Department of Economics

B.A. Economics Special Generic

Notice

1. The Students who opted **Economics Generic before year 2021** their Papers of Special Generic for all four semesters are as follows:
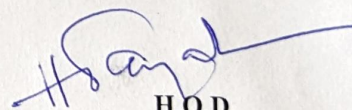
Special Generic Papers before 2021:

Semester-I	Semester-II
GE-I Economics Paper I: Descriptive Statistics	GE-II Economics Paper II: Statistical Methods
Semester-III	**Semester-IV**
GE-III Economics Paper III: Operations Research-I	GE-IV Economics Paper IV: Operations Research-II

2. The Students who opted **Economics Generic Since, year 2021** their Papers of Special Generic for all four semesters are as follows:

Special Generic Papers Since, 2021:

Semester-I	Semester-II
GE-I Economics Paper I: Introductory Microeconomics	GE-II Economics Paper II: Introductory Macroeconomics
Semester-III	**Semester-IV**
GE-III Economics Paper III: Operations Research-I	GE-IV Economics Paper IV: Operations Research-II

3. The Syllabus and Model Questions are provided along with this Notice.

H.O.D.
Department of Economics

Under UGC-Choice Based Credit System

Generic Elective in Economics I: Descriptive Statistics

Course Description

This is a course on statistical methods for economics. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inference. It then develops the notion of probability, followed by probability distributions of discrete and continuous random variables.

Course Outline

1. Statistical Methods

Statistical Methods: Definition and scope of Statistics, concepts of statistical population and sample, Data: quantitative and qualitative. Presentation: tabular and graphical, including histogram and ogive.

2. Measures of Central Tendency and Variation

Measures of Central Tendency: mathematical and positional. Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation, coefficient of variation, Moments, absolute moments, factorial moments, skewness and kurtosis.

3. Index Numbers

Index Numbers: Definition, construction of index numbers and problems thereof for weighted and unweighted index numbers including Laspeyre's, Paasche's, Edgeworth-Marshall and Fisher's. Chain index numbers, conversion of fixed based to chain based index numbers and vice-versa. Consumer price index numbers.

Readings:

1. Goon A.M., Gupta M.K. and Dasgupta B. (2002): *Fundamentals of Statistics*, Vol. I & II, 8th Edn. The World Press, Kolkata.
2. Miller, Irwin and Miller, Marylees (2006): *John E. Freund's Mathematical Statistics with Applications*, (7th Edn.), Pearson Education, Asia.
3. Mood, A.M. Graybill, F.A. and Boes, D.C. (2007): *Introduction to the Theory of Statistics*, 3rd Edn., (Reprint), Tata McGraw-Hill Pub. Co. Ltd.

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Dr. R. Sharan, Dr. P.C. Deogharia, S. Choudhary, Dr. H Dayal Dr. M. Barla, Dr. V.K. Pandey, D. M. Pathak, Sweta Sharan.

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Generic Elective in Economics II: Statistical Techniques

Course Description

This is a course on statistical methods for economics. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inference. It then develops the notion of probability, followed by probability distributions of discrete and continuous random variables.

Course Outline

1. Probality Theory

Probability: Basic concepts and definitions (Classical and Axiomatic definition), random variable, probability density function, probability mass function, distribution function and their properties, mathematical expectation, conditional expectation, moment generating function, Characteristic Function

2. Probality Distribution

Various discrete and continuous probability distributions: Uniform (continuous and discrete), Binomial, Poisson, Normal, t- distribution and F- distribution, Bivariate normal distribution (Marginal and Conditional distributions), Central Limit Theorem. Simple random sampling with and without replacement

3. Correlation and Regression Analysis

Correlation and Regression: Least square method for curve fitting, multiple regression (three variables only), Partial and multiple Correlation (for three variables only).

Readings:

1. Goon A.M., Gupta M.K. and Dasgupta B. (2002): *Fundamentals of Statistics*, Vol. I & II, 8th Edn. The World Press, Kolkata.
2. Miller, Irwin and Miller, Marylees (2006): *John E. Freund's Mathematical Statistics with Applications*, (7th Edn.), Pearson Education, Asia.
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ECONOMICS — GE

GE—III   PAPER—III   BEFORE—2021

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Generic Elective in Economics III: Operations Research-I

Course Description

This course is designed to expose the students to the field of applied mathematical economics. The emphasis will be on analyzing the real life problems in economics.

