

Directorate of Distance Learning,
Bahauddin Zakariya University, Multan.



PROPOSED SYLLABUS/STUDY SCHEME FOR
M.A. ECONOMICS Part-I
(Session 2009-2011)

Paper-I
Course Tutor: Mr. Muhammad Ramzan Sheikh
Dept. of Economics,
B.Z. UNIVERSITY, Multan.

MICRO-ECONOMIC THEORY

(100 Marks)=(20% Assignments + 80% Theory)

Part-I:

TOPIC: 1

Introduction:

Microeconomics: Comparison with other branches of economics. An overview of micro economics topics, Consumer's Decision, Markets, Economic Models. Development of Economic Theory of value, Production, Cost and Welfare. Cost Minimization, Introduction to Maximization of functions. Functions of several variables & their optimization. Implicit functions. Derived Demand, Game Theory.

TOPIC: 2

Theory of Consumer Behavior and Demand Analysis:

Axioms of Rational Choice. The utility function, Arguments of utility function. Indifference curves and Marginal Rate of substitution (MRS). Indifference curves and Transitivity. Convexity of Indifference curve. An alternative derivation Marginal utility, MRS. Concepts of Perfect substitutes and perfect complements. Non-homothetic Preference. Consumer's equilibrium. Income & Substitution effects: Hicksian Framework and Slutsky equation. Revealed Preference and the Substitution effect. Indirect utility function & its derivation.

TOPIC: 3

Market Demand and Elasticity:

Market demand curves. Types of demand curves, Short Run and Long Run: Elasticity and relationships among elasticities of demand. Theoretical issues in Market demand analysis. Implication of Elasticities and Problem Solving Approach. Identification of Inferior goods, Griffin goods and normal goods.

TOPIC: 4

Production Functions:

The Concept of Production Function; how to Choose Variables. Variation in one input, Iso-quant Maps and the rate of technical substitution. Returns to scale. The elasticity of substitution. Some common production functions, Technical progress, Equilibrium of the firm. Cobb Douglas Production function. CES Production Function. Trans-log Function.

TOPIC: 5

Cost of Production:

Definition of costs. Cost Functions; Traditional Vs Modern theory of cost. Changes in input prices, Short Run, Long run distinction, Input substitutability. Input Cost and Demand for Factors of Production. Derived Demand, Cost Minimization. Decreasing and Increasing Cost Industry and Price Determination.

ASSIGNMENT-1

Differentiate Interior Solution and Corner Solution. Draw the indifference curves for the following commodities:

- Neutral goods
- Perfect Complements
- Perfect Substitutes
- One good is 'good' and other good is 'bad'

Q2: Differentiate Price Factor Curve (PFC), Expansion Path, Isocline and Rigde lines. Compare Cobb Douglas and CES production functions. Which one is superior and why?

Q3: A consumer's preferences are given in the form of following direct utility function:

$$U=2Q_1Q_2 + Q_2$$

Drive the Indirect Utility function and prove Roy's Identity. Compare the results.

Q4: Distinguish between the following cost concepts.

- Opportunity cost and actual cost
- Explicit cost and implicit cost
- Private and social cost
- Short run and long run cost

Q5: (a) What does Price Elasticity of Demand measure?
(b) If two straight line demand curves intersect each other, which of them will have higher elasticity of demand at point of intersection?
(c) Explain Cross Elasticity and Income Elasticity of Demand.

PART-II:

TOPIC: 6

Profit Maximization and Supply:

The nature & behavior of firm,. Profit maximization. Marginal Revenue, Short Run supply by a Price taking firm, Profit maximization and input demand, The controversy over the profit maximization hypothesis. Cost minimization, Relationship between cost and production curves.

TOPIC: 7

The Theory of Market Behavior:

7.1

Perfect competition: The Perfectly competitive market: The assumptions of the Model: Short run equilibrium of the price taker firm: Long run equilibrium of the price taker firm: Equilibrium of the industry: Mathematical Derivation of Equilibrium Prices and Quantity: Difference between Perfect and Pure Competition; Price and Output Decision: Mathematical derivation of Price and Quantity.

7.2

Monopoly: Monopoly & its Basics: The negatively sloping demand curve: Short run equilibrium, Long Run Equilibrium: .Price discrimination: Bi-lateral Monopoly: Multiplant Monopoly: Comparison with perfect competition: Monopoly and Price Discrimination. Monopoly and Price Discrimination, Mathematically Price and Quantity Solution. .

7.3

Monopolistic competitive conditions: The historical setting of the theory of monopolistic competition, Characteristics of Monopolistically competitive firms. The concepts of industry & group: The basic Chamberlain theory of Monopolistic competition. Comparison with pure competition & monopoly. Mathematical Derivation of Price and Output Decision under Monopoly.

7.4

Oligopolistic conditions: A simple statement of the problem of oligopoly: Models of Non-collusive Oligopoly: Cournot, Bertrand, Chamberlain, Sweezy & Price Leadership Collusive model of oligopoly: cartels & price Leadership models. Mathematical Derivation of Price and Quantity Determination. Monopsony and Buying Power; influence on Price.

