

**DIRECTORATE OF DISTANCE EDUCATION  
MAHARSHI DAYANAND UNIVERSITY, ROHTAK**



**Syllabus  
Master of Arts (Economics)  
Two Year Programme  
w.e.f. Session 2020-21**

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

**The entire course will be of four semesters.**

# Master of Arts (Economics)

## FIRST YEAR

### First Semester

#### Micro Economics-I

#### Paper Code 20ECO21C1

M. Marks = 100

Term End Examination = 80

Assignment = 20

Time = 3 hrs

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

#### Unit-I

Nature and scope of Economics and Microeconomics. Positive and normative analysis. Role of assumptions in economic analysis. Circular flow of economic activity. Concepts of household, firm, factors of production, equilibrium – partial and general, static, comparative static and dynamic analysis, margin and slope.

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

#### Unit-II

Analysis of consumer behaviour, demand function, law of demand – cardinal, ordinal and revealed preference approaches, income-consumption curve, Engel curve, substitute and complimentary goods. Market demand curve; consequences of Bandwagon, Snob and Veblen effect. Concept of consumer surplus.

#### Unit-III

Laws of Production: short run and long run. Internal and External economies and diseconomies. Concept of cost, derivation of short and long run cost curves. Optimum input combination Simple case of a multiproduct firm. Technical progress and production function – Hick's classification. Elasticity of substitution. Properties of Cobb-Douglas and CES production function.

#### Unit-IV

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

#### Note:

(A) Nine questions would be set in all.

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

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

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

#### Suggested Readings:

- Koutsoyiannes. A. "Modern Microeconomics" (Macmillan)

- Lipsey, R.G. and Chrystal, K. Alec "An Introduction to Positive Economics" (OUP)-

Salvatore, D. "Microeconomics Theory" (Schaum's Outline series, Tata McCraw Hill)

**First Semester**  
**Macro Economics-I**  
**Paper Code 20ECO21C2**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes:**

- CO1. Students will be able to explain the concept of opportunity costs, trade –off and benefits of economics.
- CO2. Students will learn the concept of fiscal and monetary policies and their effect on economy.
- CO3. It will demonstrate knowledge of laws of supply and demand and equilibrium.
- CO4. Students will be familiar about a clear picture of circular flow model.

Determination of Output and Employment: Classical Approach – Output and Employment in Classical Theory; The Quantity Theory of Money and the Price Level; Classical Model without saving and investment; Classical Model with saving and investment;  
Keynesian Approach \_ Two Sector Model, Three Sector Model and Four Sector Model.

**Unit-II**

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

**Unit-III**

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

**Unit-IV**

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

**Note:**

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

**Suggested Readings:**

- Ackley, G (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
- Banson, W.A. (1989), *Macroeconomic Theory and Policy, (3rd Edition)*, Harper and Row, New York.
- Dorn Busch, R. and F. Stanley (1997), *Macroeconomics*, McGraw Hill, Inc. New York.

- Heijdra, B.J. and V.P. Fredericck (2001), *Foundation of Modern Macroeconomics*, Oxford University Press, New Delhi.
- Jha, R. (1991), *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., New Delhi.
- Shapiro, E. (1996), *Macroeconomic Analysis*, Galgotia Publication, New Delhi.
- Survey, M.J.C. (Ed.) (1976), *Macroeconomic Themes*, Bo and Reed Geoffrey (1994), *International Economics*, Macmillan Press Ltd.
- Peterson, W.C. (1978), *Income, Employment and Economic Growth*, Norton, New York.
- Sheffrin, Steven M. (1996), *Rational Expectations*, 2<sup>nd</sup> edition, Cambridge University Press.

**First Semester**  
**Economics of Growth and Development – I**  
**Paper Code 20ECO21C3**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes:**

