S.K.C.G. (AUTONOMOUS) COLLEGE
PARALAKHEMUNDI,GAJAPATI-761200

COURSES OF STUDIES
Choice Based Credit System (CBCS)

M.A. - Economics

2020-21 AND ONWARDS

DISTRIBUTION OF MARKS
End Semester Examination

Full Marks:80

SECTION-A   08x02 = 16
marks
08 Short Answer Questions (SAQ) (50 words)
out of 12 Questions covering the entire Syllabus.

SECTION-B   04x04 = 16
marks
04 Short Answer Questions (SAQ) (100 words)
each Question with one alternative set unit wise.

SECTION-C*   04x12 = 48
marks
04 Long Answer Questions (LAQ) (500 words)
each Question with one alternative set unit wise.

Total → 80 marks

SECTION – C*

Q.No.2- **Unit-I**   LAQ (Answer any one Question)   01x12 = 12
marks

    a.
    b.

Q.No.3- **Unit-II**   LAQ (Answer any one Question)   01x12 = 12
marks

    a.
    b.

Q.No.4- **Unit-III**   LAQ (Answer any one Question)   01x12 = 12
marks

    a.
    b.

Q.No.5- **Unit-IV**   LAQ (Answer any one Question)   01x12 = 12
marks

    a.
    b.

COURSE OF STUDIES

FOR

M.A. ECONOMICSEXAMINATIONS

SESSION 2021-23

Note: Each paper carries 100 marks, which includes 20 marks of Mid-Sem. examination and 80 marks of End-Sem. examinations

CourseNo.   **Title ofpaper**

SEMESTER – I
Core course:

ECO 101   Microeconomic Analysis – I

ECO 102   Macroeconomic Analysis –I

ECO 103   Quantitative Methods and Computer Applications – I

ECO 104   Public Economics –I

ECO 105   Economics of Growth and Development–I

SEMESTER – II

Core course:

ECO 206   Microeconomic Analysis – II

ECO 207   Macroeconomic Analysis – II

ECO 208   Quantitative Methods and Computer Applications – II

ECO 209   Public Economics –II

ECO 210   Economics of Growth and Development –II

Course No.　　　　　　　**Title ofpaper**

Note: In Semesters III and IV, there shall be two core courses and three core elective papers respectively to be chosen at least one and maximum two from each Group.

SEMESTER – III
Core Course

ECO 311	International Trade and Finance – I
ECO 312	Economics of Social Sector

Core Elective (Group-A)

ECO 313	Mathematical Economics – I
ECO 314	Industrial Economics – I
ECO 315	Computer Application in Economic Analysis-I

Core Elective (Group-B)

ECO 316	Econometrics – I
ECO 317	Financial Institutions and Markets – I
ECO 318	Agricultural Economics –I
ECO 319	Indian Economic Policy

SEMESTER – IV
Core Course:

ECO 420	International Trade and Finance –II
ECO 421	Economics of Environment and natural resources
ECO 422	Research Methodology

Core Elective (Group-A)

ECO 423	Mathematical Economics –II
ECO 424	Industrial Economics –II
ECO 425	**Research Project/Dissertation [Dissertation 60 MarkS, Open Seminar presentation 20 marks & VIVA – 20 MARKS]**

Core Elective (Group-B)

ECO 426	Econometrics – II
ECO 427	Financial Institutions and Markets – II
ECO 428	Agricultural Economics –II

SEMESTER - I (*Core course*)

Course No. ECO 101

Microeconomic Analysis – I

UNIT- I   *Demand Analysis*
Theories of demand: Axiomatic Assumptions of Preference Ordering; Utility Function and it's related concepts; Indifference Curve Analysis – Consumers Equilibrium; Marshallian and Hicksian demand functions; Slutsky Equation and Decomposition of price effect into substitution effect and income effect; Duality in Consumptions – Indirect Utility Function and Indirect Expenditure Function; Revealed Preference Hypothesis;; Consumer's Choice under Risk and Uncertainty.

UNIT- II   *Theory of Production and Costs*
Production function and its related concepts; Short-run and Long-run laws of Production; Homogenous Production Function and Returns to Scale; Producer's equilibriumand

Optimal Choice of Inputs; Constrained and Unconstrained Profit Maximisation; Production Functions – Specification and features of Cobb-Douglas and CES Production Functions; Duality in Production – Derivation of Supply and Cost Functions from Production Function; Cost function –Traditional and Modern Theories ofCost.

UNIT- III   *Price and Output Determination under Monopoly and Monopolistic Market Structures*
Price and Output Determination under Different Market Structures: Monopoly – Short-run and Long-run Equilibrium, Monopoly Power, Control and Regulation; Discriminating Monopolist; Monopolistic Competition – Short-run and Long-run Equilibrium,

UNIT- IV   *Price and Output Determination under Duopoly and Oligopoly market*
Non-price Competition; Price and Output Determination under Non-collusive and Collusive Duopoly and Oligopoly: Non-collusive Models – Cournot, Stackelberg and Kinked Demand Curve Models; Collusive Models – Cartels and Mergers, Market Share, Price Leadership Models.