TOPIC: 8

Game Theory:

Description of a Game Theory. The Payoff Matrix of a Game. Nash Equilibrium. The Prisoner's Dilemma. Sub-game Perfect Equilibrium: Sequential Equilibrium. Application of Game Theory. Cournot Equilibrium. Bertrand Equilibrium. Quantity Leadership' (Stackleberg Model) Price Leadership. . Collusion (Cartel). Conjectural Variation. Stackleberg Case.

TOPIC: 9

Pricing of Factors of Production:

Short Run Demand for one Variable Input. Input price Elasticity. The Short run Demand Curve. Variable inputs. Market demand Curve for an Input: The Price of fixed Factors: Rents & Quasi-rents. The Supply Curve of Labour: Wage Determination, Role of Unions.

TOPIC: 10

General Equilibrium:

Assumptions of the 2 x2x2 models. Edgeworth Box diagram, Pareto Optimality; Equilibrium conditions. Concept of Contract Curve, Static Properties of a General Equilibrium Model. General Equilibrium and the Allocation of Resources. Arrow's Impossibility Theorem.

TOPIC: 11

Welfare Economics:

Meaning of Economic welfare. Criteria of social welfare. Welfare Maximization. Welfare Maximization and perfect Competition. Market failure and public goods/social goods. Externality analysis. Anti-trust Policy and regulations.

TOPIC: 12

Uncertainty and Risk Analysis:

Concept of expected utility & its theorem. Uniqueness of expected utility function. Affine function. Risk aversion and Risk loving in Risk neutral. Arrow Pratt measure of (absolute) risk aversion. Measurement of risk aversion. Global Risk aversion. Arrow Pratt measure of relative risk.

ASSIGNMENT NO-2

- Q.1:** Kinked demand curve model establishes that price once determined in oligopoly does not change even if there is change in cost of production. Using kinked demand curve model show that change in cost of production does not lead to change in price in oligopoly.
- Q.2:** What is meant by product differentiation? What is the purpose of product differentiation? How does it affect firm's demand curve?
- Q.3:** "Because all the points on a contract curve are efficient, they are equally desirable from a social point of a view" Do you agree with the statement? Explain.
- Q.4:** How is a firm's demand curve for a particular variable factor input constructed when there is (i) only one variable input, (ii) two variable inputs in the productivity process?
- Q.5:** Elaborate the Von Neuman- Morgenstern expected utility function. Describe the properties of expected utility function.

List of Readings:

1. Ferguson, C.E & Gould, J.P, Microeconomic Theory. Macmillan, (Latest Edition).
2. Henderson, J.M & Quandt, R.E., Microeconomic Theory*. N.Y Macmillan II A Book Co.
3. Koutsoyiannis, A., Modern Microeconomics*, London, Macmillan, (Latest Edition).
4. Layard and Walter A.A., Micro-Economics*, McGraw Hills, (Latest Edition).
5. Varian Hal R., Micro Economics Analysis*, Norton & Company, New York, 1992.
6. 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. Stiglor, GT., The Theory of price, N.Y Macmillan, London. (Last Edition).
5. Silberberg E., The Structure of Economics, A Mathematical Analysis, McGraw Hill, (Latest edition).

(*Strongly Recommended)

Paper-II
Course Tutor: Mr. Muhammad Zahir Faridi
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MACRO-ECONOMIC THEORY

(100 Marks)=(20% Assignments + 80% Theory)

Part-I:

Note:- *Part A consists upon intermediate level material while in Part B advanced literature will be covered. Mathematical Approach may be adopted in Part B*

Topic: 1

Introduction and National Income:

The Development of Macroeconomics, Actual vs. Potential Output, Analytical Approach to Macroeconomics. Circular Flow of National Income, Measurement of GNP: Expenditure Approach, Product Approach / Income Approach, GNP as measure of welfare. Leakages and Injections: Saving and Investment and their Role. Nominal and Real Variables

Economic Models, Exogenous and Endogenous Variables and their Functional Relationships. Leading and Lagged variables. Measuring Unemployment: Okun's Law. How to build simple Macroeconomic Models, Price Indices; Inflation Indexes, Deflation and Stagflation. Introduction to Keynesian and Classical School of Thoughts.

Topic: 2

Income Determination:

Firm's Demand for Factors of Production, Production Function, Demand for Labor and Capital: Marginal Product of Factors and their Demand. Labor Market and its Equilibrium. Demand for Goods and Services: Aggregate Demand and its Components: Consumption, Investment, Government Spending and Net exports Equilibrium of Aggregate Demand and Supply: Mathematical Solution and Equilibrium. Saving and Investment Balance. Derivation of Simple Multiplier, Tax Multiplier. Inclusion of Imports and Multiplier.

Topic: 3

Theories 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: 4

Saving and Investment:

Definition and Kinds of Investment; Autonomous and Induced etc. Determinants of investment. Present Value Criteria for Investment. Investment Demand and Output Growth. Tobin's Q-Theory. Lags in Investment Demand. Derivation of IS curve, Shape of IS curve. Volatility of Investment. Investment Demand and Fiscal Policy. Shifts in Investment Demand Curve and output determination.

