

**Revised Curriculum, Syllabus and Pattern of Question Papers for M. Sc.  
Economics (Annual System): Two Years Program of 1400 Marks  
w.e.f. Session 2012 & Onwards**

**M. Sc. Economics (Part -I)**

<b>Paper No.</b>	<b>Title of Papers</b>	<b>Maximum Marks</b>
Paper 1	Microeconomic Theory	100 Marks
Paper 2	Macroeconomic Theory	100 Marks
Paper 3	Mathematical Economics	100 Marks
Paper 4	Descriptive and Inferential Statistics	100 Marks
Paper 5	Monetary Economics and Public Finance	100 Marks
Paper 6	Development Economics	100 Marks
Paper 7	Islamic Economics	100 Marks

**M. Sc. Economics (Part-II)**

<b>Paper No.</b>	<b>Title of Papers</b>	<b>Maximum Marks</b>
Paper 8	International Economics	100 Marks
Paper 9	Econometrics	100 Marks
Paper 10	Financial Economics	100 Marks
Paper 11	Managerial Economics	100 Marks
Paper 12	Major Issues in Pakistan's Economy	100 Marks
Paper 13	Agricultural Economics	100 Marks
Paper 14	Optional Paper	100 Marks

**List of Optional Papers**

<b>Option No.</b>	<b>Title of Paper</b>	<b>Maximum Marks</b>
I	Labour Economics	100 Marks
II	Optimization and Dynamic Analysis	100 Marks
III	History of Economic Thoughts	100 Marks
IV	Human Resource Development	100 Marks
V	Population Economics	100 Marks

**Revised Pattern of Question Papers for M. Sc. Economics (Annual System)  
w.e.f. First Annual, 2014 & onwards as Approved by the University Bodies**

The Question paper will consist of 6 Questions in all. Question 1 of 40 marks consisting of 4 parts of 10 marks each will be compulsory and the candidates will have to attempt 3 Questions (Subjective) of 20 Marks each from the remaining 5 Questions.

# **Revised Syllabus & Contents of the Papers**

## **M.Sc. Economics (Annual System) Part- 1**

### **Paper 1: MICROECONOMIC THEORY**

#### **Topic: 1**

##### **Some Fundamentals of Micro Economics**

Microeconomics: Comparison with other branches of economics. The uses and limitations of Microeconomic theories. The problem of Scarcity. The Concept of opportunity cost. Markets, Firms and Individuals. Demand and Supply: A Review. Relative and absolute Prices. Real and Nominal Prices. Cobweb Theorem. Slope and Elasticity of Demand. Different Kinds of elasticity of demand. Price Controls. Consumer and Producer's surpluses.

#### **Topic: 2**

##### **Theory of Consumer Behaviour**

Consumer's equilibrium under Cardinal Approach and consumer demand curve. Ordinal Approach axioms and Consumer's equilibrium under Ordinal Approach. Effects on consumer equilibrium. Marginal rate of consumer substitution. Properties of indifference curves. Graphical derivation of Marshallian, Hicksian and Slutsky demand curves. Theory of Revealed Preference.

#### **Topic: 3**

##### **Theory of Production**

The Concept of Production Function; Production with one variable and two variable inputs, Laws of Returns and Returns to scale. The substitution and Resource effects of change in input prices. Euler's Theorem. The elasticity of substitution. Some special production functions: Cobb Douglas Production function. CES Production Function. Translog Production function. Homogenous Production Function.

#### **Topic: 4**

##### **Cost of Production and Revenue**

Definition and kinds of costs. Cost Functions. Traditional, Modern and Engineering costs Theories. Economies of Scale and Scope. Revenue Analysis (Total, Marginal and Average Revenue).

#### **Topic: 5**

##### **The Theory of Market Behaviour**

**5.1 Pure and Perfect competition:** equilibrium of firm in Short run. The supply curve of the firm and the industry. Short run equilibrium of industry. Equilibrium of firm and Industry in Long Run. Optimum Resource allocation. Dynamic changes and Industry Equilibrium: Shift in the Market demand, Predictions of the perfect competition model when costs change, Effects of Imposition of a Tax.

**5.2 Monopoly** and its basis. The negatively sloping demand curve: Short run and Long Run equilibrium, Predictions in dynamic changes: Shift in the Market demand, An increase in the costs of monopolist. Imposition of a Tax. Comparison with perfect competition: Govt regulated Monopoly. Monopoly Power its sources and social cost. Monopsony and Monopoly compared. Monopsony Power its sources and social cost. Bilateral Monopoly. Multi-plant Monopolist Firm. Price Discrimination, Govt. regulated Monopoly.

**5.3 Monopolistic competitive conditions:** The historical setting of the theory of monopolistic competition, Characteristics of Monopolistically competitive firms. The concepts of industry & group: The basic Chamberlin theory of Monopolistic competition:(Model No 1: Equilibrium with new firms entering the industry, Model No 2: Equilibrium with Price competition, Model No 3: Equilibrium with Price competition and free entry). Critique of Chamberlin Model. Comparison with pure competition.

**5.4 Oligopolistic conditions:** A simple statement of the problem of oligopoly: Non-collusive Oligopoly: Models of Cournot, Bertrand, Chamberlain, Sweezy & Stackelberg  
**Collusive Oligopoly:** Model of cartels and Price Leadership.

**Topic: 6**

**Pricing of Factors of Production and Income Distribution**

Factor Pricing in perfectly competitive and imperfectly competitive Markets. Elasticity of Factor substitution, Technological progress and Income Distribution.

**Topic: 7**

**General Equilibrium and Economic Efficiency**

Partial and general Equilibrium Analysis. Two interdependent markets -moving to general equilibrium (an example). Efficiency in exchange. Equity and Efficiency. Efficiency in Production.

**Topic:8**

**Welfare Economics**

Criteria of social welfare: Growth of GNP as a welfare criterion, Bentham's criterion, A cardinalist criterion. The Pareto optimality criterion. The Kaldor-Hicks Compensation criterion. The Bergson criterion 'social welfare function'. Maximization of social welfare. Determination of the welfare maximizing output mix, Commodity distribution and Resource Allocation. Welfare Maximization and Perfect Competition.

**Recommended Books:**

1. Bilas, Richard A, Microeconomic Theory\*. McGraw-Hill Kogakusha, Ltd, (2<sup>nd</sup> Edition).
2. Koutsoyiannis, A., Modern Microeconomics\*, London, Macmillan, (Latest Edition).
3. Pindyck, Robert. S, Daniel L. Rubinfeld and Prem L.Mehta, Microeconomics\*. Pearson Education Inc, (Sixth Edition).
4. Henderson, J.M & Quandt, R.E., Microeconomic Theory\*. N.Y Macmillan II A Book Co.
5. Varian Hal R., Micro Economics Analysis\*, Norton & Company, New York, 1992.
6. Ferguson, C.E & Gould, J.P, Microeconomic Theory. Macmillan, (Latest Edition).
7. Layard and Walter A.A., Micro Economics, McGraw Hills, (Latest Edition).
8. Walter Nicholson, Microeconomic Theory: Basic Principles and Extensions (6th edition)

**Additional Readings:**

1. Baumol, W)., Economic Theory and Operations Analysis, Prentice Hall (Last Edition).
2. Hirshleifer Jack, Price Theory and Applications\*, Prentice Hall (Latest Edition).
3. Kameischon: D.T. R., Readings in Microeconomics, Nevi York, The world publishing co (last Edition).
4. Stiglitz, G.T., The Theory of price, N.Y Macmillan, London. (Last Edition).
5. Silberberg E., The Structure of Economics, A Mathematical Analysis, McGraw Hill, (Latest edition).
6. Dwivedi, D.N. Microeconomics theory and applications. Pearson Education Inc, (Second Edition).
7. Salvatore, Dominick, Micro Economic Theory\*, McGraw Hills, (Latest Edition).

(\***Strongly Recommended**).

## **Paper 2: MACROECONOMIC THEORY**

### **Topic: 1**

#### **Introduction to Macro Economics and National Income**

The development of Macro Economics. Introduction, main objectives, scope and subject matter of Macroeconomics. Circular flow of national income, national income aggregates, measurement of GNP, expenditure approach, income approach, product approach, GNP as a measure of welfare. Outlays and components of demand, some important identities, rules for computing GDP, real GDP VS nominal GDP, actual GDP VS potential GDP, prices indices. GDP deflator, CPI, PPI, Measuring job less-ness. The unemployment rate, unemployment, GDP, and Okun's Law. Inflation and Inflation rate, GDP growth rate.

### **Topic: 2**

#### **Classical Theory of Output and Employment**

- a) The classical revolution, production function and employment, demand for and supply of labor, labor market equilibrium, the determinants of output and employment, derivation of classical aggregate supply curve.
- b) What is money? Functions of money and types of money, how quantity of money is measured? The quantity theory of money, the money demand function and the quantity equation, relationship between money, prices and inflation, Seigniorage, real vs nominal interest rates, the fisher effect. The classical aggregate demand curve. The classical theory of the interest rate. Say's Law of markets, pricing implications of the classical equilibrium model.

### **Topic: 3**

#### **Keynesian Theory of Income and Output Determination**

- a) Simple Keynesian model, conditions for equilibrium output. The components of aggregate demand. Consumption function, saving function (relationship between APC, MPC, APS, MPS, investment function) Govt. expenditure and net exports, aggregate demand equals aggregate output. Theory of multiplier, derivation of simple multiplier, Govt. expenditure and tax multiplier, export and import multiplier, super multiplier, employment multiplier, balanced budget multiplier. Budget surplus and full employment.
- b) Money in the Keynesian system. Interest rate and aggregate demand, Keynesian theory of interest rate, Keynesian theory of demand for money. Regressive expectation model, portfolio balance approach.

### **Topic: 4**

#### **Theory of Consumption and Their Implications**

Theories of Consumption: Duesenbury Hypothesis, Keynesian Consumption Function. Permanent Income Hypothesis / Life Cycle Hypothesis, Beyond Permanent Income Hypothesis, Kuznet's findings and Reconciliation of Marginal Propensity to Consume and Average Propensity to Consume and Evidences. Mathematical derivation of Consumption Models. The MPS Model, Wealth effect in the Static Model. Implications of Consumption Theories for Policy Formulation and Stabilization Policy. Random Walk Model.

### **Topic: 5**

#### **Theory of Investment**

Investment VS capital, kinds of investment, determinants of investment MEC VS MEI Present value criterion for investment, Internal Rate of Return Criterion, Neo classical

model of fixed business investment. Taxes and investment, Tobin's q theory, Residential investment model, Acceleration Principle, Rigid and Flexible Accelerator, Inventory Investment Model.

### **Topic: 6**

#### **IS – LM frame work**

IS curve, its derivation, shape of IS curve, factors affecting the slope and position of IS curve (Mathematical version) LM curve, its derivation, factors affecting the slope and position of LM curve. Policy effects in the IS-LM model. Monetary and fiscal policy multipliers in the IS-LM curve model.

### **Topic: 7**

#### **Aggregate Demand and Aggregate Supply Analysis**

Keynesian aggregate demand curve, its derivation, factors determining its slope and position. The aggregate demand schedule combined with the classical theory of aggregate supply. The Keynesian contractual view of labor market – a flexible price – fixed money wage model, comparison of classical and Keynesian theories of labor supply. The Keynesian aggregate supply curve with variable money wage. Policy effects in the variable-wage Keynesian model. The effects of shifts in the aggregate supply schedule, factors that shift the aggregate supply schedule. Aggregate supply models. The sticky wage model, the imperfect information model, the sticky – price model, The Worker Misperception Model.

### **Topic: 8**

#### **Inflation**

The concept of inflation, Demand pull and Cost push inflation, hyperinflation, social cost of inflation, theory of stagflation, The Relation of Wages Changes to Unemployment. The Philips curve – the theoretical basis for the Philips curve. Unemployment and price expectations. The long-run Philips curve. Deriving the Philips curve from the aggregate supply curve. Adaptive expectations and inflation inertia, The Natural Rate Theory, Monetarist View of the Philips Curve, Keynesian view of the Philips curve.

### **Topic: 9**

#### **Government Debt and Budget Deficits**

The size of Government Debt, Measurement Problem: Inflation, Capital Assets, Business Cycle etc, Ricardian view or Debt: Ricardian Equivalence, Consumers and Future Taxes. Tax shooting, Delayed Stabilization, Ricardo and Ricardian Equivalence and Debate. Model or Debt Crises.

### **Topic: 10**

#### **Economic Fluctuations, Long-Term Growth and Full Employment**

- a) The theory of real business cycles, interpretation, labor market, technology shocks, household behavior, the persistence of output fluctuation, limitations of the models Samuelson's multiplier – accelerator interaction theory of trade cycles, Kaldor's model of the business cycle. Hicks's theory of business cycle, AD-AS theories of output functions.
- b) Basic neoclassical growth model/Solow growth model – the accumulation of capital, determination of steady state equilibrium in the long-run, how savings affects growth, the golden rule level of capital, how population affects the steady state level, technological progress in the Solow model, policies to promote growth endogenous growth theory.