Course No. ECO 102
Macroeconomic Analysis – I

UNIT- I *National Income Accounts and Social Welfare*
Different systems of national income accounting: Social accounting, Input-output accounting, Flow of funds accounting and Balance of Payments accounting; United Nations System of National Accounts (SNA); National income and social welfare, Measure of Economic Welfare(MEW)

UNIT- II *Consumption Function*
Keynes' Psychological Law of Consumption: Implication of the law, Short-run and long-run consumption function, Empirical evidence on consumption function; Income-consumption relationship: Absolute income, Relative income, Life cycle and Permanent income hypotheses;

UNIT- III Investment function

Investment multiplier, Theories of investment and accelerator, Super multiplier, Influence of policy measures on investment.

UNIT- IV Demand for Money
Classical approach to demand for money: Quantity theory approach, Fisher's equation, Cambridge quantity theory, Keynes's liquidity preference approach: transaction, precautionary and speculative demand for money; Aggregate demand for money; Neo-classical and Keynesian views on interest.

Course No. ECO 103
Quantitative Methods and Computer Applications–I
(*Statistical Methods*)

UNIT- I Probability and Theoretical Distribution
Deterministic and non-deterministic experiments, various types of events, classical and empirical definitions of probability – Law of addition and multiplication, conditional probability and concept of interdependence. Baye's theorem and its applications; Elementary concept of random variable; Probability mass and density functions; Expectations, Properties of Binomial, Poisson and Normal distributions.

UNIT- II Sampling and Estimation Theory
Basic concept of sampling – Universe and Sample , Theory of Sampling distribution and Standard Error. Random and non-random sampling, simple random stratified random and P.P.S. sampling. Point Estimation and Interval Estimation, Desirable properties of an estimator;

UNIT- III Correlation and Regression analysis
Correlation – Simple, partial and multiple correlation (applications only); Multiple regression, partial regression coefficient, Estimation of regression coefficients in a multiple regression model; Standard error of regression coefficients, Goodness of fit of a regressionmodel

UNIT- IV Testing of hypothesis and Computer Application
Null and alternative; Type-1 and Type-2 Errors, Goodness of fit; Confidence intervals and level of significance; Hypothesis testing based on Z, t, (Chi square) and F Tests;. Computer Application in Economics : Basic applications of Microsoft Office-Excel.

Course No. ECO 104
Public Economics – I

UNIT- I Public expenditure and public debt
Public Expenditure–Hypotheses: Wagner's law of increasing state activities, Peacock-Wiseman hypothesis. Pure theory of public expenditure; Structure, growth and effect of public expenditure; Social Cost-benefit analysis, Public Debt– Sources, Effects, burden and it'smanagement.
UNIT- II Fiscal policy and budget
Fiscal policy– Objectives of fiscal policy, Neutral & compensatory and functional finance, Fiscal policy for stabilization-automatic vs. discretionary stabilization; inter-dependence of fiscal and monetary policies, The Public Budgets– Kinds of Budgets, Zero-base budgeting,

Different concepts of budget deficit, Budgetary deficits and its implications, Balanced budget multiplier.

UNIT- III Theories of Public Revenue

Public Revenue – Different Approaches to the division of tax burden, Incidence and effects of taxation, Elasticity and buoyancy; Taxable capacity; Benefit and ability to pay approaches; Theory of optimaltaxation.

UNIT- IV Indian Public Finance

Indian tax system, Trends in revenue and expenditure of the Central and State Government; Major taxes in India: base of taxes, direct and indirect taxes, taxation of agriculture, expenditure tax, Reforms in direct and indirect taxes, taxes on services, Non-tax revenue of the center, State and local bodies; Analysis of the Union and state government budget, Trends in public debt, fiscal sector reforms in India.

Course No. ECO 105
Economics of Growth and Development – I

CC.1.5.1 Economic Growth

Economic growth versus Economic development; Exogenous Growth Models – Harrod and Domar growth model and it's instability in equilibrium; Solow Model; Meade's Steady State Growth Model; Kaldor's Model; Romer's Endogenous growth model; Role of education, research and knowledge in economic

growth.

CC.1.5.2 Social Aspects of Development

Poverty and Inequality – Indicators and Measurement of Poverty and Inequality; Food Security and Nutrition; Human Capital – Human Development Index and Quality of Life Index; Role of Education and Health in Development; Theory of Demographic Transition, Optimum Theory of Population, Measurement of fertility– Total fertility rate, gross and net reproductionrate.

