, R. L. (1999). *The Worldly Philosophers*. Touchstone Books.

Hunt. E.K. & Lautzenheiser, M. (2011). *History of Economic Thought: A Critical Reader*. PHI Publication.

Kalecki, M. (2011). *Theory of Economic Dynamics: An Essay on Cyclical and Long-Run Changes in Capitalist Economy*. Monthly Review Press.

Keynes J.M. (2008). *The General Theory of Employment, Interest and Money*. New Delhi: Atlantic Books.

Roll, E. (1992). *History of Economic Thought*. Faber and Faber Publication.

Schumpeter, J A. (1954). *History of Economic Analysis*. Oxford University Press.

Sweezy, P. (1945). *Theory of Capitalist Development*. Monthly Review Press.

## PAPER -MAECO-303 & 304: Option (v) - ECONOMETRICS- I

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

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

Besides the time-tested method of imparting verbal instructions through lectures, description and derivation of econometric models would be demonstrated by extensive use of blackboard. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought through the students writing assignments, tutorials and seminars.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### Pedagogy of the Course Work :

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each).  
It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry  
2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT – I

Nature & Types of Econometrics, Methodology Followed & Type of Data Used in Econometric Models. Estimation of the Two Variable and Multiple Regression Models with the Method of Ordinary Least Squares (OLS); BLUE Properties and Testing of Hypothesis, Maximum Likelihood Estimation (MLE).

## UNIT-II

Nature, Consequences, Detection & Remedial Measures for the problems of: Multicollinearity, Heteroscedasticity and Autocorrelation.

## UNIT-III

*Model Specification and Diagnostic Testing:*

Types of Specification Errors and consequences,

Tests of Specification and Misspecification

Errors of Measurement in dependent and independent variables

Encompassing and Non Encompassing Models: Introduction

Criteria for Model Selection.

## UNIT-IV

Estimation of Regression Models using Standard Statistical/Econometric Packages [SPSS/E-View/STATA].

Interpretation of Estimates and Hypothesis Testing.

Testing for and redressal of Multicollinearity, Heteroscedasticity, Autocorrelation using Computer Techniques.

### **Recommended Readings:**

#### **Essential Readings**

Gujarati, D. (2002). *Basic Econometrics* (4<sup>th</sup> ed.). McGraw Hill.

Stock, J.H. & Watson, M. W. (2011). *Introduction to Econometrics* (3<sup>rd</sup> ed.). Delhi: Pearson Prentice Pvt. Ltd.

Johnston, J. & Nardo, D. (1997). *Econometric Methods* (4th ed.). McGraw Hill.

Kemanta, J. (2008). *Elements of Econometrics* (2<sup>nd</sup> ed.). New York: Macmillan.

Koutsoyiannis, A. (1973). *A Theory of Econometrics*. New York: Harper & Row.

Maddala, G. S. (2007). *Introduction to Econometrics* (3<sup>rd</sup> ed.). India: Wiley.

Wooldridge, J. M. (2000). *Introductory Econometrics*. South Western College Publishing.

## PAPER -MAECO-303 & 304: option (vi) - MATHEMATICAL ECONOMICS-I

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

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

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

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

**Pedagogy of the Course Work:** The course relies on a combination of lectures, solving problems, and discussing of academic articles or real life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be compulsory, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry 15 marks ( $15 \times 4 = 60$ ).

### UNIT-I

**Linear Programming and Data Envelopment Analysis:** Frontier Estimation using Linear Programming; measurement of economic, technical, revenue, and profit efficiency scores. The Malmquist Productivity index.

**Non-Linear Programming:** Non-linear Programming and Kuhn-Tucker conditions. War time rationing and Peak load pricing issues.



## UNIT-II

**Dynamic Optimization:** A Brief introduction to the calculus of variations (Euler equation), end point (transversality) conditions. The control problem, Statement and types of control. Pontryagin's Maximum principle, finite and infinite time horizon, interpretation of hamiltomian, costate variables, equation of motion; end point conditions. Constructing a phase diagram and its analysis.

## UNIT-III

**Input-Output Analysis:** Static Open and Closed Models; Viability Conditions; Activity Analysis Interpretation of Input-Output Model; Aggregation Problem; Substitution Theorem; Cost and Price Determination; Dynamic Leontief-System. Social Accounting Matrix: An Introduction.

## UNIT-IV

**Game Theory:** Two persons Zero Sum Game, Max-Min Strategy. Non-Zero Sum Game, Static Games in Complete Information, Strongly and Weakly Dominant Strategies, Dominant Strategy Equilibrium; Pure and Mixed Strategies; Concept of Nash Equilibrium—Examples such as Prisoner's Dilemma, Battle of Sex, Matching Pennies, Co-ordination Problem and Multiple Equilibria, etc., Focal Points, Dynamic Games in Complete Information, Sub-Games and Sub-Game Perfect Nash Equilibrium.

### Recommended Readings:

#### Essential Readings

Abel, A. & Bernanke, M. (1998). *Macroeconomics*. Massachusetts: Addison Wesley.

Allen, R. G. D. (1967). *Macro Economic Theory*. London: Macmillan.

Allen, R. G. D. (1974). *Mathematical Economics*. London: Macmillan

Baumol, W. J. (2000). *Economic Theory and Operations Analysis* (4<sup>th</sup> ed.). New Delhi: Prentice Hall of India.

Dorfman, R. , Samuelson, P. & Sallow, R. (1968) *Linear Programming and Economic Analysis*. Tokyo : McGraw Hill Kogakusha Ltd.

Dornbusch, R. & Fisher, S. (1981). *Macroeconomics*. New Delhi: McGraw Hill.