Topic: 5**Money Market: The Demand and Supply of Money:**

Money Demand and its Determinants, Regressive Expectation Model. Portfolio Balance Approach, Empirical Estimation of Income and Interest Elasticities. Supply of Money, Determinants of Money Supply. Measurement of Money Supply and its implications, Instruments of Monetary Policy.

Interest Sensitivity of Money Supply. Quantity Theory of Money and its critical Review. Fischer effect, Money, Prices, and Inflation. Derivation of LM Curve and its Slope. LM Curve and Money Market Equilibrium. Interaction of IS-LM and Equilibrium.

Topic: 6**Aggregate Demand, Supply and Stabilization Policy:**

Keynesian Models: Liquidity Trap. Effectiveness of Policy and Price Rigidity. Slope of Aggregate Supply and Demand Curves. Liquidity Trap. Grand Aggregate Demand Curve. Interaction of IS-LM and Determination of output: Short run and Long-run analysis: Aggregate Demand and Supply and their Slopes. Slope of IS-LM in Short-run and Long-run. Vertical / Horizontal Shapes of these Curves. Classical and Keynesian Models. Shocks to Aggregate Demand and Supply and Stabilization Policy. Supply Side Economics. Stagflation and Stabilization Policies, Shocks to IS-LM and its Outcomes and Policy Implications. Short-run-Long-run Philips Curves. Long run and Vertical Aggregate Supply Curve. Ineffectiveness of Keynesian Policies, Technical Change and Shift in Vertical Aggregate Supply Curve.

ASSIGNMENT NO-1:

Q.1: Explain the various national income aggregates in detail.

Q.2: How output and employment level is determined under Classical and Keynesian systems.

Q3: Discuss the effectiveness of fiscal and monetary policies by considering the different slopes of IS and LM curves.

Q4: Define and explain the following concepts:

- Okun's law
- Stagflation
- CPI vs GDP Deflator
- Random Walk Model

Q5: Explain the differences and similarities between life cycle consumption hypothesis and Permanent income hypothesis.

PART-II:

Topic: 7

Open Economy and Macro economic Stabilization:

Exchange Rates and their Determinants: Mundell - Fleming Model (MFM): Small open Economy with perfect Capital Mobility. IS-LM: Goods and Money Market. Small Open Economy, Floating Exchange Rate and Fiscal Policy. Fixed Exchange Rate and Fiscal Policy. Flexible and Managed Exchange Rates.

Monetary Policy, Devaluation and Recovery from great depression. Trade Policy: Mundell-Fleming Model (MFM) with changing Price Level. MFM and large open Economy. Depreciation and its impacts. Income Absorption Approach and exchange Adjustment and Balance of Payment.

Topic: 8

Labor, Market, Price, Expectation and Unemployment:

Demand and Supply of Labour, Equilibrium in the Labour Market: The Sticky Wage Model, Insider-Outsider Models. The Workers-Misperception Model, The Imperfect-Information Model, The Sticky Price Model. Rational Expectation (RE), Adaptive Expectations, RE and Painless Disflation, Hysteresis and challenge to Natural rate Hypothesis.

Topic: 9

Macroeconomic Policy Debate:

Policy Actions: Active or Passive, Ignorance, Expectations and the Lucas Critique. Conduct of Policy: Rule vs. Discretion, Distrust of Policy makers and Political Process. Macroeconomics Policy: Rules for Fiscal Policy, making Policy in uncertain World. Seignorage and Inflation: What can Policy Accomplish? Monetarists vs. Activists debate. Phillips Curve: Short run and Long run analysis, The expectation augmented Phillips Curve. Money Inclusion and output. Short Run and Long Run Adjustment. Perfect Foresight and Adjustment.

Topic: 10

Government Debt and Budget Deficit:

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: 11

Economic Fluctuation and Its Sources:

The Theory of Real Business Cycles: Interpretation: Labor Market, Technology Shocks. Household Behaviour, the persistence of output Fluctuations. Limitations of the Model. The Challenges: What we know and what we don't know? Long run and Country's Capacity to Produce, Short-run and influence of Aggregate Demand. Random Walk Model. What Determines Inflation Rate, Unemployment Rate and Output Growth? Can we revise Natural Rate of Output? Should we stabilize the Economy? The cost of Inflation? The problem of Budget Deficit?

Topic: 12

Long – Term Growth and Full Employment:

- Basic Neo-Classical Growth Model and Equilibrium Capital/Output Ratio, Wage–Profit Relative Shares
- Neo Classical Model with Technical Progress
- Capital Embodied Technical Progress
- Neutral Disembodied Technical Progress
- Labor – Augmenting Disembodied Technical Progress
- Kaldor Saving Function and Neo classical Production Function.

- Golden Rule and Optimal Growth Models
- New Growth Theory/ Endogenous Growth

ASSIGNMENT NO-2:

- Q.1:** Explain the Real Business cycle theorist's views on the proper conduct of monetary and fiscal policy.
- Q.2:** Explain the concept of Phillips Curve. Is there any difference between monetarists and Keynesian views of Phillips Curve?
- Q.3:** Describe four problems affecting measurement of the government budget deficit.
- Q.4:** In the Mundell Fleming model with flexible exchange rates, explain what happens to aggregate income, exchange rate and trade balance when (i) quota on imported cars is removed (ii) Money Supply has increased (iii) Govt expenditure has decreased.
- Q.5:** Explain the role of capital and savings in Solow growth model.