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

**Unit 1**

**Economic Growth and Development**

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

**Unit-II**

**Development and Underdevelopment**

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

**Unit-III**

**Classical Theories of Development**

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

**Unit-IV**

**Growth Models**

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

**Note:**

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

**Suggested Readings :**

- Adelman, I. (1961), Theories of Economic Growth and Development, Stanford University Press, Stanford.
- Barro, R. and X. Sala-i-Martin, Economic Growth, McGraw Hill, New York.
- Behrman, S. and T.N. Srinivasan (1995), Handbook of Development Economics, Vol. 3, Elsevier, Amsterdam.
- Brown, M. (1966), On the Theory and Measurement of Technical Change, Cambridge, University Press, Cambridge, Mass.
- Chakravarti, S. (1982), Alternative Approaches to the Theory of Economic Growth, Oxford University Press, New Delhi.
- Chenery, H. and T.N. Srinivasan (Eds.) (1989), Handbook of Development Economics, Vols. 1 & 2, Elsevier, Amsterdam.
- Ghatak, S. (1986), An Introduction to Development Economics, Allen and Unwin, London.
- Gillis, M., D.H. Perkins, M. Romer and D.R. Snodgrass (1992), Economics of Development, (3rd Edition), W.W. Norton, New York.
- Higgins, B. (1959), Economic Development, W.W. Norton, New York.
- Jones, H.G. (1975), An Introduction to Modern Theories of Economic Growth, Nelson, London.
- Kindleberger, C.P. (1977), Economic Development, (3rd Edition), McGraw Hill, New York.
- Meier, G.M. and J.E. Rauch (2005), Leading Issues in Economic Development, (8th Edition), Oxford University Press, New Delhi.
- Sen, A.K. (Ed.) (1990), Growth Economics, Penguin, Harmondsworth.
- Todaro, M.P. and S.C. Smith (2003), (8th Edition), Economic Development, Pearson Education, Delhi.
- Thirwal, A.P. (1999), (6th Edition), Growth and Development, Macmillan, U.K
- Meir, G.M. (1995), Leading Issues in Economic Development, Oxford University Press, New Delhi.
- Mishra S.K. and V.K. Puri, Economics of Development and Planning, Himalaya Publishing House, Mumbai.
- Todaro, M.P. Economic Development, Latest Edition, Longman, London.
- Thiwal, A.P. (2003), (6th Edition), Growth and Development, Seventh Edition, Macmillan, New York.
- Hogendorn, J. (1996), Economic Development, Addison, Wesley, New York.

**First Semester**  
**Mathematics for Economists-I**  
**Paper Code 20ECO21C4**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes:**

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

**Unit-I**

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

**Unit-II**

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

**Unit-III**

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

**Unit-IV**

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

**Note 1:**

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

**Note 2:**

(A) Nine questions would be set in all.

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

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

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

**Suggested Readings:**

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

**First Semester**  
**Statistical Methods-I**  
**Paper Code 20ECO21C5**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes:**

- CO1. Students would learn the common statistical techniques and terminologies used in the course and understand the concept of a frequency distribution for sample data, and able to summarise the distribution by diagrams and statistics.
- CO2 Students would be able to apply fundamental concepts and use appropriate software tools for data summary and exploratory data analysis.
- CO3 Students would gain knowledge to interpret examples of methods for summarising data sets, including common graphical tools and summary statistics.
- CO4 Students would develop an understanding of the basic concepts of probability, random variables, and sampling distribution of a statistic.
- CO5 Students would learn the measurement of central tendency, hypothesis testing, analysis of variance and multiple regression and correlation analysis.
- CO5 Students would become familiar with the sources of vital statistics data, how to interpret such data and how to perform basic tests to evaluate them which will help students in their doctoral research.

**Unit –I**

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

**Unit-II**

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

**Unit-III**

Index numbers: Problems and methods of construction of various types of indices, Laspeyres, Pasche's and Fisher's ideal index numbers, Time reversal, factor reversal and circular tests; chain base indices, base shifting splicing and deflating the index nos., costs of living index numbers and consumer price index numbers. Time series: components of time series and their decomposition, Methods of measuring trend, cyclical, seasonal and irregular variation.

**Unit-IV**

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

**Note:**

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

from each unit))

**Suggested Readings:**

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

**Second Semester  
Micro Economics-II  
Paper Code 20ECO22C1**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes:**

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

**Unit-I**

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

**Unit-II**

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

**Unit-III**

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

**Unit-IV**

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

**Note:**

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

**Suggested Readings :**

- Koutsoyiannes. A. “Modern Microeconomics” (Macmillan)
- Lipsey, R.G. and Chrysal, K. Alec “An Introduction to Possitive Economics: (OUP)
  - Salvatore, D. “Microeconomics Theory” (Schaum’s Outline series, Tata McCraw Hill)

**Second Semester**  
**Macro Economics-II**  
**Paper Code 20ECO22C2**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes:**

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

**Unit-I**

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

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

**Unit-II**

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

**Unit-III**

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

**Unit-IV**

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

**Note:**

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

**Suggested Readings:**

- Ackley, G (1978), *Macroeconomics: Theory and Policy*, Macmillan, New York.
- Banson, W.A. (1989), *Macroeconomic Theory and Policy, (3rd Edition)*, Harper and Row, New -York.
- Dorn Busch, R. and F. Stanley (1997), *Macroeconomics*, McGraw Hill, Inc. New York.