### **Recommended Books:**

1. Branson, William H., (1979), *Macroeconomic Theory and Policy\**, Harper and Row Publishers, New York / London.
2. Froyen, R. T., *Macroeconomics: Theories and Policies\**, (Latest Edition), Prentice Hall, 7<sup>th</sup> Edition, 2002.
3. Branson, William H., and Litvack James M., *Macroeconomics\**, (Latest Edition), Princeton University.
4. Glahe, Fred R., (Latest Edition), *Macroeconomics, Theory and Policy*, Harcourt Brace Jovanovich Inc.
5. Mankiw, Gregory N., (2000) *Macroeconomics\**, Worth Publishers, New York.
6. Peel D. and Minfow P., (2002). *Advance Macroeconomics*, Edward Elgar, Cheltenham, U.K.
7. Delorme. Jr., *Macroeconomics*, 2<sup>nd</sup> Edition.
8. Romer, David, (200I). *Advanced Macroeconomics\**, McGraw Hills, New York, London.
9. Sargent, Thomas J., (19XX) *Rational Expectations and Inflation\**, Harper and Raw Publishers, New York / London.

**\* Strongly Recommended**

### **Additional Reading Material / Research Papers:**

1. Ball, Laurence, Mankiw, N. Gregory, and Romer, David 1988. "The New Keynesian Economics and the Output – Inflation Trade off". *Brookings Papers on Economic Activity. No. 1, 1 -6*, Reprinted in Mankiw and Romer (1991)
2. Barro, Robert J 1976. "Rational Expectations and the Role of Monetary Policy". *Journal of Monetary Economics 2 (January): 1 – 32*
3. Barro, Robert J. 1989. "Interest – Rate Targeting" *Journal of Monetary Economics 23 (January): 3-30*
4. Rosalind Leveic arid Alexander Reborens, *Macro-economics: An Introduction to Keynesian Neo-Classical Controversies*; Macmillan (Latest edition),
5. Barro, Robert, J " and Gordon, David B, 1983b. "Rules, Discretion and Reputation in a Model of Monetary Policy," *Journal of Monetary Economics 12 (July): 101-121*. Reprinted in Persson and Tabellini (1994).
6. Bernheim, B. Douglas. 1987, "Ricardian Equivalence: An Evaluation of Theory and Evidence." *NBER Macroeconomics Annual 2: 263 – 304*
7. Blanchard, Olivier J. 1984. "The Lucas Critique and the Volcker Deflation." *American Economic Review' 74 (May): 211-215*.
8. Fischer, Stanley. 1993. "The Role of Macroeconomic Factors in Growth." *Journal Of Monetary Economics 32 (December): 485-512*.
9. Friedman, Milton, 1968. "The 13--ole of Monetary Policy". *American Economic Review 58 (March): 1-17*.
10. Long, John B., and Plosser, Charles I. 1983. "Real Business Cycles." *Journal of Political Economy 91 (February): 39-69*.
11. Mankiv, G., N. (1990), A quick Refresher Course in Macroeconomics, *Journal of Economic Literature* , Vol. XXVIII, 1645-60.
12. Romer, Christina D. 1999. "Changes in Business Cycles: *Journal of Economic Perspectives 13 (spring): 23-44*.
13. Romer, Paul M. I.990, "Endogenous Technological Change." 1998 (October, Part 2): S71-S 102.

## **Paper 3: MATHEMATICAL ECONOMICS**

### **Topic: 1**

#### **The Nature of Mathematical Economics and Economic Models**

Introduction; Ingredients of mathematical models; Real numbers; Concept of Sets; set operations; Relations and functions; Types of Functions; Asymptotes; Exponents & their rules; Bivariate and multivariate Functions; Levels of Generality; Some Examples of Economic Applications

### **Topic: 2**

#### **Static Analysis in Economics**

Introduction; Constructing the Linear model and solutions; Non-linear models; The quadratic formula; Finding roots; General equilibrium ; Economic Applications and examples of Static Analysis

### **Topic: 3**

#### **Linear Models and Matrix Algebra**

Matrices, arrays and vectors; Matrix operations; Vector operations; Commutative, associative and distributive laws; Types of matrices; Transposes and inverses; Finite Markov chains; Conditions for non singularity of a matrix; Minors and cofactors; Determinant & its properties; Laplace expansion; Solution of linear equations through Cramer's rule and Inverse of a matrix method; Properties of inverse of a matrix; Use of matrix approach in market & national income models; Input–Output Analysis; Some Economic Applications and examples

### **Topic: 4**

#### **Comparative Statics and Derivatives**

Introduction; The derivative; Limit theories; Review inequalities and absolute values; Continuity and differentiability; Rules of differentiation; Higher order derivatives; Economic applications of derivatives; Partial Differentiation; Some Economic Applications (Marginal products, elasticities, Shepard's Lemma and the conditional input demand function, macro models and market models); Dependence or Independence of Equations; Differentials; Differentials and Elasticity; Rules of Total Differential; Some Economic Applications (Isoquants, isocost lines, indifference curves and budget lines); Total Derivatives; Implicit Functions; General Function Models; Some Economic Applications; Limitations of Comparative Static

### **Topic: 5**

#### **Optimization: Functions of Single Variable**

Introduction; Optimum Values and Extreme Values; First Derivative Test; Economic Applications; Second and Higher Derivatives; Some Economic Applications; Maclaurin and Taylor Series;  $N^{\text{th}}$  Derivative Test for Relative Extremum of one variable

### **Topic: 6**

#### **Optimization: Functions of Time**

Introduction; Nature of Exponential Functions; Growth Problems; Economic Interpretation of  $e$ ; Continuous and Discrete Growth; Discounting and Negative Growth; Logarithms; Rules of Logarithms; Logarithmic Functions; Derivatives of Exponential and Logarithmic Functions; Optimal Timing; Some Economic Applications

## Topic: 7

### **Optimization: Functions of more than one Variable**

Extreme values of an objective Function of more than one choice Variables; Finding maximum/minimum; Quadratic forms; Characteristic roots; Concavity and convexity; Differentiability; Some Economic Applications; Reduced form models; General form models

## Topic: 8

### **Optimization: Constrained & Extrema**

Free and constrained optimization; Effects of Constraints; Finding Stationary Values; Second-Order Conditions; Quasiconcavity and Quasiconvexity; Some Economic Applications; Homogeneous Functions and Economic Applications

### **Recommended books:**

1. Alpha C. Chiang and K. Wainwright, *Fundamental Methods of Mathematical Economics\**, Fourth Edition, Mc. Graw-Hill International Edition, 2005.
2. Dowling, Edward T. *Introduction to Mathematical Economics\** (part of Schaum's easy outlines series). New York: McGraw-Hill, 2006.
3. Pemberton and Rau, *Mathematics for Economists\**, Manchester University Press, 3rd Edition, 2011.
4. Abadir, K.A. and Magnus, J. R., *Matrix Algebra\**, Cambridge University Press, 2005.
5. Fuente, A. de la, *Mathematical Methods and Models for Economists\**, Cambridge University Press, 2000.
6. Sydsaeter, Knut and Peter Hammond. *Essential Mathematics for Economic Analysis, 2nd Ed.* Financial Times, Prentice Hall: Harlow, England. ISBN is 0-273-68180-X, 2006.
7. Simon, Carl P, and Lawrence Blume, *Mathematics for Economists*. New York: W.W. Norton & Company, Inc., 1994
8. Anthony, Martin Henry George, *Mathematics for economics and finance* Cambridge, Cambridge University Press, 1996.
9. Bradley, Teresa, *Essential mathematics for economics and business, 2<sup>nd</sup> Edition*, Chichester, J. Wiley, 2002.
10. Jacques, Ian, *Mathematics for economics and business, 5<sup>th</sup> Edition*, Harlow, FT Prentice Hall, 2006.
11. Rosser, M. J, *Basic mathematics for economists, 2<sup>nd</sup> Edition*, London, Routledge, 2003.
12. Weber E. Jean, *Mathematical Analysis, Business and Economic Applications (Latest Edition)* I-Harper and Row Publishers, New York.
13. Blume, Lawrence, *Mathematics for economists* New York, Norton, 1994.
14. Hoy, Michael, *Mathematics for Economists*. Cambridge, MA: MIT Press. 2001.
15. Klein, Michael W., *Mathematical Methods for Economics*. Boston, MA: Addison-Wesley. 2002.
16. Hoy, Livernois, McKenna, Rees and Stengos, *Mathematics for Economics*, MIT Press, 3rd Edition, 2011.

\* *Strongly Recommended*



## **Paper 4: DESCRIPTIVE AND INFERENCE STATISTICS**

### **Topic: 1**

#### **Introduction to Statistics**

Descriptive and inferential statistics; population and sample, parameter and statistic; The four basic activities in statistics: Designing a plan for data collection, Exploring the data, Estimating an unknown quantity, Hypothesis testing; Type of measurement scales: Nominal, Ordinal, Interval and Ratio; Types of data: Univariate, Bivariate and Multivariate data, Primary and secondary data, Quantitative data and qualitative data, Time series, Cross-sectional and pooled data; Significant digits and rounding off numbers. Numerical examples and questions relating to all contents given in this topic

### **Topic: 2**

#### **Presentation of Data and Measures of Central Tendency**

Introduction; Classification; Tabulating numerical data: The frequency distribution, the cumulative frequency distribution, the relative frequency distribution, the percentage frequency distribution; Graphic and diagrammatic representation: Bar chart, Pi chart, Histograms, Frequency curves and Histograms; Histograms by Hand: Stem-and-Leaf. Measure of central tendency; Introduction; Types of Averages: Mean: Arithmetic mean, Geometric mean, Harmonic mean, Trimmed and Winsorized means; Quintiles: Median, Quartiles, Deciles, Percentiles; The mode; Box plot and detailed box plot; Empirical relation between Mean, Median and Mode; The cumulative distribution function.

### **Topic: 3**

#### **Measures of Dispersion, Skewness and Kurtosis**

Absolute and relative measures of dispersion; Different measures of dispersion: The Range, Quartile deviation, Mean deviation, Variance and standard deviation: Definition and interpretation of variance and standard deviation, Computation of Variance and standard deviation, Step deviation method or coding method, Coefficient of variation, Standardized variable, Properties of standard deviation and variance; Skewness: Karl Pearson's coefficient of Skewness, Bowley's coefficient of Skewness; Kurtosis.

### **Topic: 4**

#### **Probability and Probability Distribution**

A survey of probability concepts: Classical probability, Empirical concept, Subjective probability; some rules of probability: Rules of addition, Rules of multiplication; Conditional Probability, Bayes Theorem; Counting rules: The multiplication formula, The permutation formula, The combination formula; Mathematical Expectation, Random variables, Discrete random variable Continuous random variable; The mean, variance and standard deviation of a probability distribution; Binomial probability distribution, and its computation, Properties of Binomial probability distribution; The normal probability distributions: Properties of normal distribution.

### **Topic: 5**

#### **Survey Sampling and Sampling Distributions**

Sampling and Sample: Advantages of sampling, Representative samples, design and sample survey, Sampling frame; Probability and non-probability sampling; Sampling with and without replacement; Sampling and non-sampling error, sampling bias; Sampling distribution of the mean; The central limit theorem; Sampling distribution of differences between means.

**Topic: 6****Estimation Theory & Hypothesis Testing**

Point estimates and confidence intervals; Criteria for good estimators; The t-distribution; Point estimators of mean and variance; Estimation by confidence interval: Confidence interval estimate of a population mean (Known & Unknown Variances), Confidence interval for differences of means, Confidence interval for population proportion, Confidence interval for differences between proportions; Types of hypotheses; Type I versus Type II errors; Tests of population means and variances; Two sample tests; The F distribution; Testing for the variances of two populations

**Topic: 7****Chi Square Application & Analysis of Variance**

Introduction; .Goodness-of-fit test: Equal and unequal expected frequencies; Limitations of Chi square; Using the goodness-of-fit test to test for normality; Contingency Table Analysis. Introduction, The F-distribution; Comparing two population variances; ANOVA assumptions; ANOVA test; Inferences about pairs of treatment means; Two-way analysis of variance.

**Topic: 8****Simple Linear Regression and Correlation Analysis**

Scatter diagram; Standard methods for obtaining regression line: (i) Inspection, (ii) .Semi average, (iii) Least squares principle; Assumptions underlying linear regression and its properties; Measures of variations: Standard error of the estimate, Coefficient of determination; Prediction in Regression Analysis; Interpolation verses extrapolation; Correlation analysis; Scatter diagram; The coefficient of correlation: Properties/characteristics of coefficient of correlation, Correlation and causation; The relationship among the correlation coefficient, the coefficient of determination and the standard error of estimate; Inference about the correlation coefficient; t-test for correlation coefficient; Rank correlation coefficient; Some Economic Applications

**Topic: 9****Applied Statistics**

Index Numbers, Un-weighted index numbers; Simple aggregative index; Weighted indexes; Laspeyre's price index, Paaseche's price index; MarshalEdgeworth price index; Fisher's ideal index; Consumer Price Index (CPI), Producer Price Index (PPI), CPI versus GDP Deflator; Issues in constructing and using index numbers; Application of index numbers to business and economics; An overview of time series analysis; Component Factors of the classical multiplication time series model and their estimation: Secular trend; Cyclical variation, Seasonal variation, Irregular variation; Smoothing the annual time series and using it in forecasting: Moving averages, Weighted moving averages, Exponential smoothing; Using trend and seasonal component in forecasting; Time series and forecasting; Some Economic Applications

### **Recommended Books:**

1. Lind, Marchal, Wathen, *Statistical Techniques in Business and Economics\**, McGraw-Hill Companies, 12th Edition, 2005.
2. Chaudhry, Sher Mohammad and Kamal, Shahid, *Introduction to Statistical Theory\**, Lahore: Ilmi Kitab Khana, 2009.
3. H.K. Chow et al., *Introductory Statistics\**, 2nd edition, Prentice Hall, 2007.
4. Barrow, M., *Statistics for Economics, Accounting and Business Studies*, 4th edition (Longman), 2005.
5. Agresti, Alan, *Statistical methods for the social sciences*, 3rd Edition, Upper Saddle River, N.J., London, Prentice Hall, 1997.
6. Mc Clave, J.M., Benson, P. G., Sincich, T., *Statistics for Business and Economics* (9th or 10<sup>th</sup> ed.) Pearson Publishing, 2005.
7. Berenson M L., D. M. Levine, and T. C. Krehbiel, *Basic Business Statistics*, 11th edition, Pearson Prentice Hall, 2009.
8. J. Siegel, .Andrew F., *Practical Business Statistics* (5th edition). Boston: McGraw Hill, 2003.
9. New bold, Paul, Carlson, William L. and Thorne, Betty M, *Statistics for Business and Economics* (5th edition), New Jersey: Prentice Hall, 20m.
10. Keller, Gerald and Warrack, Brian, *Statistics for Management and Economics* (5<sup>th</sup> edition). Boston: Duxbury Thomson Learning, 2000.
11. Stephan and Spegal, *Statistics*, latest Edition, Schum's Outline Series.

