Courses Offered:

The college offers the courses for Under graduate, Post graduate& Research Programme in the department of Economics. Below are the details,

Under Graduate	B.A. Economics	Branch - IV
Post Graduate	M.A. Economics	Branch – III
Research Programme	Ph.D. Degree	FullTime /Part Time

The University of Madras has introduced the CBCS, which is being followed by all its affiliated colleges in both Under graduate and Post graduate programmes, with effect from 2008 – 2009. The below are the structure of U.G Courses,

UNIVERSITY OF MADRAS
B.A. DEGREE COURSE INECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021

CORE-I: MICRO ECONOMICS-I

B.A. DEGREE COURSE INECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021

Inst.Hrs :6   **YEAR: I**
Credits :4   **SEMESTER:I**

Learning Outcomes:
Students will acquire

- An understanding of the basic conceptual framework ofeconomics
- Knowledge on working of marketmechanism
- An analytical impact of changes in market forces on price, income and output overtime
- An overview of consumer behavioural patterns to arrive atequilibrium
- Insights pertaining to production, production function and producers equilibrium

UNIT I
Definitions of Economics –Scope and methods of micro economics- theories and models – production frontier – economic problems – free markets

UNIT II
Firms and households – demand function and supply function –determinants – shift vs movement – law of demand and law of supply – exceptions and applications – determination of marketequilibrium.

UNIT III
Elasticities of demand and supply – slope – types – price, income, cross, substitution – calculating Elasticities – determinants –time dimensions.

UNIT IV
Cardinal Utility Approach – Total Utility and Marginal Utility –Law of Diminishing Marginal Utility – Law of equi-marginal utility – Limitations – Ordinal Utility – Indifference Curves – Properties – Marginal Rate of Substitution – Consumer's Equilibrium –Hicksian Price Effect -- Concept of Consumer Surplus.

UNIT V
Production Function – Law of Variable Proportions – Iso-quants – Marginal Rate of Technical Substitution – Law of Returns to Scale – Producers' Equilibrium – Least cost combinations.

References:
1. Gregory Mankiw (2014) Economics: Principles and Applications, New Delhi, Cengage LearningIndia
2. Koutsiyannis A. (2003) Modern Micro Economics – Palgram Macmillan (UK) 2ndEdition.
3. Robert Pindyck and Daniel Rubinfeld (2017) 8th Edn. Micro Economics, Pearson Education.
4. Varian,H.(2000),Intermediate Microeconomics: A Modern Approach, W.W.Norton, NewYork

B.A. DEGREE COURSE INECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021
UNIVERSITY OF MADRAS

BEC-DSC02

CORE-II: STATISTICS-I

Inst.Hrs :6   **YEAR: I**
Credits :4   **SEMESTER:I**

Learning Outcomes:
➢ Students will be able to explore data, demonstrate skill in describing, analyzing data appropriately
➢ To learn to empirically verify simple economic law/theory
➢ Should be able to conduct simple economicanalysis

UNIT I: Descriptive Statistics/Summary Statistics: (ONLY INTERNAL ASSESSMENT)
Measures of Central Tendency – Minimum, Maximum, Mean, Median, Mode- Measures of Dispersion – Standard deviation, Variance- Measures of deviation from Normality - Skewness, Kurtosis- Frequency Distributions – Univariate, Bivariate- Graphical Illustrations

UNIT II: Probability:
Introduction to Probability & Concepts- Addition Rule of Probability- Multiplication Rule of Probability- Conditional Probability & Baye's theorem- Theoretical Probability Distributions – Binomial, Poisson, Normal distributions

UNIT III: Inferential Statistics:
Estimation – Point estimation, Interval estimation- Statistical Hypothesis Testing and Significance- Steps in hypothesis testing – Types of hypothesis, Levels of Significance, Degrees of Freedom, Type I and Types II Errors, One-Tail and Two-Tail Tests, Standard Error, p-Values

UNIT IV: Tests of Significance of Means:
Small Sample Test: Student's t Distribution – Properties of t distribution, Applications of t test- Large Sample Test: Standard Error – Applications & Uses- ANOVA – One-way & Two-way

UNIT V: Index Numbers
Meaning and uses of Index numbers in Economics - methods of construction of Index in Economics - Methods of construction of index numbers: Simple Method: 1. Simple Aggregation Price Index, Simple Average of Relatives, 2. Weighted Method: Fisher's, Laspeyres, Paasche's Method.

References:
1. Aggarwal. Y.P (2002), Statistics Methods – Concepts Application and Computation, Sterling Publishers Private Ltd., NewDelhi.
2. Gupta, S.P. (1993), Fundamentals of Applied Statistics, S. Chand & Sons, NewDelhi.
3. Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book Co.,London.
4. Whigham, David, (2008), Business Data Analysis Using Excel, Oxford UniversityPress.
5. Wonnacott H. Thomas & Wonnacott J. Ronald (1969), Introductory Statistics, John Wiley & Sons, Inc. NewYork.
6. Timothy C. Urdan (2005), Statistics in Plain English, *Second Edition,*Lea Lawrence Erlbaum Associates Publishers,London

BEC-DSA1A

ALLIED-I(A): HISTORY OF ECONOMICTHOUGHT

Inst.Hrs :6   **YEAR: I**
Credits   :5   **SEMESTER:I**

Learning Outcomes
➢ To trace the evolution of economic science and evaluate the contributions of various thinkers and schools ofthought
➢ The student should conceptualize the evolution of economic ideas and hence forth identify the ideology of different schools ofthought
➢ Critical thinking- contextual analysis of theories and itsrelevance
➢ Writing and presentation Skills engage in academic debates/ intellectualexercise

UNIT 1
Introduction to the History of Economic Thought – Meaning, Need for study of Economic Thought - Origin of Modern Economic Thought –Mercantilism –Physiocracy

UNIT2
The Classical Political Economy - Adam Smith- David Ricardo - Thomas Robert Malthus- J.S.Mill

UNIT3
Alternative Schools of Thought - Marxian Socialism-Institutional School –Thorstein Bunde Veblen- German Historical School –Critical and Positive ideas- Marginal Revolution –William Stanley Jevons –Carl Menger –Leon Walras- Neo Classical Economics –Main Features –Alfred Marshall –Critique of Neoclassical School

UNIT 4
Keynesian Economics- Main Features of Keynesian Revolution – Contributions of Lord Keynes to Macro Economics -Welfare School –Vilfred Pareto

UNIT 5
Indian Economic Thought - Dadabhai Naoroji- Mahadev Govind Ranade - Gopalakrishna Gokhale - M. K. Gandhi

References:
1. Dasgupta, Ajit(1993).A History of Indian Economic Thought,Routledge,London,NewYork.
2. Lokanathan V.(2007), A History of Economic Thought, S. Chand, New Delhi NewDelhi.
3. Haney, Lewis H. (1962) History of Economic Thought, The Macmillan,NewYork.
4. Paul.R.R (2014), History of Economic Thought, KalyaniPublications.
5. Roll, Eric (2006), History of Economic Thought. Faber,London.
6. Agnar Sandmo,(2010), Economics Evolving: A History of Economic Thought, Princeton UniversityPress.

