Module 3.

- Data analysis and interpretation- tools, Probability and theoretical distribution- statistical estimation and testing- parametric and non parametric tests.

Module 4.

- Basic concepts of OR and its uses in business decision making.

Module 5.

- Linear programming, transportation and assignment, Net work analysis- CPM and PERT. Statistical decision theory.

Unit V
Financial Management and Marketing

Module 1.

- Basic concepts of financial management- goals of financial management- Traditional Vs Modern goal- scope of financial management-investment decision, financing decision and dividend decision-role of financial manager in modern business.

Module 2.

- Capital investment decision- cash flow estimation- methods of project evaluation, traditional and modern methods. Time value of money- Incorporation of risk in project evaluation.

Module 3.

- Financing decision, capital structure planning- operating and financial leverage- NI approach and NOI approach- optimum capital structure-Determinants of capital structure.

Module 4.

- Cost of capital and dividend policy. Individual components cost and weighted average cost of capital-Value of the firm and dividend policy. Theories of dividend. Basic concepts of working capital management.

Module 5.

- Basic concepts of marketing, need, want, demand, value, satisfaction- Marketing concepts-Marketing planning, implementation and control system. Marketing mix.

Unit VI
Cost and Management Accounting

Module 1.

- Cost accounting basic concepts- elements of cost, materials, labour and overheads. Activity based costing-Unit costing- process costing by product and joint product costing.

Module 2.

- Cost control and cost reduction - methods and techniques-value analysis- value engineering.

Module 3.

- Management accounting, basic concepts, Cost accounting Vs Management accounting.

Module 4.

- Financial statement analysis- ratio analysis, fund flow and cash flow analysis.

Module 5.

- Marginal costing, breakeven analysis and managerial decisions based on it.

06. Economics

Unit I
Microeconomic Theory and Applications

Module 1. Theory of Consumer Bahaviour

- Theory of consumer behavior – utility functions –demand analysis – price, income and substitution effects - theory and applications of indifference curves – Hicks and Slutsky effects – revealed preference theory - choice under uncertainty – recent developments in the theory of demand - LES, CES demand functions - dynamic versions of demand – duality and indirect utility functions – Bandwagon, Snob and Veblen effects

Module 2. Theory of Costs and Production

- Traditional and modern theories of costs – production function – Cobb- Douglas, CES, VES and translog production functions
- Producer's equilibrium using Isoquants - Isocost analysis - technical progress – Harrod and Hicks versions

Module 3. Market Structure and Equilibrium Price and Output Determination

- Classification of markets – short- run and long-run equilibrium under perfect competition, monopoly and monopolistic competition – shut down and break-even analysis – monopoly power – different oligopoly markets – Cournot, Bertrand, Stackelberg, Chamberlin, Kinked demand curve – Cartels – price leadership – price discrimination – game theory and it's applications – prisoner's dilemma

Module 4. Theory of Distribution, General Equilibrium, Welfare Economics and Uncertainty

- Micro and macro theories of distribution - marginal productivity – Euler's theorem and adding up problem – contributions of Ricardo, Marx, Kalecky - partial and general equilibrium – contributions of Walras, Hicks – Kaldor – theory of Second-Best – Arrow's Impossibility theorem – theory of risk and uncertainty – moral hazard, adverse selection and externalities

Unit II
Macroeconomic Theory and Applications

Module 1. Macroeconomic Framework

- National income accounting - classical and Keynesian analysis of macro aggregates – IS-LM model – policy analysis in the closed and open systems – Mundell -Fleming Model – monetary approach to balance of payment – labour market analysis – search theories

Module 2. Behavioural Foundations of Macroeconomics

- Consumption functions and puzzle – absolute, relative, permanent and life cycle hypotheses of consumption
- Investment functions – role of interest rate and expectations – neo-classical, Keynesian and accelerator theories of investment – user cost of capital – Tobin's 'q' ratio

Module 3. Theory of Business Cycle, Inflation and Unemployment

- Business cycle facts - direction and timing of variables – aggregate demand and supply analysis of business cycles - theoretical contributions of Samuelson, Hicks and Kaldor – multiplier and accelerator – great depression and financial crisis – alternative views
- Classical, Keynesian and monetarist approaches to inflation and unemployment – Philip's curve – sacrifice ratio and Okun's law

Module 4. Macroeconomic Schools and Policies

- Schools in macroeconomics – classical, Keynesian, Monetarists, new classicals, supply side - rational expectations – new Keynesian and new political macro economics
- Objectives of macroeconomic policy – monetary policy – instruments- rules vs discretion - Taylor's rule – dynamic time inconsistency models – fiscal policy – instruments- Barro Ricardo equivalence theorem – income policy

Unit III
Quantitative Methods for Economic Analysis

Module 1. Statistical Methods

- Measures of central tendency – mean, median, mode, geometric and harmonic mean – measures of dispersion – range, quartile deviation, mean deviation, variance and standard deviation- skewness and kurtosis – correlation – types and measurement – partial and multiple regression analysis - probability – various types of events – laws of addition and multiplication – Bayes' theorem –

distribution – binomial, poisson, and normal distributions and their properties

Module 2. Mathematical Methods

- Matrix operation – determinants – Crammer's rule – static and dynamic input-output models – linear programming – graphical and simplex methods – duality and shadow prices
- Functions – rules of differentiation and integration – uses in economics – interpretation of revenue, cost, demand, supply functions, elasticities – market equilibrium – consumer's and producer's surplus