**\* Strongly Recommended**

### **Additional Readings**

1. Stock, James H. and Mark W. Watson, *Introduction to Econometrics*, 2nd edition, Pearson Addison Wesley, 2007
2. Carlson, William L. and Thorne, Belly, *Applied Statistical Methods for Economics and Social Sciences* (Latest edition). New Jersey: Prentice Hall.
3. Moore, David S, *The Basic Practice of Statistics'* (2<sup>nd</sup> edition). New York: freeman, 2000.

**Topic: 1****Introduction and Development of Monetary Mechanism**

Barter System. Evolution of Money, Classification of Money, Money and Near-Money, Qualities of Good Money Material, Monetary Economy, Function of Money and Measurement of Money. Demand for Money & Supply of Money. Definitions of Money, M I, M2, M3, L etc. Empirical Definition of Money. Monetary Standards: Metallic, Gold and Paper.

**Topic: 2****Value of Money and Demand for Money**

Concept of Value of Money; Measurement of Value of Money; Difficulties in Measuring Changes in Value of Money; Importance of Index Numbers; Types of Index Numbers. Quantity Theory of Money. Fisher's Transactions Approach; Cambridge Cash-Balance Approach; Fisherian and Cambridge Approaches Compared; Keynes' Theory of Money and Prices; Transaction Theories of Demand Portfolio Theories of Demand for Money. Baumol - Tobin Model of Cash Management. Friedman's Restatement of Quantity Theory of Money: Empirical Evidence on the Demand for Money. Demand for Money in Underdeveloped Countries. Income Theory of Money: Income-Expenditure Approach, Saving-Investment Approach; Superiority of Income Theory of Money

**Topic: 3****The Money Supply Process**

Monetary Base, Keynesian Liquidity Preference Framework, Friedman's Modern Quantity Theory of Money. Multiple Deposit Creation: Introducing the Money Supply Process. Determinants of the Money Supply. Understanding Movements in the Monetary Base, Money Multiplier. Deposit Multiplier, Velocity of Money and its variability- Explaining Depositor and Bank Behaviour: 'the Complete Money Supply Model. Regressive Expectation Model. Money Supply in Pakistan. Currency System in Pakistan.

**Topic: 4****Commercial Banking**

Origin and Growth, Meaning and Functions of Bank, The Balance Sheet, Basic operation of a bank. General principles of bank management. Role of Commercial Banks in a Developing Economy, Types of Banks, Banking Systems, Balance Sheet of a Bank, Portfolio Management, Credit Creation, New Trends in Commercial Banking.

**Topic: 5****The Conduct of Monetary Policy: Central Bank**

Structure and Functions of Central Bank. Central Bank role in Economic Growth. Origins and Structure of the Federal Reserve system. Multiple Deposit creation and money supply process. Tool of Monetary Policy. Monetary Base. Conduct of Monetary Policy: Goals and Targets. Tools of Monetary Policy. Advantages and Disadvantages and Impact Analysis of each Policy Tool Central Bank. Monetary Policy in Developing Countries, Financial Intermediaries. Monetization of Public Debt. Ineffectiveness of Stabilization Policies. Targeting interest rate and inflation.

**Topic: 6**

### **Public Finance: Introduction**

Public Finance and Public Sector Economics: Nature and Scope, the Economic Functions and Public Goods: Allocation of Resources, Redistribution of Income and wealth and Stabilization. Pricing Public Goods.

#### **Topic: 7**

##### **a) The Theory of Public Goods**

Fiscal Principles and Concepts: The Traditional Principle of Tax Neutrality is Expanded Principle of Fiscal Neutrality. Exhaustive Vs. Non-Exhaustive Public Expenditures, Income Elasticity of Government Expenditures, Tax Vs. Non-tax Revenues, Microeconomic Vs. Macroeconomic Regulatory Taxes, Tax Base, Tax Rate Relationship; Progressive, Regressive and Proportional Taxes, Marginal. Propensity to Tax and Marginal Vs. Average Tax Rates; Income Elasticity of a Tax Integral Fiscal Non-Neutrality. Tax Efforts and Tax Collection Performance in Pakistan.

##### **b) The Theory of Public Goods**

Public and Private Goods, Pure Public Goods, Should Public Sector be Produced vs. Private Goods? Semi Public Goods, Merit Goods, Free Rider Problem, Externalities and Public Policy.

#### **Topic: 8**

##### **Distributional Equity in Taxation**

The Ability to pay and Economic benefits (received), canon of Taxation, The Optional Income Tax Approach. Optimum Tax and Revenue Collection.

#### **Topic: 9**

##### **Tax Shifting and Incidence**

General Equilibrium vs. Partial Equilibrium: Tax Incidence Analysis. Determinants of Tax Shifting under Partial Equilibrium Conditions. Impacts of Tax Shifting on Price.

#### **Topic: 10**

##### **Fiscal Policy: Public Expenditures and Budget**

Theories of Public Expenditures, Wagner's Law, Efforts of Public Expenditures. Components of Public Expenditures in Pakistan, Sources and Direction of the Growth of Public Expenditures. Kinds of Budget, Surplus, Deficit and Balanced: Preparation of Budget Cycle in Pakistan, Development and Non-Development Budget and its Patterns. Zero Based Budget, Planning, Programming Budgeting System.

### **Recommended books:**

1. Mishkin, Frederic S., (latest edition), *The Economics of Money, Banking and Financial Markets\**. (Sixth edition). Addison Wesley, New York.
2. Pearsons and Tysome, *Monetary Economics\** (1985), Butterworth &co publishers ltd. (2<sup>nd</sup> edition)
3. Rosen and Harvey S., (1999), *Public Finance\**, McGraw Hill.
4. Musgrave R.A. and B.P., *Musgrave (Latest Eds.), Public Finance in Theory and Practice\**, McGraw Hill.
5. Patinkin Don, *Money, Interest and Prices\**, Harper and Row Publishers, (Latest Edition)
6. Lawrence Harris (1985), *Monetary Theory\**, McGraw Hill.
7. Miller, R. L. and David VanHose, (200 I), *Money, Banking' & Financial Markets\**. South Western\*, Singapore.
8. Meenai,S.A (latest edition), *Money and Banking in Pakistan*, Oxford university press Karachi.
9. Luckett G. Dudley, (1984), *Money and Banking*, 3<sup>rd</sup> Ed, McGraw Hill.
10. Bennett T: McCallum, (1989), *Monetary Economics, Theory and Policy*, McMillan.
11. Fredric S. Mishkin, (1995), *Financial Markets and Money*, Harper & Row Publishers.
12. Laidler, David E.W (1996), *The Demand for Money): Theories, Evidence and Problems (Fourth edition)*, Harper & Row, Publishers, New York.
13. Vaish M.C., *Monetary Theory;* (2000), Vikas Publishing House, Delhi.
14. Goldfeld & Chandler (1986), *The Economics of Money and Banking Harper& Row Publishers.*
15. Bernard P. Herber, (1.999), *Modern Public Finance.*
16. Chellieah RJ. (Latest cds.), *Fiscal Policy in Less Developed countries.*
17. David N. I-lyman, (1996), *Public Finance, A Contemporary Application or Harcourt Brace College Publishers;*
18. Govt. of Pakistan, *Economic Survey, Yearly Publication, Ministry of Finance, Economic Advisory Wing, Islamabad.*
19. Stiglitz E., (2000), *Economics of the Public Sector*, W. W. Norton & Co.

\* ***Strongly Recommended***

## **Paper 6: DEVELOPMENT ECONOMICS**

### **Topic: 1**

#### **Economics, Institutions, and Development: A Global Perspective**

How the other three-quarters live, economics and development studies, The nature of development economics. Why study development economics? Some critical questions, The important role of values in development economics. Economies as social systems: the need to go beyond simple economic what do we mean by development? Traditional economic measures. The new economic view of development. Three core values of development. The three objectives of development. Diverse Structures and Common Characteristics of Developing Nations. Some classifications of developing countries common characteristics of developing nations.

### **Topic: 2**

#### **Theories of Underdevelopment and Growth**

Nurkse's Model of Vicious Circle of Poverty, Nelson's low level equilibrium trap. Leibenstein's critical minimum theory. Rosenstein Rodan's Big Push theory. The linear stages theory: Rostow growth model and Harrod Domar growth model. Structural change models. International dependence revolution: Neocolonial Dependence Model, The False-Paradigm Model, The Dualistic-Development Thesis. Dualistic theories. The Neo-classical counter revolution: Challenging the Statist Model: Free Markets, Public Choice, and Market-Friendly Approaches. Traditional ("Old") Neoclassical Growth Theory. New growth Theory. . Endogenous Growth Theory. Criticisms of the New Growth Theory. Theories of Development: Reconciling the Differences. Adam Smith theory of economic growth, Ricardo theory of economic growth. Classical theory of economic growth. Karl Marx theory of economic growth. J.E Meade theory of economic growth. Schumpeter theory of economic growth. Kaldor theory of economic growth.

### **Topic: 3**

#### **Historic Growth and Contemporary Development: Lessons and Controversies**

The Growth Game. The Economics of Growth: Capital, Labor, and Technology. Capital Accumulation. Population and Labor Force Growth. Technological Progress. The Historical Record: Kuznets's Six Characteristics of Modern Economic Growth. The Limited Value of the Historical Growth Experience: Differing Initial Conditions.

### **Topic: 4**

#### **Growth, Poverty and Income Distribution**

The Growth Controversy. Some Basic Concepts: Size and Functional Distributions of Income; Size Distributions, Lorenz Curves, Dualistic Development and Shifting Lorenz Curves: Some Stylized Typologies. 'GINI Coefficients and Aggregate Measures of Inequality, Functional Distributions, A Review of Evidence: Inequality and Absolute Poverty in Third World Countries. Inequality: Variations among Countries, Absolute Poverty: Extent and Magnitude The Human Poverty Index. Economic Characteristics-of Poverty Groups Rural Poverty. Women and Poverty. Ethnic Minorities, Indigenous Populations, and Poverty. Income Levels, Growth, and the Extent of Poverty: The Kuznets Hypothesis and Other Tests Redefining Development Goals: Growth with Improved Income Distribution The Role of Economic Analysis: Redistribution from Growth. The Range of Policy Options- Some basic Considerations.

**Topic: 5****Population Growth and Economic Development: Causes, Consequences, And Controversies**

The Basic Issue: Population Growth and the Quality of Life A Review of Numbers: Population Growth—Past, -Present, and Future. World Population Growth through History. Structure of the World's Population. The Hidden Momentum of Population Growth. The Demographic Transition. The Causes of High Fertility in Developing Countries: The Malthusian and Household Models. The Malthusian -Population Trap. Criticisms of the Malthusian Model. The Microeconomic Household Theory of Fertility. The Demand for Children in Developing Countries. Some Empirical Evidence. Implications for Development and Fertility. The Consequences of High Fertility: Some Conflicting opinions. Goals and Objectives: Toward-a Consensus Some Policy Approaches. What Developing Countries Can Do? What the Developed Countries Can Do: Resources, Population, and the Global Environment. How Developed Countries Can assist Developing Countries with Their Population Programs.

**Topic: 6****Unemployment: Issues, Dimensions and Analyses**

The Employment Problem: Some Basic Issues Dimensions of LDC Unemployment: Evidence and Concepts. Employment and Unemployment: Trends and Projections. Four Dimensions of the Employment Problem. Labor Force: Present and Projected. Labor Underutilization: Some Definitional Distinctions. Linkages among Unemployment, Poverty, and Income Distribution. The Phenomenon of Jobless Growth and the Output-Employment Lag. Economic Models of Employment Determination. The Traditional Competitive Free-Market Model. Output and Employment Growth: Conflict or Congruence? Appropriate Technology and Employment Generation., The Price-Incentive Model.