CC.1.5.3 Investment Techniques

Investment criteria and choice of technique– Capital Turnover Criterion, SMP Criterion, Marginal Per Capita Reinvestment criterion, Labour versus capital intensive techniques;

CC.1.5.4 Planning Techniques

Planning techniques–Project evaluation and the Cost-benefit analysis; Linearprogramming and shadow pricing; Planning in a Market OrientedEconomy.

SEMESTER – II (*Core course*)

Course No. ECO 206
Microeconomic Analysis – II

CC.2.1.1 Managerial and Behavioural Theories of the Firm

Critical Evaluation of Marginal Analysis: Representative Model of Average Cost and Full Cost Pricing; Baumol's Theory of Sales Revenue Maximization; Bain's Limiting Price Theory; Morris and William's Static Managerial Model of the Firm.

CC.2.1.2 Neo-classical Approach and Factor Pricing

Neo-classical Approach – Marginal productivity theory; Euler's theorem and Product Exhaustion; Factor Pricing in Perfect and Imperfect Markets.

CC.2.1.3 General Equilibrium Analysis

General Equilibrium Analysis – Existence, Stability and Uniqueness of equilibrium, Walrasian System, Efficiency of general equilibrium – Efficiency of General Equilibrium in Exchange, Production and Competitive Markets.

CC.2.1.4 Welfare Economics

Pigovian Welfare Economics; Pareto Optimality Conditions; Compensation Principle, Bergson-Samuelson's Social Welfare Function; Theory of Second Best; Arrow's Impossibility Theorem; The theory of Social Choice.

Course No. ECO 207
Macroeconomic Analysis – II

CC.2.2.1 The IS-LM and Post-Keynesian approaches

The IS-LM model; Extension of IS-LM model with labour market and flexible price; General equilibrium of product and money market; Post-Keynesian approaches to demand for money; Patinkin and the Real Balance Effect; Friedman and the modern quantity theory; Monetarism vs. Fiscalism.

CC.2.2.2 Supply of money

Components and determinants of money supply; Factors influencing changes in money supply; Financial Intermediation, Growth and role of Non-Banking Financial Intermediaries (NBFIs) and Regional Rural Banks, Distinction between Banks and NBFIs; RBI approach to money supply; High powered money and money multiplier.

CC.2.2.3 Theory of Inflation

Inflation: Theories of inflation; Structuralist approach to inflation; Philip curve analysis, Short-run and long-run Philips curve, Tobin's modified Phillips curve; Policies to control inflation;

CC.2.2.4 Theories of Business Cycles
Business cycles: Theories of business cycles – Schumpeter, Kaldor, Samuelson and Hicks; Macro-economic equilibrium – relative roles of monetary fiscal policies.

Course No. ECO 208

Quantitative Methods and Computer Applications-II
(Mathematical Methods)

CC.2.3.1 Functions and Derivatives in Economics

Function and type of Functions and their Applications in Economics; Simple Derivative and Differential (both first and second order) and their applications in Economics; Partial Derivatives, Total Derivative and Total Differential and their applications in Economics; Unconstrained and Constrained Optimization of multivariate functions and their application in simple economicproblems.

CC.2.3.2 Matrices and Determinants
Matrix – Concept of matrix and types of matrices, Operations on matrices, matrix inversionandrankofamatrix,Conceptofquadraticforms,EigenrootsandEigenvectors

of matrices. Determinant and it's properties. Simple application of vectors, matrices and determinants– Solution of simultaneous equations,

CC.2.3.3 Integration, Differential and Difference Equations
Integration and its geometrical interpretation, Methods of integration, Application of integration–Consumer's Surplus and Producer's Surplus; Differential equations – Solution of first order and second order difference equations, their simple applications in economics.

CC.2.3.4 Elementary Operations Research and Computer Application
Linear programming – formulation of linear programming and it's graphical method of solution, input-output analysis – determination of equilibrium level of outputs, prices and employment; Game Theory – Concept the game, solution of game with saddle point and mixed strategies and value of a game. Computer Applications : Use of statistical packages (S.P.S.S.) in frequency distribution, correlation and regression analysis, ANOVA.

Course No. ECO 209
Public Economics – II

CC.2.4.1 Role of Public sector
Role of Government in organized society; Changing perspective of government in a mixed economy, public and private sector cooperation or competition, Government as an agent for economic planning and development; Government as a tool of operationalising the planning process, private goods, public goods and merit goods.

CC.2.4.2 Preference Revealation for Public Goods.
Market failure: Imperfections decreasing costs, externalities, public goods; Private and public mechanism for allocating resources; Problems for allocating resources; Problems of preference revelation and aggregation of preferences; An economic theory of democracy, Role of bureaucracy.

