# KUVEMPU UNIVERSITY

JNANA SAHYADRI, SHANKARGHATTA



# ECONOMICS DEGREE SYLLABUS

# KUVEMPU UNIVERSITY JNANA SAHYADRI SHANKARGHATTA,

# **ECONOMICS DEGREE SYLLABUS**

The Paper Number, Code Number and Paper title of Economics subject of various semesters in B.A. Degree course are as given below.

Class/Sem	Paper No.	Code No.	Paper title
I.BA-I SEM	I	SAA 240	MICRO ECONOMICS-I
I.BA-II SEM	II	SAB 240	MICRO ECONOMICS-II
II.BA-III SEM	III	SAC 240	MACRO ECONOMICS
II B.A. IV SEM	IV	SAD 240	MONEY AND BANKING
III B.A. V SEM	V	SAE 240	INTERNATIONAL ECONOMICS
III B.A. V SEM	VI	SAE 241 SAE 251 SAE 261	ECONOMICS OF DEVELOPMENT (Opt) ECONOMIC DOCTRINES (Opt)
			KARNATAKA ECONOMY (Opt)
III B.A. VI SEM	VII	SAF 240	INDIAN ECONOMY
III B.A. VI SEM	VIII	SAF 241 SAF 251 SAF 261	PUBLIC ECONOMICS (Opt) ENVIRONMENTAL ECONOMICS (Opt) QUANTITATIVE METHODS (Opt)

# I B.A.-I SEMESTER

# SAA 240 Paper -I: MICRO ECONOMICS - I

#### (Compulsory Paper)

### **Course Objectives:**

- To help students to acquire knowledge of some of the important principles and theories of Micro Economics.
- To provide the foundation for the study of other branches of economics.
- To develop analytical, reasoning and graphical presentation of skills.
- To enable the students to appreciate the utility of economics in day to day life.

# **Methodology:**

- Emphasis to be given to teaching concepts.
- Theories and laws to be taught with the help of tables and diagrams.
- Questions to be designed to evaluate a student's ability to use diagrams,
   explain concepts and evaluate at theoretical levels

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### Module -1: Micro Economics and Tools of Economic Analysis

Micro economics - meaning -types - scope - importance - limitations - problem of choice - basic economic problems common to all economics - role of price mechanism in a mixed economy - the law of scarcity and the economizing problem-production possibility curve.

20 Hours

#### Module -2: Measurement in Economics:

Variables - stocks - flows - linear and non-linear equations - charts - diagrams and their uses - statics and dynamics - equilibrium: partial and general equilibrium-stability and instability.

#### **Module -3: Theory of Consumer Behaviour**

Cardinal approach - Law of diminishing marginal utility - Law of equi marginal utility - consumer's surplus , Ordinal approach : Indifference curve analysis-meaning - properties - MRS- Consumers equilibrium -income effect - price effect-substitution effect - superiority of ordinal approach over cardinal approach.

20 Hours.

#### **Module - 4 : Demand Analysis**

Demand - Law of demand - demand schedule - demand curve - why demand curve is downward sloping? - change in demand v/s change in quantity demand -exceptions - elasticity of demand -meaning - kinds - types of price elasticity-factors determining - uses - measurement-demand forecasting- least square method.

20 Hours.

#### Module -5: Supply Analysis:

Supply - supply function - law of supply - supply schedule - changes in supply v/s change in quantity supplied -exceptions - elasticity of supply - equilibrium of supply and demand - the four laws of demand.

15 Hours

- 1. Asimakopulas Micro Economics, Oxford University Press.
- 2. Ahuja. H.L. Modern Micro Economics, S.Chand and Company
- 3. Jhingan.M.L. Micro Economics Theory . Konark Publications.
- 4. Misra. S.K. & V.K. Puri Micro Economics Theory and Applications (Part I & II) HPH Mumbai
- 5. Mc Connell and Gupta Economics . Mc Graw Hill
- 6. Shankaran -5 -Micro Economics, Karthekeyan Publications.
- 7. Seth M.L. Principles of Economics , Laxminarayan Agarwal, Agra
- 8. Stonier & Hague A text Book of Economic Theory.

# I B.A. -II SEMESTER SAB-240 Paper -II. MICRO ECONOMICS - II

#### (Compulsory Paper)

# **Course Objectives:**

- To help students to acquire knowledge of some of the important principles and theories of Micro Economics.
- To provide the foundation for the study of other branches of economics
- To develop analytical, reasoning and graphical presentation of skills.
- To enable the students to appreciate the utility of economics in day to day life.

