

**Scheme of Examination of VII & VIII Semester of M.A. (Hons.)
Five Year Integrated Course in Economics w.e.f. 2013-14**

Assessment	Max. Marks	Internal
Semester-VII		
VII .1 Advanced Economic Theory–I	80	20
VII.2 Econometrics Applications-I	80	20
VII .3 Operations Research –I	80	20
VII .4 Public Economics	80	20
Semester-VIII		
VIII .1 Advanced Economic Theory –II	80	20
VIII .2 Econometrics Applications -II	80	20
VIII .3 Operations Research – II	80	20
VIII .4 Advanced International Economics	80	20

VII.1 Advanced Economic Theory- I

Max. Marks: 80

Time: 3 Hrs

Unit-I

Choice Under Uncertainty: Concept of Contingent Commodities; Measures of risk aversion, risk preference, risk neutrality and the shape of indifference curves between contingent commodities. Consumer equilibrium under different risk preferences. Expected utility under uncertain outcomes: Von Neumann Morgenstern utility and consumer choice.

Unit-II

Indirect utility function, Roy's identity, Expenditure function. Hotteling's & shepherd's Lemmas. Modern derivation of the Slutsky equation. Composite commodity theorem. Integrability Problem.

Unit-III

Empirical Estimation of Demands: Interview and Experimental Approaches to Demand determination. The statistical Approach to Demand Estimation. The form of Demand Relationship. Duality in production and its role in empirical estimation of demand functions.

Unit-IV

Markets with asymmetric information: issues of hidden characteristics/actions and adverse selection/moral hazards in insurance and labour markets.

NOTE: the question paper shall have five units. Each of the first four units will contain two questions and the students shall be asked to attempt one question from each unit. Unit five shall contain eight short answer type questions without any internal choice and it shall be covering the entire syllabus. As such, unit five shall be compulsory

Suggested Readings:

Comerer, Colin, F, George : Behavioural Economics

- Loewenstien and Mathew Robin (ed.) (2006): (New Age International Publishing Princeton.
- Michael Szenberg and Lall Ram Rattan (ed.) (2004): New Frontiers in Economics Cambridge: Cambridge University Press.
- Henderson, J M and Quandt, R B (1988): Micro Economic theory: A Mathematical Approach (3rd Ed.), McGraw Hill, New Delhi.
- Silberberg, E (1978): The Structure of Economics- A Mathematical Analysis, McGraw , New York.
- Varian, H R (1992) : Microeconomics Analysis(3rd Ed.) Norton & Company, New York.
- Mas- Colell, Andrew, W M D and Green, J R (1995): Microeconomic Theory New York , Oxford University press.
- Pyndick, R S and Rubinfeld, D L (2001): Microeconomics Patparganj: Pearson Education.

VII.II Econometrics-1

Max. Marks: 80

Time: 3 Hrs

Unit-I

The matrix Approach to linear Regression model. The General linear Regression model: Assumptions in matrix notation; OLS estimation; BLUE Properties of OLS estimators; Derivation of unbiased estimator of σ^2 ; Gauss Markov Theorem; Coefficient of determination R^2 ; adjusted coefficient of determination \hat{R}^2 ; Hypothesis testing about individual regression coefficients; Testing the overall significance of Regression.

Unit-II

Relaxing the assumptions of classical linear Regression model. Multicollinearity: The nature of problem of multicollinearity; Estimation in presence of perfect multicollinearity; Consequences of multicollinearity; Detection of multicollinearity; remedial measures. Heteroscedasticity: The nature of Heteroscedasticity; OLS estimation in the presence of Heteroscedasticity; Consequences of using OLS in the presence of Heteroscedasticity; Detection of Heteroscedasticity; Remedial measures. Auto-correlation: The nature of problem of Auto-correlation; OLS estimation in the presence of Auto-correlation; Consequences of using OLS in the presence of Auto correlation; Detecting Auto-correlation Remedial measures.

Unit-III

Applications to Demand Analysis: Single Demand equations: Different functional forms used for the estimation of single demand equation; System of Demand equations: Linear Expenditure system; Problems in the Estimation of Demand Analysis; Dynamic Demand Analysis.