CC.2.4.3 Rationale for Public Policy
Allocation of resources – Theory of public goods, Voluntary exchange models, Impossibility of decentralized provision of public goods ;contributions of Lindahal and Johansen; Samuelson; Demand revealing schemes for public goods – Tiebout model, Theory of club goods, Stabilization policy – Keynesian case for stabilization policy. Uncertainty and expectations.

CC.2.4.4 Fiscal Federalism
Fiscal Federalism.Principles of multi-unit finance; Fiscal federalism in India.Vertical and horizontal imbalance.Assignment of function and sources of revenue, constitutional provisions, finance commission and planning commission, devolution of resources and grants.Theory of grants. Resource transfer from union to states – Criteria for transfer of resources; center – State financial relations in India. Problems of states resources and indebtedness, transfer of resources from union and states to local bodies.

Course No. ECO 210
Economics of Growth and Development – II

CC.2.5.1 Approaches to Development-I
Partial theories of growth and development – Vicious circles of Poverty, Circular Causation; Development Theories – Classical, Marx and Schumpeter theories of development; Unlimited supply of labour; Big push; Balanced and Unbalanced growth.

CC.2.5.2 Approaches to Development-II
Critical Minimum Effort Thesis; Low-income Equilibrium Trap; Forward and Backward Linkage; Dualism – Technical, and social; Ranis &Fei model; Dependency theory of development.

CC.2.5.3 Sectoral Aspects of Development
Role of agriculture in economic development; Efficiency and productivity in agriculture; New technology and sustainable agriculture; Globalization and agricultural growth; Rationale and Pattern of Industrialization in developing countries; Terms of trade between agriculture and industry; Infrastructure and its importance.

CC.2.5.4 Macroeconomic Policies
Macroeconomic policies and development – Role of monetary and Fiscal policies in developing countries - Prior savings, Inflation and growth; External resources – FDI, AIDs and Technology inflow; MNC activity in developing countries.

SEMESTER - III (*Core course*)
Course No. ECO 311
International Trade and Finance – I

CC.3.1.1 Theory of International Trade-I
The pure theory of international trade – Theories of absolute advantage, comparative advantage and opportunity costs; Empirical testing of classical theory; Trade equilibrium under constant, increasing and diminishing cost conditions, and imperfect competition;

CC.3.1.2 Theory of International Trade-II
Heckscher–Ohlin theory of trade, Leontief paradox, Theorem of factor price equalization, Stolper–Samuelson theorem, Rybczynski theorem, Kravis and Linder theorem of trade.Technological change and international trade.

CC.3.1.3Gains from trade
Gains from trade: their measurement and distribution; Concept of terms of trade, their uses and limitations; Hypothesis of secular deterioration of terms of trade, its empirical relevance and policy implications for less developed countries; Terms of trade and income distribution; Trade as an engine of economic growth; Concept and policy implications of immiserising growth;

CC.3.1.4. Interventions in trade
Theory of interventions: Tariffs, Quotas and Non-tariff barriers; Effects of tariffs under partial and general equilibrium perspectives; Tariff and income distribution; Optimum tariff; Types of regional economic integration; Theory of customs union: Viner's partial equilibrium approach to welfare effects of customs union; General equilibrium analysis of customs union – Lipsey model and Vanek model.

Course No. ECO 312

Economics of Social Sector

CC.3.2.1 Economics of Environmental Policy

Environmental externalities and market inefficiency – Environmental taxes and subsidies; Marketable pollution permit; Deposit refund system; Coase's property rights and bargaining solution; Command and control approach; Comparison of regulations and markets-based instruments; Global environmental externalities; Climate change and carbon tax; Trade andenvironment.

CC.3.2.2 Environmental and Natural Resource Policies in India

Mechanism for environmental regulation in India; Environmental laws and their implementation; Policy instruments for controlling water and air pollution; Forest policy; People's participation in the management of common and forest lands; Joint Forest Management; Social forestry – rationale and benefit.

CC.3.2 .3 Economics of Education

Education as an instrument for economic growth; Human capital vs. physical capital; Demand for education – private and social demand; Cost of education, wastage and stagnation benefits of education – direct and indirect benefits, private and social benefits.

CC.3.2 .4 Economics of Health

Health Dimension of development; Determinants of health – poverty, malnutrition and environmental issues. Economic dimensions of health care – Demand and supply of health care; The concept of Burden of Disease; Institutional issues in health care delivery in India.

Core Elective (Group-A)

Course No. ECO 313
Mathematical Economics – I

CE.3.3.1.1 Theory of Consumer Behaviour

Utility Function: Basic concepts, Axiomatic Assumptions of Preference Ordering; Cardinal and Ordinal measure of utility; Utility maximization; Ordinary and Compensated demand functions; Slutsky Equation – Decomposition of price effect into substitution effect and income effect, Price and income elasticities of demand and the nature of commodities, General Restrictions of Demand Functions; Duality Theorems– Direct and Indirect Utility function duality; Utility-Expenditure duality, Theory of revealed preference; the Linear expenditure system; Consumer behaviour under risk and uncertainty.