**Topic: 7****Urbanization and Rural-Urban Migration: Theory and Policy**

The Migration and Urbanization Dilemma Urbanization: Trends and Projections. The Urban, Informal Sector. Women in the informal Sector. Urban Unemployment Migration and Development. Toward an Economic Theory of Rural-Urban Migration A Verbal Description of the Todaro Model. A Diagrammatic Presentation. Five Policy Implications The Shape of a Comprehensive Migration and Employment Strategy.

**Topic: 8****Education and Development**

Education and Human Resources. Education in Developing Regions. Public Educational Expenditure. Enrollments. Literacy. Costs and Earnings. The Gender Gap: Women and Education. The Economics of Education and Employment. Educational Supply and Demand: The Relationship between Employment Opportunities and Educational Demands. Social versus Private Benefits and Costs. Education, Society, and Developments Some Issues Education and Economic Growth. Education, Inequality, and Poverty. Education, Internal Migration, and the Brain Drain. Education of Women. Fertility, and Child Health. Education and Rural Development. Summary and Conclusions: Major Educational Policy Options. Policies Largely External to Educational Systems. Policies Internal to Educational Systems.



**Topic: 9****Agricultural, Industry and Rural Development**

The Imperative of Agricultural Progress and Rural Development. Agricultural Stagnation and Growth Since 1950. The Structure of Third World Agrarian Systems The Important role of Women. The Economics of Agricultural Development: Transition from Peasant Subsistence to Specialized Commercial Farming. Toward a Strategy of Agricultural and Rural Development: Some Main Requirements. Agriculture vs. Industry: Development Debate. Lewis' Model of surplus Labor. Rains 'Fei Model and its critical review. Role of Agriculture and Industry. Land Holdings, Green Revolution and its Performance. Need for Industrialization. Industrialization and its financing mechanism. Problem of Sectoral Dualism. Why Green Revolution? The Spread of Green Revolution in Pakistan and its Status/Contributions.

**Topic: 10****Environment and Development**

Economics and the Environment. Environment and Development: The Basic Issues. The Scope of Environmental Degradation: A Brief Statistical Review. Rural Development and the Environment: A Tale of two Villages. Traditional Economic Models of the Environment. Urban development and Environment. .The Need for Policy Reform. The Global Environment: Rain Forest Destruction and Greenhouse Gases. Policy Options in Developing and Developed Countries.

**Topic: 11****Trade Theory and Development Experience**

The Importance of International Trade and Finance. Five Basic Questions about Trade and Development. The Importance of Trade for Development: A Statistical Review. The Terms of Trade and the Prebisch-Singer Thesis. The Traditional Theory of International Trade. Some Criticisms of Traditional-Free-Trade Theory in the Context of Third World Experience. Some Conclusions on Trade and Economic Development: The Limits of Theory. Trade Strategies for Development: Export Promotion versus Import Substitution. Trade Policies of Developed Countries: The Need for Reform.

**Topic: 12****Balance Of Payments, Third World Debt, and the Macroeconomic Stabilization Controversy**

The Balance of Payments Account. Financing and Reducing Payments Deficits. The Third World Debt Crises. Attempts at Alleviation: Macroeconomic Instability, IMF Stabilization Policies, and Their Critics.

**Topic: 13****Foreign Finance, Investment and Aid: Controversies and Opportunities**

The International Flow of Financial Resources. Private Foreign Direct Investment and the Multinational Corporation. Multinational Corporations: Size, Patterns, and Trends. Foreign Aid: The Development Assistance Debate. Conclusions: Toward a New View of Foreign Aid.

### **Recommended Books:**

1. Todaro, M.P, Economic Development\*. Latest Edition, Heinemann,London.
2. Balasubramanyam V and Hall. S (1992, cds) Current Issues in Development Economics. London
3. Chenery H.B and Srinivasen. Hand book of Development Economics\*, Vol I & II Amsterdam (1988, CDS) North Holland.
4. Cypher J. M and Dietz James (2004) The process of Economic development\*.
5. Ghatak Subarat, (2003), Introduction to Development Economic, Routledge\*, Taylor And Francis Group, London /New York
6. Herrick B, And Kindlebergerc, (Latest Edition), Economic Development, McMillan New York
7. Jones H,G. An Introduction To Modern Theories Of Economic Growth,(Latest Edi) McGraw Hill
8. Hirshman A.O 1960 Strategy of Economic Development, Yale University Press.
9. Mahboob ul Haq Centre for Human Resource Development Human Development in South Asia. Annual Report Islamabad
10. Mahboob ul Haq, Poverty Curtain,
11. A profile of Poverty in Pakistan (In collaboration with UNDP)
12. Meier Gerald M, Leading Issues In Economic Development\* (Latest Issue) Oxford Uni Press
13. Thirlwall A,P (2003), Growth And Development \*,With Special Reference To Developing Economics7th Edition ,Palgrave Publisher.
14. UNDP , Human Development Report , Annual Reports.
15. Van Den Berb H,(2001) Economics Growth Development, McGraw hill
16. William Easterly, Growth without Development, A case Study Of Pakistan, World Bank.
17. World bank, world Development Report, Annual Report,(Various Issues)
18. William Easterly, Growth without development, A Case study of Pakistan, World Bank.
19. Yotopolus Pan A And Nugent Jeffery B, Economics of Development, Empirical Investigation (Latest issue). *Harper And Row Publishers, London/ New York*

**(\*Strongly Recommended)**

## **Paper 7: ISLAMIC ECONOMICS**

### **Topic: 1**

#### **Introduction: Islamic Economics**

Definition of Islamic Economics, Nature of Islamic Economics, Need and Importance of Islamic Economics. Islamic economic system and Other Economic Systems. Brief Introduction of Basic Values of Islam, Taqva, Halal and Haram, Justice, Benevolence, Equality, Brotherhood and Cooperation as Determinants of Economic Behaviour and Policies. Sources of Islamic economics: the Holy Quran, The Sunnah of Allah's Apostle (S.A.W), Ijtihad, Usage or Custom, Expedience. Islamic Code of Business Ethics.

### **Topic: 2**

#### **Major Economic Thoughts: Contribution of Scholars**

Contribution of some Earlier Muslim Scholars in the Development of Islamic Economics (Imam Abu Yousuf, Imam Abu Ubaid AI Qasim" Ibn-e-Khaldoon, Imam Ibn-e-Taimiah, Shah Waliullah Dehlvi, Nasser-ud-Din Tusi).

### **Topic: 3**

#### **Theory of Consumption and Production**

Meaning and Importance, Islam and Consumption of Wealth, Moderation, Theory of Consumer's Behaviour in an Islamic Society. Production: Meaning, Islamic Approach to Production, Rights and Limits of Ownership in Islam. Ownership of land. Tenancy (Muzarat). Partnership (Shirakat). Modarbah.

### **Topic: 4**

#### **Behaviour of Firm under Islam Framework**

Moral Values and Attitude of the Firm. Guiding Principles of the Firm's Policy, Objectives of an Islamic Firm, Al-Hisba and Islamic Firm, Islamic Firm under different market conditions. Islam and Price Mechanism.

### **Topic: 5**

#### **Distribution in Islamic Economy**

Meaning, Quranic Emphasis on the Circulation of Wealth. Rent, Profit, Wages, Dignity of Labour. Measures to Stop Concentration of Wealth: Legal Measures, Optional Measures. Islamic Law of Inheritance.

### **Topic: 6**

#### **Prohibition of Interest and Interest Free Banking**

Definition of Interest, Riba in the period of Ignorance, Definition of Riba or Interest in Islam, Kinds of Interest, Distinction between Trade and Riba, Moral, Social, Economic Importance of Prohibition of Interest, Western Justification of interest. Interest-Free Banking, Functions of the Bank in Interest-Based Economy and Interest-Free Banking. Need for Interest-Free Banking, Banking in the Economic System of Islam, Model of Interest-Free Banking, Interest-Free Banking in Pakistan, Current Modes of Interest-Free Banking, Islam and Insurance Islamic Modes of Financing: Bai Salam, Bai Murabaha, Bai Muajjal, Ijara, Rent.

### **Topic: 7**

#### **Fiscal Policy**

Meaning, Objectives, Instruments of Fiscal Policy, Islamic State and its Fiscal Policy, Zakat as an Instrument of Fiscal Policy, Effects of Zakat on the Allocation, Zakat and Economic Stability. The Institution of Bait-ul-Mal, Evolution and Sources of Revenue

Bait-ul-Mal, Heads of Expenditure of Bait-ul-Mal. Theory of Taxation in Islam: Makas, Al-Makas, Al-Makaas, The Period of the Rightly Guided Caliphs, Principles of Tax Policy in Islam, Public Expenditure in Islamic Economy, Zakat and Ushr Ordinance 1980.

**Topic: 8**

**Money and Inflation in Islamic Economy**

Gold, Money, Paper Money and Credit Money. Central Banking and Monetary Policy in Islamic Framework. Central Banking and Monetary Policy in Islam. Inflation Vs. Design of Capital market. Monetary Policy in an Islamic Framework, Inflation: Definition, Kinds, Effects, Causes. Islamic Economy and Inflation. Special Measures to Control Inflation. Built in Stabilizers. Other Measures to Control Inflation. Fiscal Measures, Direct Action of the State.

**Topic: 9**

**Macro economic Concepts and Economic Role of Islamic State**

Consumption, saving and Investment Functions in Islamic Environment. Determents of Islamic Consumption Function, Concept to help others, Welfare and Religious believes. The Islamic State: Its Meaning, Aims and Functions, Economic Role of the Islamic State in the Light of its Duties.

**Topic: 10**

**Economic Planning and Development in Islam**

The Meaning of Economic Planning, Economic Development in Islam, Goals and Purposes of the Islamic Policy of Economic Development, Measurement of Economic Progress, Distinction between the Concept of Development in the Islamic Economy and the Current Economy, Economic Struggle and Inducement to Economic Development in the Holy Quran And Sunnah, Inducement to Struggle for Collective Economic Progress, Opinion of the Fuqaha on Economic Development, Measures for Economic Development in the Period of the Right Guided Caliphs. Economic Planning and Islam: Definition and Pre requisites of Planning, Islam and Planning, Planning and spending of Wealth, Economic Planning & Production of Wealth, Planning and Exchange of Wealth, Planning and Distribution of Wealth, Kinds of Planning, Goals of Planning, Selection of Goals, Targets, Strategy, Priorities, Procurement of Finance.

**Topic: 11**

**The Islamisation Process in Pakistan**

The Islamisation of Banks. Implementation of Zakat Usher in Pakistan. A brief Survey of Changes in Economic Structure and Conditions since the Holy Prophet (regarding Transport/communication}, Business Forms, Production of Goods, Money and Banking).

**Topic: 12**

**New Emerging Issues and Challenges**

Current Situation and Proposed Changes. Islamic View of International Economic Institutions and Modes of International Cooperation. Islamic View of Globalization. Quality Identification of Goods, Merits and Trade. Fair prices Vs. Market Price etc.

### **Recommended Books**

1. Islamic economics: Dar A.II & Moo Akram Ilmi Kitab Khana\*, Lahore (Latest edition.)
2. Islamic Economics: Theory and Practice, A Comparative Study\*, M.A Mannan. Cambridge, Hodder and Stoughton, 1986 (or Latest edition.).
3. Consumption Function in an Islamic Economic Framework\*, M. Fahim Khan, International Centre for Research in Islamic Economics, King Abdul Aziz Univ, KSA.

### ***\* Strongly Recommended***

### **References:**

1. Ahmad, Khurshid, (latest edition), Fiscal Policy and Revenue Allocation in Islam, International Islamic University, Islamabad.
2. Mannan M.A. (1995), Developing a System of Financial Instruments IRTI, Islamic Development Bank, Jeddah.
3. Badawi, Imam Abu Abaid AI-Qasim Muhammad A. Zaki, Kitab ul Amwal: ,Zakat.and Social Justice, Islamic Council of Europe, London, 1979.
4. Chapra T M., The Economic System of Islam, University of Karachi, 1991.
5. Chapra, Umer, Monetary Policy in an Islamic Economy, in Money and Banking in Islam, Institute of Policy Studies, Islamabad.
6. Ghazanfar S.M., (2003), Medieval Islamic Economic Thoughts, Routledge Publishers
7. Khan M. Fahim, (1995), Human Resource Mobilization Through the Profit, Loss Sharing Based financial System, IRTI, Islamic Development Bank Jeddah.
8. Khan, Tariq ullah, (1996), Practice and Performance of Mudarba, A case study of Pakistan, IRTI, Islamic Development Bank, Jeddah.
9. Khurshid, Ahmad, Elimination of Riba: Institute of Policy Studies, Islamabad.
10. Mahdi, M. Ahmad, (1995), Islamic Banking Modes for House Building Finance, Islamic Development Bank, Jeddah.
11. Mannan M.A, (1996), Financing Development in Islam, IRTI, Islamic Development Bank, Jeddah
12. Naqvi Syed Nawab Hyder Ethics and Economics: . Leicester, The Islamic Foundation.1981.
13. Nomani, Farhad & Rehnuma., Ali, Islamic Economic Systems: -Zed Rooks Ltd., London, 1994.
14. Nuti, D. Haris, (1.995), The Economics of Participation, IRTI, Islamic Development Bank, Jeddah.
15. Siddiqui, M.N; Muslim Economic Thinking, Leicester, The Islamic Foundation. 1985.
16. Tago, Usman justice, Introduction to Islamic Finance, (2000), Idara-tul-ma'arif, edition.
17. Yusaf, Imam Abu, kita bur kharaj, Lahore, Islamic book centre, 1979.