Hamberg, D. (1971). *Models of Economic Growth*. New York: Harper & Row.

Henderson, J. M. & Quandt, R. B. (1980). *Micro Economic Theory: A Mathematical Approach* (3<sup>rd</sup> ed.). New York: John Wiley.

Lancaster, V. (1965). *Mathematical Economics*. R and McNally College Pub.

Madnani, G. M. K. (2003). *Mathematical Economics*. New Delhi: Oxford IBH Publishing Co. Pvt. Ltd.

Nehar, P. A. (1971). *Economic Growth and Development: A Mathematical Introduction*. New York: John Wiley.

Silberberg, E. (1990). *The Structure of Economics– A Mathematical Analysis*. New York: McGraw Hill.

Varian, H. R. (1992). *Microeconomic Analysis*. New York: W. W. Norton.

### **Further Readings**

Chand, M. & Anand, V. K. (1981). *Economic Theory – A Mathematical Approach*. Allahabad: Kitab Mahal.

Chiang, A. C. (1984). *Fundamental Methods of Mathematical Economics* (3<sup>rd</sup> ed.). McGraw Hill.

Chung, J. W. (1993). *Utility and Production: Theory and Application*. London, New York: Basil Blackwell.

Green, H. A. J. (1971). *Consumer Theory*. Harmondsworth : Penguin.

Jha, R. (1991). *Contemporary Macroeconomic Theory and Policy*. New Delhi: Wiley Eastern Ltd.

Jones, H. G. (1976). *An Introduction to the Modern Theory of Economic Growth*. Tokyo : McGraw Hill - Kogakusha.

Leontief, W. W. (1966). *Input-Output Economics*. New York: Oxford University Press.

Nash, J. F. (1996). *Essays on Game Theory*. U.K: Cheltenham.

Quirk, J. & Saposnik, R. (1968). *Introduction to General Equilibrium Theory and Welfare Economics*. New York: McGraw Hill.

Sen, A. K. (1990). *Growth Economics*, Harmondsworth, Penguin.

Solow, Robert M. (2000). *Growth Theory – An Exposition*. Oxford: Oxford University Press.

Taha, H. S. (1997) *Operations Research – An Introduction* (6<sup>th</sup> ed). New Delhi: Prentice Hall of India Pvt. Ltd.,

Todaro, M. P. (1971). *Development and Planning Models and Methods*. Oxford: Oxford University Press.

### **PAPER-MAECO-303 & 304: Option (vii) - ECONOMICS OF POPULATION**

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

#### **Objective :**

The main objective of this paper is to make the students aware of the importance of population in economic development and the various theories that explain the growth of population in a country.

The study of Quantitative and Qualitative composition of population is also required to understand the dynamics of population growth. Migration and urbanization are the characteristics of structural changes taking place in the economy.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

#### **Pedagogy of the Course Work :**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

#### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

#### **UNIT-I**

Theories of Population; Malthus, Marxian, Liebenstein, Becker.

Demographic Transition Theory and Optimum Population Theory.

Population and Economic Development. Population as “Limits to Growth and as Ultimate Source”.

#### **UNIT-II**

Population Structure and Characteristics : Impact of Population Growth on Age and Gender Structure. Aging of Population.

Concept of Fertility Transition. Measurement of Fertility and Fertility Differentials in India.

Mortality : Components and Measurement. Mortality Differentials in India: Rural-Urban, Age and Gender.

#### **UNIT-III**

Migration : Concepts, Measurement, Migration Selectivity, Causes and Consequences of Migration.

Migration in India : Causes and Trends. Migration Differentials in India : Rural-Urban, Male-Female.

#### **UNIT-IV**

Estimation of Population in India : Census, Sampling Vital Registration Methods.

Growth and Structure on Indian Population since Independence.

Population Policy in India since Independence.

**Recommended Readings:**

**Essential Readings:**

Becker, G. (1960). *An Economic Analysis of Fertility in Demographic Change and Economic Change in Developed Countries* (edited by National Bureau of Economic Research). Princeton: Princeton University Press.

Bouge, D. J. (1971) . *Principles of Demography*. New York: John Wiley.

Coale, A. & Hoover, E. (1958) . *Population Growth and Economic Development in Low Income Countries : A Case Study of India's Prospects*. Princeton: Princeton University Press.

Cox, P. R. (1979). *Demography*. New Delhi: Vikas Publishing House.

John, R. W. (2002). *Population: An Introduction to Concepts and Issues*, (7<sup>th</sup> ed.). New York: Wadsworth Publishing Company.

Shryock, H. S. et. al. (1976). *The Methods and Materials of Demography*. New York: Academic Press.

Srinivasan, K. (1998). *Basic Demographic Techniques and Applications*. New Delhi: Sage Publications.

Thompson, W. S. & Lewis, D. T. (1976). *Population Problems*. New Delhi: Tata McGraw Hills Publishing Co.

**Further Readings:**

Boserup, E. (1981). *Population and Technological Change. A Study of Long Term Trends Chicago*: University of Chicago Press.

Chandna, R. C. (2014). *A Geography of Population Concepts, Determinants and Patterns*, (11<sup>th</sup> ed.). Kalyani Publishers.

Schultz, T. W. (1978). *Investing in People; The Economics of Population Quality*. Delhi: Hindustan Publishing Corporation, India.

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## SEMESTER-IV

### PAPER -MAECO-401: ECONOMICS OF GROWTH AND DEVELOPMENT-II

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

#### Objective:

The main objective of this course is to look at the process of growth and development in terms of its characteristics such as structural transformation, pattern of distribution of income, its inter sectoral interface. In addition, it also aims to take up issues pertaining of the emerging global scenario and the debate concerning the planning vs marketism which is so vital for development theorists and practitioners.