- Heijdra, B.J. and V.P. Fredericck (2001), *Foundation of Modern Macroeconomics*, Oxford - University Press, New Delhi.
- Jha, R. (1991), *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., New Delhi.
- Shapiro, E. (1996), *Macroeconomic Analysis*, Galgotia Publication, New Delhi.
- Survey, M.J.C. (Ed.) (1976), *Macroeconomic Themes*, Bo and Reed Geoffrey (1994), - *International Economics*, Macmillan Press Ltd.
- Peterson, W.C. (1978), *Income, Employment and Economic Growth*, Norton, New York.
- Sheffrin, Steven M. (1996), *Rational Expectations*, 2<sup>nd</sup> edition, Cambridge University Press.

**Second Semester**  
**Economics of Growth & Development – II**  
**Paper Code 20ECO22C3**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes**

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

**Unit –I**

Sectoral Aspects of development; Importance of agriculture and industry in economic development.  
Role of institutions – government and markets.  
Poverty – indicators and measurement.

**Unit-II**

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

**Unit-III**

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

**Unit-IV**

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

**Note:**

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

**Suggested Readings:**

- Behrman, S. and T.N. Srivasan (1995), Handbook of Development Economics, Vol.-3, Elsevier, Amsterdam.
- Chenery, H.B. et. al. (Eds.) (1974), Redistribution with Growth, Oxford University Press, Oxford.
- Higgins, B. (1959), Economic Development, W.W. Norton, New York.

- Chatak, S. (1986), An introduction to Development Economics, Allen and Unwin, London.
- Kindleberger, C.P. (1977), Economic Development, (3<sup>rd</sup> Edition), McGraw Hill, New York.
- Todaro, M.P. (1996), (6<sup>th</sup> Edition), Economic Development, Longman, London.
- Thiwal, A.P. (1999), (6<sup>th</sup> Edition), Financing Economic Development.
- Singh S.P (ed.), From underdevelopment to Development.

**Second Semester**  
**Mathematics for Economists-II**  
**Paper Code 20ECO22C4**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes:**

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

**Unit-I**

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

**Unit-II**

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

**Unit-III**

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

**Unit-IV**

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

**Note 1:**

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

**Note 2:**

(A) Nine questions would be set in all.

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

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

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

**Suggested Readings:**

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

**Second Semester**  
**Statistical Methods-II**  
**Paper Code 20ECO22C5**

M. Marks = 100  
Term End Examination = 80  
Assignment = 20  
Time = 3 hrs

**Course Outcomes**

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

**Unit –I**

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

**Unit-II**

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

**Unit-III**

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

**Unit-IV**

Correlation and regression: simple correlation, Pearson, spearman's correlation coefficients, multiple and partial correlation analysis, specification of a simple linear regression model, least square estimation of linear regression coefficients, interpretation of correlation and regression coefficients and their properties.

**Note:**

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

**Suggested Readings:**

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

**Second Semester**  
**(Foundation Elective Paper)**  
**MORAL EDUCATION**  
**Paper Code: 20GENF1**

**Time: 02 Hours**

**Total Marks: 50**  
**External Marks: 40**  
**Internal Marks: 10**

**Instructions**

There will be a total of five questions. Question No. 1 will be compulsory and shall contain eight to ten short answer type questions without any internal choice and it shall cover the entire syllabus. The remaining four questions will include two questions from each unit. The students will be required to attempt one question from each unit. The students will attempt three questions in all.

**UNIT I**

**Guiding principles for life**

**Ethics**

- a. Guidelines set by society
- b. Changes according time and place

**Morals**

- c. Guidelines given by the conscience
- d. Always constant

**Ethics in the workplace**

- a. Respect for each other
- b. Obedience to the organization
- c. Dignity of labour
- d. Excellence in action

**UNIT II**

**Concept of Trusteeship**

- a. Everything belongs to society
- b. Man is only a caretaker
- c. Our responsibility to ensure welfare of all

**Importance of service**

- a. Responsibility of an individual
- b. Man is only a caretaker
- c Our responsibility to ensure welfare of all

# **Master of Arts (Economics)**

## **Second Semester**

### **MEDIA AND SOCIETY**

#### **Paper Code 20JRM01**

Time Allowed 3 hrs

Max. Marks 100

Theory Marks 80

Assignment 20

#### **UNIT I**

1. Media Definition
2. Relationship of Media in Society
3. Impact of Media on society – recent trends
4. Media and Social Development

#### **UNIT II**

1. Media Literacy
2. Impact of Media on children and youth
3. Media and gender issues
4. Media and Rural Society

#### **UNIT III**

1. Media and Violence
2. Media and Rising Crime
3. Media and Democracy
4. Media and development of Scientific temperament
5. Media and environmental issues

#### **UNIT IV**

1. Media Accountability.
2. Media and Economic development
3. Media and Nation Building
4. Popular culture and media