**Paper 8: INTERNATIONAL ECONOMICS**

**Topic: 1**

**Introduction to International Trade**

The relevance of international economics, The scope of international economics, The role of trade, The role of international monetary relations, The mercantilist thesis on trade, Three basic questions, Absolute advantage, Comparative advantage, The case of Greek bananas, Comparative costs expressed in money, Opportunity cost.

**Topic: 2**

**International Equilibrium with Increasing Costs**

Increasing opportunity costs, Community indifference, General equilibrium in a single economy, A neoclassical demonstration of comparative advantage, Differences in tastes as a basis for trade, Offer curves, International equilibrium, The terms of trade, East-West trade.

**Topic: 3**

**The Heckscher-Ohlin Model and Alternative Trade Theories**

The basic assumptions of the Heckscher-Ohlin model, The meaning of factor intensity, Factor abundance, The main propositions of the Heckscher-Ohlin model, The Rybczynski theorem, The Heckscher-Ohlin theorem, The Stolper-Samuelson theorem, The factor-price equalization theorem, Empirical testing of the Ricardian theory, The Leontief paradox, Explanations of the Leontief paradox, The specific factors model, Empirical challenges to traditional theories, Increasing returns, Monopolistic competition and international trade, Linder's thesis, Technological gap and product cycle

**Topic: 4**

**Growth and Trade**

The nature of the growth process, The sources of economic growth, Classification of technical progress, The effects of growth on small countries, The scenario, Factor accumulation, Technical progress, The effects of growth on large countries, The terms of trade effect, The effect of growth on social welfare, Growth in the world economy, The Perbisch-singer thesis.

**Topic: 5**

**The Theory of Tariffs**

Types of tariff, The partial equilibrium analysis of the tariff, The general equilibrium analysis of the tariff: The small country case, The effects of the tariff on a large country, Tariffs and world welfare, The tariff as a production subsidy plus a consumption tax, Measuring the costs of protection, Effective protection, Empirical evidence on effective protection, The optimal tariff, Tariff wars in the 1930s, The theory of domestic distortions, The infant-industry argument, Other economic arguments for protection, Non-economic arguments for protection, Candle makers Versus The Sun

**Topic: 6**

**Instruments of Commercial Policy and Customs Unions**

Export taxes, Ghana's export taxes on cocoa, Export subsidies, Quantitative restrictions International cartels, OPEC, The voluntary export restraint on Japanese autos, Dumping, Other Nontariff barriers, The Poitiers plan, Highlights of U.S. tariff history and trade liberalization, Preferential trading arrangements: some definitions, The nature of

preferential trading, The theory of the second best: a digression, An outline of the theory of customs unions, An illustration of trade creation and trade diversion, Consumption effects, Dynamic effects of customs unions, The common external tariff, Common agricultural policy, Preferential trading among developing economies, The free trade agreement between Canada and the United States.

#### **Topic: 7**

##### **The Foreign Exchange Market and The Balance of Payments**

The basis of the foreign exchange market, Organization of the market, Exchange rate systems, The international character of the foreign exchange market, Exchange risk, Forward exchange, Covered interest arbitrage, The Eurodollar market, BOP: Definitions and conventions, Balance of payments accounting The US balance of payments, Reporting difficulties, Balance of payments equilibrium, Accounting balances, The US trade balance, The international investment position, The international investment position, The US foreign debt, The Balance of payments problem: A basic model, The basic assumptions, International equilibrium, The adjustment process, Countertrade, Temporary versus fundamental disequilibria.

#### **Topic: 8**

##### **The Price and Income Adjustment Mechanism**

The partial equilibrium model, Schedules for imports and exports, Equilibrium in the commodity markets, The effects of devaluation, Price elasticities of demand for imports and exports, The J-curve effect, Supply and demand for foreign exchange, Nontraded goods: A digression, The price-specie-flow mechanism, Effective exchange rates, Real exchange rates, The effect of dollar appreciation on US textile and apparel imports, The income adjustment mechanism: Income determination in a closed economy, Income determination in an open economy, The foreign trade multiplier, Devaluation: absorption versus elasticities, Policy mix for internal and external balance, Foreign repercussions, Macroeconomic interdependence in the real world, Direct controls Switching policies during the great depression.

#### **Topic: 9**

##### **Fiscal and Monetary Policy For Internal, External Balance And Exchange Rate**

The IS-LM model, Balance of payments equilibrium: The external balance schedule, The effects of fiscal and monetary policy, The compatibility of internal and external balance, The assignment problem, Criticism of the fiscal monetary policy mix, Payments imbalances and the supply of money, The monetary process, Flexible versus fixed exchange rates: The theory of employment with flexible exchange rates, The IS-LM model with flexible exchange rates, Exchange-rate overshooting, Stabilization policy: a digression, Exchange-rate regimes and stabilization, The policy mix of the first Reagan administration, Further arguments for and against flexible exchange rates.

#### **Topic: 10**

##### **The Monetary Approach and the International Monetary System**

An outline of the monetary approach, The basic model of the monetary approach, Policy implications of the monetary approach, Reconciliation between the monetary and traditional approaches, The purchasing-power-parity theory, Big Macs and the PPP theory, The monetary approach to exchange rate determination, the International Monetary System: Types of international monetary systems, The characteristics of a good international monetary system, Adjustment, liquidity, and confidence, The gold standard (1870-1914), The interwar period, The Breton woods system (1944-1971), The

present system of managed flexibility, International cooperation from the plaza to the louver, The European monetary system

### **Recommended Books:**

1. Chacholiades, Miltiades, *International Economics\**, (Latest Edition), *McGraw Hill Book Company. New York. London*
2. Caves Richard, E., and Jones Ronald W., *World Trade and Payments: An Introduction\**, Latest Editions. *Lillie, Brown and Company, Boston. Toronto.*
3. Donomick Salvatore B., *International Economics\**. (Latest Edition), *Prentice Hall.*
4. Grube! Herbert c., *International Economics*, (Latest Edition) Richard D. Irwin Inc., Honcwood, Illihois.
5. Petr Holindcr & Thomas A., Pugel., *International Economics*. 9th Edition 1996.
6. Sodersten B. and Geoffry Read., (1994). *International Economics*, *MacMillan Press ltd*
7. *The Global Competitiveness, Report, 1999, World Economic Forum, Oxford University*
8. World Bank. *World Development Report, 1986. Oxford University press.*

**\* Strongly Recommended**

### **Additional Readings:**

1. Baldwin Robert L and Richardson David J., (1986). *International Trade and Finance*, Lillie Brown and Company, Boston, Toronto.
2. Moran Theodore H., (1985). *Multinational Corporations: The Political Economy of Foreign Direct Investment*. Lexington Books, Toronto, Massachusetts.
3. Krugman and Obstfeld, *International Economics: Theory and Policy*. *Addison Willey (1998)*.



## **Paper 9: ECONOMETRICS**

### **Topic: 1**

#### **Introduction to Econometrics**

Definition and scope of econometrics; Methodology of econometrics; Types of Econometrics; The Role of the Computer

### **Topic: 2**

#### **Two Variables Regression Analysis**

Some basic ideas of Regression analysis; OLS estimation; Interpretation and economic meanings of the Results; Goodness of fit; Properties of the OLS estimator; Scaling and Units of Measurement; Functional Forms of Regression Models; Interval estimation; Hypothesis Testing; Prediction; Some extensions of the simple linear regression model.

### **Topic: 3**

#### **Multiple linear regression analysis**

Some basic ideas; OLS estimation; Interpretation and economic meanings of the Results; Multiple Coefficient of Determination; Hypotheses testing;  $R^2$  and F; Testing for parameter stability; Prediction.

### **Topic: 4**

#### **Dummy Variables And Qualitative Response Regression Models**

Illustration of the use of a Dummy Variable; Extension to more than two categories and to multiple sets of dummy variables: ANOVA models, ANCOVA models; Dummy variable alternative to Chow test ; Interaction Effects; Seasonal Analysis; Piecewise linear regression. Introduction of Qualitative Response Regression Models; The linear probability model; The Logit model; The Probit model; The Tobit model

### **Topic: 5**

#### **Multicollinearity**

Concept of Multicollinearity; Consequences of Multicollinearity problem; Methods for detection of Multicollinearity problem; Remedial measures for Multicollinearity problem; Estimations and Interpretations.

### **Topic: 6**

#### **Heteroscedasticity**

Heteroscedasticity and its Implications; OLS estimation in the presence of Heteroscedasticity; Generalized least squares (GLS); Detection of Heteroscedasticity; Remedial measures.

### **Topic: 7**

#### **Autocorrelation**

The nature of autocorrelation; OLS estimation in the presence of autocorrelation; Detection of autocorrelation; Remedial measures; Misspecification vs pure autocorrelation; Newey-West procedure; Forecasting with auto-correlated disturbances.

### **Topic: 8**

#### **Model Specification Errors**

Introduction to Model specification; Types of Specification errors; Consequences and Tests of Specification Errors; Errors of Measurement; Approaches in Choosing an Appropriate Model.

## Topic: 9

### **Dynamic Econometric Models**

Introduction; Distributed Lag Models and Estimations: The Koyck Transformation, The Almon Transformation, Other models of Lag Structures; Autoregressive Models and estimation: The Partial Adjustment Model, The Adaptive Expectations Model; Tests of Autocorrelation in Autoregressive Models.

## Topic: 10

### **Simultaneous-Equation Models**

Simultaneous Equation Models; Various Types of simultaneous equation Models; The identification problem; Estimation of Simultaneous Equation Models

### **Recommended Books:**

1. Gujarati, D. N. and Porter, D.C., *Basic Econometrics\**, 5th Edition, McGraw Hill, 2009.
2. Dougherty, Christopher, *Introduction to Econometrics\**, 3<sup>rd</sup> Edition, Oxford University Press, 2007.
3. Wooldridge, Jeffrey M, *Econometric analysis of cross section and panel data\**, Cambridge, Mass, MIT Press, 2002.
4. Koutsoyiannis, A. *Theory of Econometrics\**, McMillan, 1978.
5. Greene, William H, *Econometric analysis\**, 5<sup>th</sup> Edition, Upper Saddle River, N.J., [Great Britain], Prentice Hall, 2003.
6. Stock, James H, *Introduction to Econometrics*, Addison-Wesley series in Economics. 2<sup>nd</sup> Edition, Boston, Pearson/Addison Wesley, 2007.
7. James H. Stock and Mark W. Watson, *Introduction to Econometrics*, 2nd edition,
8. Addison Wesley, 2007.
9. Heij, C, *Econometric methods with applications in business and economics* Oxford, Oxford University Press, 2004.
10. Johnston, J, *Econometric methods*, 4th ed New York, McGraw-Hill, 1999.
11. Maddala, G. S, *Introduction to Econometrics*, 3<sup>rd</sup> Edition, Chichester, Wiley, 2001.
12. Wooldridge, Jeffrey M, *Introductory Econometrics: a modern approach*, 3<sup>rd</sup> Edition, Ohio, Thomson/South-Western, 2006
13. Hayashi, Fumio, *Econometrics*, Princeton, N.J, Princeton University Press. 2000
14. R Carter Hill, William E Griffith and Guay C., *Principle of Econometrics*, Lim (Wiley), 2007
15. Davidson, Russell, *Econometric theory and methods*, New York, Oxford University Press, 2004.
16. Davidson, J., *Econometric Theory*, Blackwell, Oxford, 2000.
17. Wonnacot, R.J. *Econometrics*, John Wiley, New York, Latest Edition.
18. Madnani, G.M.K, *Introduction to Econometrics Principles and Application*, (Latest Edition).
19. Pindyck, Rubinfeld, *Econometrics models and economic forecasts*, 3<sup>rd</sup> Edition.
20. Griffiths, Judge, *The Theory and Practice of Econometrics*, John Willy and Sons, Latest Edition.

\* **Strongly Recommended**

## **Research Articles**

1. Abadir (2002). Notation in Econometrics: a proposal for a standard. *Econometric Journal*, Vol. 5, issue I, pages 76-96.
2. Abadir and Jan R. Magnum (1993). OLS Bias in a Non-stationary Auto regression, *Hconomelric the OIJl*, Vol. 9, issue I, pages X 1-93.
3. Chaudhry, Imran Sharif (2009). An Investigation of Co-integration and Granger Causality between Trade Openness and Economic Growth in Pakistan. *Oeconomica, Studia Universitatis Babes Bolyai*, Issue.1, pp. 87-97.
4. Don Andrews (2003). A Bias-Reduced Log-Periodgram Regression Estimator for the Long Run, Memory Parameter, *Econometrica*, 71 (2) 675-712
5. Gunnar, Bardsen, (1999). Economic theory and econometric dynamics in modeling wages and prices in the United Kingdom, *Empirical Economics*, 24, (3), 483-507.
6. Rigobon, Roberto, Sack, Brian and Rigobon, Roberto (2004). The impact of monetary policy on asset prices. *Journal of Monetary Economics* 51 (8) pp.1553-1575.
7. Joshua, Angrist, (2001). Estimation of limited dependent variable models with dummy endogenous regression : simple strategies for empirical practice *Journal of Business and Economic Statistics*, 19, (1), 2-16
8. Luc, Bauwen, (1994). Estimating end use demand : a Bayesian approach , *Journal of Business and Economic Statistics*, 12, (2), 221-31
9. Manuel, Arellano, (1992). Female labour supply and on the job search: an empirical model estimated using complementary data sets. *Review of Economic Studies*, 59, (3), 537-59.
10. Stephen, Roy Bonal (1991). Some test of specification for panel data: Monte Carlo evidence and an application to employment equation. *Review of Economic Studies*, 58, (2), 277-97.

