

# **FACULTY OF ECONOMICS & BUSINESS**

## **SYLLABUS**

**For**

**Master of Science (Economics)  
Semester (I –IV)**

**(Under Credit Based Continuous Evaluation Grading System)**

**Session: 2026-2027**



**The Heritage Institution  
Kanya Maha Vidyalaya, Jalandhar  
(Autonomous)**

# **Master of Science (Economics)**

## **Program Specific Outcome**

M.Sc. Economics is two year post graduate course with five subjects in each semester. The basic objective of M.Sc. Economics is to develop strong theoretical base along with practical skills of students associated with economic theories and real world internal as well as international economic problems. This course will help to develop academicians, researchers, analysis, bankers and anchors

**Upon successful completion of this course, students will be able to:**

**PSO1:** have in depth understanding of the basic concepts and theories of various streams of Economics.

**PSO2:** learn basic and advance data analysis techniques, their theoretical base and basics of research write-ups.

**PSO3:** learn and understand basic problems and issues of Indian and Punjab Economy.

**PSO4:** learn latest developments in different streams of Economics.

**Programme outcome:**

The advanced knowledge gained with the optimum combination of economic theory, quantitative techniques, computer & financial courses open various advanced career options for the students

## Credit Based Continuous Evaluation Grading System (CBCEGS)

| Semester-I           |                                      |             |             |         |       |    |   |    |                             |
|----------------------|--------------------------------------|-------------|-------------|---------|-------|----|---|----|-----------------------------|
| Course Code          | Course Title                         | Course Type | Hours /Week | Credits | Marks |    |   |    | Examination time (in Hours) |
|                      |                                      |             |             |         | Total | Th | P | CA |                             |
| MECL-1171            | Microeconomic Theory-1               | C           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| MECL-1172            | Macroeconomic Theory-1               | C           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| MECL-1173            | Statistical Techniques               | C           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| MECL-1174            | Public Economics                     | C           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| MECL-1175<br>(OPT- ) | Optional to be selected from Table 1 | E           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| Total Credits        |                                      | 25          |             |         |       |    |   |    |                             |

| Semester-II           |                                      |             |             |         |       |    |   |    |                             |
|-----------------------|--------------------------------------|-------------|-------------|---------|-------|----|---|----|-----------------------------|
| Course Code           | Course Title                         | Course Type | Hours/ Week | Credits | Marks |    |   |    | Examination time (in Hours) |
|                       |                                      |             |             |         | Total | Th | P | CA |                             |
| MECL-2171             | Mathematical Techniques              | C           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| MECL-2172             | Research Methodology                 | C           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| MECL-2173             | Econometrics Techniques              | C           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| MECL-2174             | Field work and Report Writing        | C           | 2-0-0       | 2-0-0   | 50    | 35 | - | 15 | 3                           |
| MECL-2175<br>(OPT-__) | Optional to be selected from Table 1 | E           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| MECL-2176<br>(OPT- )  | Optional to be selected from Table 1 | E           | 4-1-0       | 4-1-0   | 100   | 70 | - | 30 | 3                           |
| Total Credits         |                                      | 27          |             |         |       |    |   |    |                             |

| Semester-III          |                                         |             |                |                |            |          |         |          |                             |
|-----------------------|-----------------------------------------|-------------|----------------|----------------|------------|----------|---------|----------|-----------------------------|
| Course Code           | Course Title                            | Course Type | Hours /Week    | Credits        | Marks      |          |         |          | Examination time (in Hours) |
|                       |                                         |             |                |                | Total      | Th       | P       | CA       |                             |
| MECL-3171             | Microeconomic Theory-II                 | C           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-3172             | Macroeconomic Theory-II                 | C           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-3173             | Economics of Development                | C           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-3174             | Theory of Statistics                    | C           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-3175             | Term Paper                              | C           | 2-0-0          | 2-0-0          | 50         | 35       | -       | 15       | 3                           |
| MECL-3176<br>(OPT-__) | Optional to be selected from<br>Table 1 | E           | 4-1-0<br>2-1-4 | 4-1-0<br>2-1-2 | 100<br>100 | 70<br>40 | -<br>30 | 30<br>30 | 3<br>3+3                    |
| Total Credits         |                                         | 27          |                |                |            |          |         |          |                             |

| Semester-IV          |                                      |             |                |                |            |          |         |          |                             |
|----------------------|--------------------------------------|-------------|----------------|----------------|------------|----------|---------|----------|-----------------------------|
| Course Code          | Course Title                         | Course Type | Hours/ Week    | Credits        | Marks      |          |         |          | Examination time (in Hours) |
|                      |                                      |             |                |                | Total      | Th       | P       | CA       |                             |
| MECL-4171            | Indian Economic Development          | C           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-4172            | International Economics              | C           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-4173 (OPT-__)   | Indian Economic Thought              | C           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-4174 (OPT-__)   | Optional to be selected from Table 1 | E           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-4175 (OPT-__)   | Optional to be selected from Table 1 | E           | 4-1-0          | 4-1-0          | 100        | 70       | -       | 30       | 3                           |
| MECL-4176 (OPT-__)   | Optional to be selected from Table 1 | E           | 4-1-0<br>2-1-4 | 4-1-0<br>2-1-2 | 100<br>100 | 70<br>40 | -<br>30 | 30<br>30 | 3<br>3+3                    |
| <b>Total Credits</b> |                                      | <b>30</b>   |                |                |            |          |         |          |                             |

| Table 1     |                                           |         |    |    |     |             |
|-------------|-------------------------------------------|---------|----|----|-----|-------------|
| Course Code | Course Title                              | Credits | CA | P  | Th  | Total Marks |
| OPT-I       | Financial Institutions and Markets        | 4-1-0   | 30 | -  | 70  | 100         |
| OPT-II      | Rural Economics                           | 4-1-0   | 30 | -  | 70  | 100         |
| OPT-III     | Economics of Environment                  | 4-1-0   | 30 | -  | 70  | 100         |
| OPT-IV      | Economics of Industrialization            | 4-1-0   | 30 | -  | 70  | 100         |
| OPT-V       | Economics of Planning                     | 4-1-0   | 30 | -  | 70  | 100         |
| OPT-VI      | Demography                                | 4-1-0   | 30 | -  | 70  | 100         |
| OPT-VII     | Labour Economics and Industrial Relations | 4-1-0   | 30 | -  | 70  | 100         |
| OPT-VIII    | Economics of Gender and Development       | 4-1-0   | 30 | -  | 70  | 100         |
| OPT-IX      | Data Science for Economists               | 2-1-2   | 30 | 30 | 40  | 100         |
| OPT-X       | Dissertation <sup>3</sup>                 | 15-0-0  | 90 | -  | 210 | 300         |

**Note: 1. C- Compulsory Course; E –Elective;**

**2. Only those students will be allowed to opt for dissertation in Semester IV, who have scored 65 percent marks in aggregate in semester I, II and III.**

**3. in lieu of three optional papers in M.Sc. Economics Semester IV.**

**Master of Science (Economics) Semester – I**  
**Session 2026-27**  
**Course Code: MECL-1171**  
**Course Title: Microeconomic Theory-I**

**Course outcomes:**

After passing this course students will be able to:

- CO1:** understand basic economic problems related to choice and scarcity and elasticity of demand and supply.
- CO2:** analyze and demonstrate knowledge of the basic theories and functions in Production.
- CO3:** have an understanding of cost functions and revenue analysis under different market conditions.
- CO4:** study equilibrium under oligopoly and bilateral monopoly; parameters and models of growth performance a firm.

**Master of Science (Economics) Semester – I**  
**Session 2026-27**  
**Course Code: MECL-1171**  
**Course Title: Microeconomic Theory–I**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**  
**Max. Marks: 100**  
**Theory: 70**  
**CA: 30**

**Instructions for the Paper Setters:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

**Nature of economic theory.** Theory of demand and supply. Elasticities of demand–theoretical and empirical aspects and their relationship, Static and dynamic Models of demand; Cobweb theorem.

**Utility approach,** Indifference curve and revealed preference approach.

**UNIT-II**

**Production function**–Isoquants, producer’s equilibrium, returns to factor and returns to scale, factor substitution, Euler’s theorem. Cobb–douglous, CES and Translog production functions.