List of Readings:

1. Branson, William H., (1979), Macroeconomic Theory and Policy, Harper and Row Publishers, New York / London.
2. Branson, William H., and Litvack James M., Macroeconomics*, (Latest Edition), Princeton University.
3. Glahe, Fred R., (Latest Edition), Macroeconomics, Theory and Policy, Harcourt Brace Jovanovich Inc.
4. Mankiw, Gregory N., (2000) Macroeconomics*, Worth Publishers, New York.
5. Peel D. and Minfow P., (2002). Advance Macroeconomics, Edward Elgar, Cheltenham, U.K.
6. Romer, David, (2001). Advanced Macroeconomics*, McGraw Hills, New York, London.
7. 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 Economics 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 and Alexander Rebores, 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
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. Denison, Edward F. 1985. Trends in American Economic Growth. /IJ2IJ-1IJ82. Washing/oil: The Brookings Institution .

9. Fischer, Stanley. 1993. "The Role of Macroeconomic Factors in Growth." *Journal Of Monetary Economics* 32 (December): 485-512.
10. Friedman, Milton, 1968. "The Role of Monetary Policy". *American Economic Review* 58 (March): 1-17.
11. Genberg, Hans 1978. "Purchasing Power Parity under Fixed and Flexible Exchange Rates." - (Journal of international Economics 8 (May): 247-276.
12. Long, John B., and Plosser, Charles I. 1983. "Real Business Cycles." *Journal of Political Economy* 91 (February): 39-69.
13. Mankiv, G., N. (1990), A quick Refresher Course in Macroeconomics, *Journal of Economic Literature* , Vol. XXVIII, 1645-60..
14. Romer, Christina D. 1999. "Changes in Business Cycles: *Journal of Economic Perspectives* 13 (spring): 23-44.

Paper-III
Course Tutor: Prof. Dr. Shah Nawaz Malik,
Dept. of Economics,
B.Z. UNIVERSITY, Multan.

MATHEMATICAL ECONOMICS

(100 Marks)=(20% Assignments + 80% Theory)

Part-I:

Topic: 1

The Nature of Mathematical Economics

Ingredients of mathematical models. Derivations: Equation of a straight line and its forms: Two points, intercept, point slope and slope intercept. Types of functions: constant, polynomial, rational, non-algebraic. Relationships and functions. Indices & their rules. Functions of more than two independent variables. Logarithms & the rules of logarithms.

Topic: 2

Equilibrium Analysis in Economics

A linear partial equilibrium market model. The effect of an excise tax in a competitive market. Non linear market model General Market Equilibrium. Equilibrium in a linear. National Income Model

Topic: 3

Linear Models and Matrix Algebra

Theory of matrix multiplication. Laws of matrix operations. Types of matrices: Square, identity, null, idempotent, diagonal, transpose and their properties. Conditions for non singularity of a matrix. Minors and cofactors. Determinant & its properties. Solution of linear equations through Gaussian method, Cramer's rule and Inverse of a matrix method. Properties of inverse of a matrix. Use of matrix approach in market & national income models.

Topic: 4

Input–Output Analysis

Input-output model, its structure and its derivation. The use of input output model in Economics.

Topic: 5

Differentiation

Rules of differentiation. Differentiation of a function .of one variable. Sum, difference, product, quotient, chain, power, inverse, logarithmic & exponential. Functions, Combinations of rules. Higher order derivatives. Economic applications of derivative. Concept of maxima & minima, elasticity and point of inflection. Profit & Revenue maximization under perfect competition, under monopoly. Maximizing. excise tax revenue in monopolistic competitive market, Minimization of cost etc.

ASSIGNMENT NO-1:

- Q.1** (a) What are the ingredients of a mathematical model? Explain your answer with some relevant examples
(b) State and explain the various types of functions with graphic depiction.
- Q.2** (a) Differentiate between partial market and general market equilibrium. Support your answer with examples.
(b) Given $Q + 40.5P = 3000$
 $1220P = 1120 + 4Q$
i) Find the equilibrium price and quantity
ii) The Government impose a tax of Rs.2 per unit. Determine the effect on market equilibrium.
- Q.3** (a) Explain some basic properties of the determinants. Support your answer with examples.
(b) Derive the Cramer's rule with mathematical expressions.
- Q.4** (a) Differentiate between Static and comparative static analyses. Support your answer with examples.
(b) What is input-output analysis? Discuss its historical background and practical significance.
(c) Given the following input coefficient Matrix 'A' and final demand Vector 'd' find the correct level of output of three industries:-

$$A = \begin{pmatrix} 1/5 & 1/3 & 0.0 \\ 1/4 & 1/3 & 1/2 \\ 0.0 & 1/5 & 1/5 \end{pmatrix} \text{ and } d = \begin{pmatrix} 6 \\ 10 \\ 2 \end{pmatrix}$$

- Q. 5** Elucidate the economic applications of derivatives with relevant examples. Also give numerical examples of profit & revenue maximization under perfect competition and monopoly.