## **Paper 10: FINANCIAL ECONOMICS**

### **Topic: 1**

#### **Financial Markets and Financial Instruments**

Real Assets versus Financial Assets, The Role of Financial Assets in the Economy Users of the Financial System. Types of Financial Instruments, Characteristics of Financial Instruments, Financial Innovation.

### **Topic: 2**

#### **The Term Structure of Interest Rates**

Theories of Term Structure: The Expectations Hypothesis, Liquidity Preference, Market Segmentation Theory, Preferred Habitat Theory. Interpreting the term structure. Measuring the term structure.

### **Topic: 3**

#### **Introduction to futures and options**

Defining options and futures, Understand rights and obligations of the parties involved in various types of options, Familiarity with the basic taxonomy used in options analysis.

### **Topic: 4**

#### **Markets, Trading and Financial Intermediation**

Types of Markets; Types of Traders; The Trading Process; Defining Financial Intermediation; Different Types of Financial Intermediaries; The Role of Banks in Financial Intermediation.

### **Topic: 5**

#### **Asymmetric Information and Capital Structure Theory**

Moral Hazard; Adverse Selection; Solutions; Defining Capital Structure; Modigliani and Miller Propositions I and II; how taxes affect financing choices; Dividend policy issues. CAPM, APT.

### **Topic: 6**

#### **The Institutional Environment and Finance**

The Regulatory Role of the Government; How the Legal Environment Affects Access to External Finance; How the Legal Environment Affects Financial Decisions

### **Topic: 7**

#### **Financial Development and Growth**

Defining Financial Development; the Finance-growth Nexus; Bank Based versus Market Based Economies.

### **Recommended Books:**

1. Bodie, Kane and Marcus, Investments\*, 5<sup>th</sup> Edition.
2. Grinblatt and Titman, Financial Markets and Corporate Strategy, 2<sup>nd</sup> Edition.
3. Cecchetti, Money, Banking and Financial markets\*.
4. Elton and Gruber, Modern Portfolio Theory and Investment Analysis
5. Bebczuk, R. N. (2003) Asymmetric Information in Financial Markets: Introduction and Applications. Cambridge University Press
6. Copeland, Weston and Shastri (2005). Financial Theory and Corporate Policy. 4<sup>th</sup> Edition.
7. Livingston, M. (1999). Money and Capital Markets. 3<sup>rd</sup> Edition (or later).
8. William F. Sharpe & Gordon J. (1996), Investments 5<sup>th</sup> Ed, Prentice Hall.
- a. Hughes & D.J. Storey (1994), Finance and the Small firm (ed.), Routledge, London.
9. Bruno Solnik (1996), International Investments 3<sup>rd</sup> Ed: Addison Wesley Publishing Company.
10. Robert C. Radcliff (1994), Investments, concepts, analysis, strategy Harper Collins College Publishers.
11. Donald E. Fischer & Ronald J. (1997), Security Analysis & Portfolio Management 6<sup>th</sup> Ed, Prentice-Hall of India, Delhi.
12. Edwin J. Elton & Martin J. Gruber (1997), Modern Portfolio Theory and Investment Analysis 4<sup>th</sup> Ed, John Wiley & Sons

**\* *Strongly Recommended***

## **Paper 11: MANAGERIAL ECONOMICS**

### **Topic: 1**

#### **Nature, Scope and Overview of Managerial Economics**

The Nature and Scope of Managerial Economics. The Managerial decision making process. Theory of the firm. Profit maximization, Cost Minimization Economic optimization: Economic relations of variables. The Incremental concept in Economic Analysis. Demand, Supply and Equilibrium.

### **Topic: 2**

#### **Demand Analysis, Estimation and Forecasting**

The Basis for Demand. The Market Demand function. Demand sensitivity analysis: Elasticity, Price Elasticity of Demand with Managerial applications. Income Elasticity of Demand with Managerial. Applications. Application of Regression Analysis: Demand estimation. Demand forecasting.

### **Topic: 3**

#### **Product and Cost Analysis**

Production functions. Total, Marginal and Average Product. Revenue and Cost in Production. Production function estimation. Productivity Measurement. Homogenous and Homothetic Production Function. Short run and long run. Cost curves. Learning curves and application. Cost-value-profit analysis. Cost estimation

### **Topic: 4**

#### **Linear Programming**

Production planning for a single product Production planning for a multiple products" Graphic specification and solution. Simplex method of solution. The dual in linear programming. Shadow prices in linear programming.

### **Topic: 5**

#### **Decision Making Under Risk and Uncertainty**

Introduction. Risk Analysis of Decision Alternatives. Adjustment for Risk in Decision Making. The Expected Value Criterion. The Standard Deviation Criterion. The Coefficient of Variation Criterion. The Certainty Equivalent Criterion. The Maxima and Maximax Criterion. The Decision Tree and Joint Probabilities. Optimal decision Strategy. Limit Pricing and preventing entry.

### **Topic: 6**

#### **Pricing Analysis and Decisions**

A Review of Market Structures and basic Pricing Models. Perfect Competition. Monopoly. Monopolistic Competition. Oligopoly. Selected Pricing Models. Marginalist Pricing. Mark up pricing. New Product Pricing. Oligopoly Model. Contestable Markets. Pricing Strategies for Firms and Market Power Monopolistic Competition. Price Discrimination, Monopsony and Price Product.

### **Topic: 7**

#### **A Critique of Traditional Theory of Firm**

Full Cost Pricing Model. Mark-up Pricing Model. Problem from Marginal Price Formula. Limit Pricing Models.

**Topic: 8****Managerial Theories and Models of the Firm**

Baumol's Theory of Sales Revenue Maximization. Marris's Model of Managerial Enterprise. Williamson's Model of Managerial Discretion Topics, Behavioral Model by Cyert and March.

**Topic: 9****Capital Budgeting and Investment**

Pre-requisites of Capital Budgeting. Investment Criteria and Decisions. Cash flow estimation, Internal Rate of Return, Profitability-Index Criterion and other criterion. Optimal Capital Budget.

**Recommended Books:**

1. Douglas, E. J., Managerial Economics\*, Prentice Hall, (1990).
2. Salvatore, D. Managerial Economics\*, McGraw Hill, (2001).
3. Hirschey, M. Managerial Economics\*, (10th edition) U.S.A. Thomson South-Western, (2003)
4. Hirschey, M. and J.L. Pappas; Fundamentals of Managerial Economics\*, Dryden Press, (1998).
5. Keat, P., and P., Young, Managerial Economics; economic tools for today's decisions markers (4th Edition) Pearson (2003).
6. Keat, P., and P., Young, Managerial Economics; MacMillan, (1992).
7. Koutsoyiannis, A., Modern Microeconomics, MacMillan, (1979).
8. Mansfield .E., (1998), Managerial Economics, Theory, Application and Cases. W. W. Norlion & co.
9. Michael R., Baye, (2000), Managerial Economics and Business Strategy, McGraw Hills.
10. Pappas, James,' Brigham Eugene F and Hirschey Mark., (latest edition), Managerial Economics, Dryden Press, Chicago.
11. Thomas, Maurice,' Managerial Economics: In a Global Economy (71h Edition) New York: McGraw Hills, (2002).

**\* Strongly Recommended****Suggested Readings (Articles):**

1. Goering, Gregory E. "Managerial Style and the Strategic Choice of Executive Incentives. *Managerial & Decision Economics* 17<sup>th</sup> January/ February 1996, 71-82
2. Chevalier, Judith A., and Scharftein, David S. "Capital-market Imperfections and Countercyclical Markups: Theory and Evidence. *American Economic Review* 86 (September; 1996): 703-725.
3. Kohoe, Michale R "Quality Uncertainty and Price in Monopoly Markets". *Journal of Industrial Economics* 44 (March 1996) 25- 32
4. Swaney, James A. "Comparative Risk Analysis: Limitations and Opportunities". *journal of economic Issues* 30 (June 1996) 463 – 473
5. De Fraja, Gianni. "Entrepreneur or Manager: Who Runs the Rirm? "*Journal of industrial economics* 44 March 1996: 89-98
6. Chambers, Marcus j, and Baily, Roy e. A theory of commodity price fluctuations, *journal of political economy*, 104 (October 1996), 924-957

## **Paper 12: MAJOR ISSUES IN PAKISTAN'S ECONOMY**

### **Topic: 1**

#### **Overview of Pakistan Economy**

Development Experience, Approaches, Policies and Outcomes. Identification of Issues: The Era of 1950's, 1960's, 1970's, 1980's 1990's and 2000's. Structural Change and Sources of Growth. Emergence of Economic Issues, Human Resource Development, Unemployment, Poverty, Income Distribution, Debt, Deficit etc. Growth with limited development in Pakistan.

### **Topic: 2**

#### **Development Planning and Resource Mobilization**

Agricultural Development Policies and Priorities, Major Targets of Development Plans and Emerging Issues; Neglects and Successes: Mobilization of Domestic Resources; Shortages, Deficits and Role of Foreign Aid. Agricultural vs. Industrial Development Debate. Agricultural Adequacy.

### **Topic: 3**

#### **Agriculture and Industrial Development: Emerging Issues**

Pattern of Agricultural and Industrial Development, Land Reforms and Its Impacts, the Role of Green Revolution and its Impacts: Present Status.' Agricultural Price Policy and Income Tax. Sectoral Terms of Trade. Industrial Development Policies and Strategies. Development of Large and Small Industries. Value Added: Manufacturing Goods vs. Primary Goods, Production. Agriculture vs. Industry: Development Debate.

### **Topic: 4**

#### **Sectoral Development, Employment Patterns and Unemployment**

Sectoral Priorities and Development Issues. Human Resource Development and Emerging Issues: Population Growth, Labor Force Participation Rate and Employment Pattern, Unemployment and Underemployment, Forecasting Manpower Needs and Employment. Strategies to combat unemployment. Criteria to Measure. Unemployment/Underemployment: Time Criterion, Productivity Criterion and New Index of Unemployment: Application to Pakistan and Empirical Evidences. Good Governance, Social Action Plan and its Impact. Role of Institution in Development. Social Sectors development vs. High Return Sectors: Growth trade off.

### **Topic: 5**

#### **International Debt and Dependency**

Concepts of Foreign Aid and Debt. Borrowing vs. Domestic Reserve Mobilization (failure). Size of Foreign Debt, Debt Servicing and its Impacts. Strategies to combat with High Debt Servicing Policy, Foreign Trade. Promotion, Cutting non-development Expenditures, Rescheduling and its Impacts. Debt Management in Pakistan and its Impacts. Debt Modeling and Future Implications.

### **Topic: 6**

#### **Poverty and Income Distribution**

Pattern of Income Distribution: Rural and Urban. Definitions and Approaches to Measure Poverty: Income Approach, Expenditure Approach, Basic Needs Approach, Poverty of Participatory Index (POPI).' How to Combat .Poverty; Growth Strategy, basic Needs, Labor Intensive Investment: Education / Training etc. and Social Action Plan (SAP) , its Role and Critical Review, Evasion of Policies / Strategies to Combat Poverty



and improving Income Distribution: Critical Evaluation. Neglect of Human Resource Development, Child Labor. Factors Productivity Issues.

**Topic: 7**

**Inflation, Foreign Trade Deficit and Emerging Issues**

Sources of Inflation in Pakistan. Policies to combat Inflation and their impacts. Trade performance, Instability and its Impacts. Policies to Combat Deficit and Trade Instability, WTO and its Impacts. Reforms and Further Needs. Expected Impacts of WTO and Challenges. Terms of Trade Issues, Market Access and Health Related Rates.

**Topic: 8**

**Infrastructural services-I**

**Health**

Health system and their problems, why health matters: The economic significance, health facilities in Pakistan. Development of the health facilities under the five years plans.

**Education**

Role of education in economic development, Pakistan's education structure. Development and expansion of education in Pakistan overall development since 1947. Development of science and technology.

**Topic: 9**

**Infrastructural service-II**

Importance of transportation and communication salient feature of transport in Pakistan major means of transport in Pakistan Transport System.

**Communication**

Communication network, electronic media information technology, telecom sector, internet. Role of communication in economic development

**Energy resources**

Sources of power generation, energy crises, Role of energy in Pak-economy, critical analysis of the energy policies.

**Topic: 10**

**Fiscal policy in Pakistan**

Structure of public finance, government receipts, government expenditure, the concept of public sector development program (PSDP). Pakistan's Taxation Structure, deficit financing in Pakistan. Anti-inflationary fiscal policy.