**UNIT-III**

**Traditional and modern theories of costs**–a comparison. Derivation of cost functions from production functions. Revenue analysis, price and output determination under perfect competition, monopoly and monopolistic competition.

**UNIT-IV**

**Oligopoly**–collusive and non–collusive models of oligopoly, Bilateral monopoly; workable competition – structure, conduct and performance norms.

**Alternative theories of the firm** –Baumol’s sales maximization hypothesis, Marris model, Williamson’s model and limit price model.

**A Case study on elasticity/laws of utility.**

**Suggested Readings:**

1. Henderson & Quandt: Microeconomic Theory, A Mathematical Approach, McGraw-Hill, Newyork, 1978.
2. Koutsoyiannis A.: Modern Microeconomics, Macmillan Press, London, 1979.
3. Heath field & Wibe: An Introduction to Cost and Production Functions, Macmillan Press, London,1979.
4. Layard & Walters: Microeconomics Theory, Mc Graw-Hill, New York, 1978.
5. Naylor & Vernon: Microeconomics and Decisions Models of the Firm, W. Norton, New York,1996.
6. Ferguson, C. E.: Microeconomics Theory, Prentice Hall, 1978.
7. Dacosta, G.C.: Value and Distribution, Himalaya Publication, 1992.

**Master of Science (Economics) Semester – I**

**Session 2026-27**

**Course Code: MECL-1172**

**Course Title: Macroeconomic Theory-I**

**Course outcomes:**

After passing this course students will be able to:

**CO1:** understand the basics concepts of national income and its measurement.

**CO2:** understand the basics models of income determination and concept of multiplier

**CO3:** Understand the working of labour market

**CO4:** understand the consumption puzzle and unflation

**Master of Science (Economics) Semester – I**

**Session 2026-27**

**Course Code: MECL-1172**

**Course Title: Macroeconomic Theory–I**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Instructions for the Paper Setters:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

National income: Concept–Production vs. non–productive activities, final vs. intermediate activities, Measurement and difficulties. Domestic and national product and their components. National income at factor cost and at market prices. Real and nominal GNP, GNP and welfare. Social accounting and its significance.

**UNIT-II**

The classical and Keynesian models of income determination, Overall equilibrium in the basic static model (goods, labour and money markets), Adjustment towards equilibrium. Wage-Price Flexibility: Classical Vs Keynesians Views. Balance budget multiplier.

**UNIT-III**

Consumption: Keynesian consumption function. The consumption puzzle; Absolute income hypothesis, Relative income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis.

**UNIT-IV**

Money: Concept of money; High powered money and money multiplier; control of money supply. Classical and Keynesian approach to demand for money; Post–Keynesian approaches to demand for money – Patinkin and the Real Balances Effect, Approaches of Baumol and Tobin; Friedman and modern quantity theory.

**A Case study on Consumption function/demand for money.**

**Suggested Readings:**

1. Beckman, W. An Introduction to National Income Analysis, London, E.L.B.S.1976.
2. Studenski, Paul, A., The Income of Nation spart2, Theory and Methodology, New York, University Press,1958.
3. U.N. The System of National Accounts, Series F no.2, 1968.
4. Branson, W.H. Macroeconomic Theory and Policy, New York, Harper & Row,1972.
5. Ackley G. Macroeconomics Theory, New York, Macmillan,1969.
6. Dornbusch, E and S. Fischer Macroeconomics Auckland, McGraw Hill International,1981
7. Levacic, R Macroeconomics: The State and Dynamic Analysis of a Monetary Economy, London, Macmillan,1976.
8. Glahe, F.R. Macroeconomics: Theory and Policy, Harcourt Brace Jovanovich, NewYork,1973.

9. Crouch, R.L. Macroeconomics, New York, Harcourt Brace Jovanovich, New York, 1972.

**Master of Science (Economics) Semester – II**  
**Session 2026-27**  
**Course Code: MECL-1173**  
**Course Title: Statistical Techniques**

**Course outcomes:**

After passing this course students will be able to:

- CO1:** understand the co-variability among variables by using statistical techniques simple, partial and multiple correlation and prediction of dependent variable by using simple regression.
- CO2:** learn the techniques for forecasting and prediction by using multiple regression and non-linear growth curves
- CO3:** understand the concepts of probability in detail and theoretical distributions and also moment generating function
- CO4:** understand the methods of drawing a sample and procedure for hypothesis testing and applications.

**Master of Science (Economics) Semester – I**

**Session 2026-27**

**Course Code: MECL-1173**

**Course Title: Statistical Techniques**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Correlation and Regression: Meaning, assumptions and limitations of simple correlation and regression– analysis; Pearson’s product moment and spearman’s rank Correlation coefficients, and their properties; partial and multiple correlation. Simple regression–basic idea about least–squares principle, lines of regression and properties of regression co –efficient.

**UNIT-II**

Multiple linear regression equation: Derivation and application. Method of estimation of second degree parabolic, exponential and modified exponential curves; Method of computing average annual rate of growth.

**UNIT-III**

Elements of probability: Deterministic and non –deterministic experiments, various types of events. Classical and empirical definitions, laws of addition and multiplication of probability, conditional probability and the concept of independence of events, elementary concept of a random variable, probability mass and density functions. Expectations, moments and moment generating function

**UNIT-IV**

Properties and applications of binomial, poisson and normal distributions.

Sampling: Concepts uses in sampling, difference between random and non–random sampling, simpler and om sampling, stratified random sampling and p.p.s. sampling.

**A Case study on applications of correlation and regression using statistical software**

**Suggested Readings:**

1. Chou Ya–Lun: Statistical Analysis.
2. Croxton, Cowden and Klein: Applied General Statistics.
3. Gupta S.C. and Kapur V.K.: Fundamentals of Applied Statistics, Sultan Chand & Sons (1993).
4. Miller, Jane: Statistics for Advanced Level, Cambridge University Press (1996).
5. Spiegel, M.R.: Theory and Problems of Statistics.
6. Hogg, R.V. and Craig A.T.: Introduction to Mathematical Statistics (3rdEd.), Macmillan Publishing Co., New Delhi.
7. Sukhatme, P.V. and Sukhatme B.V.: Sampling Theory of Surveys with Applications, Iowa State University Press, Ames, Iowa (1970)

**Master of Science (Economics) Semester – I**  
**Session 2026-27**  
**Course Code: MECL-1174**  
**Course Title: Public Economics**

Course outcomes:

After passing this course students will be able to:

**CO1:** understand the introduction to and rationale of public economics.

**CO2:** understand the various concepts and system of provision of public goods

**CO3:** understand the effects of government expenditure and theories of public economics.

**CO4:** understand Indian system of public finance and transfer of financial resources.

**Master of Science (Economics) Semester – I**

**Session 2026-27**

**Course Code: MECL-1174**

**Course Title: Public Economics**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theories: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Introduction to public Economics: Nature and scope, Social Choice, Voting Rules, Arrow's Impossibility Theorem Rationale for state intervention: Market failures and externalities.

**UNIT-II**

Public revenue : sources, taxation, tax elasticity and buoyancy, taxable capacity and tax effort; Theory of incidence; equity in taxation; principles of taxation; direct and indirect taxes; effect of taxation on production and distribution; major taxes in India; tax reforms in India.

**UNIT-III**

Evaluation of government expenditure: Cost-benefit analysis, elements, principles and theoretical foundations.

Theories of Public Sector: Wagner's Law, Baumol's Law, Ratchet effect.

**UNIT-IV**

Fiscal federalism – theory and problems. Criteria for resource transfer from Union to States, Centre-State financial relations in India, recommendations of the latest Finance Commission. Fiscal policy – objectives, interdependence of monetary and fiscal policies.