CE.3.3.1.2 Theory of production and cost

Production Function: Basic Concepts, Elasticity of Substitution, Homogeneous Production Function and it's Properties; Homogeneous Production Function and return to scale; Optimization Behaviour of the firm– Constrained output maximisation and cost minimisation; Unconstrained profit maximisation; Input demand functions; Optimization Behaviour of multi-product firm – Constrained revenue maximisation and Unconstrained profit maximisation; Specification and Properties of Cobb-Douglas (CD), CES, Duality in production–Production and Cost function Duality; Derivation of Input demand functions; Derivation of short-run and long-run cost functions.

CE.3.3.1.3 Price determination in Monopoly and Monopolistic Market Structures

Price and Output Determination under Different Market Structures: Price and output determination under perfect competition; Monopoly – Monopoly Power and Control; Price and output determination under Monopoly and Discriminating Monopoly; Price and output determination under Monopolistic Competition in the Short-run and Long-run;

CE.3.3.1.4 Price Determination in Duopoly and Oligopoly Market.

Price and Output Determination under Non-collusive and Collusive Duopoly and Oligopoly: Non-collusive Models – Cournot, Stackelberg and Kinked Demand Curve Models; Collusive Models – Cartels and Mergers, Market Share, Price Leadership Models; Factor pricing under Bilateral monopoly.

Course No. ECO 314
Industrial Economics – I

CE.3.3.2.1 Concept and Scope of industrial economics

Concept and Scope of industrial economics; Organisation of a firm: Ownership, control and objectives of the firm; Choice of the organizational form; Business motives of the firm.

CE.3.3.2.2 Industrial Location Theories

Analysis of industrial location–Determinants of industrial location; Approaches to industrial locational Analysis; Economic theories of industrial location: Weber's Theory, Market Area Theory of Palander and Central Place Theory of Losch; Operational approaches to industrial location, Factors affecting location.

CE.3.3.2.3 Market Structure, Market Conduct and Profitability

Market structure: Standard forms of market structures, Sellers' concentration; Product differentiation; Entry conditions. Profitability: Market structure and profitability: Determinants of profitability. Theory of profitability; Market structure and innovation: The theories of technologicalinnovation.

CE.3.3.2.4 Market Concentration and Market Performance

Market concentration: Theoretical issues; Measurement of market concentration and monopoly power; Extent of market concentration; Concentration and market performance of a firm. Market Performance: Growth of the firm; Conceptual framework for the theory of growth; Constraints on growth of the firm; Industrial Productivity and Efficiency; Measurement of Industrial efficiency; Some efficiency condition in production.

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Course No. ECO 315
Computer Application in Economic Analysis – I
[*Marks:* THEORY -60, PRATICAL – 25, MID SEM - 15]

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CE.3.3.3.1 Introduction to computer and Operating Systems

Computer Organisation; Central Processing Unit; Types of Memory; Input and Output devices; Classification of computers; Programming languages; Operating System- DOS and Windows; Data Representation and the Number systems: decimal, binary, octal and hexadecimal.

CE.3.3.3.2 Use of Computer for Office Automation

Spread sheet - Concept and use of spread sheet, Structure of a spread sheet, Spread in-built functions, Chart feature of a spread sheet, Operation and Use of MS-Excel and Lotus Smart-suite.

CE.3.3.3.3 Statistical Data Processing Techniques-I

Statistical Package handling and command description Statistical Package for Social Science (SPSS); Basic statistical and econometric functions and their analysis - Analysis of Regression, Analysis ofcorrelation,

CE.3.3.3.4 Statistical Data Processing Techniques-II

Analysis of Variance (ANOVA), Analysis of Covariance (ANCOVA), Linear programming; Time Series Trend Analysis; Input-output Analysis, Game theory – Saddle point and Mixed strategy solutions.

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Core Elective (Group-B)
Course No. ECO 316
Econometrics – I

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CE.3.4.1.1 Basic Econometrics

Nature, meaning and scope of econometrics; Simple linear regression model – Assumptions; OLS Estimation; Blue properties of OLS estimators and the Gauss-Markov theorem; Derivation of R2 ; Inference in the least-squares model, Analysis of variance and the least-squares model; Prediction in the least-squares model; Estimation of extension two variable linear regression model ;

CE.3.4.1.2 Problems in Regression Analysis

Multiple/General regression model, Non-linear regression models – parabolic, exponential, log-linear, semi-log, hyperbolic, and logistic regression models. Meaning and nature, tests, consequences and remedial measures of problems ofHeteroscedasticity;

CE.3.4.1.3 Regressions with Qualitative and Lagged Variables

Multicollinearity and Auto-correlation; Problems of Specification Error and Errors of Measurement. Estimation of regression models by using Computer, Econometrics software:Gretl

CE.3.4.1.4 Regressions with Qualitative and Lagged Variables

Dummy variable technique - Testing structural stability of regression models, Comparing two or more regression models, Interaction effects, Seasonal analysis, Other use of dummy variables; Regression with dummy dependent variables - LPM, Logit, Probit models and their applications.