### **Recommended Books:**

1. Zaidi, Akbar, (latest edition), Issues in Pakistan Economy\*, Oxford Univ. Press, Karachi.
2. Govt. of Pakistan, Pakistan Economic Survey\* (Latest Publication), Ministry of Finance, Economic Advisory Wing, Islamabad.
3. Saeed, Khawaja Amjad, The Economy of Pakistan\*, Karachi: Oxford University Press, 2004
3. Chaudhary M. Aslam, Human Resource Development and Management in Pakistan, Ferozsons, Lahore (1989).
4. Ishrat Hussain, Pakistan: The Economy at the Cross Roads - Past Policies and Present Imperatives, Oxford Univ. Press, Karachi, 1988.
5. Khan, Shahrukh R., 50 Years of Pakistan's Economy - Traditional Topics and Contemporary Concerns. Oxford Univ. Press, Karachi (2000).
6. Mahbub-ul-Haq, Centre for Human Development (MHCHD), Poverty Profile of Pakistan, (1989) Oxford University Press.
7. Mahbub-ul-Haq, Human Development In South Asia, Annual Reports.
8. World Development Reports, World Bank.
9. Aslam M., Perspective on Development Planning In Pakistan, Allied Book Centre; Lahore, 2001-2002.
10. Raja, Muhammad Hameed and M. Zahir Faridi, Leading issues in Pakistan's economy. Abdullah Brothers, Lahore.

*(Note: Teacher(s) must assign latest research papers pertaining to each topic)*

**\* Strongly Recommended**

## **Paper 13: AGRICULTURAL ECONOMICS**

### **Topic: 1**

#### **Introduction and Importance of Agriculture**

Agricultural Revolution, Importance of Agriculture, Food Safety, Agriculture vs. Industrial development Debate- Current State of Agricultural Development. Brief overview of Sources of Growth. Introduction to issues in Agriculture.

### **Topic: 2**

#### **Structure and Characteristics of Agriculture in LDC's**

Traditional Agriculture and Productivity. Access to non-labor resources. The Framing Environment: Natural Hazards and Economic Uncertainties. The Food problem. Farm Size and Productivity. Farm Size in Pakistan' and Productivity Commercial Farms. Impact of Agricultural Reforms on Farm Size.

### **Topic: 3**

#### **Role of Agriculture in Economic Development**

A framework of Analysis. Product Contribution, Market Contribution, Factor Contribution. Foreign Exchange Contribution. Agriculture vs. Industry Debate of Development.

### **Topic: 4**

#### **Theory of Rent and the concept of "surplus".**

Introduction. Economic Rent. The Theory of Rent. Rent and Quasi-Rent The Ricardian 'Corn Rent. The Rental Market. Agricultural Surplus. Characteristics of Landownership in Underdeveloped Agriculture and Pakistan. The Theory of Share Tenancy. Some Extensions of the Share Tenancy Model. Tennurail Status in Pakistan. Agricultural productivity in Pakistan and use of inputs.

### **Topic: 5**

#### **Agriculture in Dualistic Development Models**

Introduction. The Lewis Model. The Ranis-Fei (FR) Model. The Jorgenson Model. Kelley, Williamson, Cheetham Model. Criticism: Dual Economy Models. Agricultural Adequacy; Mellor's Model.

### **Topic: 6**

#### **Resource Use Efficiency and Technical Change in Peasant Agriculture**

Efficiency of Resource Utilization. Technological Change in Agriculture. . Generation of new Agricultural Technology. Factor-biased Technological Change and its Distributional Consequences. Agricultural Technical Change and, Agricultural Employment: Empirical Evidences. Agricultural Resources and. Technical Change in LDCs: with Special Reference to Pakistan.

### **Topic: 7**

#### **Supply Response**

Introduction. The Cobweb Model: An Illustration. Price-Supply Response in. Backward Agriculture. A simple Supply Response Model. Supply Response in the Underdeveloped Agricultural labour Market, Specifically in Pakistan. The Concept of Marketed Surplus: Some Methods of Estimation. . Some Criticisms of Krishna's Method and the Alternative Approach of Behrman Perennial Crops and Marketed Surplus in Pakistan. Green Revolution in Pakistan and Responses. Present Status of Green Revolution in Pakistan: Empirical Analysis.

**Topic: 8****Institutional Constraints and Remedial Policies**

Inequitable Landownership and Land Reform. Capital and Finance in, Underdeveloped Agriculture. Marketing Imperfections and Marketing Policy in Pakistan. Measures to Improve Marketing System in Pakistan. Support Price Policy in Pakistan. Determinants of support prices. Impacts of support prices.

**Topic: 9****Population and Food Supplies**

The Classical Model. Contra-Malthusian Model. Ecological Disequilibrium. Synthesis of Population and Food Supply Theories. Malnutrition in Developing Countries like Pakistan and Remedial Manners. Choice of Planning Strategy for Agriculture Development, Agricultural Project Planning.

**Topic: 10****Agriculture and International Trade**

Main Features of Trade in Agricultural Goods. Trade Policies in Developed Countries and their Impacts. Welfare Gains from Price Stabilization. Terms of Trade Issue. A Survey of the Literature. Some Measurement Problems. Prebisch's Hypothesis. The Agricultural Self-Sufficiency Argument in Developing Countries like Pakistan. Cartels in Commodity Trade and Welfare Gains and Losses. Integrated Commodity Agreement (ICA) Schemes. The Compensating Financing Schemes in Pakistan. Impact of Policy Measures on Primary Product Trade of Pakistan. Few agricultural goods production and exports to two markets; Issues and problems of instability in exports. WTO and its implications for Pakistan's agriculture, with special reference to quality, dumping, subsidies, State Trading; Sanitary and Phytosanitary rules and marketing rules etc. Subsidies and Developed Countries.

**Recommended Books:**

1. Brown, Lester, The Social Impact. Of Green Revolution\*, New York, The Greogic Endowment for International Peace, 1971
2. Capstick Margret. The Economics of Agriculture\*, London George Allen Unwin Ltd., . latest edition.
3. Chaudhary M. Aslam, (1989), Agricultural Development and Public Policies\*, Izhar Sons, Lahore.
4. Ghatak S., and Ingersent K., Agriculture and Economic Development, (Latest Edition), Harvester Press.
5. Johnston, Bruce, F & Fellir Kily. Agricultural and Structural Transformation, Economic Strategies in late Developing Countries.
6. Khan Mahmood-ul-Hassan. The Economics of Green Revolution in Pakistan, New York, . Published 1975
7. Karamat, A., Political Economy of Rural Development in Pakistan, Lahore Vanguard Book House, 1981
8. Thorbake Erike. The Role of Agriculture in Economic Development, New York, Columbia University Press (1971)
9. Colman D. and Young T., Principals of Agricultural Economics, Markets and Prices in Less Developed Countries, (1989), Cambridge University Press.
10. Yujiro . Hayami and Vernon. W.. Ruttan, Agricultural Development, John Hopking University Press, London. (Latest edition).

**\* Strongly Recommended**

## **Optional Paper I: LABOUR ECONOMICS**

### **Topic: 1**

#### **Importance of Labor Economics**

Introduction: Industrialization and Emergence of Labor Analyze Labor Markets and Conditions. Overview Developing and Developed World.

### **Topic: 2**

#### **Labor Markets Analysis: Demand for Labor**

Labor Market Indicators, Demand for Labor, Decision Making and Labor Hiring. Labor Migration: Reasons and Impacts. Demand for Labor by Firms, Short Run and Long Run Demand for Labor, Industry and Market Demand.

### **Topic: 3**

#### **Labor Market: Supply of Labor and Wages**

Determinants of Labor Supply Concepts of Human Capital, Human Capital productivity and Wages. The Determinants, Labor Force Participation. Supply of Labor and Household Productions. Labor- Skill, Training and Productivity. The Dual Labor Market Theory. Labor Unions and Wages. Supply and Demand for Labor and Wage Determination. Backward bending Supply Curve of Labor.

### **Topic: 4**

#### **Wages, Unemployment and Inflation**

Determinants of Wages, Market Determination of Wages and Marginal Productivity, High Wages and Involuntary Unemployment. Stagflation and Unemployment, Structural Adjustment and Wages. Major Sources of Unemployment, Wages and Phillip Curve. Wage Rigidity, Labor Unions and Underemployment. Underemployment and Social Protection.

### **Topic: 5**

#### **Labor Market Discrimination**

Discrimination in Labor Market: Gender Race and Ethnicity. Efficiency Wage Theories and Coordination Failure.

### **Topic: 6**

#### **Labor Market Information System**

Labor Market Information System and Efficiency, Labor Statistics and Labor. Policy. Human Welfare and Labor Policy, Minimum Wages, Rationale and Impacts.

### **Topic: 7**

#### **Theories of Labor Movements**

The Marxist, The Wells, Selling and Pearlman's contributions. Trade Unions in. Pakistan, Labor Legislation in Pakistan. Impacts of Labor Union. Labor Policies in Pakistan: Critical Evaluation.

### **Topic: 8**

#### **Child Labor**

Definition and extent of child labor. Child labor; moral aspects. Child labor an international issue: Extent of Child labor in developing countries. Child labor in Pakistan. Policies to combat child labor. Child labor and international trade issue.

### **Recommended Books:**

1. Comith Stephen, (2003), Labour Economics\*, Routledge Publishers.
2. Bruce, Kaufman; c. Kaufman, Julie L; Hotchkiss, (2002), Economics of Labour Markets\*, Thomson Publisher.
3. Current Issues in Labour Economics\*, (1989), Palgrave Mcmillan.
4. Reynolds, Labor Economics and Labor Relations.
5. Grley, Ashenfelter (edt), Layard, P. R. G, (cdt), Hand Book of Labour' Economics, Elsevier Science Pub. Co. (1986).

\* ***Strongly Recommended***

## **Optional Paper II: OPTIMIZATION AND DYNAMIC ANALYSIS**

### **Topic: 1**

#### **Economic Dynamics and Integral Calculus**

Dynamics and Integration; The Nature of Indefinite Integrals; Basic Rules of Integrations & Rules of Operation; The Substitution Rule and the Rule of Integration by Parts; Definite Integrals; Major properties of Definite Integral; A Definite Integral as an Area Under a Curve; Improper Integrals; Economic Applications of Integrals; Finding Total Functions from Marginal Functions; Investment & Capital Formation; Present Value of Cash Flow; Present Value of a perpetual low; Domar Growth Model

### **Topic:2**

#### **Differential Equations: Continuous Time:**

##### **First Order Linear Differential Equations**

Meaning and Definition; Homogenous & Non-Homogenous Cases; Solution of First Order Linear Differential Equation with Constant Coefficient & Constant Term and its Verification; Economic Applications: Dynamics of Market Price. Solution and its Verification of First Order Differential Equation with Variable; Coefficient and Variable Term; Exact Differential Equation its Solution and Verification; Non-linear Differential Equations of the First Order and First Degree; Bemoulli Equation; Separable Variables; The Qualitative Graphic Approach; Concept of Phase Diagram; types of Time Paths and their Dynamic Stability; Economic Applications; Solow Growth Model.

### **Topic: 3**

#### **Differential Equations: Higher Order Differential Equations**

Solution and Verification of Second order Linear Differential Equations with Constant Coefficient and Constant term: Distinct Real Roots; Repeated Real Roots and Complex Root Cases; Dynamic Stability of Equilibrium; Economic Applications; A Market Model with Price Expectations; The Interaction of Inflation and Unemployment; Solution of Higher order Differential Equations with Constant Coefficient and Constant Term; Convergence and the Routh Theorem.

### **Topic: 4**

#### **Difference Equations: Discrete Time:**

##### **First Order difference Equations**

Solution and its Verification of First Order Difference Equations; The Dynamic Stability of Equilibrium; Economic Applications; The Cobweb Model; A Market Model with inventory: Nonlinear Difference Equations; The Qualitative-Graphic Approach; Phase Diagrams Types of Time Path; A Market with a Price Ceiling

### **Topic: 5**

#### **Higher Order Difference Equations**

Solution and Verification of Second-Order Linear Difference Equation with Constant Coefficients and Constant Term; Distinct Real Roots, Repeated Real Roots and Complex Roots cases; The Convergence of the Time Path; Economic Applications; Samuelson Multiplier-Acceleration Interaction Model; Inflation and Unemployment in Discrete Time; Higher Order Linear Difference Equations and their Solutions; Convergence and Schur Theorem Again; The Solution of Simultaneous Differential Equations.

**Topic: 6****Linear Programming**

Introduction of linear Programming; Graphical approach, simplex method; Some Economic applications of linear programming; Concept of primal & dual; Duality theorems; Solving of Primal via dual; Economic interpretation of a dual

**Topic:7****Game Theory and Economics**

Introduction; The Mathematics of Competition; Basic Concepts; Zero-sum and variable-sum games; Saddle Point; Winning strategies; maximin and minimax strategies; Graphical Method and Simplex method

**Topic: 8****Optimization Review and Further Topics**

Classical Optimization and Constrained Optimization; Fixed point theorem; Non-linear Programming and Kuhn-Tucker Conditions; The Constraint Qualification; Some Economic Applications; Sufficiency Theorems in Nonlinear Programming; Envelope Theorem; Duality and Envelope Theorem: The Primal Problem; Dual problem; Roy's Identity; Shephard's Lemma; Some Economic Applications

**Recommended Books:**

1. Chiang A.C. *Fundamental Methods of Mathematical Economics\**, McGraw Hill (2<sup>nd</sup> and 3<sup>rd</sup> Editions)
2. Alpha C. Chiang and K. Wainwright, *Fundamental Methods of Mathematical Economics\**, Fourth Edition, Mc. Graw-Hill International Edition, 2005.
3. Klein, Michael W., *Mathematical Methods for Economics\**. Boston, MA: Addison-Wesley. 2002.
4. Hoy, Livernois, McKenna, Rees and Stengos, *Mathematics for Economics*, MIT Press, 3rd Edition, 2011.
5. Dowling, Edward T. *Introduction to Mathematical Economics\**, (Part of Schaum's easy outlines series). New York: McGraw-Hill, 2006.
6. Glass Colin J. *An introduction to Mathematical Methods in Economics\**, McGraw. Hill.
7. Avinash K Dixit, *Optimization in Economic Theory*. Oxford University Press. ISBN 0-19-877210-6.
8. Michael Hoy, John Livernois, Chris McKenna and Thanasis Stengos, *Mathematics for Economics*. The MIT Press. Second Edition. ISBN 0-262-08294-2, 2001.
9. Carl P. Simon and Lawrence Blume, *Mathematics for Economists*. N.W
10. Norton & Company, Inc. ISBN 0-393-95733-0, 1994.
11. Haung David, S., *Introduction to the set of Mathematics in Economic Analysis Graphical Approach, Simplex Method, Economic Application of linear Programming*, N-Y John Wiley and Sons, latest edition.
12. Hoy M., Livermois J, Rees R, Stengos T, *Mathematic for Economics*, 1996. Addison Weasley Publishers limited.