**A Case study on the impact of GST on Indian economy/structure of public expenditure in India.**

**Suggested Readings:**

1. Atkinson A.B. and J.E. Stiglitz, Lectures on Public Economics, New York: McGraw-Hill, 1980
2. Cullis J. and P. Jones, Public Finance and Public Choice, OUP, 1998
3. Hindriks J. and G.D. Myles, Intermediate Public Economics, MIT Press, 2006
4. Myles G., Public Economics, Cambridge University Press, 1995
5. Oates W., Fiscal Federalism, New York: Harcourt, Brace Jovanovich, 1972
6. Purohit M., Value Added Tax, Gayatri Publications, 2001
7. Tresch R., Public Finance: A Normative Theory, Academic Press, 1995
8. Mueller D., Public Choice III, Cambridge University Press, 2003 (Modules 1, 2, 3, 4)
9. Drazen A., Political Economy in Macroeconomics, Princeton University Press, 2000 (Modules 1, 3)
10. Cullis J. And P. Jones, Public Finance and Public Choice, Oxford University Press, 1998 (Module 4).

**Master of Science (Economics) Semester – II**  
**Session 2026-27**  
**Course Code: MECL-2171**  
**Course Title: Mathematics for Economists**

**Course outcomes:**

- CO1:** Recognize the concept of functions and rules of differentiation and apply this to find out revenue, cost, demand, supply function, elasticity and their types.
- CO2:** To learn the concept of differential equations and the concepts of integration and its applications to consumer's surplus and producer's surplus.
- CO3:** To learn the matrix algebra and solve the system of equations using matrices. Students will also be able to understand the concept of quadratic forms, Eigen roots and Eigen vectors.
- CO4:** to learn linear programming problem, its formulation and solution through graphical and simplex methods.

**Master of Science (Economics) Semester – II**  
**Session 2026-27**  
**Course Code: MECL-2171**  
**Course Title: Mathematics for Economists**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Differentiation: Differentiation. Partial derivatives, Euler's theorem and total differentials. Maxima and minima with and without constraints. Economic applications of differentiation.

**UNIT-II**

Differential and Difference Equations: Differential and difference equations of first and second order.

Integration: Simple integration, Integration by parts, partial fractions, Definite integral, Economic application of integration.

**UNIT-III**

Linear Algebra: Matrix: Types, properties of determinants, inverse of matrix, Solution by Crammer's rule and matrix inverse method.

Characteristic roots and vectors, quadratic forms: Application of matrix in input–output analysis.

**UNIT-IV**

Linear Programming: Formulation of L.P.P.: simplex and graphical methods, two–phase simplex method and dual simplex method, Concept of duality.

**Suggested Readings:**

1. Yamane, Taro: Mathematics for Economists, Printice Hall, Latest Edition
2. Chiang, A: Fundamental Methods of Mathematical Economics, McGraw Hill Ltd.1974
3. Chang Yan Chiou: Introduction to Input–output Economics.
4. Taha, H.A.: Operations Research: An Introduction, Pearsons Publications Latest Edition.
5. Monga, G.S.: Mathematics for Management and Economics. S. Chand and Co.2017.
6. Sancheti, D.C. & V.K. Kapoor: Business Mathematics, S. Chand & Sons.2018.
7. Balwant Kandoi: Mathematics for Business & Economics, Volume I & II Himalya Publications

**Master of Science (Economics) Semester – II**  
**Session 2026-27**  
**Course Code: MECL-2172**  
**Course Title: Research Methodology**

**Course outcomes:**

After passing this course students will be able to understand:

**CO1:** the basics research and formulation of research problems

**CO2:** the basics of writing a review of literature, referencing and plagiarism

**CO3:** the identification of variables and testing of hypothesis

**CO4:** the ethics in social science research and basics of research writings

**Master of Science (Economics) Semester – II**

**Session 2026-27**

**Course Code: MECL-2172**

**Course Title: Research Methodology**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

**Introduction to Research:** Meaning, purpose, significance of research, Research methods versus methodology, Classification of Research based on its purpose, Research process.

**Formulating a research problem:** Selecting the problem, necessity of defining a problem, steps in the formulation of a research problem and objectives.

**UNIT-II**

**Literature review and critical thinking:** The scope and importance of a literature review, types of literature review, procedure for reviewing the literature.

Documentation and referencing, Plagiarism and how to avoid it?

**UNIT-III**

**Identification of variables:** Types of variables from the point of view of causation, study design and unit of measurement. Types of measurement scale: nominal, ordinal, interval and ratio scale.

**Constructing hypothesis:** Definition, characteristics, and types of a hypothesis. Data Preparation, screening and transformation.

**UNIT-IV**

**Ethical issues in social science research:** Principles of ethically acceptable research, Codes of ethics.

**Research writing:** Characteristics of a good research paper. Planning and preparing a final research report.

A Case study on designing of questionnaire using different scales of measurement/review of literature on any economic problem/policy/issue.

**AI- Use of Grammarly.in and Perplexity for literature review**

**Suggested Readings:**

1. C.R. Kothari; Research Methodology: Methods and Techniques, Wiley Eastern Limited, 1985.
2. Kumar, R. Research Methodology: A step-by-step guide for beginners, 4<sup>th</sup> edition, Pearson, 2014.
3. Paul D. Leedy and J E Ormrod. Practical Research Planning and design, 11<sup>th</sup> edition, Pearson, 2018.
4. Creswell, J. W. Research design: Qualitative, quantitative and mixed methods approach. 5<sup>th</sup> Ed. Thousand Oaks, CA: Sage, 2018.

5. Majhi, P. R. and Khatua, P. K. Research Methodology. 2<sup>nd</sup> Edition, Himalaya Publication House, 2018.

**Master of Science (Economics) Semester – II**  
**Session 2026-27**  
**Course Code: MECL-2173**  
**Course Title: Econometric Techniques**

**Course outcomes:**

After passing this course students will be able to understand:

**CO 1:** Estimation of regression and properties of regression parameters

**CO 2:** Problems associated with estimation of regression and applications of dummy variables.

**CO 3:** various time series properties and their testing procedures.

**CO 4:** simultaneous equation models and their estimation.

**Master of Science (Economics) Semester – II**  
**Session 2026-27**  
**Course Code: MECL-2173**  
**Course Title: Econometric Techniques**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**Unit-I**

Meaning and Scope of Econometrics, Gauss Markov Theorem (for two variables), Multiple Regression Model, Coefficient of determination, Numerical based on multiple linear regression model

**Unit-II**

Problems of regression analysis: Nature, test, consequences and remedial steps of problems of heteroscedasticity, multi collinearity and auto- correlation,  
Dummy variables and their uses; Regression with dummy dependent variables: The LPM, Logit and Probit.

**Unit-III**

**Time Series Analysis:** Stationary time series and their properties; Random Walk model, Testing for unit roots (Dickey-Fuller test and Augmented Dickey-Fuller test), co-integration–spurious regression, Granger Causality.

**Unit-IV**

**Simultaneous equations models:** The simultaneous equation bias and inconsistency of OLS estimators; The identification problem; Rules of identification–order and rank conditions; Methods of estimating simultaneous equations system; Recursive methods; Indirect Least Squares (ILS).

Case Study on time series properties using statistical software.

**Suggested Readings**

1. Johnston, J.: Econometric Methods, McGraw Hill, New York, 1972.
2. Koutsoyiannis A.: Theory of Econometrics, Palgrave Macmillan, 1978.
3. Gujarati, D.: Basic Econometrics, McGraw Hill Education, 1978.
4. Chow G. C.: Econometrics, McGraw Hill International, 1977.
5. Madala, G.S: Introduction to Econometrics, Wiley-India, 2009.
6. Pollock Beg: The Algebra of Econometrics, Wiley Series in Probability and Statistics, 1979.
7. Greene, W.H.: Econometrics Analysis, Prentice Hall, New York, 2018.

**Master of Science (Economics) Semester – II**  
**Session 2026-27**  
**Course Code: MECL-2174**  
**Course Title: Field Work and Report Writing**

**Course outcome**

After passing this course student will be able to understand:

CO1: Basics of data collection.

CO2: The stages of preparing questionnaire

CO3: Editing and presentation of data

CO4: interpretation of the findings.

**Master of Science (Economics) Semester – II**  
**Session 2026-27**  
**Course Code: MECL-2174**  
**Course Title: Field Work and Report Writing**

**Credits: L-T-P: 2–0–0**  
**Total Marks: 50**

- Introduction to collection of data.
- Various methods of collecting primary data
- Sources of secondary data
- precautions in using secondary data
- Drafting of a questionnaire.
- Carrying out field work and report writing.