Part-II:

Topic: 6

Partial & Total Differentiation

Partial differentiation & its rules. Higher order & cross partial derivatives (Young's theorem). Total differential & total derivatives. Implicit functions rule of differentiation. Optimizing cubic functions & their economic application.

Topic: 7

Economic Applications of Partial & Total Differentiation

Comparative static analysis: a linear Partial equilibrium market model, a linear National Income model. Partial Elasticities. Production functions Analysis. Maximization & Minimization of unconstrained functions & their economic applications: Profit maximization by a multi-product firm under perfect Competition & monopoly, Price discrimination, Multi-plant monopoly, .input decisions etc.

Topic: 8

Optimization: Constrained & Extrema

Free and constrained optimization, extrema of a function of two variables: graphical analysis, Lagrange method. Utility maximization & Cost minimization. Homogenous Production function, Cobb Douglas Production function. Jaccobian determinants. CES Production Function. Translog Function.

Topic: 9

Linear Programming

Ingredients of linear Programming. Graphical approach, simplex method, economic application of linear programming. Concept of primal & dual. Duality theorems. Solving of Primal via dual. Economic interpretation of a dual.

ASSIGNMENT NO-2

Q. 1 (a) Highlight the significance of partial derivatives in Economics (b) Given the following functions:-

i) $2x^3 - 3x^2y - bxy^2 - 17 = 0$ (Find dy/dx)

ii) $Y = \text{Log}(x + x^2 + 4)$ (Find dy/dx)

iii) $Y = f(x, w) - 3x - w^2$

Where $x = g(w) = 2w^2 + w + 4$ (Find total derivative)

iv) For the production function

$$Q = k^3 - 8k^2 + 10KL + 5KL^2 - 3L^2$$

Find marginal productivities of labor and capital at $L = 2, K = 3$

Q.2 (a) Define the followings:-

- i) Convex function
- ii) Quasi convex function
- iii) Concave function
- iv) Quasi concave function

(b) A firm's demand function is

$$22 - 0.5Q - P = 0 \text{ and the average cost function is}$$

$$AC = f(Q) = \frac{1}{3}Q^2 - 8.5Q + 50 + 90Q^{-1}$$

Find the level of output which maximizes total profits. Also find the amount of profit.

Q.3 (a) Explain the concept of Jacobian Determinant with the help of suitable examples.

(b) Find the extreme value of:

$$Z = 20x + 40y - 2x^2 - 3y^2 \quad \text{Subject to} \quad 4x + 5y = 26$$

Is this function maxima or minima?

(c) Determine whether the following functions are homogenous. If so, of what degree?

i) $Z = xy$

ii) $Z = 2x + y + 3xy$

Q.4 (a) What are ingredients of linear programming? State its assumptions and usefulness.

(b) Solve by simplex method:

$$\text{Minimize } C = 60x_1 + x_2$$

$$\text{Subject to } 2x_1 + 3x_2 \geq 36$$

$$2x_1 + 2x_2 \geq 28$$

$$8x_1 + 2x_2 \geq 32$$

$$\text{and } x_1, x_2 \geq 0$$

Q.5 (a) Solve the following primal via dual:-

$$\text{Minimize } C = 0.6x_1 + x_2$$

$$\text{Subject to } 12x_1 + 4x_2 \geq 20$$

$$5x_1 + 5x_2 \geq 18$$

$$3x_1 + 6x_2 \geq 12$$

$$\text{and } x_1, x_2 \geq 0$$

(b) Explain the Duality Theorems and also give some economic interpretation of a dual.

List of Readings:

1. Chiang, Ac., Fundamental Methods of Mathematical Economics, McGraw Hills (Latest Edition)
2. Boumal W.L., Economic Dynamics, Macmillan (Latest Edition)
3. Budnick, Frank, Applied Mathematics for Business, Economics and Social Sciences.
4. Dowling E.T., Mathematics for economists, Schum Series (Latest Edition).
5. Weber E. Jean, Mathematical Analysis, Business and Economic Applications (Latest Edition).

Paper-IV
Course Tutor: Dr. Imran Sharif Chaudhry
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STATISTICS FOR ECONOMISTS

(100 Marks)=(20% Assignments + 80% Theory)

Part-I:

Topic: 1

Introduction:

Descriptive and inferential statistics; Variable and constant, 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; Errors: Biased and unbiased.

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 mean and Winsorized mean; Quintiles: Median, Quartiles, Deciles, Percentiles; The mode; Box plot and detailed box plot; Empirical relation between Mean, Median and Mode; The cumulative distribution function: Finding the percentile ranking for a given number, Finding the percentile for a given percentage; Summary measures and type of data.

Topic: 3

Measures of Dispersion, Shewness and Kurtosis:

Absolute and relative measure 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; Tree diagrams; Conditional' Probability, Bayes Theorem; Counting rules: The multiplication formula, The permutation formula, The combination formula.

Discrete probability distribution, Random variables, Discrete random variable" Continuous random variable; The mean, variance and standard deviation of a probability distribution; Binomial probability distribution, and its computation, Cumulative probability distributions, Properties of Binomial probability distribution.