BEC-DSC03

CORE-III: MICRO ECONOMICS-II

Inst.Hrs :6   **YEAR: I**
Credits :4   **SEMESTER:II**

Learning Outcomes:

Students will acquire

➢ Idea about the concepts of cost andrevenue
➢ Knowledge of perfect competition and price and outputdetermination
➢ Information about monopoly market and the practice of pricediscrimination
➢ Knowledge of monopolistic competition and oligopoly marketcondition.
➢ Insight into theories of rent, wage, interest andprofit.

UNIT I
Cost and Revenue Concepts – Types of Costs – Fixed and Variable Costs – Average, Marginal and Total Costs – Short run and Long run Costs, economies and dis-economies – Traditional and Modern Costs – Total, Average and Marginal Revenues- nature of AR and MR under different market structures.

UNIT II
Perfect Competition – Features – Price and Output Determination under Perfect Competition – Short run and Long run equilibrium of the firm.

UNIT III
Monopoly – Equilibrium under Monopoly – Price Discrimination – Types and Degrees of Price Discrimination – A Note on Dumping – control of monopoly.

UNIT IV
Equilibrium under monopolistic competition – Product Differentiation and selling costs- Excess capacity – Oligopoly – Kinked Demand Curve Model – Cartels – Price leadership model.

UNIT V
Marginal Productivity Theory of Distribution – Theories of Rent, Wage, Interest and Profit.

References:
1. Karl E. Case and Ray C. Fair, (2013) Principles of Economics, 11th Edition, Pearson, New Delhi.
2. Gregory Mankiw (2014), Economics: Principles and Applications, New Delhi, Cengage LearningIndia.
3. Koutsiyannis A. (2003), Modern Micro Economics – Palgram Macmillan (UK) 2ndEdition.
4. Watson(1975), Price Theory and its uses, Scientific Book Company,Calcutta.

UNIVERSITY OF MADRAS
B.A. DEGREE COURSE INECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021

BEC-DSC04

CORE-IV: STATISTICS–II

B.A. DEGREE COURSE IN ECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021

Inst.Hrs:6   **YEAR: I**
Credits :4   **SEMESTER: II**

Learning Outcomes:
➢ Students will be able to explore data, demonstrate skill in describing, analyzing data appropriately
➢ To learn to empirically verify simple economic law/theory
➢ Will be able to conduct simple economicanalysis

UNITI: Measures of LinearRelationships
Introduction to Correlation – Definition, Types- Estimation of Correlation Coefficients– Simple, Multiple- Properties of Correlation Coefficient-Spearman's, Rank Correlation co-efficient

UNITII: Simple Linear RegressionAnalysis/Models
Introduction to Simple Linear Regression Models- Regression vs. Causation- Properties & Estimation of Regression Coefficients- Coefficient of Determination

UNITIII: Multiple Linear Regression Models
Introduction to Multiple Linear Regression Models- Properties & Estimation of Partial- Regression Slope Coefficients- Multiple Coefficient of Determination

UNITIV: Time Series Analysis:
Concepts and components of time series data- measurement of trends – Graphical, moving, average, least squares method and fitting of linear trend curves.

UNITV: MinorAssignment
Estimate, analyze and draw inference on an economic data using any of the statistical tools in the syllabus.

References:
1. Aggarwal. Y.P (2002), Statistics Methods – Concepts Application and Computation, Sterling Publishers Private Ltd., NewDelhi.
2. Gupta, S.P. (1993), Fundamentals of Applied Statistics, S. Chand & Sons, NewDelhi.
3. Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book Co.,London.
4. Whigham, David, (2008), Business Data Analysis Using Excel, Oxford UniversityPress.
5. Wonnacott H. Thomas & Wonnacott J. Ronald (1969), Introductory Statistics, John Wiley & Sons, Inc. NewYork.
6. Timothy C. Urdan (2005), Statistics in Plain English, *Second Edition,* Lea Lawrence Erlbaum Associates Publishers,London.

UNIVERSITY OF MADRAS
B.A. DEGREE COURSE IN ECONOMICS

BEC-DSA2A

ALLIED-II(A): HEALTHECONOMICS

Inst.Hrs :6   YEAR: I
Credits :5   SEMESTER: II

LEARNING OUTCOMES

➢ To understand the students, health is one of the important indicators of humandevelopment.
➢ To highlight the need of health care services supply and demand both private and publicsector.
➢ To enables the students the key concepts of health and evaluation of health caresystem
➢ To assess and the performance of health indicators and itsimplications
➢ This paper is to create awareness of health care and healthinsurance
➢ It also helps to understand health industry andtourism
➢ This paper also enlighten them to live with hygiene and its boost to importance of human development in particular and overall economic development ingeneral.

UNIT-I
Health and Economic Development- Investment in man -Health and Social Welfare- Determinants of Health- Income and Health Linkages- Economic Analysis of Health care.

UNIT-II
Demand for Health Care Services- Preference for Health care using Indifference Curves- Budget Constraints- Income and Price effects for Health care- Elasticity of Demand for Medical care.

UNIT-III
Supply of Health care services- Physicians and Medical Personnel as Health care providers- Non labour inputs- Hospitals- Interaction of Demand and Supply of Health care.

UNIT-IV
Health Indicators- Birth rate- Fertility- Morbidity- Mortality- IMR – CMR- MMR- Disability Adjusted Life Year (DALY)- Quality Adjusted Life Year (QALY)- Sex ratio.