**Master of Science (Economics) Semester – III**  
**Session 2026-27**  
**Course Code: MECL-3171**  
**Course Title: Microeconomic Theory-II**

**Course outcomes:**

After passing this course students will be able to understand:

**CO 1:** the traditional and modern theories of distributions.

**CO2:** elements of product pricing and game theory.

**CO 3:** Various criteria of welfare improvement and applications of welfare Economics.

**CO 4:** Basics of general welfare and different approaches to general welfare

**Master of Science (Economics) Semester – III**  
**Session 2026-27**  
**Course Code: MECL-3171**  
**Course Title: Microeconomic Theory-II**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

**Pricing of factors:** Meaning and concept; Marginal productivity theory of distribution; Euler's Theorem and its application to distribution; Modern theory of distribution; Macro theories of distribution and their relevance to economic theory.

**UNIT-II**

**Contemporary pricing practices and strategies:** Role of costs and profitability in pricing decisions. Product life cycle pricing, Product line pricing, new product pricing, pricing of multiple products.

**UNIT-III**

**Criteria for welfare improvement** - Pareto criterion, General ethical criterion, Kaldor's criterion;

A.K. Sen's Social Welfare Function; measure of welfare cost. Arrow's Impossibility theorem, equity-efficiency trade off. Applications of welfare economics.

**UNIT-IV**

**Meaning of general equilibrium:** interdependence of markets, General equilibrium and Macroeconomics, partial versus general equilibrium approach.

Classical, neo – classical and input -output approaches to general equilibrium. Existence, stability and uniqueness of equilibrium. General Equilibrium and Pareto optimality.

Seminar on any topic from syllabus

**Suggested Readings:**

1. Henderson & Quandt: Microeconomic Theory, A Mathematical Approach.
2. Koutsoyiannis A.: Modern Microeconomics, Macmillan Press Ltd.
3. Heath field & Wibe: An Introduction to Cost and Production Functions.
4. Layard & Walters : Microeconomics Theory
5. Naylor & Vernon: Microeconomics and Decisions Models of the Firm.
6. Ferguson, C.E.: Microeconomics Theory.
7. Dacosta, G.C.: Value and Distribution, Himalaya Publication, 1992.
8. Pindyck: Microeconomics, Pearson Publication and Robin field.
9. Madala, G. S. and Ellen Meller, Microeconomics; Theory and Applications; McGraw Hill Book Company, New York.

**Master of Science (Economics) Semester – III**

**Session 2026-27**

**Course Code: MECL-3172**

**Course Title: Macroeconomic Theory-II**

**Course outcomes:**

After passing this course students will be able to understand:

**CO1:** the Basic framework of IS-LM mechanism and relative effectiveness of monetary and fiscal policies

**CO2:**the basic theories of inflation and its solutions.

**CO3:**features of important theories of investment and trade cycles.

**CO4:**the targets of macroeconomics policy and the basic features of new classical and new Keynesian models.

**Master of Science (Economics) Semester – III**  
**Session 2026-27**  
**Course Code: MECL-3172**  
**Course Title: Macroeconomic Theory-II**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**  
**Max. Marks: 100**  
**Theory: 70**  
**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT– I**

**Neo–classical and Keynesian Synthesis:** The IS–LM model, Extension of IS–LM model with government sector, Relative effectiveness of monetary and fiscal policies, labour market and flexible prices. General Equilibrium in Open Economy: Mundell–Fleming approach in fixed and flexible Exchange rate system,

**UNIT– II**

**Theory of Inflation :** Classical, Keynesian and Monetarist approaches, Structuralists’ theory of inflation; Philips curve analysis: Short run and long run Philips curve, Natural Rate of Unemployment hypothesis, Adaptive expectations and rational expectations; Policies to control inflation.

**UNIT– III**

**Investment:** Keynesian, Post–Keynesian, Neo–Keynesian, (Jorgenson approach). Lags in investment function.

**Trade Cycles:** Samuelson, Hicks and Kaldor Models

**UNIT– IV**

**Macroeconomics policy:** meaning and objectives. Targets and Instruments– fixed and flexible Targets approaches. Monetary transmission Mechanisms.

**New classical Economics:** Rational Expectation Hypothesis, Real Business cycle theory.

**New Keynesian Economics:** Sticky wage prices, Efficiency Wage models, Insider-Outsider Model.

**Case Studies on Inflation/Investment**

**Suggested Readings:**

1. Froyen R. T, (2014), Macroeconomics: Theory and Policies, Dorling Kindersley, Noida UP, India.
2. Shapiro, E.(1996), Macroeconomic Analysis, Galgotia Publications, New Delhi.
3. Rana and Verma (2020), Macroeconomic Theory, Vikas Publications

Note: The latest edition of the books is recommended.

**Master of Science (Economics) Semester - III**  
**Session 2026-27**  
**Course Code: MECL-3173**  
**Course Title: Economics of Development**

**Course outcomes:**

After passing this course students will be able to:

- CO1:** relate and recognize the theoretical aspects of Economic Development and the various indicators of economic growth and development and also growth models.
- CO2:** understand the theories of development and Models of surplus labour.
- CO3:** understand different strategies of economic growth and role of agriculture in economic development.
- CO4:** explain, analyze and assess the role of human resources, capital formation and foreign capital in the process of Economic Growth and Development and role of trade and MNCs in economic development.

**Master of Science (Economics) Semester - III**  
**Session 2026-27**  
**Course Code: MECL-3173**  
**Course Title: Economics of Development**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Economic development: meaning, development and underdevelopment, development gap, measuring development, indices of development and quality of life, international comparisons of development.

Sources of economics growth, economic development and technological change. Redistribution with growth, measurement of inequality.

**UNIT-II**

Models of surplus labour. Lewis, Ranis and Fei and Jorgenson Models.

Todaro's Model of rural-urban migration. Employment and unemployment in underdeveloped countries.

Theories and models of economics development – Rostow's stage theory. Schumpeter, Harrod–Domar, Solow, Kaldor, Joan Robinson.

**UNIT-III**

Growth models with technical progress. Endogenous Growth Theory and Macro determinants of growth. Strategies of economic growth –balanced vs. unbalanced growth and their tests, agricultural strategy for economic development, role of agriculture in development.

**UNIT-IV**

Capital formation: Two gap theory, domestic and external sources, foreign investment, foreign aid, trade vs. aid, inflation and economic growth. Role of human capital in economic development.

Trade and development, dependency theory, theory of unequal exchange, trade policy – import substitution vs. export promotion.

**A Seminar on any topic from the syllabus.**

**Suggested Readings**

1. Ghatak, S. An Introduction to Development Economics, Allen and Unwin, London.
2. Higgins, B. Economic Development: Theory and Policies, Central Book Depot, Allahabad, 1963.
3. Kuznets, S. Population, Capital and Growth, Heina Mann Educational Books, 1974.
4. Meier, G.M. Leading Issues in Economic Development, Oxford University Press, New Delhi, Latest Edition.
5. Thirl wall, A.P. Growth and Development, Macmillan, London, Latest Edition.
6. Thirlwall, A.P. Economics of Development, Theory and Evidence, Palgrave Macmillan, Latest Edition.
7. Todaro, M.P. Economic Development in Third World, Oxford University, London, Latest Edition.
8. Todaro, M.P. & S.C. Smith
9. Yotopoulos, P.A. Economic Development, Pearsons, Latest Edition. Economics of Development, Harper and Row, New York, 1976. & Nugent J.

**Master of Science (Economics) Semester - III**  
**Session 2026-27**  
**Course Code: MECL-3174**  
**Course Title: Theory of Statistics**

**Course outcomes:**

After passing this course students will be able to:

- CO1:** understand the various laws of probability. distributions, importance of its underlying assumptions and its applications
- CO2:** understand probability. Distributions and importance of their underlying assumptions and its applications
- CO3:** understand the concepts of point and interval estimation and theoretical details of properties of sampling distributions.
- CO4:** learn the procedure of hypothesis testing and identify appropriate parametric and non-parametric tests for analyzing data.

**Master of Science (Economics) Semester - III**

**Session 2026-27**

**Course Code: MECL-3174**

**Course Title: Theory of Statistics**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus, respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Axiomatic definition of probability, properties of probability functions, laws of addition and multiplication of probability, conditional probability, independence of events, Bayes' theorem.