# Methodology:

- Emphasis to be given to teaching concepts.
- Theories and laws to be taught with the help of tables and diagrams.
- Questions to be designed to evaluate a student's ability to use diagrams explain concepts and evaluate at theoretical levels

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### **Module -1 : Theory of Production**

Production: production function - short run and long run - law of variable proportions - laws of returns - economics and diseconomies of scale - production equilibrium

15 Hours

#### Module -2: Nature and Behavior of Costs and Revenue Analysis

Cost of production: cost concepts - money cost - real cost - opportunity cost - explicit and implicit cost - accounting and economic costs - prime costs - supplementary costs - short run costs - short run cost curves - TFC, TVC, TC, AFC, AVC, AC, MC - long run costs - long run cost curves - Revenue : meaning and concepts - AR, MR & TR - revenue under different markets

#### **Module -3: Product Pricing**

The concept of firm and industry - Perfect competition: features - determination of price and output, role of time element - Monopoly: features - types - price - output determination - price discrimination: features - conditions to make price discrimination more effective - price output determination - Monopolistic competition: features - product differentiation - price output determination - Oligopoly: features - Kinked demand curve - price output determination - administered prices.

20 Hours

#### **Module -4: Factor Pricing**

Nature of factor markets - marginal productivity theory of distribution - Rent: Ricardo and modern theory of rent -transfer earnings - quasi rent - Wages: subsistence theory of wages - wage fund theory - modern theory - Interest: classical theory - loanable fund theory - liquidity preference theory - IS and LM model - Profit: risk - uncertainty - dynamic and innovations theory.

25 Hours

#### **Module 5: Break Even Analysis**

Meaning and assumption - Break even point and chart - importance - limitations.

10 Hours

- 1. Ahuja H. L. Modern Micro Economics
- 2. Jhingam M L Micro Economic Theory
- 3. Mc Connel and Gupta Economics
- 4. Sankaran Micro Ecnomics
- 5. Seth M L Principles of Economics
- 6. Stonier and Hague A text Book of Economic Theory.

# SAC-240 <u>II B.A. -III SEMESTER</u> Paper – III. <u>MACRO ECONOMICS</u>

#### (Compulsory Paper)

# **Course Objectives:**

- To enable the student to learn the well formulated principles of macroeconomics.
- To help the student to understand the integrated working of a modern economy.
- To provide the basis for the study of other branches of economics
- To help the student to appreciate the role of government in the economic functioning of a nation.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### Module -1: Macro Economics and National Income Accounting

Macro economics - meaning - types- uses - circular flow of income and wealth - National income : meaning - definition - concepts of national income - GDP - GNP- NNP - PI-DPI-PCI (Real and Nominal) - methods of calculation -uses - difficulties in the measurement.

15 Hours

# **Module -2: Theory of Employment**

Classical theory of employment - Say's law of market - wage price flexibility - Keynesian theory of employment - effective demand - aggregate supply of function - aggregate demand function - wage price rigidity - Consumption function : psychological law of consumption - Average propensity to consume (APC) Marginal propensity to consume (MPC) - determinants of propensity to consume - Investment function - types of investments - marginal efficiency of capital - determinants - Multiplier and Accelerator - comparison of classical and Keynesian theory.

30 Hours

#### **Module - 3: Theory of Prices**

Inflation -meaning -types - causes - effects - remedies - inflationary gap inflation and unemployment - Philips curve : short run and long run - Deflation : meaning -causes - effects - remedies - deflationary gap.

15 Hours

#### Module - 4: Theory of Business Cycles

Trade cycles: meaning -types - features - phases - theories of trade cycles: Hayed - Keynes - Hawtrey - Hicks - measures to control trade cycles - forecasting the business environment - the business cycle today.

15 Hours.

#### **Module -5: Macro Economic Policy**

Meaning and objectives of monetary and fiscal policy - lags and limitations. Interplay of monetary and fiscal policy.

15 Hours.

- 1. Ackley G Macro Economics Theory and Policy
- 2. Mithani D.M. Macro Economic Analysis and Policy
- 3. Shapiro E Macro Economic Analysis
- 4. S.B. Gupta Monetary Economics
- 5. M.L. Seth Monetary Economics.

# SAD-240 PAPER – IV. MONEY AND BANKING

#### (Compulsory Paper)

# **Course Objectives:**

- To enable the student to learn the various concepts involved in money and banking
- To help the student to understand, modern money, capital market and banking system.
- To provide the basis for acquiring the knowledge of economic system in the country.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

### **Module- 1: Money and Monetary Standards**

Meaning and definitions of money -kinds of money: metallic coins - paper money -deposit money - legal tender money - optional money - money paper money of account - monetary standards - features, merits and demerits - principles and methods of note issue - functions of money - role of money in modern economy - role of money in a developing economy.

15 Hours

### Module -2: Supply and Demand for Money:

The supply of money: determinants of money supply - changes in the supply of money - the velocity of circulation of money - changes in velocity of circulation - demand for money: classical - Keynesian and post - Keynesian developments - equality of supply and demand for money.