UNIT-V
Health Insurance- Medical Ethics- Medical Tourism.

BOOKS FOR REFERENCE:
1. William Jack, Principles of Health Economics for Developing Countries, World Bank Institute Development Studies1999.
2. World Development Report, Investing in Health, The World Bank1993.
3. M. Grossman, ‗The Shadow price of Health in the Economics of Health' Vol. 1 by A.J. Culyes (ed) (1991), Edward Elger publishing Ltd, UK.
4. Volan Brian (1993) Economics Incentives, Health Status and Health services, Utilisation, Journal of Health Economics, VolII.
5. Banerjee, D. (1975), Social and Cultural Foundations of Health Service Systems of India, Inquiry, Supplement to Vol. XII,June.
6. Edwin G Dolan andJohnC   Goodman: Economics of Public Policy: 4thEdition: West Publishing Company, NewYork.

B.A. DEGREE COURSE IN ECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021
CORE-V: INDIAN ECONOMY-I

Inst.Hrs:6   **YEAR: II**
Credits :4   **SEMESTER:III**

Learning Outcomes:

➢ understand and dimension of Indian EconomicProblems
➢ understand the population dynamics and importance of demographic dividend of aneconomy
➢ understand the need for formulation of strategies of planning for reformingeconomies
➢ appreciate the vital link between agriculture credit and farm productivity inAgriculture
➢ appreciate the impact of unemployment, and fluctuating price indices, and economic disparities on a growingeconomy

UNIT-I
Economic development and growth-Basic characteristics of the Indian economy-major issues of development-obstacles to development.

UNIT-II
Structure of Indian economy-National income – sectoral contribution and economic transition in India - -natural resources in the process of economic development population size andgrowth –demography composition – new population policy

UNIT-III
Objectives of planning in India –development strategy in India-broad achievements and failures- new economic reforms –liberalization, privatization and globalization-rationale behind economic reforms-progress of privatization and globalization.

UNIT-IV
The place of agriculture in the national economy-trends in production and productivity in agriculture – green revolution-progress of agriculture under the five year plans –land reforms – rural credit – agricultural marketing and food security in India.

UNIT-V
Poverty and inequality in India –unemployment in India-causes for rising of prices –regional disparities in India.

References:

1. Ahluwalia, I. J. and IMD Little (Eds.) (1998). *India's Economic Reforms and Development*, Oxford University Press, NewDelhi.
2. Byres, T.J. (Ed.) (1997), The State, Development Planning and Liberalization n India, Oxford University Press, NewDelhi.
3. Byres, T.J. (Ed.) (1998), The Indian Economy: Major Debates Since Independence, Oxford University Press, NewDelhi.
4. Kausik Basu (Ed.) (2012), Oxford Companion to Indian Economy, 3rd Edition, OUP, New Delhi.
5. Uma Kapila (Ed.) (2017-18) Indian Economy Since Independence , Academic Foundation, New Delhi, 28th Edition.
6. Ashima Goyal (Ed.) The Oxford Handbook of the Indian Economy in the 21st Century: Understanding the Inherent Dynamism, Oxford UniversityPress.

B.A. DEGREE COURSE IN ECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021

UNIVERSITY OF MADRAS

BEC-DSC06

CORE-VI: MATHEMATICS FORECONOMISTS

Inst.Hrs:6   **YEAR: II**
Credits :4   **SEMESTER:III**

Learning Outcomes:

➢ The student should acquire computational skills- calculation of derivatives and solve problems in optimization
➢ Analytical skills- capable of identifying tools required to solve specific problems/ economic issues.
➢ Acquire broad understanding of maximization and minimizationtechniques.

UNIT I

Vector and Matrix Algebra - Basic Operations - Types of Matrices – Transpose of a Matrix – Properties of Transpose – Partitioned Matrices – Minor and Rank of a Matrix.

UNIT II

Determinants – Singular, Non Singular Matrix – Adjoint Matrix – Inverse Matrices – Properties of Inverse – System of Equations with Inverse – Cramer's Rule.

UNIT III

Differentiation – Rules of Differentiation: Differentiation of Sum and Difference of functions – Product Rule – Quotient Rule – Chain Rule – Higher Order Derivatives – Direct and Cross PartialDerivatives.

UNIT IV

Maximization and Minimization – Economic Applications: Revenue Maximization – Profit Maximization under Perfect Competition, Monopoly, Discriminating Monopoly – Cost Minimization.

UNIT V

Integration – Rules – Definite Integrals – Properties of Definite Integrals – Economic Applications: Consumer's Surplus and Producer's Surplus.

References:
1. Chiang. A. C. (2005), Fundamental Methods of Mathematical for Economics, McGraw Hill, New York.
2. Edward T Dowling (2011), Schaum's Outline of Introduction to Mathematical Economics, 3rd Edition, McGraw HillPublication.
3. Geoff Renshaw(2009), Maths for Economics, 2nd Edition, Oxford Publications, NewDelhi
4. Jean E. Weber (1982), Mathematical Analysis, Business and Economics Applications, Harper International Edition, Cambridge, March1.
5. Mabbet, A.J. (1986), Workout Mathematics for Economists, Mac Millan Master Series, 4th Edition,London.

BEC-DSA3A

ALLIED-III(A): RURAL ECONOMICS

Inst.Hrs :6   **YEAR: II**
Credits :5   **SEMESTER:III**

Learning Outcomes:

➢ To understand the concept of RuralEconomy
➢ To gain knowledge about the Rural employment, issues of unemployment andPolicies
➢ To obtain knowledge about the Agricultural Marketing, pricing policies, financial issues and financialinstitutions.
➢ To know the Rural Development Programmes and Policies of thegovernment
➢ To obtain knowledge about the Rural Industrialisationopportunities.

UNIT I
Nature- Scope and Factors determining Rural Economy- Characteristics of Rural Economy - Social Aspects of India's Rural Areas - Barter System - Non-monetized Sector - Economic Characteristics - Land and Asset Distribution - Agricultural Income - Vagaries of Monsoon.

UNIT II
Rural Unemployment - Types and Magnitude , Agricultural Labour – Marginal Productivity – Agricultural Wage – Minimum Wages Act, Rural Employment Programmes – MGNREGA – Rural Poverty – Nature, Causes and Consequences – Poverty Alleviation Programmes.