**UNIT-II**

Chebyshev's inequality, moments generating function of a random variable, and its properties. Theoretical probability distribution; derivation of the properties of binomial, poisson, normal, gamma, and beta distributions.

**UNIT-III**

Properties of good estimates; methods of estimation with emphasis on maximum likelihood method. Sampling distributions; Derivation of the properties of  $z$ ,  $\chi^2$ ,  $t$  and  $F$ – distributions and their applications.

**UNIT-IV**

Basic concepts regarding testing of hypothesis: tests of hypotheses based upon  $z$ ,  $t$ ,  $F$  and chi square distributions: Analysis of variance with one–way and two–way classifications and their applications.

A case study on test of significance ( $t$ ,  $F$  and Chi square test) using Statistical software.

**Suggested Readings:**

1. Goon, A.M., Gupta, M.K. and Das Gupta, B. (1977), *An Outline of Statistical Theory*, Vols. I & II, The World Press Ltd., Calcutta.
  2. Gupta and Kapoor(2014), *Fundamentals of Mathematical Statistics*, Sultan Chand & Sons , New Delhi
  3. Kapur, J.N. and Saxena, H.C. (1997), *Mathematical Statistics*, S. Chand & Co., New Delhi.
- Note: The latest edition of the books is recommended.*

**Master of Science (Economics) Semester - III**

**Session 2026-27**

**Course Code: MECL-3175**

**Course Title: Term Paper**

**Course Outcome:**

After passing this course student will be able to:

- CO 1: identify the topic for carrying out research
- CO 2: analyze the objectives of any research study
- CO 3: analyze and interpret the research findings.
- CO 4: learn basics of writing a research paper

**Master of Science (Economics) Semester - III**

**Session 2026-27**

**Course Code: MECL-3175**

**Course Title: Term Paper**

**L-T-P (Credits):2-0-0**

**Max. Marks: 50**

**Theory: 35**

**CA: 15**

**Master of Science (Economics) Semester – IV**  
**Session 2026-27**

**Course Code: MECL-4171**

**Course Title: Indian Economic Development**

**Course outcomes:**

After passing this course students will be able to:

**CO1:** understand state of agriculture and various policies associated with Indian agriculture.

**CO2:** understand the problems and structural changes in Indian economy; and the role of physical infrastructure.

**CO3:** understand the status of industrial sector and various policies for its development.

**CO4:** elements of new EXIM policy and trends in external trade of India.

**Master of Science (Economics) Semester IV**  
**Session 2026-27**  
**Course Code: MECL-4171**  
**Course Title: Indian Economic Development**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Agriculture sector: Production and productivity trends; regional variation in production; technological change and distribution of gains, agriculture price policy, New Economic Reforms and agriculture: Agriculture and WTO, Public expenditure and agricultural growth.

**UNIT-II**

Structural changes and growth of Indian economy: Sources of economic growth; growth and Inequalities; New Economic policy and employment: Employment and poverty, MNREGA, NFSA (National Food Security Act–2013), Physical infrastructure for economic development, Public- Private Partnership in infrastructure.

**UNIT-III**

Industrial Sector: Pattern of growth and performance: New Industrial policy: Instruments, impact and implications: public sector/private sector, Role of FDI in Industrial Development. Role and Potential of Public- Private Partnership in India.

**UNIT-IV**

Foreign sector: New EXIM Policy: trends in foreign trade of India. Foreign collaborations and MNC's, TRIPS, TRIMS and GATS.

**Seminar on any topic from syllabus**

**Suggested Readings:**

1. Dutt and Sundram(2016), *Indian economy*, S. Chand Publications, New Delhi.
2. Chakravarty, S. (1987), *Development Planning: The Indian Experience*, Oxford University Press, New Delhi.
3. Government of India, *Economic Survey, (Annual)*, Various Issues, Ministry of Finance, New Delhi.
4. Dhar, P.K. (2016), *Indian Economy: Its Growth and Dimensions*, Kalyani Publications.

*Note: The latest edition of the books is recommended.*

**Master of Science (Economics) Semester – IV**  
**Session 2026-27**  
**Course Code: MECL-4172**  
**Course Title: International Economics**

**Course outcomes:**

After passing this course students will be able to:

**CO1:** Understand the theories of international trade and relevance of terms of trade.

**CO2:** Understand the different approaches to balance of payments.

**CO3:** Understand the various measures to restrict and promote international trade along with the concept of exchange rate determination.

**CO4:** Understand the context of various international organizations to promote international trade, its stability and various episodes of crisis in international markets.

**Master of Science (Economics) Semester – IV**  
**Session 2026-27**  
**Course Code: MECL-4172**  
**Course Title: International Economics**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**  
**Max. Marks: 100**  
**Theory: 70**  
**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Theory of International trade and commercial policy: Classical comparative cost theory, Heckscher–Ohlin Model, Empirical test of classical and Heckscher –Ohlin model  
Terms of trade and economic growth– Secular deterioration Hypothesis – a critical view, Terms of trade and offer curve.

**UNIT-II**

Balance of payments: Meaning, concept, equilibrium and disequilibrium in balance of payments, Traditional, Absorption and Monetary approaches for adjustments in balance of payments. Foreign trade multiplier.

**UNIT-III**

Forms of protection: Tariff, nominal, effective and optimum rates of tariffs – their measurement, impact and welfare implications. Non-tariff barriers and their implications  
Exchange Rates: Exchange rate and its determination. Theory of Foreign Exchange Markets  
Exchange Trading, Arbitrage and Market Hedging.

**UNIT-IV**

International Monetary System: Special Drawing Rights; Breakdown of the Bretton wood system, Asian Financial Crisis of 1997, Global Financial Crisis of 2008 and Eurozone Crisis – Causes and Impact,

Optimum Currency Areas – Theory and Impact in the developed and developing countries.  
BREXIT: Issues and Implications.

**A Seminar on any topic from the syllabus.**

**Suggested Readings:**

1. Bhagwati, J. (1981), *International Trade: Selected Readings*, Cambridge University Press, Massachusetts.
2. Krugman, P.B. and M. Dkstfeld (1994), *International Economics, Theory and Policy*, Glenview, Foresman.
3. Salvatore, D. (1997), *International Economics*, Prentice Hall, Upper Saddle, NJJ, New York.
4. Soderston, B.O. (1991), *International Economics*, Macmillan Press Ltd., London.

*Note: The latest edition of the books is recommended.*



**Master of Science (Economics) Semester – IV**  
**Session 2026-27**  
**Course Code: MECL-4173**  
**Course Title: Indian Economic Thought**

**Course outcomes:**

After passing this course student will be able to:

**CO1:** Understand the economic thoughts of Kautilya

**CO2:** Learn the significant contribution of early great Indian economists

**CO3:** Understand the economic philosophy of M.K.Gandhi and B.R. Ambedkar

**CO4:** Learn the contribution of Nobel Prize winners Amartya Sen and Abhijit Banerjee

**Master of Science (Economics) Semester – IV**  
**Session 2026-27**  
**Course Code: MECL-4173**  
**Course Title: Indian Economic Thought**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**  
**Max. Marks: 100**  
**Theory: 70**  
**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus, respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**Unit-1**

Kautilya's Arthashastra- Economic system, Welfare state, Dignity of labour, Agriculture, Varta, Resource Management, Industry and trade, Social Security.

**Unit-II**

Economic ideas of Dadabhai Naroji, M.G. Ranade, C.N.Vakil, D.R. Gadgil, V.K.R.V. Rao and P.C. Mahalanobis

**Unit-III**

Gandhian Philosophy on Village Republics, Swadeshi, Industrialization and Machinery, Food and population and the doctrine of trusteeship  
B.R. Ambedkar's Economic Thought on Equal Pay, Land Reforms and Labour Welfare

**Unit-IV**

Amartya Sen's Contribution to Welfare Economics  
Abhijit Banerjee's policies to reduce poverty in developing countries

**References**

Shamsastry, R. *Kautilya's Arthasastra*, Global Vision Publishing House, India  
Prasoon, S. (2017), *Kautilya's Arthasastra*. V&S Publishers.  
Das, D.K.(2002), *Great Indian Economists: Their Ideas and Contribution to Indian Economy*, Deep & Deep Publications.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-I (Financial Institutions and Markets)**

**Course outcomes:**

After passing this course students will be able to:

**CO1:** understand the functioning of leading developing financial institutions in India.

**CO2:** understand the working of non-banking financial intermediaries and mutual funds.

**CO3:** understand the mechanism as well as working of Insurance sector in India.

**CO4:** understand of the working of money and capital markets their structures and role of SEBI.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-I (Financial Institutions and Markets)**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Development financial institutions: Evolution of development banks, changing role, IFCI, IDBI, ICICI, NABARD, SIDBI, State Industrial Development Corporations, State Financial Corporations, Performance of All Indian Financial Institutions.