Course Outline

1. Linear Algebra

Matrices, Determinants, Inverse, Linear Independence, Rank, Solution to simultaneous linear equations and Applications.
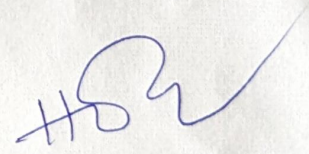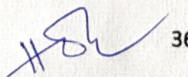
2. Linear Programming

Introduction, Mathematical Formulation of a Linear Programming Problem, Solution- Graphical Method; Maximization and Minimization Cases, Duality- Concepts and Interpretation.

3. Transportation Problem

Introduction, Matrix Formulation and Balance Check of a Transportation Problem, Initial Basic Feasible Solution (Only LCM and VAM Method), Test of Optimality and Optimal Solution, Stepping Stone and MODI Methods.

Readings:

1. Kapoor V.K., '*Operations Research*': Sultan Chand and Sons.
2. Swarup Kanti, Gupta, P.K. and Manmohan, '*Operations Research*': Sultan Chand and Sons.
3. Taha H.A., '*Operations Research- An Introduction*': Pearson Education.
4. Vohra N.D., '*Quatitative Techniques in Management*':Mc.Graw Hill. Co.Ltd.

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Generic Elective in Economics IV: Operations Research-II

Course Description

This course is designed to expose the students to the field of applied mathematical economics. The emphasis will be on analyzing the real life problems in economics.

Course Outline

1. Assignment Problem

Introduction, Balanced and Unbalanced Assignment Problem, Solution using Hungarian Assignment Method.

2. Game Theory

Introduction and Basic Terminology, Pure Strategy Games- Identification of Saddle Point and Value of the Game, Principle of Dominance, Mixed Strategy Games- only Arithmetic Method for 2X2 Games.

2. Input-Output Analysis

Introduction, Assumptions, Closed and Open Input-Output Model, Hawkins-Simon Conditions, Solution for Three Industries, Dynamic Input-Output Model, Limitations of Input-Output Model.

Readings:

1. Kapoor V.K., '*Operations Research*': Sultan Chand and Sons.
2. Swarup Kanti, Gupta, P.K. and Manmohan, '*Operations Research*': Sultan Chand and Sons.
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Generic Elective in Economics I: Introductory Micro Economics (GE I)

Course Description

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

Instructions for Question setter

There will be at least 8 Questions comprising at least 1 Question of short notes type, out of which 5 Questions to be attempted. Full Marks allotted is 70. Care should be taken to ensure that entire paper is covered. The questions should be based on prescribed books in the syllabus.

Course Outline

1. Exploring the subject matter of Economics
Why study economics? Scope and method of economics; the economic problem: scarcity and choice; the question of what to produce, how to produce and how to distribute output; science of economics; the basic competitive model; prices, property rights and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graph

2. Supply and Demand: How Markets Work, Markets and Welfare
Markets and competition; determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the market.

3. The Households
The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects; labour supply and savings decision -choice between leisure and consumption.

4. The Firm and Perfect Market Structure
Behaviour of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.

Readings

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.

2. N. Gregory Mankiw, *Economics: Principles and Applications*, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private

Generic Elective in Economics II: Introductory Macro Economics (GE II)

Course Description

This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.

Instructions for Question setter

There will be at least 8 Questions comprising at least 1 Question of short notes type, out of which 5 Questions to be attempted. Full Marks allotted is 70. Care should be taken to ensure that entire paper is covered. The questions should be based on prescribed books in the syllabus.

Course Outline

1. Introduction to Macroeconomics and National Income Accounting
Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; balance of payments: current and capital accounts.

2. Money
Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.

3. Inflation
Inflation – Demand pull and cost push theories of inflation and its social costs; hyperinflation.

4. The Closed Economy in the Short Run
Classical and Keynesian systems; simple Keynesian model of income determination; IS-LM model;effectiveness of Fiscal & Monetary Policy with the help of IS-LM Model..

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics,* Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009. 4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol D'Souza, *Macroeconomics*, Pearson Education, 2009.

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Generic Elective in Economics III: Operations Research-I

Course Description

This course is designed to expose the students to the field of applied mathematical economics. The emphasis will be on analyzing the real life problems in economics.

Course Outline

1. Linear Algebra

Matrices, Determinants, Inverse, Linear Independence, Rank, Solution to simultaneous linear equations and Applications.
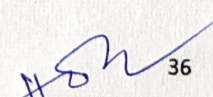
2. Linear Programming

Introduction, Mathematical Formulation of a Linear Programming Problem, Solution- Graphical Method; Maximization and Minimization Cases, Duality- Concepts and Interpretation.
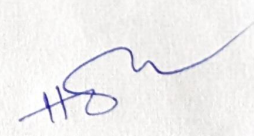
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Generic Elective in Economics IV: Operations Research-II

Course Description

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Course Outline

1. Assignment Problem

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