Unit-IV

Functional Forms of Regression Model: How to measure elasticity: The Log- Linear Model; comparing Linear and Log- Linear Regression Models; How to measure Growth Rate; The Semilog Model; The Lin- Log Model: When the explanatory variable is Logarithmic; Estimation of Cobb-Douglas Production function and consumption function.

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Suggested Readings:

- Gujarati, Damodar, N: Basic Econometrics, McGraw Hill Edition 2012.
- Intriligator Michael D: Econometric Models, Techniques ,and Application , New Jersey, Prentice- Hall
- Johnston, J: Econometric Methods, 3rd. Ed. McGraw Hill, New York 1984.
- Koutsoyiannis,A: Theory of Econometrics, Harper and Row New York, 1973.
- Krishna K.L: Econometric Applications in India , New Delhi, Oxford University Press
- Klein, Lawrence R: An Introduction to Econometrics, Prentice, Engle Wood Cliffs N.J.1962

- Madala G.S : Introduction to Econometrics, John wiley and sons, 3rd Ed. New York 2001.
- Madhani G.M.K : Introduction to Econometrics, Oxford and IBH Publishing Co. Pvt. Ltd. 1994

VII.3 Operation Research

Max. Marks: 80

Time: 3 Hrs.

UNIT - I

Introduction to Operations Research, Nature and significance of Operations Research. Features of Operations Research approach Interdisciplinary Approach, Methodological Approach, Wholistic Approach, Objective Approach, Methodology of Operations Research. Advantages of Operations Research Study; Basic Operations Research Models; Computer software for Operations Research.

UNIT - II

Linear programming- Introduction, structure of Linear Programming Model; Assumption of Linear Programming ; Advantages and Limitations of linear programming; Linear Programming Model- Formulation ;Graphical Method, Simplex Method, duality, Economic Interpretation of duality

UNIT – III

Transportation Problem; Mathematical Model of Transportation Problem, Solution Algorithm to a Transportation Problem. Methods for finding Initial Solution: NWCM, LCM, VAM, MODI Algorithm.

UNIT – IV

Project Management, Basic Differences between PERT and CPM. PERT/CPM Network components and precedence relationships, critical path Analysis; Project Scheduling with uncertain Activity Times.

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Essential Readings:

- Gupta, Prem Kumar and Dira D.S (2007): Operations Research (6th ed.), New Delhi: S.Chand & Company Pvt. limited.
- Kapoor, V.K. (2001): Operations Research Techniques for management New Delhi: Sultan Chand & Sons.
- Sharma, J.K. (2013): Operations Research; Theory and Application (5th Ed.) Mac Millan Publishers India.
- Taha, H.A. (2012): Operations Research- An Introduction (7th Ed.) New Delhi: Prentice Hall of India.

VII.4 Public Economics**Max. Marks: 80****Time: 3 Hrs****Unit-I**

Fiscal Federalism: Principles of multi-Unit finance; Fiscal federalism in India; Vertical and horizontal imbalance; Assignment of functions and sources of revenue and Constitutional provisions; Finance Commission and Planning Commission.

Unit-II

Indian Public Finances: Transfer of Resources from Union to States – criteria for transfer of resources; devolution of resources and grants; problems of states' resources and indebtedness; States and local bodies; Transfer of Resource from States to Local Bodies.

Unit-III

Budget: Zero based Budgeting, Performance Budgeting; Budget making process in India; various concepts of budgetary deficits.

Unit-IV

Public Debt: Concepts, types and sources of public debt; Burden of public debt; principles of public debt management; Public Debt Management in India.

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Suggested Readings:

Atkinson, A. B. and J. E. Siglitz (1980), Lectures on Public Economics, Tata McGraw Hill, New York.

Govt. of India, Ministry of Finance: Economics Survey (of various years)

Musgrave R.A. and Musgrave P.B., *Public Economics in Theory and Practice*, McGraw Hill.

Mandal Sudipto (ed) *Public Finance: Policy Issue of India*.

M. Govind Rao and Tapan Sen (1998), *Financial Federalism in India*

M.G. Rao and Tapas Sen (1996), *Financial Federalism in India*, Macmillan India,

M. Govind Rao *Changing contours in fiscal federalism in India*

Stieglitz, J.E., *Economics of Public Sector*, J.W. Norton & Company.