**Pedagogy of the Course Work:** The course relies on a combination of lectures, solving problems, and discussing of academic articles or real life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

#### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be compulsory, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry 15 marks ( $15 \times 4 = 60$ ).

#### UNIT-I

***Economic Growth and Structural Change:*** Structural Changes in the Composition of Gross Domestic Product and Occupational Structure.

Exploring the Relationship between Economic Development and Income Distribution: Kuznets' inverted U-Shaped Curve and Augmented Kuznets' Curve.

#### UNIT-II

***Agriculture-Industry Interface:***

The Models of Lewis, Fei and Ranis and Todaro.

The Balanced Growth Doctrine (Rosenstein Rodan), Unbalanced Growth (Hirschman's version).

#### UNIT-III

***Investment Criteria***

Investment Criteria; Choice of Technique.

***Economic Isolation and Integration with the Global Market:*** International Trade and Economic Development; Foreign aid and Economic Development ; Role of Foreign Direct Investment (FDI) and Multi-National Corporations (MNCs) in the Emerging Scenario.

#### UNIT-IV

***Market and State:*** An Overview of the Economic Functions of the Market and State.

Planning and Market: Planning by direction, Planning by market, Planning in backward areas.

From Washington to post-Washington consensus.

#### **Recommended Readings:**

Agarwala, A. N., & Singh, S. P. (Eds.). (1963). *Economics of underdevelopment: A series of articles and papers*. London : Oxford University Press.

Chenery, H. B., Syrquin, M., & Elkington, H. (1975). *Patterns of development, 1950-1970 (Vol. 75)*. London: Oxford University Press.

Halm, G. N. (1951). LEWIS, W. ARTHUR. *The Principles of Economic Planning*. Pp. 128.

Kuznets, S., & Murphy, J. T. (1966). *Modern economic growth: Rate, structure, and spread (Vol. 2)*. New Haven: Yale University Press.

Lewis W. Arthur (1976). *Development planning: The essentials of economic policy*. London: Routledge.

Meier, G. M., & Rauch, J. E. (Eds.). (1995). *Leading issues in economic development (Vol. 6)*. New York: Oxford University Press.

Ranis, G., & Fei, J. C. (1961). A theory of economic development. *The American economic review*, 533-565.

Ray, D. (1998). *Development economics*. New Jersey: Princeton University Press.

Thirlwall, A.P. (Latest edition). *Economics of development: Theory and evidence*. New York: Palgrave Macmillan.

Washington: Public Affairs Press, 1951. 2.50cloth; 2.00 card. *The ANNALS of the American Academy of Political and Social Science*, 278(1), 234-234.

## PAPER -MAECO-402: INDIAN ECONOMIC ISSUES– II

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objectives:

The objective of this paper is to acquaint the students with the performance of different sectors of the Indian economy and the policy framework governing them. This will provide them an insight into the past, present and future functioning of the Indian economy and strengthen their analytical capability.

The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought through the students writing assignments, tutorials and seminars.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The script would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT - I

#### **Service Sector and Infrastructure Development in Post-reform Era:**

Service Sector in India – Growth, Pattern and Future Prospects.

Infrastructure Development - Need, Performance and Government Strategy on Infrastructure Development. Special Economic Zones (SEZs): Policy, Features and Problems.

Changes in Public Policy with Special Reference to Competition Policy and Consumer Protection Act.

### UNIT - II

#### **Financial Sector in the Post-reform Era:**

Structure and Features of the Financial System in India. Financial Sector Reforms.

Indian Money and Capital Markets — Structure, Features and Reforms.

Role of Securities Exchange Board of India (SEBI).

### UNIT – III

#### ***Public Finance in the Post-reform Era:***

Public Expenditure in India : Trends and Issues. Fiscal Imbalances and Public Debt Sustainability in the Indian Economy.

Fiscal Responsibility and Budget Management Act, 2003. Approach and Recommendations of Recent Finance commission.

### UNIT- IV

#### ***External Sector the Post-reform Era:***

Trade Policy during Post Reform Period. Liberalised Exchange Rate Management System. Foreign Direct Investment – Trends and Issues. India and the World Trade Organisation.

#### **Recommended Readings:**

##### **Books :-**

Acharya, S. & Rakesh, M. (2011). *India's Economic Performance and Challenges (Essay's in Honour of Montek S Ahluwalia)*. New Delhi: Oxford University Press.

Ahluwalia, I.J. & Little, IMD. (2008). *India's Economic Reforms & Development (Essays in Honour of Manmohan Singh)*. New Delhi: Oxford University Press.

Dhar, P.K. (Latest ed.) *Indian Economy- Its Growing Dimensions*. Kalyani Publisher.

Datt, G. & A. Mahajan. (Latest Edition). *Indian Economy*. New Delhi : S.Chand .

Fernando, A.C. (2016). *Indian Economy*. India: Pearson.

Kapila, U. (Latest Edition) *Indian Economy since Independence*. New Delhi: Academic Foundation.

Kapila, U. (Latest Edition) *Indian Economy: Performance and Policies*. New Delhi: Academic Foundation.

Krueger, A.O. (2002). *Economic Policy Reforms and the Indian Economy*. New Delhi: Oxford University Press.

Mishra, S.K. and Puri, V.K. ( Latest Edition) *Indian Economy*. Mumbai: Himalya Publisher House.

*Economic and Political Weekly*, Various Issues.

*Economic Survey (Various Issues)*, Government of India. New Delhi: Oxford University Press.