The normal probability distributions: Properties of normal distribution, Applications of the standard normal distribution, Areas under the normal curve,

Finding areas under the normal curve; The normal approximation to the binomial; Continuity correction factor.

Topic: 5 Survey Sampling and Sampling Distributions:

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

Topic: 6

Estimation and confidence Intervals:

Point estimates and confidence intervals; Estimation by confidence interval: Confidence interval estimate of a population mean (Known Variance), Confidence interval estimate of a population mean (Unknown Variance) Confidence interval for differences of means, Confidence interval for differences of means; Confidence interval for population proportion, Confidence interval for differences between proportions; One sided confidence interval; Sample size for estimating population mean.

ASSIGNMENT NO-1:

- Q. 1** How do economists use different types of measurement scales? Also explain how many types of data they use in their analyses of economic problems? Explain your answer with some examples from economic theory.
- Q. 2** What are the measures of dispersion? How variance and standard deviation are important for economic analysis? Also give some practical importance of Skewness and Kurtosis.
- Q. 3** Differentiate between Binomial and Normal Probability Distributions. Compare and contrast their properties.
- Q. 4** Differentiate between probability and non-probability sampling with their advantages and disadvantages. Also give some explanation of their major types.
- Q. 5** Table-1 contains data on 100 household's incomes collected in Multan City. Given these data:
- (a) Form a frequency distribution for the data.
 - (b) Plot a histogram for the data and the cumulative frequency distribution
 - (c) Calculate the mode, the median and the arithmetic mean for the data

Table-1: Income Data from Multan City

| | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|
| 5700 | 1790 | 3710 | 9730 | 4810 | 7100 | 8090 | 3790 | 5460 | 5450 |
| 8950 | 3690 | 1800 | 4290 | 2750 | 7940 | 1650 | 670 | 5330 | 6030 |
| 940 | 1560 | 880 | 9290 | 2990 | 7680 | 3270 | 8500 | 6390 | 4020 |
| 1630 | 4550 | 2640 | 8860 | 3940 | 2220 | 9450 | 6040 | 9280 | 2950 |
| 8050 | 7270 | 6640 | 7340 | 1860 | 8700 | 846 | 4530 | 6190 | 5870 |
| 4180 | 670 | 4900 | 5060 | 2790 | 9870 | 6720 | 990 | 3320 | 8670 |
| 6620 | 9570 | 3140 | 950 | 8520 | 1970 | 1880 | 7090 | 5410 | 8710 |
| 4230 | 9620 | 590 | 9840 | 8170 | 2740 | 7460 | 8500 | 1950 | 5100 |
| 9080 | 3500 | 1580 | 4140 | 7720 | 8180 | 9070 | 5820 | 7520 | 6250 |
| 3340 | 720 | 3360 | 1950 | 4920 | 5250 | 1930 | 9860 | 2570 | 7320 |

PART-II

Topic: 7

Hypothesis Testing:

One sample test of hypothesis; One Sample; One tail and two tails tests of Significance; Testing for a population mean with a known population standard deviation: Two-tailed test, one-tailed test; P-Value in hypothesis testing; Testing for a population mean: Large sample, Population standard deviation unknown; Testing hypotheses about population proportion when sample size is large; Type II error.

Testing of two Sample Hypothesis: Population means, Population proportions; comparing populations with small samples.

Topic: 8

Chi Square Application:

Introduction; .Goodness-of-fit test: Equal expected frequencies; Goodness-of-fit test: Unequal. expected frequencies; Limitations of Chi square; Using the goodness-'of-fit test to test for normality; Contingency Table Analysis.

Topic: 9

Analysis of Variance:

Introduction, The F-distribution; Comparing two population variances; ANOVA assumptions; ANOVA test; Inferences about pairs of treatment means; Two-way analysis of variance.

Topic: 10

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; 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 slope and correlation coefficient; t-test t for the slope, F- test for the slope, t-test for correlation coefficient; Estimation of the mean values and predication of individual values; Confidence interval and predication interval estimate; Rank correlation.

Topic: 11

Multiple Linear Regression and Correlation Analysis:

Multiple Linear regression model, Interpretation of partial regression coefficients; Estimation of multiple linear regression model with two explanatory variables by

using Least squares principle, Matrix approach, Deviation form; Pitfalls and problems in multiple regression: Multicollinearity, Variable selection, Model misspecification; Multiple standard error of estimate; Coefficient of multiple determination (adjusted and unadjusted); Evaluating the regression equation: Using a scatter diagram, Correlation matrix, Global test, Individual variable significance test, Qualitative independent variables; Multiple regressions in terms of linear correlation coefficients; Multiple correlation and partial correlation; Nonlinear regression models; Dealing with nonlinear relationship and unequal variability.