Srivastava D.K. (ed.) *Fiscal Federalism in India*

Srivastava, D. K. (Ed.) (2000), *Fiscal Federalism in India*, Har-Anand Publications Ltd., New Delhi.

Reports of various Finance Commissions

VIII.1 Advanced Economic Theory II

Max. Marks: 80

Time: 3 Hrs

Unit-I

Monetarist-Keynesian debate on Macro Theory and Policy. Monetarist and Keynesian views on Output and Inflation. The Phillips Curve- Short run and Long run.

Unit-II

New Classical Economics and New Keynesian Direction: The New Classical attack, The Keynesian Countercritique, New Keynesian Direction. Rational Expectations and the New Classical Macro Economics: The Theory of Rational Expectations; The theory of continuous Market Clearing, The New Classical Economics and The Business Cycles⁶, Supply Side Economics: Taxes , Incentives and Production, Supply Side Economics and Government.

Unit-III

The New Keynesian Theories of Sticky Wages and Unemployment; Implicit Wage Contracts, Efficiency Wage Models, Insider- Outsider Models, Menu Costs.

Unit-IV

Macroeconomic Policy in an open economy – The Mundell Fleming Model. The Assignment Problem in International Macro Economics- Mundell Model, Swan Model.

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Suggested Readings:

- Branson W (1989) : Macro economic Theory and Policy 3rd Edition, Harper Collins
- Dornusch, R (1980) : Open Economy Macroeconomics Basic Books
- Dornbusch, Fisher and Strartz (2002) : Macroeconomics, Ninth Edition, tata McGraw Hills, New Delhi
- Makin, A J : International Macroeconomics, Princeton Hall.
- N Mankiw, and D Romer (1991) (ed.) New Keynesian Economics, MIT, 2 Volumes.
- Sheffrin, S(1999): Rational Expectations, Cambridge University Press.
- Pentecost Eric (2000) : Macroeconomics- An Open Economy Approach Macmillan Press Ltd.
- Raghbendra, Jha (2008) : Contemporary Macroeconomics: Theory and Policy. New Age International Publishers.
- Abel Andrew B, Bernanke Ben S (Fifth Edition) (2007): Macroeconomics Pearson Education Inc., New Delhi.
- Heijdra Ben J/ Ploeg Frederick Van der (2008): The Foundations of Modern Macroeconomics Oxford University Press.
- D' Souza Errol (2008): Macroeconomics Pearson Education Inc., New Delhi.
- Froyen, R(2002) : Macro Economics, 7th Edition, Pearson Education Inc., New Delhi.

- Snowden Brian and Vane Howard R (2005): *Modern Macroeconomics: Its Origins, Development and current state*, Edward Elgar, UK.
- Wendy Carlin/ Soskice David (2007): *Macroeconomics: Imperfections, Institutions and Policies* Oxford University Press.

VIII.II Econometrics-1I

Max. Marks: 80

Time: 3 Hrs

Unit-I

Dynamic Econometric Models: Auto- Regressive and Distributed Lag Models: The Role of Log in Economics; The Reasons for Lags; Koyck Approach to estimation of Distributed Log Models, Rationalization of Koyck Model: The Adaptive Expectation model; Partial adjustment Model, Causality in Economics: The Granger Causality Test.

Unit-II

Dummy Variables Regression Models. The Nature of Dummy Variables, ANOVA Models, ANOVA Models with two qualitative variables, ANCOVA Models, uses of Dummy variables, The Dummy variable alternative to the chow test.

Unit-III

Simultaneous Equation Models: Simultaneous Equation Bias; Consequences of Simultaneous relations, The Identification Problem: Under identification; exact identification; over identification; Rules for identification: The order and Rank Conditions of identification, multicollinearity and identification. Approaches to Estimation: The Method of Indirect least Square and the method of Two- Stage Least Square.

Unit-IV

Time Series Econometrics. Some Basic Concepts: Stochastic Processes, Stationary Stochastic Processes, Non- Stationary Stochastic Processes, Unit Root Stochastic Process, Trend Stationary and Difference Stationary Stochastic Processes, Integrated Stochastic Processes, The Phenomenon of spurious Regression, Tests of Stationarity: The Root Test, Co integration Forecasting: AR, MR, and ARIMA Modeling of Time Series Data, The Box- Jenkins(BJ) Methodology.