##### **Research Papers:-**

Acharyya, Rajat. (1994). Liberalised Exchange Rate Management system and Devaluation in India: Trade Balance Effect, *Journal of Economic Integration*, vol. 9, No. 4, December.

Banga, Rashmi. (2006). Critical Issues in India's Service led Growth, INRM policy Brief (2), *Asian Development Bank*.

Gopalam, R. & M. C. Singh. (2015). Services Growth in India, *Economic & Political Weekly*, L( 41).

Kaur, B., Mukherjee, A., Kumar, N. & Ekka, A. P. (2014). Debt Sustainability at the State Level in India, *RBI working paper series*, Department of Economic and Policy Research, RBI

Kaur, Balbir. (2012). Threshold Level of Debt and Public Debt sustainability: the Indian Experience, *RBI accessional paper*, 33 (1 &2).

Meena, R.S. (2011). Financial Reformns: Realities and Myths. *Ijmt*, 19(1), 44-45.



Nagaraj, R. (2003). Foreign Direct Investment in India in the 1990's - Trend and Issues, *Economic & Political Weekly*, Vol.38, No.17, 26April.

Patil, R. H. (2006). Current state of the Indian capital market. *Economic & Political Weekly*, 41(11), 1001–1011.

Patil, R.H. (2010) Financial sector Reforms: Realities and myths, *Economic & Political Weekly*, XLV, (19), 8 May.

Pattnaik, R.K. et.all. (2003). Exchange Rate Management: The Indian Experience, *Economic & Political Weekly*, Vol. 38, no.2, 31 May.

Sahoo, P. (2015). Time to review the Special Economic Zone Act, *Economic & Political Weekly*, L (14).

Sally, Razeen. (2011). Indian Trade Policy after the crisis, *ECIPE occasional papers*, (4).

### **Further Readings**

“*Essays from EPW-Quarter Century of Liberalisation in India*” (2018).Oxford University Press.

Bhagwati, J.& Panagariya, A. (2012). *India's Tryst with Destiny*. India: Harper Collins.

Drèze, J., & Sen, A. (2013). *An uncertain Glory-India & its Contradictions*. New Delhi: Penguin Books.

Singh, M. (2018). *Changing India* Vol. 1-5. Oxford University Press.

## **PAPER -MAECO-403 & 404: option (i) - ECONOMICS OF AGRICULTURE-II**

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### **Objective:**

The focus of this course is to introduce students to issues associated with agricultural finance, agricultural markets, food security and international trade in agricultural commodities, and also to expose students to the recent developments in Indian agriculture. The objective is to equip students to analysis and critically assess issues, policies and programmes in these areas.

### **Pedagogy of the Course Work :**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.

3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT-I

**Agricultural Finance:** Financial Characteristics of Agriculture, Imperfect Information [Agency Relationship, Adverse Selection, and Moral Hazard] and Enforcement Problems in Credit Markets; Segmented Rural Credit Markets, Resolving Information and Incentive Problems; Managing Borrowers' Credit Risks; Agribusiness and Trade Financing. Rationale for Government Intervention in Rural Credit Markets.

### UNIT-II

**Agricultural Markets:** Nature, Types and Problems of Agricultural Commodity Markets; Marketing Margins and Marketing Margin Determinants; Evaluation of Marketing Efficiency. Horizontal Structure of Agricultural Marketing, Vertical Market Relationships.

**Institutional and Organizations in Agricultural Markets:** Farmers Cooperatives, Marketing Boards and Trading Enterprises.

**Instability in Agricultural Markets:** Price Stabilization and Social Benefits, Storage and Market Stabilization, Role of Commodity Futures and Options in Stabilization.

### UNIT-III

**Food Security:** Concept, Threat, Indicators and Mechanism to Food Security; Food Assistance Programmes [both Domestic and International].

**Agriculture and International Trade:** Main Features of International Trade in Agricultural Commodities, Domestic Agricultural and Trade Policies of Developed Countries and Their Impact on World Trade, Agriculture in GATT Negotiations and WTO.

### UNIT-IV

**Indian Agriculture:** Structure and Functioning of Rural Credit Market in India.

Indian Agricultural Development Strategy Since Independence. Opportunities and Challenges [Expectations, Performance, and Emerging Constraints and Potentials] for Indian Agriculture in the Post Reform Period. National Agricultural Policy (Latest).

#### **Recommended Readings:**

##### **Essential Readings:**

Besley, Timothy (1994). "How Do Market Failures Justify Interventions in Rural Credit Markets?" *The World Bank Research Observer*, Vol. 9, No.1

Bruce L. Gardener and Gordon C. Rausser (2002). (Ed.), *Handbook of Agricultural Economics Vol., 2A Agricultural and Its External Linkages*, Amersterdam, Elsevier Science B.V.

Bruce L. Gardener and Gordon C. Rausser (2002). (Ed.), *Handbook of Agricultural Economics Vol., 2B Agricultural and Policy*, Amersterdam, Elsevier Science B.V.

Bruce L. Gardener and Gordon C. Rausser (2002). (Eds), *Handbook of Agricultural Economics Vol.1B, Marketing Distribution and Consumption*, Amersterdam, Elsevier Science B.V.

Bruce L. Gardener and Gordon C. Rausser (2002). (Eds.), *Handbook of Agricultural Economics Vol.IA Agricultural Production*, Amsterdam, Elsevier Science B.V.

Ghatak Subrata and Ken Ingersent (1984). *Agriculture and Economic Development*. London: Harvester Press Ltd.