Topic: 12

Applied Statistics:

Index Numbers, Un-weighted index numbers; Simple aggregative index; Weighted indexes; Laspeyre's price index, Paasche's price index; Marshall-Edgeworth 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 multiplicative 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; The multiplicative model, Calculating the seasonal indexes; De-seasonalization the time series, Using deseasonalized time series to identify trend, Seasonal adjustments, Model based on monthly data, Cyclical component; Modeling cyclic behavior using box-Jenkins ARIMA processes; Using regression analysis in forecasting; Qualitative approach to forecasting: Delphi method, Expert judgment, Scenario writing, Intuitive approaches; Choosing an appropriate forecasting model; Some observations on time series analysis.

ASSIGNMENT NO-2:

- Q.1** (a) Define Chi-Square Distribution and explain its properties.
(b) A random sample of 100 workers with children in day care shows a mean day care cost of Rs. 2,600 and a standard deviation of Rs. 500. Verify the department's claim that the mean exceeds Rs. 2,500 at the 0.05 level with this information.
- Q.2** (a) Differentiate between regression and correlation. Also explain their properties.
(b) Define index numbers. What are the measuring methods of inflation using index numbers? Explain your answer.

Q. 3 From the following data estimate the partial regression coefficients, adjusted and unadjusted R^2 values.

$$\bar{Y} = 367.69 \quad \bar{X}_2 = 402.76 \quad \bar{X}_3 = 8.0$$

$$\sum (Y_i - \bar{Y})^2 = 66042.27, \sum (X_{2,i} - \bar{X}_2)^2 = 84855.09, \sum (X_{3,i} - \bar{X}_3)^2 = 280.0$$

$$\sum (Y_i - \bar{Y})(X_{2,i} - \bar{X}_2) = 74778.35, \sum (Y_i - \bar{Y})(X_{3,i} - \bar{X}_3) = 4250.9$$

$$\sum (X_{2,i} - \bar{X}_2)(X_{3,i} - \bar{X}_3) = 4796.0 \quad n = 15$$

Q. 4 Explain the component factors of the classical multiplication time series model and their estimation. Support your answer with some examples.

Q. 5 Consider the following data:

| Y | X ₂ | X ₃ |
|---|----------------|----------------|
| 1 | 1 | 2 |
| 3 | 2 | 1 |
| 8 | 3 | -3 |

Based on these data, estimate the following regressions: $Y_i = \alpha_1 + \alpha_2 X_{2,i} + \alpha_3 X_{3,i} + v_i$

$$Y_i = \alpha_1 + \alpha_2 X_{2,i} + v_{1,i} \quad (1)$$

$$Y_i = \lambda_1 + \lambda_3 X_{3,i} + v_{2,i} \quad (2)$$

$$Y_i = \beta_1 + \beta_2 X_{2,i} + \beta_3 X_{3,i} + v_i \quad (3)$$

(a) Is $\alpha_2 = \beta_2$? Why or Why not?

(b) Is $\lambda_3 = \beta_3$? Why or Why not?

What important conclusion do you draw from this exercise?

List of Readings

- I. Lind, Douglas A., Marshal, William G. and Mason, Robert D., Statistical Techniques in Business and Economics (11th edition). Boston: McGraw Hill, 2003.
- Chaudhry, Sher Mohammad and Kamal, Shahid, Introduction to Statistical Theory (7th edition). Lahore: Ilmi Kitab Khana, 2002.
- J. Siegel, Andrew F., Practical Business Statistics (5th edition). Boston: McGraw Hill, 2003.
- New bold, Paul, Carlson, William L. and Thorne, Betty M, Statistics for Business and Economics (5th edition), New Jersey: Prentice Hall, 20m.
- Keller, Gerald and Warrack, Brian, Statistics for Management and Economics (5th edition). Boston: Duxbury Thomson Learning, 2000.

Additional Readings

- Bereson Mark L., Levine, David M. and Krehbiel, Timothy c., Basic Business Statistics: Concepts and Applications (91h edition). New Jersey: Prentice Hall, 2004.

2. Barron, Michael M., Statistics for Economics Accounting and Business Studies (Latest Edition), New York, Prentice Hall.
3. Carlson, William L. and Thorne, Belly, Applied Statistical Methods for Economics and Social Sciences (Latest edition). New Jersey: Prentice Hall.
4. Moore, David S, The Basic Practice of Statistics' (2nd edition). New York: freeman,2000

Paper-V
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ISLAMIC ECONOMICS

(100 Marks)=(20% Assignments + 80% Theory)

Note: The instructor concerned many assign additional and latest literature on the subject matter. The references provided at the end of the course are just helping literature. Students must consult additional literature on each topic.

Part-I:

Topic: 1

Introduction: Islamic Economics

- i) Nature, and Importance of Islamic Economics. Islamic Economics versus Economics of Secular Economy and Mixed Economic System.
- ii) Brief Introduction of Basic Vales of Islam, Taqva, Halal and Haram, Justice, Benevolence, Equality, Brotherhood and Cooperation as Determinants of Economic Behaviour and Policies

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, Baqar-al-Sadar).

Topic: 3

Islamic Economic System

Salient features of Islamic Economic System; objectives, Economic Freedom, Property and Ownership Rights. The Concept of Equality and Efficiency The Relative Importance of Capital and Labour. Priority to Basic Needs. Concepts of Ownerships and Implication, Welfare and income Distribution. Comparison of Islamic Economic System with Capitalism and Socialism with respect to above cited principles/values of Islam.