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Course No. ECO 317
Financial Institutions and Markets – I

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CE.3.4.2.1 Nature and Role of Financial System

Money and finance –Financial inter-mediation and financial intermediaries – The structure of the financial system – Functions of the financial sector – Indicator of financial development – Equilibrium in Financial markets – Financial system and economic development.

CE.3.4.2.2 Structure of Interest Rates

Theories of interest rate determination – Level of interest rates – Long period and short period rates – Term structure of interest rates – Spread between lending and deposit rates – Administered interest rates – Appropriate interest rate policy.

CE.3.4.2.3 The Central Bank and Monetary Policy

Functions of central bank – The aims and objectives of the monetary policy in developed and developing countries – Instruments of monetary policy – proliferation of banking and non-bank financial intermediaries – Effectiveness of monetary policy – Credit creation and its control;

CE.3.4.2.4 The Commercial Banks and Development Banks

Profitability and efficiency of banks; Development banks – Role and functions; Investment banking and merchant banking; Financial sector reforms in India.

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Course No. ECO 318
Agricultural Economics – I

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CE.3.4.3.1 Agriculture and Economic Development

Nature and scope of agricultural and rural economics; Traditional agriculture and its modernization; Role of agriculture in economic development; Interdependence between agriculture and industry – some empirical evidence; Models of interaction between agriculture and the rest of the economy; Agricultural development, poverty and environment.

CE.3.4.3.2 Rural infrastructure, economic activities

Use of land, water and energy; Rural transport; communication, banking, extension services, role, modes and problems of rural electrification, rural social infrastructure – education and health and information dissemination.

Livestock economics – Livestock resources and their productivity; Problems of marketing; White revolution; Fishery and poultry development; Forestry, horticulture and floriculture; issues and problems in rural industrialization and development of agro-based industries.

CE.3.4.3.3 Land Reforms and labour market

Rural labour supply; Interlocking of factor markets; Mobility of labour and segmentation in labour markets; marginalisation of rural labour; Nature, extent and trends in rural unemployment; Agricultural wages in India; male-female wage differences; Non-agricultural rural employment – Trends and determinants. Principles of land utilization; Land distribution – Structure and trends; Land values and rent; Land tenures and farming systems – Peasant; capitalist collective and state farming; Tenancy and crop sharing – forms, incidence and effects; Land reform measures and performance; Women and land reforms; Problems of marginal and small farmers.

CE.3.4.3.4 Agricultural Productivity

Agricultural production – Resource use and efficiency; Production function analyses in

agriculture; Factor combination and resource substitution; cost and supply curves; size of farm and laws of returns – Theoretical and empirical findings; Farm budgeting and cost concepts; Supply response of individual crops and aggregate supply; Resource use efficiency in traditional agriculture; technical change, Labour absorption and gender issues in agricultural services.

Course No. ECO 319
Indian Economic Policy

AE.3.5.1 Public Finance

Fiscal policy; Growth of public expenditure; Tax policy and tax reforms; Main source of revenue of Union and the State governments; Fiscal correction for economic growth; Public debt policy; External debt; Deficit financing.

AE.3.5.2 Agriculture and Industrial Sector

Agricultural finance; Agricultural subsidies and food security in India; Public sector enterprises and their performance; problems of sick units in India; Growth and pattern of industrialization; Productivity in industrial sector.

AE.3.5.3 Infrastructure

Sources of energy: power, coal, oil and gas, atomic energy and non conventional energy sources; Energy crisis; Energy strategy; Transport system in India: road transport, water transport, air transport and communication.

AE.3.5.4 External sector

Multinational corporations: Reasons for the growth of MNCs; FERA and FEMA; WTO and India: India's commitments to WTO and benefits proclaimed for India.

SEMESTER - IV (*Core Course*)

Course No. ECO 420
International Trade and Finance – II

CC.4.1.1 Balance of payments
Meaning and components of balance of payments; Equilibrium and disequilibrium in the balance of payments; Devaluation and balance of payments adjustment; Foreign trade multiplier with and without foreign repercussions.

CC.4.1.2 Approaches for Balance of Payment Adjustments
Absorption, Payments and Monetary approaches for adjustment in the balance of payments; Expenditure-reducing and expenditure-switching policies for balance of payments adjustment; Approaches for achieving internal and external equilibrium simultaneously: The Swan model and Mundell-Fleming model; Relative merits and demerits of fixed and flexible exchange rates in the context of growth and development in developingcountries.