Hoff Karla & Joseph E. Stiglitz (1990). "Introduction: *Imperfect Information and Rural Credit Markets – Puzzles and Policy Perspective*" *The World Bank Economic Review*, Vol.4, No.3

Government of India Five Year Plan, (Latest), *Planning Commission*. New Delhi. *Government of India*,

Government of India *National Agricultural Policy*, Ministry of Agriculture, New Delhi. (Latest). *Government of India*.

World Bank (2006). *Rejuvenating Indian Agriculture*, Washington, World Bank.

## **PAPER -MAECO-403 & 404: option (ii) - ECONOMICS OF INDUSTRY-II**

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### **Objective:**

In the contemporary world with globalization and liberalization more and more attention is being given to industry. Since industry performance critically depends on firms' behaviour allowing equilibrium outcome, the course intends to provide a rigorous knowledge of different long-run equilibrium outcome of firms under different conditions from the point of view of public policy. The students are also equipped to deal with debates involved in the industrial development in a cogent and analytical manner, particularly in the Indian context. However, it should be noted that Game Theoretic approach to any topic/problem is outside the scope of the Present syllabus.

The time-tested method of imparting verbal instructions through lectures would be used. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought through the students writing assignments, tutorials and seminars.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/options concerned.

### **Pedagogy of the Course Work:**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES :**

1. The syllabus of this paper has been divided into four units.

2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT – I

Rivalry; Conditions Facilitating and Hindering Collusive Conduct. Potential Competition: Limit Price versus Strategy by Dominant Firm. Direct costs based strategy: rising Rivals Costs; Indirect Strategies: capacity and marketing. Rivalry with Efficiency and Product Differentiation  
 Relationship between Market Structure and Technological Progress: Economics of innovation; Arrow and Schumpeter. Timing of Innovation and Innovation as a strategic Conduct.

### UNIT – II

Market Power and Efficiency Related Causes of Different Types of Merger: Horizontal; Vertical and Conglomerate. Causes of different types of Takeovers. Evaluation of Merger Policy: US experience.

### UNIT – III

Macro Economic Issues: Means Thesis on Administered Pricing by Firms; The Kinked Demand Curve and Full Cost Pricing; Transaction Costs and Price Rigidity.

Issues of Price Discrimination: Nature of Price Discrimination. Effects of Price Discrimination: welfare, Efficiency and Competition.

### UNIT – IV

Public Policy towards Market Structure, Conduct and Performance. Optimality of Perfect Competition. Costs of Monopoly: Theoretical Issues and Empirical Measurement of Social Welfare Loses. Evolution of Govt. of Indian Policy towards Monopolistic and Restrictive Practices: Theoretical issues.

### **Recommended Readings:**

#### ***Essential Readings***

Bain, Wildsmith, S. (1975) . *Managerial Theories of the Firm*.

Devine, P. J. & Others. (1976). *Introduction to Industrial Economics*, George Allen & Unwin.

Hawkin, C. J. (1973) .*Theory of the Firm*. Macmillan.

Hay, D. A. & Morris, D. J. (1991). *Industrial Economics : Theory and Evidence*. Oxford University Press.

J. S. (1968) *Industrial Organizations* (2<sup>nd</sup> ed.), University of California.

Martin Stephen (1989) . *Industrial Economics (Economic Analysis and Public Policy)*.

Scherer, F. M. & Ross Boston David (1990) *Industrial Market Structure and Economic Performance*. Houghton Mifflin Company.

Shepherd, W. G. (1990). *The Economics of Industrial Organisation* (3<sup>rd</sup> ed.). New Jersey: Prentice Hall Englewood Cliffs.

## PAPER -MAECO-403 & 404: option (iii) – RESEARCH METHODS

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

To rigorously train the students with the concepts, methodology and reasoning involved in analyzing the economic behavior of firms and markets, in general, a static and partial equilibrium frameworks.

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT – I

**Introduction to Research Methodology:** Meaning and Objectives of Research, Types of Research and its Approaches, Techniques of Defining the Research Problem. Reviewing the Literature, Use of Mendeley and MS-Word in Citing the Literature, Various Formats of Writing the reference/bibliography. Research Design: Meaning, need and Types.

### UNIT – II

**Data Collection Techniques:** *Questionnaire Method:* Types, Format and Pre-Testing of Questionnaires. Techniques for Increasing Response of Respondents. *Interview Method:* Types, Process and Rules of Interviews. Factors affecting interview. Interviewer's Bias. Selection and Training of Interviewers. *Observation Method:* Types of Observations.

### UNIT – III

**Measurement and Scaling Techniques:** Measurement Scales: Types of Measurement Scales, Types and Components of Measurement. Accuracy of Measurement and Reliability Testing. Increasing Reliability.

**Sampling Techniques:** Simple Random Sampling; PPS Sampling; Stratified Random Sampling; Multistage Sampling (Applications only).

#### UNIT – IV

**Testing of Hypotheses:** *Parametric Tests:* Applications of  $t$ ,  $z$ , and  $F$ -test Statistics. *Non-Parametric Tests:* Application of  $\chi^2$ , McNemar, Kolmogorov-Smirnov, Sign, Wilcoxon Signed, Mann Whitney, Rank-Sum, Kruskal-Wallis, Kendall's Coefficient Tests.

#### Recommended Readings:

##### Essential Readings

Kumar, R. (2009). *Research Methodology: Methods and Techniques*. India: New Age International.

Tripathi, P C. (2008). *A Textbook of Research Methodology*, Sultan Chand.

Goon, A.M.& M.K. Gupta. (Latest Edition). *An Outline of Statistical Theory*. World Press Pvt. Ltd., Calcutta.

Sukhatme & Sukwatme (1970). *Sampling Theory of Surveys with Applications*. John Wiley and Sons.