Module 3. Econometric Methods

- Methodology of econometric research – simple and general linear econometric models – assumptions – estimation of parameters – co-efficient of determination (R^2) – Gauss Markov theorem – concepts of autocorrelation, multicollinearity and heteroscedasticity and their tests

Module 4. Research Methodology

- Sampling - types and techniques – hypothesis testing – null and alternative hypotheses – type I and type II error – theories of estimation – point and interval estimation – t, F, and chi-square tests
- Research design – collection, organization and analysis of data – presentation of research report

Unit IV
Development Experiences of India and Kerala

Module 1. Growth and structural changes of Indian Economy

- Growth and sector-wise contribution to GDP and employment - demographic features – Distribution of National Income among four factors of production - Regional disparity in growth and development - HDI related indicators in India - poverty and unemployment in India

Module 2. Development Strategies in India

- Economic Planning in India - objectives and achievements - development strategies in India - Mixed Economic Framework - Economic Reforms - recent developments

Module 3. Economic Policy and Development in India

- Issues and policies in Agriculture, Industry, Trade, Infrastructure - price movements and India's monetary, fiscal and financial sector policies and reforms - recent developments

Module 4. Kerala's Economic Development

- Kerala model of development - Sustainability issues- Poverty and Unemployment in Kerala - Structural changes in Kerala's economy- performance of agriculture, industry, infrastructure and services – Issues of Migration, Urbanisation and Demographic features - Fiscal scenario in Kerala - Decentralisation and achievements – recent developments

Unit V
Economic Development and Environmental Economics

Module 1. Concept and Measurement of Economic Development

- Meaning of development – growth vs development - indicators of development – per capita income - PQLI - HDI - HPI - perpetuation of under development - vicious circle of poverty - circular causation - structural view of under development - inequalities in income distribution - Lorenz curve and Gini coefficient – Kuznet's Inverted U-hypothesis.

Module 2. Theories of Economic Growth

- Classical theories - Marx - Schumpeter - Harrod-Domar model - Neo-classical growth theories - Solow - Meade - Mrs. Joan Robbinson - Kaldor-Mirrlees Model - Technical progress function of Kaldor - Convergence Hypothesis - Endogenous theories of growth – Education - Research and Human Capital.

Module 3. Partial Theories of Growth

- Dual Economies - Social dualism - Technological dualism - Geographical and financial dualism - Lewis theory of development with unlimited supply of labour - Fei-Ranis theory - Balanced growth - Rosenstein Rodan, Nurkse and Lewis - Unbalanced Growth - Low level equilibrium trap - Critical minimum effort thesis - Dependency theories of development.

Module 4. Measurement of Environmental Values

- Use values; Option values and non-use values; Valuation methods — Methods based on observed market behavior - Hedonic property values and household production models (travel cost method and household health production function) - Methods based on response to hypothetical markets - contingent valuation andcontingent ranking methods.

Module 5. Environmental and Natural Resource Problems in India

- Mechanism for environment regulation in India - Environmental laws and their implementation - Policy instruments for controlling water and air pollution and forestry policy - People's participation in the management of common and forest lands - The institutions of joint forest management and the joint protected area management - Social forestry — rationale and benefits - Solid waste management - causes, effects and control measures (E-waste, Plastic waste, Industrial waste) - Pollution analysis and policy -causes, effects and control measures of pollution (air, water, noise and soil).

Unit VI
Money, Banking, Public Finance and International Trade

Module 1. Money and Banking

- Money and finance – demand for money – contributions of Irving Fisher, J M Keynes, Milton Friedman, Baumol and Tobin – supply of money – mechanistic model – behavioural model and H-theory – money multiplier
- Commercial banking – functions - credit creation – central banking –functions – financial markets – structure, composition and instruments of capital markets – capital market reforms

Module 2. Public Finance

- Difference between private goods, public goods and merit goods – public expenditure - Wagner's law of increasing state activities - principles of public expenditure – public revenue – sources – kinds and canons of taxation – taxable capacity – impact and incidence – public debt – classification and effects – Centre-State financial relations – Finance Commissions - recent developments

Module 3. Theories of International Trade

- Theories of international trade - Smith, Ricardo, Heckscher-Ohlin – Leontief paradox – factor price equalization theorem – models based on imperfect competitions – free trade and protection – types and effects of tariffs and quotas – Stopler - Samuelson theorem – Metzler paradox

Module 4. Balance of Payments / Economic Integration

- Balance of payment accounting – elasticity and absorption approaches – foreign exchange markets – flexible and floating exchange rates – IMF – IBRD – ADB
- Forms of economic integration – PTA – FTA – customs union – economic union – progress of SAARC / SAPTA / ASEAN – regionalism vs multilateralism –recent developments

07. English

Unit I

Module 1. Chaucer's Age

- Socio-political background – Chaucer and his contemporaries Langland, Gower – General Prologue to the Canterbury Tales