UNIT III
Agricultural Marketing – Minimum Support Price linked to Production Cost - Agriculture Marketing Development – eNAM system (online Agriculture Market Place) Crop Insurance - Rural Finance - Causes and magnitude of rural indebtedness, Sources of rural credit: Unorganized: Money lenders, Indigenous Bankers, Organized: Co-operatives, Commercial Banks, Regional Rural Banks – NABARD.

UNIT IV
Rural Development Programmes –Pradhan MantriSadak Yojana -PradhanMantriAwaasYojana – National Rural Health Mission – National Rural Livelihood Mission.

UNIT V
Rural Industrialization - Agro-based Industries – Cottage Industries, Rural artisans - Cooperative societies – Rural Marketing. Cooperative Marketing-Role of Self Help Groups – PURA Model – Recent Government Policy for Rural Development.

References:
1. Agarwal A.N., KundanLal, (1990), Rural Economy of India, Vikas,Delhi.
2. Choudry. C.M, (2009) Rural Economics- Jaipur- SublimePublication
3. DhingraI.C., (2010), The Indian Economy, Sultan Chand, NewDelhi.
4. L.C. Jain, (1985), Grass without Roots: Rural Development Under Government Auspices, Sage Publications, New Delhi.
5. Patel, K.V, Shan A.C, and Mello L.D, (1984), Rural Economics, Himalaya,Mumbai.
6. Prasad B.K. Rural Development, (2003), Concept, Approach and RuralStrategy.

BEC-DSC07

CORE-VII: INDIANECONOMY–II

Inst.Hrs:6   **YEAR: II**
Credits :4   **SEMESTER: IV**

Learning Outcomes:

➢ To appreciate the changing perspective with regard to industrialisation and policy prescriptions to enhancedevelopment.

➢ Students will be competent to analyse the cause for industrial disputes, and find out the measures for socialsecurity.

➢ Students will be capable of acquiring the ability to examine the role of trade policy and foreign trade, and know about the composition of foreigntrade.

➢ The students can learn about the wide ranging impact of policy changes made by RBI and other financialinstitutions

➢ Obtain an overview about the revenue and expenditure of both Central and State Government and gives knowledge about the revenue sharing formula recommended by FinanceCommission.

UNIT-I

The role of industrialization-review of industrial growth under planning-small scale industries; role, problems, and policy perspective to help small scale industries-industrial policies; 1956, 1977 and 1991.

UNIT-II

Features of industrial labour- causes for industrial disputes –social security measures – unorganised sector and India's informal economy –agricultural workers in India.

UNIT-III

Importance of foreign trade for a developing economy-composition and direction of India's foreign trade- role of FDI-BOP crisis- India's trade policy.

UNIT-IV

Financial sector reforms – organisation of India's money market –changing roles of RBI-development financial institutions –Indian capital market and SBEI

UNIT-V

Trends in revenue and expenditure of central and state Governments-deficit finance in India- current year budget of government of India-finance commission-federal finance in India.

References

1. Ahluwalia, I. J. and IMD Little (Eds.) (1998). *India's Economic Reforms and Development*, Oxford University Press, NewDelhi.
2. Byres, T.J. (Ed.) (1997), The State, Development Planning and Liberalization in India, Oxford University Press, NewDelhi.
3. KausikBasu (Ed.) (2012), Oxford Companion to Indian Economy, 3rd Edition, OUP, NewDelhi.
4. Uma Kapila (Ed.) (2017-18) Indian Economy Since Independence , Academic Foundation, New Delhi, 28thEdition.
5. AshimaGoyal(Ed.) The Oxford Handbook of the Indian Economy in the 21st Century: Understanding the Inherent Dynamism, Oxford UniversityPress.

UNIVERSITY OF MADRAS
B.A. DEGREE COURSE INECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021

BEC-DSC08

CORE-VIII: ECONOMETRICS

Inst.Hrs :6 **YEAR: II**
Credits :4 **SEMESTER: IV**

Learning Outcomes
➢ Understand how to use regression analysis to infer causal relations of economicvariables
➢ Understand the economic implications and the relevance of the tools required to formulate simple econometricmodels

UNIT 1
Introduction to Econometrics – Definition and Scope –Divisions of Econometrics – Methodology of Econometrics – Types ofEconometrics

UNIT 2
Simple Linear Regression Model-Two Variable Linear Regression Model - PRF and SRF - Methods of OLS - Classical Linear Regression Model –Assumptions- Gauss Markov Theorem- Best Linear Unbiased Estimator(BLUE) - Derivation of OLS estimator and its properties

UNIT 3
Hypothesis testing- Coefficient of determination - Standard Error – Confidence Intervals

UNIT 4
Estimation of the model by OLS method - Estimation of a two variable model - Three Variable Linear Regression Model – Partial Regression co-efficients - Functional form of regression models: Double Log, Semi Log, Reciprocal models

UNIT 5
Econometric Model with Quantitative Independent Variables - Introduction to Dummy Variables
- Regression using Dummy Variables Testing for structural stability of regression models - Interaction Effects - Seasonal Analysis

REFERENCES:
1. Damodar N, Gujarati. & Sangeetha. S. (2007), Basic Econometrics, 4 th edition, McGraw Hill Publications, . NewDelhi.
2. Damodar N, Gujarati. (2011), Basic Econometrics by Example, 1st edition: Palgrave MacmillanIndia
3. Christopher, Dougherty. Introduction to Econometrics (2011), 4 th edition, Oxford University Press, London.
4. Dominick, Salvatore. & Derrick. (2011), Reagle. Statistics and Econometrics, Schaum's Outlines 2 nd edition. McGraw Hill, NewYork.
5. Koutsoyiannis, A. (1977), Theory of Econometrics, 2nd edition. Macmillan Press,London.
6. Maddala.G.S (1997),Econometrics McGraw Hill, NewYork

UNIVERSITY OF MADRAS
B.A. DEGREE COURSE IN ECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021

BEC-DSA4A

ALLIED-IV(A): TAMIL NADU ECONOMY

Inst.Hrs :6 **YEAR: II**
Credits :5 **SEMESTER: IV**

LEARNING OUTCOMES:

➢ To understand the growth and development aspects of Tamil Nadu Stateeconomy.
➢ To gain knowledge about demographic structure of Tamil Nadu, population policy, employment issues andpoverty.
➢ To understand the basics of cropping pattern, irrigation, marketing, food security andPDS
➢ To understand the trends in industrial development in Tamil Nadu and the roles of SSI, TIDCO, TANSI, SIPCOT, DIC in promoting industrialgrowth
➢ To gain knowledge on the role of transport system and energy sector in promoting economic development of TamilNadu
➢ To understand the importance of health, education and environmentalknowledge.