Anderson, T W Goode, W.J. & Hatt Paul K (1952). *An Introduction to Multivariate Statistical Methods in Social Research*. New York: McGraw Hill Book Company.

Kumar,P., Singh, D. & Singh, P. *Handbook of Sampling Methods, Indian and Agricultural Statistics Research Institute, ICAR.*

#### PAPER -MAECO-403 & 404: option (iv) –PUBLIC POLICY

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

#### Objective:

To rigorously train the students with the concepts, methodology and reasoning involved in analyzing the economic behaviour of firms and markets, in general, a static and partial equilibrium frameworks.

#### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

## **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### **UNIT-I**

**Introduction to public policy:** Definition, Scope and Need for Public Policy. Role of the Government in Public Policy Making. Policy Making Process. Policy Implementation. Policy Evaluation – Assessing the Impact of Public Policy. Policy Analysis.

### **UNIT-II**

**Models of Public Policy** - Institutional, Process, Incremental, Group, Elite, Public Choice and Game Theory Model. Attributes of a Good Policy Making Process. Problems in Policy Making. Policy Memo – Writing an Effective Policy Memo.

### **UNIT -III**

**Institutions and Governance:** Political Institutions and Governance. Role of Good Governance in Public Policy. Economic Governance. Policy Failure - Limits to public policy and State Capacity. Public Policy vs. Populism.

### **UNIT-IV**

**Economic Policy:** Economic Theories as Policy Guides. Overall Economic Policy Framework in India with Special Reference to the Relevance of Planning Commission of India. Niti Ayog- its Objectives and Functions. Weaknesses in India's Public Policy Making Process. Reforming the Process and Institutions. Competition Policy, Consumer Protection Act.

### **Recommended Readings:**

#### **Essential Readings**

Ayyar, R.V.V. (2009). *Public policymaking in India*. New Delhi: Pearson

Dye, T. R. (2017). *Understanding public policy*. (15<sup>th</sup> ed.). New Delhi: Pearson Education.

Nagel, S. S. (1984). Public policy goals, means, and methods. *Review of Policy Research*, 3(2), 192-192.

Sapru, R. K. (2013). *Public policy: Formulation, implementation and evaluation*. New Delhi: Sterling Publishers.

#### **Further Readings:**

Anderson, J. E. (2010). *Public policymaking*. (7<sup>th</sup> ed.). New Delhi: Cengage Learning.

Gerston, L.N. (2014). *Public policymaking in a democratic society: A guide to civic engagement*. Washington DC: Routledge.

Gupta, D. K. (2010). *Analyzing public policy: Concepts, tools, and techniques*. London: Sage.

Hill, M. J., & Hupe, P. L. (2002). *Implementing public policy: An introduction to the study of operational governance*. London: Sage.

Nagel, S. S. (2018). *India's development and public policy*. Washington DC: Routledge.

Peters, B. G., & Van Nispen, F. K. (Eds.). (1998). *Public policy instruments: Evaluating the tools of public administration*. Cheltenham: Edward Elgar.

## PAPER -MAECO-403 & 404: option (v) - ECONOMETRICS –II

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective :

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

Besides the time-tested method of imparting verbal instructions through lectures, description and derivation of econometric models would be demonstrated by extensive use of blackboard. Examples, in so far as possible, would be selected from everyday life/experience. The feedback would be sought through the students writing assignments, tutorials and seminars.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### Pedagogy of the Course Work:

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### UNIT-I

*Simultaneous Equations Models (SEM):*



Nature of SEM's, Simultaneous Equation Bias, Identifications Problem.  
Rank and Order Conditions. Testing Identification of Economic Models.  
Estimation of SEM'S : ILS, 2SLS, 3SLS .Method of Instrumental Variables

## UNIT-II

*Dummy variables:*

Dummy Explanatory Variables and Their Use to Test Equality to Two Regressions; Chow Test and Dummy Variable Approach.

*Qualitative Response Regression Models:*

Nature of Qualitative Response models.

Description and Estimation of Linear Probability Model and Problems.

Logit , Probit and Tobit Models.

## UNIT-III

*Panel Data Models:*

*Introduction:* Advantages and Issues Involved in Utilizing Panel Data.

Simple Panel Data Models: Fixed Effects (LSDV) and Random Effects Approach.

*Distributed Lag and Autoregressive Models:*

Introduction and Nature of Distributed Lag (DL) & Auto Regressive (AR) Model. Koyck Approach for Estimation of DL & AR Models Rationalization of Koyck Approach by Adaptive Expectation and Partial Adjustment Hypothesis; Almon's Polynomial Approach.

## UNIT-IV

*Time Series Analysis:*

Testing Casuality in Economics: Granger Causality Test.

Stationary, Test of Stationary, Spurious Regression, Unit Roots, Dickey-Fuller Test, Cointegration, Engle Granger Test.

*Forecasting:* AR, MA and ARIMA processes, Box Jenking Methodology.

Vector Auto Regression (VAR) Model, Introduction, Formulation, Estimation and Problems.

### **Recommended Readings:**

#### **Essential Readings :**

Gujarati Damodar (2003). *Basic Econometrics*, (4<sup>th</sup> ed.), McGraw Hill, New York.

James H Stock, Mark W. Watson. *Introduction to Econometrics* (2011). (3<sup>rd</sup> ed.) Pearson Prentice Pvt. Ltd, Delhi.

Kementa, J. (1971). *Elements of Econometrics*, (2<sup>nd</sup> ed.), Macmillan, New York.

Madala, G. S. (2007). *Introduction to Econometrics*, (3<sup>rd</sup> ed.), John Wiley & Sons Ltd., England.