Topic: 4

Micro-economics in Islam Framework

The Consumer Behaviour in Islam. Utility, Moderation, optional Consumption Behavior. Organization of Production and Behavioral theories of Firms Objectives and Behavior of Firm in Islamic Economy. Business Ethics in Production and Marketing. Hoarding and Gains.
Market Structure - Monopoly and. Competition, Resource Allocation in Islamic Environment and Cartels. Concepts of Fair Trade.
Stockiest/Wholesales, determination of Prices and Rate of Normal Profit/ Meeting of Losses. Price Mechanism and State Role in Regulation of Markets.

Topic: 5

The Modes of Financing in Islam

Modarba and Musharka. Types of Bai. (Bai -Salam, Bai Muajjal, Morabaha)
Saving and Investment in Islam. Investment of Savings for Gains.

Topic: 6**Distribution in Islamic Economy**

Islamic Stress on Circulating of Wealth. Steps against Concentration. of Wealth. Social Justice in Islam. Rights of Labour, Distributive Justice Use of Land and other Natural Resources and their Rewards. Role of Stale in Distribution of Wealth.

ASSIGNMENT NO-1:

Q1: "Islamic Economics is a distinct approach to human welfare", Discuss

Q2: Give a detailed comparison of Islamic economic system with other systems.

Q3: Explain the contribution of Imam Abu Yousaf and Ibn-e-Khaldoon in the development of Islamic Economics.

Q4: Highlight the Nature, Objectives and Price Output Policy of an Islamic Firm.

Q5: What do you know about fair and just distribution of income and wealth? Account for guiding principles for fair and just distribution in Islamic economic system.

Part-II:**Topic: 7****Some Basic Macro economic Concepts**

Consumption, saving and Investment Functions in Islamic Environment. Determents of Islamic Consumption Function, Concept to help others, Welfare and Religious believes. Zakat and Usher

Topic: 8**Demand and Supply of Money and Banking**

Gold, Money, Paper Money and Credit Money. Western Justification of interest. Islamic Concept of Riba, its Implications and Alternatives. Functions of Commercial Banks in Islamic Framework. 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

Topic: 9**Zakat, Social Justice and State**

Meaning of Zakat, Nisab, Introductory Hints about items of Zakat. Distributive Role of Zakat and Social Justice. Zakat as a tool in Fiscal Policy. Economic Role of Islamic State. Welfare consumption and limits. Revenue and Expenditure Items in Modern Islamic States. Beneficiaries of Zakat. The Tax Policy of Islam. Nature and Scope of Fiscal Policy in Islamic State (Taxation Policy). Expenditure Principles. Burden of Taxes.

Topic: 10**Economic Planning and Development**

Concepts and Objectives of Economic Development in Islam. Resources for development. Nature of Economic Planning in Islam.

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.

ASSIGNMENT NO-2:

- Q1:** Evaluate the distributional significance of Zakah and Islamic law of Inheritance.
- Q2:** Discuss the role of economic planning for Islamic economy. Also explain how the basic goals and objectives can be achieved by economic attaining in Islamic economy.
- Q3:** Discuss the role of Consumption, savings and investment in Islamic economics.
- Q4:** Summarize your views about interest free financial system. State the effects of elimination of interest on the distribution of income.
- Q5:** Write a note on the following: Islamic Modes of financing Monetary Policy in an Islamic framework

List of Readings:**Basic Texts**

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

References:

1. Ahmad, Khurshid, (latest edition), Fiscal Policy and Revenue Allocation in Islam, International Islamic University, Islamabad.
2. Anf A.Q. 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 Ranking 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 Developmentl3ank, 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 Dvelopment 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-VI

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MAJOR ISSUES IN PAKISTAN'S ECONOMY

(50 Marks)=(20% Assignments + 80% Theory)

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 Governness, 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.

Recommended Books: -

1. Aslam M., Perspective on Development Planning In Pakistan, Allied Book Centre; Lahore, 2001-2002.
 2. Chaudhary M. Aslam and Ahmad Eatbaz: Globalization, WTO and Trade Liberalization in Pakistan, Ferozsons, Lahore (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, Shahrugh R., 50 Years of Pakistan's Economy - Traditional Topics and Contemporary Concerns. Oxford Univ. Press, Karachi (2000).
 6. Mahboob-ul-Haq Centre for Human Development (MHCHD), Poverty Profile of Pakistan, (1989) Oxford University Press.
 7. Human Development In South Asia, Annual Report.
 8. Saeed, Khawaja Amjad, The Economy of Pakistan, Karachi: Oxford University Press, 2004
 9. Zaidi, Akbar, (1999), Issues in Pakistan Economy, Oxford Univ. Press, Karachi.
 10. World Development Reports, World Bank.
- (Note: Teacher(s) must assign latest research papers pertaining to each topic)

Assignment:

- Q.1.** Discuss the monetary Fiscal steps undertaken by the Government of Pakistan during the decade of 1990.
- Q.2** Give an historical overview of Economic planning in Pakistan.
- Q.3** Analyse the tax on agriculture income debate in Pakistan.