UNIT I

Growth and development- Ingredients of economic growth- Sectoral growth in perspective- Inter-state Growth profiles- Economic development and structural Transformation-SDP trends- Planning.

UNIT II

Theory of Demographic Transition – Trends in Growth of Population- Sex ratio, Density, Literacy, Birth and Death rate- Urbanisation – Population Policy 2001. Composition of workforce – Unemployment andPoverty.

UNIT – III

Agriculture – Cropping Pattern – Irrigation – Agricultural Development in Tamil Nadu- Green Revolution – Agricultural marketing: regulated markets and Co- operative marketing – Non- Farm activities in Tamil Nadu- Food Security and Public distribution system.

UNIT IV

Trends in Industrial Development in Tamil Nadu – Factors contributing to Industrial Development in Tamil Nadu- Small Scale Industries: Role , Problems , Promotional Measures for SSI - TIDCO, TANSI, SIPCOT, DIC – Economic Liberalisation Vis-a - Vis Industrial Growth.

UNIT – V

Transport and Economic development- Nationalisation of Roadways-performance of public sector transports- Power development in Tamil Nadu-Rural Electrification. Social inputs and its development effects: Health, Education, Nutrition, water supply and environment

REFERENCES:

1. TN – An Economic Appraisal – various issues – Department of Evaluation and AppliedResearch.
2. State Planning Commission Reports of Government of Tamil Nadu.spc.tn.gov.in
3. Statistical Handbook of Tamil Nadu – Department of Economics andStatistics.
4. Leonard A C (2006) , Tamil Nadu Economy, Macmillan India Ltd, NewDelhi
5. MIDS (1988) , Tamil Nadu Economy : Performance and Issues, Oxford and IBN Publishing Co. Pvt. Ltd., NewDelhi
6. Naganathan M (2002) Tamil Nadu Economy: Trends and prospects, University OfMadras.
7. Dr. V. Lakshmi, Tamil Nadu Economy, Varadhan Socio- Research Centre, Chennai,2018.

BEC-CSC09

CORE-IX: MACRO ECONOMICS–I
(Common to B.A.Business Economics)

Inst.Hrs :6   YEAR:III
Credits :4   SEMESTER: V

Learning Outcomes:

Students will acquire

➢ Knowledge about the working of macro-economic parameters of aneconomy
➢ An understanding and measurement of national income and social accounting concepts and their importance
➢ An insight into the basic tenets of classical and Keynesian theory of output and employment in understanding economicfluctuations
➢ An idea about the implication of consumption theories in enhancinggrowth
➢ To appreciate the impact of changing interest rates oninvestment.

UNIT I:
Nature of Macro Economics - Difference between Micro and Macro Economics- Macro Statics and macro dynamics – transition from micro economics to macro economics.

UNIT II:
National Income – concepts of national income – methods of measuring of national income – Difficulties in measurement of national income – importance of national income analysis – social accounting – components and importance of social accounting.

UNIT III:
Classical theory of output and employment – J.B Say's Law of Markets- Keynesian Theory of output and employment – Wage rigidity – Derivation of aggregate Supply curve – Aggregate Expenditure function – Effective demand

UNIT IV:
The consumption function – meaning of consumption function – technical attributes of consumption function – determinants of the consumption function - Keynesian Consumption function –Relative Income hypothesis – Permanent Income Hypothesis - Life Cycle Hypothesis.

UNIT V:
Investment function – definition – induced and autonomous investment – determinants of investment – MEC and MEI and rate of interest – factors other than the interest rate affecting inducement to invest.

Reference Books:
1. Dornbusch, Rudiger, Stanley Fischer, and Richard Startz (2000). Macroeconomics, Tata McGraw- Hill Publishing Company, NewDelhi.
2. Roger E.A. Farmer (2002), Macro Economics, Thompson Asia Pvt. Ltd.,Singapore
3. Jha, Raghbendra (1991). Contemporary Macroeconomic Theory and Policy, Wiley Eastern Limited, NewDelhi.
4. Laidler, David E.W. (1977). The Demand for Money: Theories and Evidence, Harper and Row, New York.
5. Mueller, M.G. (Ed.) (1978). Readings in Macroeconomics, Surjeet Publications, NewDelhi.
6. Mankiw. N Gregory (2000) Macro Economics (Worth Publishers, NewYork).

BEC-DSC10

CORE-X: PUBLIC FINANCE–I

Inst.Hrs :6
Credits :4

YEAR: III
SEMESTER: V

Learning Outcomes:

➤ To understand the importance of public finance in economic development and able to differentiate private and public in terms of finance andgoods.

➤ In depth knowledge in public expenditure especially the significance and effects of increase in public expenditure. Also to study the economic views of publicexpenditure.

➤ Insight knowledge on various sources of public revenue and to understand the ways in which direct and indirect taxes are levied for augmenting financial resources towards economicdevelopment.

➤ To study the theoretical underpinnings behind the shifting and incidence oftaxes.

➤ To understand the concept of taxable capacity with its importance, types andmeasurements.

UNIT I:
Public finance – Meaning and Scope – Public and Private Finance – Principle of Maximum Social Advantage – Public Goods and Private Goods.

UNIT II:
Meaning and Definition of Public Expenditure – Reasons for the Growth of Public Expenditure – Views of Economists on Public Expenditure: Wagner's Hypothesis and Peacock – Wiseman Hypothesis, Canons of Public Expenditure – Effects of Public Expenditure

UNIT III:
Sources of Public Revenue – Taxes – Canons of Taxation–Principles of Taxation Classification of Tax – Direct and Indirect taxes—A brief note on different taxes – GST in India - Effects of Taxes.

UNIT IV:
Shifting and Incidence of Taxes – Theories of Shifting and Incidence – Concentration theory – Diffusion Theory – Modern Theory of Incidence

UNIT V:
Meaning – Factors determining Taxable Capacity – Types of Taxable capacity – Significance – Limits of Taxable Capacity – Measurement of Taxable Capacity.