CC.4.1.3 International Economic Co-operation

Regionalism – EU, rationale and progress of SAARC/SAPTA and ASEAN region; problems and prospects of forming customs union in Asia; Multilaterialism – UNCTAD, NIEO, GATT/WTO; Optimum Currency Areas; International financial institutions – IMF and World Bank; Need, adequacy and determinants of international liquidity; Conditionality clause of IMF from the point of view of India.

CC.4.1.4 Trade Policies and India
Trade problems and trade policies in India during the last five decades; Recent changes in the direction and composition of trade and their implications; Rationale and impact of trade reforms since 1991 on balance of payments, employment and growth; Instruments of export promotion; Recent import and export policies, and agenda for thefuture.

Course No. ECO 421

Economics Environment and Natural resources

CC.4.2.1 Measurement of environmental values.
Need for environmental valuation; Total economic value – Use values, option values and non-use values; Valuation methods: Methods based on observed market behaviour – Hedonic pricing method and Travel cost method (household production function models); Methods based on response to hypothetical markets – contingent valuation method; Environmental values and Cost – Benefit Analysis; Choice of discount rate.

CC.4.2.2 Economics of Non-renewable Natural Resource Management
Types of natural resources; Concern for natural resource scarcity; Theory of optimal extraction of non-renewable (exhaustible) resources – Extraction under perfectly competitive and monopolistic markets.

CC.4.2.3 Economics of Rrenewable Natural Resource Management
Theory of optimal use of renewable resources – Biological growth process, Harvesting under private property and open access conditions; Approach for common property resources.

CC.4.2.4 Environment and development
Environment and development trade-off; The Environmental Kuznets Curve hypothesis and its limitations; Sustainable development: Weak and strong sustainability; Rules and indicators of sustainable development; Integrated environmental and economic accounting; Measurement of environmentally- correctedGDP.

Course No. ECO 422
Research Methodology – I

CC.4.3.1 Introduction to Social Science Research
Introduction to social science research, different types of research,. Methods of collection of data, questionnaire and interview, observation, theory of case studies, type of data: primary & secondary, time-series and cross-section data. Data base of the Indian economy.

CC.4.3.2 Review of Literature and Research Design
Need for reviewing literature, Sources of Literature, What to review and for what purpose, the Research proposal and the Formulation of research design, Need of a research design, Different research design, Features of a good research design

CC.4.3.3 Sampling in Social Science Research

Sampling in social science research, Different sampling methods- Random sampling, Probability sampling, simple and stratified random sampling, cluster sampling, systematic sampling, Sampling and non-sampling errors.

CC.4.3.4 Research Report

Meaning and purpose of report, Target group in report writing, Contents of a report, Format of a Report, Qualities of a good research report, Types of a report. Planning of a report, Organisation of a report, Presentation of a report, Style in Report writing, Conclusion andGeneralization.

Core Elective (Group-A)

Course No. ECO 423
Mathematical Economics – II

CE.4.4.1.1 Market Equilibrium

Single market equilibrium– MarshallianWalrasian equilibrium conditions; Lagged market equilibrium; Multi-market equilibrium – General equilibrium system of Walras, Stability conditions for equilibrium.

CE.4.4.1.2 Determination of Income and growth models

Determinants of investment.Static and dynamic multiplier; Accelerator; Trade cycle models – Samuelson and Hicks, Harrod and Domar growth model, Solow and Meade. Growth Models with technical progress; Optimal growth and Golden rule of accumulation.

CE.4.4.1.3 Game theory

Concept of game – two person zero-sum game, pay-off matrix, pure and mixed strategies, maximin and minimax solutions, saddle point solution, non-constant sum game. Prisoner's dilemma.

CE.4.4.1.4 Linear programming and input-output analysis

Linear programming– Primal and dual problem, Simplex method; Transport and storage problems and other applications of linear programming in economics, Input-output Analysis – Open and Closed systems. Hawkins Simon conditions. Leontief's dynamic system.

Course No. ECO 424
Industrial Economics – II

CE.4.4.2.1 Optimum Plant Size and Diversification, Vertical Integration and Merger

The cost theory and optimum size of the plant: The theory of cost and production functions, Efficiency and the size of the firm; Empirical estimation. Motivesfor diversification: Theories and empirical evidence on mergers and acquisitions (M & As) and diversification; Measurement approaches and empiricalevidence.

CE.4.4.2.2 Industrial Finance Accounting, Ratio Analysis and Investment decisions

Finance Accounting: Need of Finance; type of Finance and source of finance; Financial statements:BalanceSheet,ProfitandLossAccount;Assessmentoffinancialsoundness. Financial ratio analysis: Classification and description of financial ratios; The standard of comparison of ratios; Break Even analysis; Application of Break Evenanalysis.

Investment Decisions: Nature and type of Investment decisions.