\* *Strongly Recommended*



## **Optional Paper III: HISTORY OF ECONOMIC THOUGHTS**

### **Topic 1:**

Introduction: Importance of Economic History: Approaches to study the subject  
Overview of Ancient Greek, Roman and Medieval Economic thought. Overview of Ancient and medieval thoughts. Quensy's influential ideas, Feudalism, Mercantilism, Nature's Circular Flow, Process of modern theories and thoughts  
Overview of Islamic thoughts: Ibne-Khuldoon and thereafter. Overview of silent Features of Muslim School of Thought.

### **Topic 2:**

The contributions of Mercantilists and the Physiocrats. A doctrine of Economic process, transition to liberalization. Wage theory to natural price, the task of government. Overtime, changing role of government.

### **Topic 3:**

The Contributions of Classical School, Adam Smith; Malthus' and Ricardo etc.,' The Labor Theory of Value. Bullin Debate. Ricardo's Monetary Thought. Evolutionists, Ricardo and Reformers of 18th Century. The Theory of Rent Profit Concepts of Colonization. Economic Imperialism

### **Topic 4:**

Socialism before Marx. English Socialists. Anarchism. Karl Marx's Contributions. . The Class Struggle. Criticism of Marx. Challenges to Capitalism. German Historical School, Weber's Contributions.

### **Topic 5:**

The Marginalist School, Neoclassical Economics. Jans Inference. The concept of Welfare State. Chamberlain and Robinson. Australian School of thought Veber and Galbrith's Contribution

### **Topic 6:**

The Keynesian and Post Keynesian School, The Great Depression: Economic Policies and Capitalist Instability Between the World Wars. The 20th. Century Paradigms. The Growth of International Economy. The Rise and fall of Post World War II. The American economic history and Lessons.

### **Topic 7:**

The Emergence of Modern Economic Growth, Building Blocks, Industrial Revolution, Structuralist and Dependency School of thought; Sunkel, Amit SameI, Frank and others' contribution. Technological Change and Impacts.

### **Topic 8:**

The Crisis of the 1970's and International Responses. Failure of Trickle down effects. Rational Expectation Revolution. Basic Needs Approach and welfare. Emergence. Famine and Poverty.

### **Topic 9:**

Modern Economic Thought. Comparison of Post Keynesian and Monetarist. Thoughts: Supply side economics. Globalization, Liberalization and New Weave of Economic Growth and Welfare. New Growth Theory. Convergence and Divergence Debate. Future

of Economics, Quality and International Trade and emergence of markets, New Regionalism's~, New directions of research. Environment and sustainable growth.

**Recommended Readings:**

1. A History of Economic Ideas\*, (1959), Robert LekachQlan, McGraw Hill Company.
2. Economic Theory in Retrospect\*, Blaug, (1918), Cambridge University Press
3. Frank A. G., (1998), Global Economy in the Asian Age\*, Univ., of California Press:
4. Henery John D., The Future of Economics, (1992), Black Wall Publishers.
5. Marx k., and Engles F., The Communist Manifesto, Peoples Publishing House, Moscow, latest edition.
6. Rima Ingrid, Development of Economic Analysis, Routledge Publishers (Latest cd.)
7. Spechler, Martin c., (1990), Perspective in Economic Thought, McGraw Hills.
8. The Main Current in Modern Economics (latest edition), Tlie Free Press of Glancer.
9. Theories of Value and Distribution (latest Edition), Dobb M., Cambridge Univ., Press, Latest edition.
10. Twenty Contemporary Economist cd. (1981). Press. Schach and Locksley, MacMillan

\* ***Strongly Recommended***

## **Optional Paper IV: HUMAN RESOURCE DEVELOPMENT**

### **Topic: 1**

#### **Introduction and Issues**

Brief Review of Population Growth and Resource Position: Food, Nutrition etc. Role of Human Resources in Human Development, Neglect of Human Resources and Impact on Development. Optimum Population Growth. Forecast of Population and Implications.

### **Topic: 2**

#### **Human Resource and Economic Growth**

Human Development Profiles of Nations: Human Resource Development and Case Study of Japan and ASEAN. Human Development Paradigm: Human Capital Model and Empirical Evidences; Missing People, Health / Birth of Human. Development Index and Implications, Sources of Economic Growth, Role of Human Capital.

### **Topic: 3**

#### **Investment in Human Capital and Returns**

Demand for Education, Social demand, Private demand, Cost Rationale and Demand for Higher Education. Investment in Measurement of Returns to Investment in Education, Human quality and Returns. On Job Training: Cost and Benefits. . Returns to Education and its applications. Determinants of Earnings. Higher Education and Return. Investment in Human Development in Pakistani. Present conditions of Human Resources in Pakistan. Constraints to Human Development in Pakistan. Policies to Develop Human Resources in Pakistan.

### **Topic: 4**

#### **Mobility and Migration of Human**

Migration Decision: Determinants, Migration as Investment, Migration Models. . Labor Migration from Pakistan, Earnings / Remittance and Impacts. Migration and Development in Pakistan.

### **Topic: 5**

#### **Women and Human Development**

Determinants of Women's Time Allocation, Female Labor Force Participation. Development of Women; Education and Trailing. Social Conditions in Less Developed Countries and Earnings of Women. Status of women as development agent in Pakistan. Policies to improve women conditions in Pakistan.

### **Topic: 6**

#### **Health, Nutrition and Human Development**

Poverty and Basic Needs: Impacts on Human Capital. Nutrition Health and Education, Determinants of Child Mortality. Infant Mortality in the World: Empirical Evidences and Trends. Nutrition Demand: Income and Schooling of Women. Health Policies and Human Capital. Provision of Basic Needs in Pakistan. Productivity and Income Distribution.

### **Topic: 7**

#### **Employment, Unemployment and Manpower Forecasting**

Labor market structure. Manpower requirements, Determinants of Employment and Unemployment. Models of Employment. Employment and Unemployment pattern in Developed and Underdeveloped Countries. Criteria to Measure Unemployment, Under-employment. International Definitions, Time Criterion and Productivity Criterion, New Index etc. Unemployment Criteria and. Empirical Evidences Pertaining to Pakistan.

Extent of unemployment and under-employment in Pakistan. Labor market information system in Pakistan. Forecasting Labor Force and Population, with reference to Pakistan. The Growth of human Resources / Population and Challenges of Employment and income Generation. Employment policies and strategies, Sector specific employment Elasticities. Skill development and market demand. Structural change, Industrial demand and adjustment. Improving industrial employment.

**Topic: 8**

**International Dialogue: Development Cooperation.**

Environment and Human Health, Human Development Potential in the Islamic World. International Institutions and Human Development, Political Diversions, Aid and its Diversions. Liberalization of WTO and Labor Migration Issue. Moral Concepts. World Poverty and International Community/ institutions. New Global Vision: World income Distribution and Human Development.

**Recommended Books:**

1. Ansley J. Coal & Edgat M. Hower; Population Growth and Economic Development in low income Countries, (Latest Edition), Oxford University Press.
2. Behman Jere R, Human Resource Led Development? (1990). Review of Issues and Evidence, ILO-ARTEP, New Delhi.
3. Behman Jere R. and Schneider, Ryan; An International Perspective on Pakistan human Capital Investment in the Last Quarter Country. The Pakistan Development Review, Vol. 32, No. 1, Spring 1993, pp 1-68.
4. Chaudhary M. Aslam and Hamid A., (1999), Human Development and Management in Pakistan, Ferozsons, Lahore.
5. Harbison and Myers, C.A., Educational Manpower and Economic Growth (Latest Edition), McGraw Hill.
6. Harbison, Fredrick and Myers, Charles A., (Latest edition), Education, Manpower and Economic Growth, Strategies of Human Resources Development, McGraw Hills.
7. Human Development Report (1991).
8. Khawaja Saeed Amjad, HRM-HRD: Personnel Management, Lahore: Institute of Business Management, 2004.
9. Kamal A.R., Human Resource Development in the Labor Surplus Economies - An Integrated Approach, in Proceedings Report and Background Papers of the Regional Workshop on Human Resource Development and Utilization: Issues and Policies, Pakistan Manpower Institute Islamabad (1989).
10. Mahboob-ul-I-laq, Reflections on Human Development (1998), Oxford, India.
11. Mincer Jacob, Family Migration Decision, *Journal of Political Economy* Vol. 86 #5 (1978)
12. Rashid, Amjad; Human Resource Planning, The Asian Experience, I LO, ARTEP, New Delhi (1987).
13. Schultz T.W., Investment in Human Capital, *American Economic Review*, Vol. 51 March 1961
14. T.S. Ashok, I; The Export of Manpower from Pakistan to the Middle East, 1975-88, *World Development*, Vol. 10#4, (1982).
15. Thamarajakshi R., 1988, Human Resource Policy and Economic Development: Selected Country Studies: Asian Development Bank Manila, Philippines (1990)

**\* Strongly Recommended**

## **Optional Paper V: POPULATION ECONOMICS**

### **Topic: 1**

#### **The Nature of Population Study**

Populations, Samples, Formal Demography and Population Analysis

### **Topic: 2**

#### **Analytics**

Demographic Research in Action, Variables, Graphical Analysis, Models, Frequency, Distributions, Graphical Presentations of Frequency Distributions, Averages, Absolute and Relative Numbers

### **Topic: 3**

#### **The Sources of Information for Demographers**

Population Registers, Census, Sample Surveys, Vital Statistics, International Migration, Statistics,

### **Topic: 4**

#### **The Growth of Population**

A Sketch of World Population History, The Present and the Future Growth of World Population, The Growth of Population in the United States, The Growth of Population Outside the United States: England, Canada and Turkey

### **Topic: 5**

#### **The Distribution of Population**

A Note on Density, The Uneven Distribution of World Population, World Urbanization, Urbanization Explained, American Urbanization, Urbanization in Less Developed Countries

### **Topic: 6**

#### **Mortality**

Basic Measures of Mortality, Differential Mortality, Major Causes of Death, Trends in Mortality

### **Topic: 7**

#### **Fertility**

A Note on Nuptiality, Basic Measures of Fertility, Differential Fertility, Trends in Fertility, The Theory of the Demographic Transition, Appendix: Fertility Inhibition, or Birth Control

### **Topic: 8**

#### **Migration**

Basic Concepts and Measures of Migration, Sources of Data on Migration, Functions of Migration, Significant Types of Migration, Differentials and Selectivity of Migration, Motivations for Migrating, Consequences of Migration

### **Topic: 10**

#### **International Migration**

A Short History of American Immigration, The Determinants of American Immigration, The Consequences of American Immigration, American Immigration Policy: Past and Present

**Topic: 11**

**Internal Migration**

A Short History of Internal Migration, Internal Migration in Developing Nations

**Topic: 12**

**The Composition of Population**

Population Processes and Population Composition, Sex Composition, Age Composition, Comparisons of Age and Sex Composition, Factors Affecting the Sex and Age Composition, Demographic Consequences of Age and Sex Structure, Economic Age Categories, Racial Composition

**Topic: 13**

**The Socioeconomic Effects of Population Change**

The Economic Impact of a Rising Dependency Ratio, Aging: A Problem for Developed Nations, Some Implications of Zero Population Growth

**Topic: 14**

**Population Policy**

Definitions, Goals, and Ethical Considerations, Population Policy in the Less Developed Countries, Population Policy in the Developed Countries, The Policy Debate on Immigration

**Recommended Books:**

1. Hauser, P. M., and O.D. Duncan, *The Study of Population\**, Chicago: University of Chicago Press, 1964.
2. Nam, C.B. *The Progress of Demography as a Scientific Discipline\**. *Demography* 16 (November 1979).
3. Thompson, W.S, and D.T. Lewis, *Population Problems\**, 5<sup>th</sup> Ed., New York: McGraw-Hill, 1965.
4. Johannes Overbeek, University of Maine at Orono, *Population An Introduction*, Harcourt Brace Jovanovich, Inc. New York, San Diego, Chicago, San Francisco, Atlanta London, Sydney, Toronto.
5. Gaugh, M.E., *A Geography of Population and Settlement*. Dubuque: Broomen, 1970.
6. Miller, Z.L., *The Urbanization of Modern America: A Brief History*, New York, Harcourt Brace Jovanovich, 1973.

**\* *Strongly Recommended***