References:
1. David.N.Hyman(2005),Public Finance: A Contemporary Application of Theory and Policies,Cengage India Edition, NewDelhi
2. Holley Ulbrich, (2003), Public Finance in Theory and Practice, Thomson South-Western, Chennai.
3. Lekhi R.K and Joginder Singh (2015), Public Finance, Kalyani publishers,Delhi.
4. Musgrave. Richard and Peggy.Musgrave, (2017), Public finance in Theory and practice, Mcgraw-HillPublications
5. Rosen, Harvey(2013),Public Finance, McGraw HillPublications
6. Pinaki Chakraborthy, GST in India, Orient Blackswan,2019.

CORE-XI: INTERNATIONAL ECONOMICS

Inst.Hrs :6   **YEAR: III**
Credits :4   **SEMESTER: V**

Learning Outcomes
➢ To understand the fundamental conceptual framework through theories of internationaltrade
➢ Application of the concepts to evaluate decisions with regard to internationaltrade
➢ To validate arguments and reassess need for protection or open up trade to assess the effects of tariff and non-tariffbarriers
➢ To examine the functioning and causes of balance of payments conundrum and to enhance trade flows and design schemes for evaluation
➢ To be aware of the functions and working of international financial institutions to ensure free to orderly flow of cross borderflows.

UNIT I
International Trade –Meaning –Difference between International and Inter-Regional Trade – Community Indifference Curve – Production Possibility Curve – Offer Curves –Opportunity Cost.

UNIT II
Theories of International Trade: Adam Smith (Absolute Advantage) – David Ricardo (Comparative Cost Advantage) –Heckscher - Ohlin Theorem— Heberler (Opportunity Cost Theory) - J.S. Mills (Reciprocal Demand Theory).

UNIT III
Free Trade – Protection – Meaning – Cases for and against Free Trade and Protection – Quotas: Meaning and Types. Tariff: Meaning, Types and Effects.

UNIT IV
Balance of Payments – Meaning - Structure of Balance of Payments – Causes of Disequilibrium – Measures to Control Disequilibrium. New International Economic Order – Objectives and Implementation.

UNIT V
IMF – World Bank – WTO –Regional Trade Agreements–ASEAN-Euro Zone- G20 –Asian Development Bank – BRICS – Recent Summits –Trading Blocs –SAARC – NAFTA – EU.

References:

1. Charles P Kindleberger (1999), International Economics, Macmillan Press LtdLondon.
2. Dominick Salvatore (2014), International Economics, John Wiley International Student Edition.
3. Paul Krugman, Maurice Obstfeld and Marc Melitz, Addison (2014) – Wesley International Economics: Theory and Policy, Pearson Education IndianEdition.
4. Robert Carbaugh (2016), International Economics, CengageLearning.

UNIVERSITY OF MADRAS
B.A. DEGREE COURSE IN ECONOMICS
SYLLABUS WITH EFFECT FROM 2020-2021

BEC-DSC12

CORE-XII: DEVELOPMENTECONOMICS

Inst.Hrs :6   **YEAR: III**
Credits :4   **SEMESTER: V**

Learning Outcomes:
➢ To understand about the economic development and economic growth and also knowing economic indicators.
➢ To gain knowledge the various growthmodels.
➢ To obtain knowledge of the social evils like poverty, incomeinequalities.
➢ To gain knowledge of the international trade and economic growth and Sources of international finance.

UNIT I
Definition of Economic Development and Economic Growth – Distinction between economic growth and economic development – Factors Contributing to Development and Growth: Institutional, Technological, Economic and non-economic factors – Measuring Development – GDP – PQLI – PPP - HDI.

UNIT II
Rostow's Stages of Economic growth –Balanced Vs Unbalanced growth- Nurkse Theory of Balanced Growth -Hirshman's theory of unbalanced growth-Rosenstein Rodan's Big Push theory– Lewis' dual sector model - Leibenstein's Critical Minimum Effort thesis.

UNIT III
Issues of Development: Income Distribution – Measuring inequality – Inequality in income and growth – The inverted U Hypothesis -Externality – Environmental Kuznet's Curve – Sustainable Development.

UNIT IV
Poverty cycle – Conceptual issues –Measurement of Poverty –Range –Coefficient of Variation – Head count - Head Count Ratio – Poverty Gap Ratio – Lorenz Curve – Gini Coefficient – Sen's Index on Poverty – Functional Impact of Poverty.

UNIT V
International trade and economic growth – Import Substitution and Export Promotion Meaning and types of international capital movement – Role of Foreign Direct Investment in economic development. – Foreign aid and economic development – Types of foreign aid

REFERENCES:
1. Adelman Irma (1961), Theories of Economic Growth and Development, Stanford UniversityPress.
2. Debraj Ray (1998), ―Development Economics‖ Princeton University Press, NewJersey.
3. Gerald M. Meier, James E. Rauch, Leading Issues in Economic Development, Oxford University Press, 7th edition(2000).
4. Thirwall A.P (1989), Growth and Development,Palgrave Macmillan; 4thEd.
5. Wayne Nafziger E (2012), Economic Development, Edition 5, Cambridge UniversityPress.

BEC-DSE1A
ELECTIVE-I(A): AGRICULTURAL ECONOMICS

Inst.Hrs:6   **YEAR:III**
Credits :5   **SEMESTER: V**

Learning Outcomes:
➢ To understand the concept of agricultural economics i.e. Farming and non-farming sectors, Cropping pattern (diversification (or)rotation)
➢ To gain knowledge about the land holdings and its impact onproductivity.
➢ To understand about the rural financial issues and sources of finance for agriculturaldevelopment.
➢ To understand the concept of agricultural marketing function andtypes.
➢ To gain knowledge about the community developmentprogrammes.

UNIT 1:
Meaning of Agricultural Economics, Need and Importance of Agricultural Economics – Relationship between Agricultural and Non-agricultural Sectors – Major Crops – Food and Commercial Crops, Crop Rotation, Mixed Farming and Sustainable Agriculture – Importance of Technology in Agriculture.
UNIT II
Agricultural Holdings, Sub-Division and Fragmentation of Holding in India, Causes and Ill Effects of Sub-Division - Consolidation of Land Holding. Agricultural Productivity – causes for Low Productivity, Suggestions for Raising Agricultural Productivity.
UNIT III
Indebtedness-Causes, Consequences, Measures to Remove Rural Indebtedness and Regulation of Money Lenders. Agricultural Credit – Sources of Agricultural Finance –NABARD - RRB- Self Help Group- Non Institutional Finance.