CE.4.4.2.3 Indian Industrial Growth

Classification of industries; Industrial policy in India - Role of Public and private sectors; Recent trends in Indian industrial growth; MNCs and transfer of technology; Liberalization and privatization and the growth ofindustries.

CE.4.4.2.4 Industrial Finance and Labour

Industrial Finance: Role, nature, volume and types of institutional finance – IDBI, IFCI, SFCs, SIDC, commercial banks etc. Industrial Labour: Structure of industrial labour; Employment dimensions of Indian industries, Industrial relations; Exit policy and social security; Wages and problem of bonus; labour market reforms.

ECO 425

Research Project/Dissertation

[Dissertation 60 Marks and Open Seminar presentation 20 marks and viva – 20 marks]

Core Elective (Group-B)

Course No. ECO 426
Econometrics – II

CE.4.5.1.1 Simultaneous Equation Models-Meaning

Introduction to Simultaneous Equation models with examples; Simultaneous equation bias and inconsistency of OLS estimators; Structural and Reduced form; Identification problem–Order and Rank conditions for identification

CE.4.5.1.2. Estimation of Simultaneous Equations

Methods of estimating simultaneous equation system: Recursive methods and OLS, Indirect least squares (ILS), 2SLS and 3SLS.

CE.4.5.1.3 Autoregressive and Distributed Lag Models

Autoregressive and Distributed Lag Models – Koyck model; Adaptive Expectation model; Stock Adjustment model; Almon approach to distributed-lag models;

CE.4.5.1.4 Time Series Analysis

Time-Series Analysis – Basic concepts of time-series; Stationary and Non-stationary Stochastic Process; Integrated Stochastic Process; Random Walk model; Tests of Stationarity–Autocorrelation function and Correlogram; Unit Root test and Dickey-Fuller test, Co-integration and Engle-Granger (EG) test.

Course No. ECO 427
Financial Institutions and Markets – II

CE.4.5.2.1 Non-bank Financial Intermediaries

Definition and types of non-bank financial institutions: Their growth and impact on India's economic development, measures taken to control their operations.

CE.4.5.2.2 Financial Markets

Role and structure of money market and capital market – call money market. Treasury bill market, commercial bill market including commercial paper and certificate of deposits, discount market.

CE.4.5.2.3 Securities and Derivatives Markets

Government securities market – markets for derivatives: features and options and other derivatives : types, uses and pricing of derivatives – Primary and secondary market for securities; SEBI: its impact on the working of capital market in India; IRDA and its role in financial markets.

CE.4.5.2.4 International Financial Markets

Reforms in International monetary system for developing countries – Lending operation of world bank and its affiliates – Working of IDA and IFC; The Growth of Regional financial institutions; Asian Development Bank and its lending activities; Asian Development Bank and India, Euro–dollar and Euro-Currency markets; their developmental role and regulation at the International level.

Course No. ECO 428
Agricultural Economics – II

CE.4.5.3.1 Rural finance and cooperation in India

Role of capital and rural credit; Organized and unorganized capital market; Rural savings and capital formation; characteristics and sources of rural credit – Institutional and non-institutional; Reorganization of rural credit – co-operatives, commercial banks, regional rural banks, role of NABARD.Cooperative movement; Genesis and growth of cooperative sector; Agricultural cooperation in India; Problems and prospects of cooperative Institutions.

CE.4.5.3.2 Agricultural Prices

Marketing and state policy; Agricultural markets and marketing efficiency – Marketing functions and costs. Market structure and imperfections; Regulated markets; Marketed and marketable surplus; Behaviour of agricultural prices – Cobweb model; Price and income stability; State policy with respect to agricultural marketing; ware-housing; prices; taxation

and crop insurance; Terms of trade between agricultural and non-agricultural prices; Need for state intervention; Objectives of agricultural price policy – Instruments and evaluation; Food security in India and Public distribution system.

CE.4.5.3.3 Agricultural growth in India

Recent trends in agricultural growth in India; Inter-regional variations in growth of output and productivity; Cropping pattern shifts; Supply of inputs – irrigation, power, seed and fertilizers; pricing of inputs and role of subsidies; Distribution of gains from technological change; Role of public investment and capital formation in Indian agriculture; Strategy of agricultural development and technological progress; sustainable agriculture – indigenous practices; bio-technological practices and growth potential.

CE.4.5.3.4 Agriculture and external sector

International trade in agricultural commodities; commodity agreements; Issues in liberalization of domestic and international trade in agriculture; Role of MNCs.; Globalisation of Indian economy and problems and prospects of Indian agriculture; Impact of World Trade Organisation on Indian agriculture.

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1. Research Methodology- C. R Kothari
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3. Basic Statistics, Goon Gupta and Dasgupta
4. Scientific Social Survey and Research- P.V.Young