**UNIT-II**

Non-banking financial intermediaries: Definition and types of Regulation of NBFIs. Mutual Funds: Growth of mutual funds in India, Types of mutual funds schemes, Risks in Mutual funds SEBI guide lines relating to mutual funds. Financial Sector reforms (recent developments).

**UNIT-III**

Commercial Banks: Systems, Theories of banking, Structure of Commercial Banks in India, Major Reforms in Banks. Central Banking: Functions with special reference to developing countries, RBI: Functions and Instruments, Role and functions of Insurance Regulatory and Development Authority (IRDA). SEBI: Role, Powers and Scope.

**UNIT-IV**

Role and structure of money and capital markets: Call money market, commercial bill market, Treasury Bills Market, Government Securities Market, Primary and Secondary Market for Securities.

A Case study on working of any financial institution.

**Suggested Readings**

1. Bhole, L.M. (2004), Financial Institutions and Markets: Structure, Growth and Innovation, Tata McGraw Hill, New Delhi.
2. Palande, P.S. et al (2003), Insurance in India: Changing Policies and Emerging opportunities, Sage Publications, New Delhi.
3. Pendharkar, V.G. (2003), Unit Trust of India: Retrospect and Prospect, UBS Publishers'
4. Distributors Ltd., New Delhi.
5. Pathak, B.V. (2008), The Indian Financial System Markets, Institutions and Services, Dorling Kinderslay (India) Pvt. Ltd., New Delhi.
6. Gutpa, S.B. (2006), Monetary Economics Institutions, Theory and Policy, S. Chand & Co. Ltd., New Delhi.
7. Reserve Bank of India, Handbook of Statistics on Indian Economy, Various Issues.
8. Cherunilam Francis (2012), Business Environment, Himalaya Publishing House Pvt. Ltd.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-II (Rural Economics)**

**Course outcomes:**

After passing this course students will be able to:

- CO1:** learn the role of reforms in land utilization, agriculture and industry in rural development.
- CO2:** understand the rural unemployment and the role of capital formation in rural development. In additions, students will also learn the agricultural development took place in terms of agriculture production.
- CO3:** learn the agricultural price policy and different marketing systems of agricultural produce.
- CO4:** Comprehend the various schemes for rural industrialization and the role of social and economic overhead for rural development.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-II (Rural Economics)**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Concept: Nature and Scope, Agriculture industry interaction: theories and empirical evidences.

Land: Utilisation, Land reform, supply and pricing of inputs.

**UNIT-II**

Rural Labour and employment: Disguised unemployment, Extent, causes and estimates of rural poverty, Interstate labour migration: factors and implications.

Capital formation in rural sector: Savings and assets formation, credit–institutional and non–institutional special role of NABARD and RRBS. Production: Agricultural growth in India; Production function, Farm budgeting, Technical changes: Green revolution.

**UNIT-III**

Rural marketing: Traditional marketing, regulated markets, co –operative marketing and contract farming. Agricultural prices: Price behaviour; cobweb cycle; public distribution system; terms of trade, agriculture price policy.

**UNIT-IV**

Rural Industrialisation: Concept and scope, Government policy, KVIC, Mini–industrial estates. Industrial cooperatives. TRYSEM. Economic and social infrastructure: Transport & Communications, power, education, drinking water, health, Sanitation and rural housing, social forestry and environment. Strategies of rural development in plans. Poverty alleviation programmes.

A case study of Rural labour/employment generation programmes in a Village.

**Suggested Readings:**

1. Aziz, Sartaj: Rural Development Learning from China.
2. Hirschman, A, O.: The Strategy of Economic Development.
3. Singh, Radha Raman: Studies in Regional Planning and Rural Development.
4. Shah, S.M., Whitby, M.C. D.L.J.: Rural Development, Planning and Reforms.
5. Robins, A.N. and Tensery, K.G. Wills.: Rural Resources Development.
6. Nangundappa, D.M.: Area Planning and Rural Development.
7. Arora, R.C: Integrated Rural Development.
8. Raghava Rao, D.V.: Panchayats and Rural Development.
9. D.S. Tyagi: Public Distribution in India.
10. Sukhpal Singh: Contract Farming and the State: Experience of Thail and India, Kalpaz Publications, 2006.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-III (Economics of Environment)**

**Course outcomes:**

After passing this course students will be able to:

- CO1:** understand environmental policies & regulations and externalities.
- CO2:** understand the Environmental and development trade-off in context of sustainability development and social accounting.
- CO3:** understand measurement of benefits and costs of environmental protection, ecological balance in the context of water, land air and spices and energy policy.
- CO4:** understand global economic issues, sustainable development, trade, WTO regime, strategies and forums in the context of environment protection.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-III (Economics of Environment)**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**  
**Max. Marks: 100**  
**Theory: 70**  
**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Environment: Basic concepts, Environment and economics, Distinction between Environmental economics and Ecological Economics. Externalities, common property resources, public goods. Environmental externalities –Pigouvian taxes and subsidies, marketable pollution permits, Coase theorem, monitoring and enforcement of environmental regulation.

**UNIT-II**

Environmental and development trade-off, concept of sustainable development, sustainability– neo– classical and ecological views. Integrated environmental and economic accounting and measurement of environmentally corrected GDP.

**UNIT-III**

Measurement of benefits and costs of environmental protection and benefit –cost analysis. Environmental regulation and legislation–air, water, land, chemical and pesticides, endangered species protection, incentive based regulation, promoting clean technology.

**UNIT-IV**

Global issues–poverty, population and environment, global agreements on environment, political economy of sustainable development, trade and policy environment under WTO regime. Rio Convention, Bali Action Plan, Green Climate Fund.

Mechanism for environment regulation in India; environmental laws and their implementation; Recent policy instruments for controlling pollution environmental standards; social forestry – rationale and benefits.

**A Case study on environmental issues due to industrialization/Agricultural Farming**

**Suggested Readings**

1. Baumol, YAN and W.R. Oates (1998). The Theory of Environmental Policy, Cambridge University Press.
2. Bromley, D.W. (ed) (1995). Handbook of Environmental Economics, Blackwell, London.
3. Hanley, N. and C.J. Roberts (ed.) (2002). Issues in Environmental Economics, Blackwell, Oxford, Macmillan.
4. Kolstad, C.D. (1999) Environmental Economics, Oxford, New Delhi.
5. Sankar, U. (ed.) (2001) Environmental Economics an Indian Perspective, Oxford, New Delhi.
6. Sengupta, R.P. (2001) Ecology and Economics: An approach to Sustainable Development, Oxford, New Delhi.
7. Chadha, G.K. (ed.) (2001) WTO and Indian Economy, Deep & Deep, New Delhi.
8. Goodstein, E.S. (2002) Economics and the Environment, John Wiley, New York.

**Session 2026-27**

**OPT-IV (Economics of Industrialization)**

**Course outcomes:**

After passing this course students will be able to:

**CO1:** understand the types, role, productivity, efficiency and concentration of Industries.

**CO2:** understand the problems and regulation of industrial labour.

**CO3:** understand history of industrial revolution and various financial institutions for the development of Industries.

**CO4:** understand Industrial policy and growth of major industries in India.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-IV (Economics of Industrialization)**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**  
**Max. Marks: 100**  
**Theory: 70**  
**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Rationale of Industrialization, Industrialization in developing country, Pattern of Industrial Growth: Chenery's Views.

Measuring Industrial productivity and efficiency, industrial concentration. Classification of industries, Types of Industries: Organised and Unorganised sector, Large, Medium, Small and Micro enterprises (MSMEs): Nature and importance.