UNIT IV
Concepts and Features of Agricultural Marketing in India – Main Defects of Agricultural Marketing. The Regulated Markets – Functions. Co-operative Marketing – Advantages and Progress of Co-operative Marketing.
UNIT V
Community Development – Objectives and Implementation of CD, Meanings, Objectives, Strategy - Progress – Swarnajayanthi GramSwarojgarYojana (SGSY) – National Agricultural Policy 2000 - MGNREP – Food Security.

References:
1. Acharya, S.S. and Agarwal, N.L. (2004); Agricultural marketing in India, Oxford andIBH Publishing Co. Pvt.Ltd.
2. Badi, R.V. and Badi, N.V. (2004); Rural Marketing, Himalaya PublishingHouse.
3. Giriappa, S. (2000); Institutions and Agricultural Marketing, MohitPublications.
4. Lekhi, R.K. and Singh, Joginder (2005); Agricultural Economics, KalyaniPublishers.
5. Mahajan, K.A. (2003); Co-operative Marketing, Anmol Publications Pvt.Ltd.
6. Rajan Kumar Sahoo, (2011); Agricultural Marketing, Dominant Publishers & Distributors Pvt.Ltd.

CORE-XIII: MACRO ECONOMICS–II
(Common to B.A. Business Economics)

Inst.Hrs :6   **YEAR: III**
Credits :4   **SEMESTER:VI**

Learning Outcomes:

➢ To assess the impact of investment on increasing employment, output and consumption through the concept ofmultiplier

➢ To understand the equilibrium between product and factormarkets.

➢ Understand several key models and concepts of monetaryeconomics.

➢ Demonstrate an understanding of economic fluctuations and policy measures to withstand economic shocks

➢ Appreciate the role, value and limitations of monetary and fiscalpoliciesin   handling economicfluctuations.

UNIT I
Multiplier – employment and investment multiplier – leakages of multiplier – uses and limitations of multiplier – principles of accelerator and supermultiplier.

UNIT II
General Equilibrium – Equilibrium of commodity market (IS) and Money Market (LM) – Simultaneous equilibrium of commodity and money market (IS-LM) Changes in general equilibrium.

UNIT III
Money – Fisher's quantity theory of money – Cambridge equations – Keynesian theory of money – money supply – determinants of money supply – high power money and money multiplier.

UNIT IV
Business cycles – types – phases and effects of business cycle – inflation – Philips curve – causes and measures to controlinflation.

UNIT V
Macro-Economic policy: objectives – monetary policy – objectives – instruments – effectiveness of monetary policy – fiscal policy – objectives – monetary and fiscal mix to control inflation

Reference Books:
1. Dornbusch, Rudiger, Stanley Fischer, and Richard Startz (2000). Macroeconomics, Tata McGraw-Hill Publishing Company, NewDelhi.
2. Roger E.A. Farmer (2002), Macro Economics, Thompson Asia Pvt.Ltd.,Singapore
3. Jha, Raghbendra (1991). Contemporary Macroeconomic Theory and Policy, Wiley Eastern Limited, NewDelhi.
4. Laidler, David E.W. (1977). The Demand for Money: Theories and Evidence, Harper and Row, NewYork.
5. Mueller, M.G. (Ed.)(1978). Readings in Macroeconomics, Surjeet Publications, NewDelhi.
6. Mankiw. N Gregory (2000) Macro Economics (Worth Publishers, NewYork)

BEC-DSC14

CORE-XIV: PUBLIC FINANCE-II

Inst.Hrs :6   **YEAR: III**
Credits :4   **SEMESTER:VI**

Learning Outcomes:
➢ Understand the concept of public debt with its causes, effects andmanagement.
➢ Depth knowledge in the concept of fiscal federalism, fiancé commission and NITIAYOG
➢ Acquire more knowledge on the concept of deficit financing and its causes and effects in an economy.
➢ More knowledge in the framework of budget and overview of current UnionBudget.
➢ Understand the major functions of local government sources of finance and the problems faced byit.

UNIT I:
Public Debt - Meaning — Comparison of Private and Public debt – Objectives of Public debt – Classification of Public Debt , Causes, Effects and Redemption of public debt – Public debt management in India

UNIT II:
Meaning – Principles of Fiscal Federalism – Objectives of Finance Commission – Recommendations of 13th, 14th and 15th Finance Commission – Co-operative Federalism-NITI Aayog - Centre State Financial Relations.

UNIT III:
Meaning – Objectives –concepts of Deficit Financing- Causes of Deficit Financing – Impact of Deficit financing – Advantages and Disadvantages of Deficit Financing.

UNIT IV:
Meaning and Definition of Budget – Objectives of the Budget – Structure of the Budget – Budgetary procedure in India – An overview of Current Union Government Budget.

UNIT V:
Local Governments – Types of Local Governments – Sources of Finance of Local Governments
– Functions of local governments – Problems faced by Local Governments with regard to Finance

References:
1. David.N.Hyman(2005),Public Finance: A Contemporary Application of Theoryand Policies, Cengage India Edition, NewDelhi
2. Holley Ulbrich, (2003), Public Finance in Theory and Practice, Thomson South-Western, Chennai.
3. Lekhi R.K and Joginder Singh (2015), Public Finance, Kalyani publishers,Delhi.
4. Musgrave. Richard and Peggy.Musgrave, (2017), Public finance in Theoryand practice,McGraw HillPublications
5. Rosen, Harvey(2013),Public Finance, McGraw HillPublications

BEC-DSC15

CORE-XV: MONETARY ECONOMICS

Inst.Hrs :6 YEAR: III
Credits :4 SEMESTER:VI

Learning Outcomes

➢ It enables the students to understand the nature, basic concepts, scope and importance of money
➢ It capacitates the students to have a thorough understanding of the various functions of money.
➢ The students get an insight in to the different schools of thought regarding the demand for money and supply ofmoney.
➢ It enables the students to gets awareness of the different types, causes and effects of inflation anddeflation
➢ To familiarize the students with the different classification of banks and the evolution of banks.To understand working & operation ofRBI.
➢ To know the structure and working of money market, capital markets and also determination of foreignexchange
➢ To create awareness of the monetary policy formulations, its targets andobjectives

Unit I
Money in Economic System – Functions of Money-Evolution of Money – Types of Monetary Standards.