#### **Further Readings:**

Johnston, J. & Dinarido. (2007). *Econometrics* (4<sup>th</sup> ed.).New York: McGraw Hill.

S. Hsiao Cheng (2003). *Analysis of Panel Data*, (2<sup>nd</sup> ed.).Cambridge : Cambridge University Press.

## PAPER -MAECO-403 & 404: option (vi) - MATHEMATICAL ECONOMICS-II

Max. Marks	: 100
Theory	: 80 Marks
Internal Assessment	: 20 Marks
Time	: 3 Hours
Teaching Hours	: 50

### Objective:

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

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

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

**Pedagogy of the Course Work:** The course relies on a combination of lectures, solving problems, and discussing of academic articles or real life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:

1. The syllabus of this paper has been divided into four units.
2. There shall be 9 questions in all.
3. The first question, which would be compulsory, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry 15 marks ( $15 \times 4 = 60$ ).

### UNIT-I

**Theory of Consumer Behaviour:** Linear Expenditure Function and Indirect Utility Function; Roy's Identity; Expenditure Function; Consumer's Surplus; Choice under Risk, Von Neumann Utility Function; Intertemporal Utility Maximization.

**Production Analysis:** Homogeneous and Homothetic Production Functions; Elasticity of Substitution; Cobb-Douglas, CES and VES Production Functions; Estimation of economic, technical, revenue, and profit efficiency scores using production CD, CES and VES functions.

## UNIT-II

**Market Equilibrium:** Existence and Uniqueness of Equilibrium; Stability of Equilibrium; Dynamic Equilibrium with Lagged Adjustment; Cobweb Model. Multi-Market Equilibrium, Walras's Law and the Existence of General Equilibrium.

**Welfare Economics:** Mathematical explanation of Paretian concept of social welfare. Bergsonian concept of social welfare. Externalities and economic welfare. The Compensation Principle: Kaldor-Hicks criterion, Kaldor-Hicks criterion and Scitovsky community indifference curves. Scitovsky double criterion. Samuelson's comparisons. Little criterion. Social welfare function. Arrow's theorem.

## UNIT-III

**Fundamentals of Macro Economics:** Mathematical formulation of Classical and Keynesian models. Inter-temporal utility function and consumption decisions, investment multiplier with once for all and repeating doses, the Balanced Budget Multiplier.

**Relative Effectiveness of Fiscal and Monetary Policy:** effectiveness issues under different regimes of IS-LM-BP Models: A Mathematical Representation.

## UNIT-IV

**Growth Models:** Harrod-Domar Growth Models. An Overview of Neo-Classical Growth Models and Golden Rule of Capital Accumulation. Growth Accounting; Models of Endogenous Growth.

**Two Sector Models of Endogenous Growth:** Meade's Model, Jorgenson's model of a dual economy. Uzawa-Lucas model. Model with reversed factor intensities.

### Recommended Readings:

#### Essential Readings:

Abel, A. & Bernanke, M, (1998). *Macroeconomics*. Massachusetts: Addison Wesley.

Allen, R. G. D. (1967). *Macro Economic Theory*. London: Macmillan.

Allen, R. G. D. (1974). *Mathematical Economics*. London: Macmillan

Baumol, W. J. (2000). *Economic Theory and Operations Analysis* (4<sup>th</sup> ed.). N. Delhi: Prentice Hall of India.

Dorfman, R. , Samuelson, P. & Sallow, R. (1968) *Linear Programming and Economic Analysis*. Tokyo : McGraw Hill Kogakusha Ltd.

Dornbusch, R. & Fisher, S. (1981). *Macroeconomics*. New Delhi: McGraw Hill.

Hamberg, D. (1971). *Models of Economic Growth*. New York : Harper & Row.

Henderson, J. M. & Quandt, R. B. (1980). *Micro Economic Theory: A Mathematical Approach* (3<sup>rd</sup> ed.). New York: John Wiley.

Lancaster, V. (1965). *Mathematical Economics*. R and McNally College Pub.

Madnani, G. M. K. (2003). *Mathematical Economics*. New Delhi : Oxford IBH Publishing Co. Pvt. Ltd.

Nehar, P. A. (1971). *Economic Growth and Development: A Mathematical Introduction*. New York: John Wiley.

Silberberg, E. (1990). *The Structure of Economics– A Mathematical Analysis*. New York: McGraw Hill.

Varian, H. R. (1992). *Microeconomic Analysis*. New York : W. W. Norton.

### **Further Readings:**

Chand, M. & Anand, V. K. (1981). *Economic Theory – A Mathematical Approach*. Allahabad: Kitab Mahal.

Chiang, A. C. (1984). *Fundamental Methods of Mathematical Economics* (3<sup>rd</sup> ed.). McGraw Hill.

Chung, J. W. (1993). *Utility and Production: Theory and Application*. London, New York: Basil Blackwell.

Green, H. A. J. (1971). *Consumer Theory*. Harmondsworth : Penguin.

Jha, R. (1991). *Contemporary Macroeconomic Theory and Policy*. New Delhi: Wiley Eastern Ltd.

Jones, H. G. (1976). *An Introduction to the Modern Theory of Economic Growth*. Tokyo : McGraw Hill - Kogakusha.

Leontief, W. W. (1966). *Input-Output Economics*. New York: Oxford University Press.

Nash, J. F. (1996). *Essays on Game Theory*. U.K : Cheltenham.

Quirk, J. & Saposnik, R. (1968). *Introduction to General Equilibrium Theory and Welfare Economics*. New York : McGraw Hill..