**UNIT-II**

Industrial Labour in organized and unorganized manufacturing, Types of labour: Skilled and Unskilled; Casualization of labour, Industrial labour and migration, Labour laws in India

**UNIT-III**

Industrial revolutions: first, second, third and fourth industrial revolutions: Industrial Finance and Development in India: Industrial Financial Institutions and Banks

**UNIT-IV**

Industrial policies: Narrow and Broad Views, Need for Public Policy for Industrialization, Industrial Policies in developing countries, Industrial policy in India, Protectionism for Industrial Growth, Major Industries in India- Textiles, Pharmaceuticals, Information Technology

**Seminar on any topic from the syllabus**

**Suggested Readings:**

1. Bains, J.S (1959), *Industrial Organization*, John Wiley and Sons.
2. Barthwal R.R., (2010), *Industrial Economics: An Introductory Text*, Wiley Eastern, New Delhi.
3. Chadha, V. and G.S. Bhalla (1999), *Industrial Development in India: The Post-Reform Scene*, Kalyanai Publishers, New Delhi
4. Dutt and Sundram (2016), *Indian economy*, S. Chand Publications, New Delhi.
5. Dhar, P.K. (2016), *Indian Economy: Its Growth and Dimensions*, Kalyani Publications.
6. Kathuria, Rajesh and Sen (2014) *Productivity in Indian Manufacturing*, Routledge.
7. Kuchhal, SC (1970) *The Industrial Economy of India*
8. Ramaswamy, E.A. & U. Ramaswamy 1987. *Industry and Labour*, Oxford University Press: Delhi.
9. Reserve Bank of India Bulletin
10. Website of Ministry of Textiles, Govt. of India

*Note: The latest edition of the books is recommended.*

**MASTER OF ARTS (Economics)**  
**Session 2026-27**  
**OPT-V (Economics of Planning)**

**Course outcomes:**

After passing this course student will be able to:

- CO1:** recognize different planning systems and relevance of planning in modern era.
- CO2:** understand the concept of different investment criteria, choice of techniques and appropriate technology for under developed countries and transfer of technology from developed countries to developing countries.
- CO3:** understand project characteristics and various stages of a project and recognize the different criteria for project evaluation.
- CO4:** appreciate the importance and limitations of planning in India, plan models, NITI Aayog.

**MASTER OF ARTS (Economics)**  
**Semester IV**  
**Session 2026-27**  
**OPT V (Economics of Planning)**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**Unit – I**

**Economic Planning:** Meaning, objectives, rationale and types of planning; Different planning systems; Requisites for successful planning. Planning in third world countries in the context of Globalization and Liberalization.

**Unit – II**

**Investment criteria:** Rationale and types. Choice of Technique: Sen-Dobb Thesis, labour intensive vs. capital intensive technology; Choice of technique in underdeveloped countries and appropriate technique for UDC's. International transfer of technology- channels, importance and problems in the transfer of technology.

**Unit – III**

**Project evaluation:** Meaning, origin, rationale, project planning and commercial profitability criteria; social cost benefit analysis- meaning and technique; Shadow Prices- Meaning, importance and methods to compute shadow prices; Little Mirrless and UNIDIO approaches – A comparison.

**Unit – IV**

**Indian plan models:** Harrod-Domar, Mahalanobis, Frisch and Sandee, Manne and Rudra, CELP model and its applications. Indian Planning- Objectives, strategy and evaluation of Indian planning, Resource mobilization for Indian plans; NITI Aayog- composition, Functions and strategy.

**A Seminar on any topic from the syllabus.**

**Suggested Readings:**

1. Lekhi, R.K. and S. Joginder (2020), *The Economics of development and planning*, Kalyani Publisher.
2. Puri, V.K. & Misra, S.K. (2020), *Economics of Development and Planning - Theory & Practice*, Himalaya Publishing House, New Delhi.
3. Todaro, P. (2016), *Development Planning: Models & Methods*, Oxford University Press.

*Note: The latest edition of the books is recommended.*

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-VI (Demography)**

Course outcomes:

After passing this course students will be able to:

- CO1:** understand the inter-linkage between environment, populations and economic development.
- CO2:** understand the concepts of population growth rate and the analysis of social structure, migration and economic development in context of population growth.
- CO3:** understand various theories of population growth and various factors explaining mortality.
- CO4:** learn the characteristics of population growth and population policy of India.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-VI (Demography)**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Demography: Meaning and its scope, Population and Economic Development: Interdependence between population, development and environment.

**UNIT-II**

Demography and related concepts: macro–micro dynamics of population.

Social structure its components and influence on demographic factors; migration, meaning, causes and consequences for economic development.

**UNIT-III**

Population Theories: Malthusian theory of population, post Malthusian transition, optimum theory of population, theory of demographic transition. Fertility Analysis

Mortality: Death rate, Infant Mortality Rate, Factors for decline in mortality in recent past, Methods of population projection.

**UNIT-IV**

Changing Characteristics of Population in India: Population growth rates and trends, density of Population, age structure, life expectancy, sex ratio and occupational structure of population, population policy of India and its evaluation. An analysis of trend of India's population after independence.

**Case study on any aspect of population dynamics in local area**

**Suggested Readings:**

1. Srinivasan, K. (1998), Basic Demographic Techniques and Applications, Sage, New Delhi.
2. Simon, J.L. (1992) Population and Development in Poor Countries. Princeton University Press.
3. Novell.C(1988), Methods and Models in Demography, Bellhaven Press, London.
4. Choubey, P.K. (2000), Population Policy in India, Kanishka Publications, New Delhi.
5. Bogue, D.J(1971) Principles of Demography, John Wiley, New York.
6. Dutt Ruddra and Sun dram K. P.M. ,Indian Economy
7. Visaria V."Infant Mortality in Indian: Level Trends and Determinants" Economic and Political Weekly, Vol.20, No.32, August 10,1985.
8. NathV."1991PopulationCensus: Some facts and Policy Issues", EPW, Vol.26 September 14,1991.
9. Gopalan C "Population Problem: Need for a Total Views EPW.Vol.26, September14, 1991.
10. Dandekar, V.M. "Population Front of India's Economic Development" EPW, Vol.22, No.17, April 23,1998, pp.837–842

11. Rajan Isudaya. S. "Family Planning Programme in India: An Economic Evaluation", The Indian Economic Journal, Vol.34, No.4, April–June, PP79–86.
12. Cocharane, Susan, H. "Children is By Product "Investment Goods: A Review of Some Micro Economics Models of Fertility" Population Studies, Vol.29, No.3, pp373–390.
13. Ehsanul Haq, "Sociology of Population", Macmillan, New Delhi, 2007.
14. Prithvish Nag, "Atlas of Population Change in India (1951–2001)", National Atlas and Thematic Mapping Organization, Kolkata, 2001.
15. Parul Dave and Pallavi Mehta, "Mental Health and Aging Women: Important Correlates" (edited), Delhi, Kalpaz, p.522, 2008.
16. Anil Bagchi, "The Ageing World", Longman, Delhi, 2006.
17. Ishwar Modi, "Ageing and Human Development: Global Perspectives" (Edited), Rawat, New Delhi, p. 406, 2001.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-VII (Labour Economics and Industrial Relations)**

**Course outcomes:**

After passing this course students will be able to:

**CO1:** understand the concept of labour economics and theories and types of labour markets.

**CO2:** understand the role of trade unions, their growth and problems.

**CO3:** understand concept of wages, industrial disputes and its settlement.

**CO4:** understand social security policies and State policies with respect to labour welfare in India.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-VII (Labour Economics and Industrial Relations)**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Concept of labour, characteristics of labour, labour markets: definition and characteristics, theories of labour. Market: Classical, Neo–classical and Dualistic labour markets. Structured and unstructured market; Internal and external labour market

**UNIT-II**

Features and characteristics of Indian labour market.

Industrial Relations: Trade Unions, objectives and functions. Indian Trade Unions; Growth and problems.

**UNIT-III**

Industrial disputes, Industrial disputes in India, Dispute settlement machinery in India.

Wages: Concepts of minimum, living and fair wage, Wage, productivity and inflation relationship, Wage policy in India: Minimum Wages Act and Payment of Wages Act.