Unit II
Demand for Money: Quantity Theory-Classical, Cambridge equations and Keynesian Liquidity Preference –Friedman's Restatement Quantity theory of Money – Supply and composition of money – determinants of money supply -Money Multiplier.

Unit III
Commercial Banks – Functions and Operations-Credit Creation –Reforms in the Indian Banking System –Issues of NPA-Reserve Bank of India: Functions and Working – demonetization in India – objectives -implications

Unit IV
Money Market - Structure and Functions – Features of Indian Money Market – Role of unorganized money markets in India. Capital Market :Primary and Secondary Markets –SEBI and Capital Markets – Foreign Exchange Market – Types anddeterminants

Unit V
Monetary Policy: Objectives, Instruments of Credit Control measures – Transmission Process – Working of monetary policy in developed and developing countries.

References:

1. Goldfield and Chandler (1959) The Economics of Money and Banking,H & RPublication.
2. Jagadish Handa: Monetary Economics, Routledge; 1st Edition (18 September2008)
3. Pierce and Shaw, (1985), Monetary Economics:Theories, Evidence and Policy, Butterworth-Heinemann Ltd; 2nd revisededition
4. R.Cauvery, N.Kruparani, U.K,Sudhanayak, A.Manimekhalai, (2012), Monetary Economics, S.Chand and Companylimited.
5. R.R.Paul, (2013), Monetary economics, Kalyani Publishers, NewDelhi
6. Vaish M C (1985), Money, Banking, Trade and Finance, Wiley EasternPublication.
7. C. Rammanohar Reddy, Demonetization and Black Economy, Orient Blackswan,2019

BEC-DSE2B

ELECTIVE-II(B): MANAGERIAL ECONOMICS

Inst.Hrs:6   **YEAR: III**
Credits :5   **SEMESTER:VI**

Learning Outcomes:

➢ To acquire knowledge of scope, basic concepts and principles of managerialeconomics.
➢ To acquire insights into demand concept and demand forecastingmethods.
➢ To acquire information about cost concepts and break-evenanalysis.
➢ To acquire knowledge of pricingstrategies.
➢ To acquire idea of capital budgeting, project profitability and methods of appraising project profitability.

UNIT I
Definition and Scope of Managerial Economics-Tools of Managerial Decision making: Incremental and Marginal analysis- Equi-marginal principle – Principle of Discounting – Time perspective
UNIT II
Types of Demand: Derived Demand and Autonomous demand - New and replacement Demand - Total Demand and market segment demand - Short run and long run demand -Demand forecasting: Purpose and methods of forecasting. Opinion poll methods – Barometric technique – trend projection methods – time series analysis
UNIT III
Costs, Concepts: Future cost, Imputed costs, Opportunity cost, Sunk cost– Accounting and Economic costs, Book and Out-of pocket costs – Explicit and Implicit costs, Private and Social costs – shutdown and Abandonment costs. Break even Analysis – Assumptions – Uses – Limitations.

UNIT IV
Pricing Strategy : Peak load pricing, Pricing over the life cycle of a product, Skimming price , Penetration price, Multi-product pricing -Cost oriented pricing, Full cost pricing, Marginal cost pricing, Competition oriented pricing, Going rate pricing, Customary pricing –,Cyclical pricing - Porter's five forces model of competitive structure

UNIT V
Capital budgeting – cost of capital –-Project profitability – Methods of appraising project profitability.
References:

1. Keat,Paul G&Young,Philip.K.Y(2016),Managerial Economics,Pearson Education,NewDelhi.
2. K. JothiSivagnanam, and R. Srinivasan, (2010), Business Economics, Tata McGraw Hill Education Private Limited, NewDelhi.
3. Domnick Salvatore, (2009) Managerial Economics in a Global Economy, 4th Edition. Cengage Learning, NewDelhi.
4. McGuigan, R. James, Moyer, R. Charles and Harris H. Frederick, (2005), Managerial Economics- Applications, Strategy, and Tactics, Cengage Learning, NewDelhi.
5. Varshney R.L&K.L Maheshwari (2005),Managerial Economics, S.Chand & Co, New Delhi.

BEC-DSE3A

ELECTIVE-III(A): ENVIRONMENTAL ECONOMICS
(FOR ECONOMICS STUDENTS)

Inst.Hrs:6   **YEAR: III**
Credits :5   **SEMESTER:VI**

Learning Outcomes:
➢ To acquire knowledge regarding the relationship between Economy andEnvironment.
➢ To differentiate different types of pollution say Cumulative and Non-cumulative; Degradable and Non-de gradableetc.
➢ To understand the cost and impact ofpollution.
➢ To acquire in-depth knowledge in the determination of Optimum level of pollution and measures undertaken by the government to controlpollution.
➢ Interlinking the concept of climate change with sustainable development and to understand the impact of climate change in Rural and Urbandevelopment.

UNIT I
Environmental Economics an Introduction - The limitations of circular flow model of the economy: the opportunity cost of economic activity -The resource flow between environment and economy-The functions provided by the environment system to economicsystem

UNIT II
Types of Pollutants: Cumulative and Con- cumulative-Local, Regional and Global; Point source and Non- point source-Degradable, non-degradable and persistent pollution

UNIT III
Pollution as an external cost-Public goods -Absence of property rights

UNIT IV
Concept of optimum pollution-Command and Control-Pollution Tax-Pollution permits- Subsidies-Types of Environment Value-Cost Benefit Analysis -Travel Cost Method

UNIT V
Definition of Sustainable Development-Policies for Sustainable Development-Economic Costs of Climate change-Urbanisation – Damages in Rural Environment-Economic consequences of climate change inIndia

References:
1. Bhattacharaya: EnvironmentalEconomics-OUP,2002
2. Hanley, Nick, J.F. Shogren, and Ben White (2013): Introduction to Environmental Economics, London: Oxford University Press. ISBN:9780199568734
3. Karpagam M. (2013) Environmental Economics, Streling Publishers, New Delhi. ISBN: 9788120721463