Sen, A. K. (1990). *Growth Economics*, Harmondsworth, Penguin.

Solow, Robert M. (2000). *Growth Theory – An Exposition*. Oxford: Oxford University Press.

Taha, H. S. (1997) *Operations Research – An Introduction* (6<sup>th</sup> ed). New Delhi: Prentice Hall of India Pvt. Ltd.

Todaro, M. P. (1971). *Development and Planning Models and Methods*, Oxford University Press, Oxford.

### **Paper-MAECO-403 &404: option (vii)- ECONOMICS OF MONEY AND BANKING**

Max. Marks	:	100
Theory	:	80 Marks
Internal Assessment	:	20 Marks
Time	:	3 Hours
Teaching Hours	:	50

### **Objective:**

Money and banking constitute important components towards understanding of economics. A clear understanding of the operations of money and banking and their interaction with the rest of the economy is

essential to realize how monetary forces operate through a multitude of channels – market, non-market, institutions and among others, the state. The operation of financial markets and their regulations are to be studied to appreciate their key-role in an economy, especially after the far reaching banking and financial sector reforms in India and elsewhere. The present course is designed to acquaint the students fully with the changing role of financial institutions in the process of growth and development. Accordingly, the paper on 'Economics of Money and Banking' is an optimal integration of monetary theory, banking and non-banking financial institutions, which combine with itself a systematic discussion of the theory, institutions and policy with special reference to India.

The students would be evaluated at the end of each semester through subjective type questions/answers (both short and essay type). The scripts would be evaluated by the examiners having adequate postgraduate teaching experience in the paper/option concerned.

### **Pedagogy of the Course Work:**

The course relies on a combination of lectures, solving problems, and discussing of academic articles or real-life situations. Teacher will assign topic for assignments on contemporary themes and issues from the syllabi. Special tutorials/contact hour for one-to-one student-teacher interactions.

### **INSTRUCTIONS FOR THE PAPER-SETTER AND CANDIDATES:**

1. *The syllabus of this paper has been divided into four units.*
2. There shall be 9 questions in all.
3. The first question, which would be **compulsory**, shall be short answer type (word limit 25-30 each). It would carry 15 short questions, spread over the entire syllabus. The candidate will be required to attempt any 10 short answer type questions. Each short answer type question would carry 2 marks ( $10 \times 2 = 20$ ).
4. Rest of the paper shall contain 4 units. Each unit shall have two questions and the candidates shall be required to attempt one question from each Unit— 4 in all. Each question shall carry **15** marks ( $15 \times 4 = 60$ ).

### **UNIT-I**

**Money Supply:** Theoretical and Empirical Attempts to Define Money. Balance sheet of a Central Bank and Components of Money Supply. Money Creation by the Banking System. High Powered Money and Money Multiplier. Measures of *Money Supply* and *liquidity* in India.

**Demand for Money:** Interest sensitivity of demand for money- A review of Classical, Keynesian and Monetarist theories of demand for Money. Empirical attempts to estimate demand for money function.

### **UNIT-II**

**Term Structure of Interest Rates:** The Expectations Theory, Liquidity Premium Theory, Market Segmented Theory, Preferred Habitat Theory, Structure of Interest Rates in India.

**Monetary Policy:** Targets, Goals and the Trade Offs among Alternate Goals, Lags in Operation, Keynesian and Monetarist Views on Transmission Mechanism, Rules vs. Discretion.

### **UNIT-III**

**Central Banking:** Main Functions, Policy Tools, Recent Monetary Policy of RBI, money aggregates targeting, interest targeting and inflation targeting approaches of RBI, Autonomy of RBI.

**Commercial Banking:** Types of commercial banks in India. Banking Sector Reforms, Major Developments in Commercial Banking in India since reforms (including mergers).

### **UNIT-IV**

**Non-Banking Financial Institutions:** Role, Growth and Structure of Non-Banking Financial

Institutions(NBFIs) in India. Types and Control of Non-Banking Financial Companies(NBFCs).

**International Monetary System:** IMF as provider of International Liquidity. European Monetary System– Features of the Maastricht Treaty and Post Maastricht Treaty Developments. Constituents of international money and capital markets.

## **Recommended Readings**

### **Essential Readings:**

Bhole, L.M. (2016). *Financial Institutions and Markets*. Tata Mcgraw Hill.

Bofinger, P. (2001). *Monetary Policy: Goals, Institutions, Strategy and Instruments*. Oxford University Press.

Dennis Geogrey, E.J. (1981). *Monetary Economics*. Longman.

Desai, V. (2019). *The Indian Financial System and development*. Himalaya Publishing House.

Diulio, A. E. (1987). *Theory and Problems of Money and Banking*. International Edition (Schaum's Outline Series).

Fabozzi, F. J. & Franco (2009). *Capital Markets Institutions and Instruments*, (4<sup>th</sup> ed.). New Jersey: Prentice Hall, Modigliani.

Gordon, E. & Natarajan, K. (2019), *Financial Markets & Services*. Himalaya Publishing House.

Howells, P. & Bain, K. (2002). *The Economics of Money, Banking and Finance*. Prentice Hall, Pearson Education Ltd.

Khan, M.Y. (2017). *Indian Financial System*. Tata Mcgraw Hill.

Kulkarni, G. (1999). *Modern Monetary Theory*. New Delhi: Macmillan.

Mankiw, N.G. (2008). *Macro-economics*. New York: Macmillan Worth Publishers.

Mohan, R. (2009). *Monetary Policy in a Globalized Economy – A Practitioner's View*. Oxford University Press.

### **Further Readings:**

Government of India Economic Survey (Recent Issues).

Reserve Bank of India Various Reports.

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