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- Koutsoyiannis,A: Theory of Econometrics, Harper and Row New York, 1973.
- Kmenta, Jan: Elements of Econometrics, 2nd ed. Macmillan, New York 1986.
- Krishna K.L: Econometric Applications in India , New Delhi, Oxford University Press
- Patterson Kerry P,: An Introduction to Applied Econometrics: A Time Series Approach, London, Palgrave, 2000.
- Pindyek, R S and D L Rubinfeld: Econometric Models and Economic Forecasts, 4th Ed. New York McGraw Hill.

VIII. 3 Operation Research

Max. Marks: 80

Time: 3 Hrs.

UNIT - I

Sequencing: Notations, Terminology and Assumption; processing n jobs through two machines; processing n jobs through three machines; processing n jobs through m machines; processing two jobs through m machines.

UNIT - II

Inventory Control Model- Introduction and meaning, functional role of inventory Factors involved in inventory problem analysis, steps of Inventory model building. Economic order quantity (EOQ) model with constant Rate of demand, EOQ Model with different Rates of demand.

UNIT – III

Introduction to Markov Chains and applications characteristics of a Markov chain, State and transition probabilities, Multi period transition probabilities, Steady- State (Equilibrium) conditions.

UNIT – IV

Simulation, steps of simulation process; stochastic simulation and random numbers; Simulation of inventory problems, simulation of queueing problem, simulation of investment problems, simulation of maintenance problems.

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- Taha, H.A. (2012): Operations Research- An Introduction (7th Ed.) New Delhi: Prentice Hall of India.

VIII.4 Advanced International Economics

Max. Marks: 80

Time: 3 Hrs

Unit-I

Advance Theories of International Trade: Kravis and Linder Theory of Trade, The Rybezynski theorem, Theorem of factor price equalization. Measurement of gains from trade and their distribution Measurement of intra- industry trade.

Unit-II

Foreign Trade and National Income: Foreign Trade Multiplier with and without foreign repercussions and determination of national income and output,. Concept and policy implications of immiserizing growth. Role of dynamic factors, e.g., Change in tastes, technology and factor endowments in explaining the emergence of trade. Relative merits and demerits of fixed and flexible exchange rate in the context of growth and development in developing countries.

Unit-III

International Monetary System: Rise and fall of Gold Standard, Brettonwood System and collapse of Brettonwood system. Need, adequacy and determinants of international reserves. Functioning and conditionality clause of International Monetary Fund (IMF). Emerging international monetary system and optimum currency area. Expenditure-reducing and expenditure-switching policies and direct controls for balance of payment adjustment. Policies for achieving internal and external equilibrium simultaneously under alternative exchange rate regime.

Unit-IV

Trade policies and trade related problems in India: World Trade Organization (WTO) and India, functions of WTO and its impact on Indian economy. Recent changes in latest import and export policy of India after trade reforms since 1991. Recent changes in the direction and composition of trade and their implications. Problem of India's international debt.

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- Bhagwani, J. (Ed.) (1981), International Trade, Selected Readings, Cambridge University Press, Massachusetts.
- Carbooth, M. (1999), International Economics, International Thompson Publishing, New York.
- Chacholiades, M. (1990), International Trade: Theory and Policy, McGraw Hill, Kogakusha, Japan.

- Dana, M.S. (2000), International Economics: Study Guide and Work Book (5th Edition) Rutledge Publishers, London.
- Dunn, R.M. and J.H. Mutt (2000), International Economics, Rutledge Publishers, London.
- Kenen, P.B. (1994), The International Economy, Cambridge University Press, London.
- Kindleberger, C.P. (1973), International Economics, R.D.Irwin, Homewood.
- King, P.G.(1995), International Economics and International Economic Policy: A Reader, McGraw Hill International Singapore.
- Krugman, P.R. and M. Obstfeld (1994), International economics: theory and policy, Glenview, Foresman.
- Krugman, P.R. and M. Obstfeld (2009),(5th ed), Wesley series in Economics.
- Salvatore, D. (2000), International Economics, Prentice Hall, Upper Saddle River, N.J. New York.
- Soderston, BO (2013), International Economics, The Macmillan Press Ltd. London.
- Ellsworth, P.T. and J. Cark Leith(1971), International Economy, Collier Macmillan Ltd. London.