**UNIT-IV**

Social Security: Definition and scope, Social security measures in India, Problems of child labour in India. Major recommendations of Second National Commission on labour, Labour market reforms.

**Seminar on any topic from syllabus**

**Suggested Readings:**

1. Bhagoliwal, T.N. Economics of Labour and Industrial Relations, Sahitya Bhawan, 1982.
2. Hajela, P.D. (1998), Labour Restructuring in India: A Critique of the New Economic Policies, Common wealth Publisher, New Delhi.
3. Lester, R.A. (1964), Economics of Labour, (2<sup>nd</sup> Edition), Macmillan, New York.
4. McConnell, C.R. and S.L. Brue (1986), Contemporary Labour Economics, McGraw–Hill, New York.
5. Papola, T.S., P.P. Ghosh and A.N. Sharma (Eds) (1993), Labour, Employment and Industrial Relations in India, B.R. Publishing Corporation, New Delhi.
6. Venkata Ratnam, C.S. (2001), Globalization and Labour–Management Relations: Dynamics of Change, Sage Publications/Response Books, New Delhi.
7. McCormick B. and Smith (Eds) (1968), The Labour Market, Penguin, Harmondsworth.
8. Das, N. (1960), Unemployment, Full Employment and India, Asia Publishing House, Bombay.
9. Deshpande L.K. and J.C. Sandesara, (Eds) (1970), Wage Policy and Wages Determination in India, Bombay University Press, Bombay.

10. Hicks J. R. (1932), The Theory of Wages, Clarendon Press, Oxford.
11. Mazumdar, D. (1989), Micro-economic Issue of Labour Markets in Developing Countries, EDI Services Paper No. 40, World Bank, Washington D.C.
12. Memoria, C.B.(1966), Labour Problems & Social Welfare in India, Kitab Mahal, Allahabad.
13. Punekar, S.D. (1978), Labour Welfare, Trade Unionism and Industrial Relations, Himalaya Publishing House, Bombay.
14. Singh V.B. (Ed) (1970), Industrial Labour in India, Popular Parakashan, Bombay.
15. Misra, L. (2000), Child Labour in India, Oxford University Press, New Delhi.
16. Reynolds, L.G.: Labour Economics and labour Relations, PrenticeHall,1974.
17. Riveros, L. (1990), Labour Market Policies and Labour Market Reforms in Socialist Economies, World Bank, Washington D.C.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-VIII (Economics of Gender and Development)**

Course outcomes:

After passing this course student will be able to:

**CO1:** Learn the demography of the female population and its access to various facilities.

**CO2:** Understand women rights and the factor affecting economic status of women

**CO3:** Comprehend female participation and labour force, wage differential and its determinants.

**CO4:** Learn the social security mechanism regarding women and the role of NGOs, gender biases and gender development policies.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-VIII (Economics of Gender and Development)**

**Time: 3 Hours**

**L-T-P (Credits):4-1-0**

**Max. Marks: 100**

**Theory: 70**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (14 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**UNIT-I**

Importance and concepts of women studies, Demography of female population: Age structure, mortality rates, and sex ratio–Causes of declining sex ratios and fertility rates in LDCs particularly India– Theories and measurement of fertility and its control; Women and their access to nutrition, health, education, and social and community resources.

**UNIT-II**

Factors affecting decision making by women: property rights, access to and control over economic resources, assets; Economics status of women and its effect on work–participation rate, income level, health, and education in developing countries and India.

**UNIT-III**

Factors affecting female entry in labour market; Supply and demand for female labour in developed and developing countries, particularly India; Wage differentials in female activities; Determinants of wage differentials; gender, education, skill, productivity, efficiency, opportunity.

**UNIT-IV**

Social security of women: entitlements, ensuring economic independence and risk coverage, access to credit and insurance markets; Role of voluntary organizations self-help groups in providing social security; Labour market biases and gender discrimination; Gender and development indices.

**Case study on any aspect related to gender discrimination and biases in local area.**

**Recommended Readings**

1. Agarwal, B. (1994), A Field of One's Own: Gender and Land Rights in South Asia, Cambridge University Press, Cambridge.
2. Agnihotri, S.B. (2000).Sex ratio in Indian Population: A Fresh Exploration, Sage Publications, New Delhi.
3. Amsden, A.H.(Ed.)(1980),The Economics of Women and Work, Penguin, Harmonds worth.
4. Dantwala, M.L., H. Sethi and P. Visaria (1998), Social Change through Voluntary Action, Sage Publications, New Delhi.
5. Desai, N. and M.K. Raj (Eds.) (1979), Women and Security in India, Research Centre for Women Studies, SNDT University, Bombay.
6. Dwyer, D. and J. Bruce (Eds.) (1988), A Home Divided: Women and Income in the Third World, Stanford University Press, Stanford.
7. Evans, H. and C. Ungerson, (Eds.) (1983), Sexual Divisions, Patterns and Processes, Tavi

stock, London.

8. Government of India (1974), Towards Equality—Report of the Committee on the Status of Women in India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
9. Gulati, S.C. (1998), Fertility in India: An Econometric Analysis of a Metropolis, Sage Publications, New Delhi.
10. Gupta, J.A. (2000), New Reproductive Technologies, Women's Health and Autonomy, Indo Dutch Studies on Development Alternatives, Sage Publications, New Delhi.
11. ILO (1978), Women's Participation in the Economic Activity of Asian Countries, ILO, Geneva.
12. Jhabwala, R. and R.K. Subramanya (2000) (Eds.) the Unorganized Sector: Work Security and Social Protection, Sage Publications, New Delhi.
13. Kabeer, N. (1994), Reversed Realities: Gender Hierarchies in Development Thought, Kali for Women, New Delhi.
14. Krishnaraj, M., R.M. Sudarshan and A. Shariff (1999), Gender, Population and Development, Oxford University Press, New Delhi.
15. Kuhn, A. and A.N. Wolpe (Eds.) (1978), Feminism and Materialism, Routledge and Kegan Paul, London.
16. Seth, M. (2000), Women and Development: The Indian Experience, Sage Publications, New Delhi.
17. Mishra, S. (2000) Voluntary Action in Health and Population: The Dynamics of Social Transition, Sage Publications, New Delhi.
18. Mitra, A. (1979). Implications of Declining Sex Ratio in India's Population, Allied, New Delhi.
19. Papola, T.S. and A.N. Sharma (Eds.) (1999), Gender and Employment in India, Vikas Publishing House, New Delhi.
20. Redcliff, N. and E. Mingione, (Eds.) (1985), Beyond Employment: Household, Gender and Subsistence, Basil Blackwell, Oxford.
21. Sen, A.K. (1990), 'Gender and Cooperative Conflicts' in Tinker (Ed.) Persistent Inequalities
22. : Women and World Development, Oxford University Press, New York.
23. Srinivasan, K. (1998), Basic Demographic Techniques and Applications, Sage Publications, New Delhi.
24. Young, K. et al (Eds.) (1987), Serving Two Masters, Routledge & Kegan Paul, London.
25. Wazir, R. (2000), The Gender Gap in Basic Education: NGOs as Change Agents, Sage Publications, New Delhi.

**Master of Science (Economics)**  
**Session 2026-27**  
**OPT-IX (Data Science for Economists)**

**Time: 3 Hours**

**L-T-P (Credits): 2-1-2**

**Max. Marks: 100**

**Theory: 40**

**Practical: 30**

**CA: 30**

**Note: Instructions for the Paper–Setter:**

Eight questions of equal marks (8 marks each) are to be set, two in each of the four Sections (A-D). Questions of Sections A-D should be set from Units I-IV of the syllabus respectively. Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section.

**[Syllabus will be discussed and approved in BOS Department of Computer Science]**

**MASTER OF ARTS (Economics)**  
**Semester IV**  
**Session 2024-25**  
**OPT X (Dissertation)**

**Course Outcomes:**

**After the completion of this course students will be capable to:**

CO1: understand and application of analytical tools to analyze the articulated problem.

CO2: do collection and management of data.

CO3: understand and interpret the output generated using analytical tools.

CO4: analyze and draw the significance of the problem under study.

**MASTER OF ARTS (Economics)**  
**Semester IV**  
**Session 2024-25**  
**OPT X (Dissertation)**

**Credits: L-T-P 12-0-0**  
**Total Marks:300**