15 Hours

#### Module -3: Value of Money and its Measurements:

Meaning of value of money - theories of value of money : quality theory - Fisher's equation - Cambridge version - Marshall , Pigou, Robertson and Keynes - Income and expenditure theory - Milton Friedman's restatement of quantity

theory of money - limitations -Index numbers : meaning and types - construction of simple & weighed index numbers - difficulties - uses of index numbers - limitations.

20 Hours

#### Module -4: Commercial Banking

Meaning and functions - balance sheet - Investment policy - credit creation (multiple expansion) - banking practices and services: cheques - Drafts, Bills, Pass Book - ATM - Internet Banking - Banker customer relationship - Core banking - portfolio management - role of commercial banks in a developing economy.

20 Hours

#### **Module - 5 : Central Banking:**

Nature and functions - credit control : Quantitative techniques: bank rate - open market operations - Variable reserve ratio - statutory liquidity ratio - Qualitative credit control: limitations - money market : meaning - constituents of money market and capital market - features and components primary and secondary - NBFIs - meaning and role in economic development .

20 Hours

- 1. Jhingan M L Monetary Theory
- 2. M L Seth Monetary Economics
- 3. Mithani D M Monetary Theory
- 4. Kulkarni and Kulkundrikar Monetary Economics
- 5. Panikkar K K Banking Theory and systems
- 6. R S Sayers Modern Banking
- 7. Dekock Central Banking
- 8. Garz Money and Banking

# SAE-240 Paper – V. International Economics

#### (Compulsory Paper)

# **Course Objectives:**

- To enable the students to learn the fundamental theories of international economics.
- To enable the students to apply the knowledge gained from the study of micro and macro economics in the field of international economics.
- To enable the students to understand the international trade system as it exists today.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### **Module -1 : Theory of International Trade**

Meaning - internal and international trade - classical theory - H.O. theorem -Leontief paradox - gains from trade : meaning -measurement - factors determining gains from trade.

10 Hours

#### Module -2: Terms of Trade and Commercial Policy

Meaning - offer curves - concepts - factors determining terms of trade - terms of trade and economic development -free trade and protection : arguments for and against - tariffs and quotas : meaning - types -effects.

15 hours

#### Module -3: Balance of Payments and Exchange Rate:

Meaning - balance of trade and balance of payments - structure of balance of payments - causes for disequilibrium in the balance of payments - measures for correcting disequilibrium -Foreign exchange : meaning - determination of exchange rate -fixed and flexible exchange rate - merits and demerits - purchasing power parity theory.

### **Module - 4: International Monetary Institutions**

International Monetary Fund - objectives - functions - achievements - World Bank - objectives - functions and achievements - Asian Development Bank : objectives - functions - achievements .

15 Hours

#### **Module -5: Economic Integration**

Meaning -theory of customs union - European Union - SAARC - foreign capital -MNCs - GATT-WTO - objectives functions - achievements.

20 Hours

- 1. International Economy Peter B Kenen
- 2. International Economy P T Elseworth
- 3. International Economy Kindle Berger
- 4. International Economy- M L Jhingan
- 5. International Economy H G P Srivastava
- 6. International Economy- B O Sodersten

# III B.A. - V Semester

# SAE-241 <u>Paper-VI.</u> <u>Economics of Development</u> (Optional)

# **Course Objectives:**

- To enable the students to learn the fundamental concepts of development economics.
- To enable the students to develop a logical and analytical view of issues in today's world.
- To enable the students to relate learning to reading the case of development issues like poverty, unemployment, imbalances etc.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### **Module -1:Economic Development and Economic Growth**

Meaning - definitions - distinction - determinants of economic growth - obstacles to development - measures of development in relation to GNP, PCI, PQLI, HDI - Gender empowerment - Human capabilities - measures to reduce income inequalities - sustainable development.

10 Hours

#### Module -2: Essentials of Economic Development

Capital formation: meaning - sources - role causes for low rate of capital formation in UDCs - Foreign capital: advantages and its dangers - Technology and economic development - Anthur Levies - theory of surplus labour - Ragner Nurkse theory of capital formation - capital Output - ratio - incremental capital output ratio - Choice of techniques: labour intensives and capital intensive.

#### Module -3: Growth Strategies and Growth Models

Introduction - Adom Smith - David Ricardo - Karl Marx - Schumpeter - Rostow - Gunnar Myrdal - Big Push theory - Critical Minimum Effort Thesis - Strategies of growth : balanced and unbalanced growth

20 Hours

#### Module -4: Human Resource and Economic Development

Importance of HRD in economic development - population as a growth promoting and retarding factor - C.P. Blacker theory of demographic transition - Man power planning : meaning - manpower shortages - man power surplus - strategy of man power planning - Human capital formation : meaning and problems - education and development - health and nutrition.

20 Hours

### **Module -5: International Aspects of Development**

Role of foreign trade - Secular deterioration in terms of trade - Globalization : merits and demerits - MNC's - merits and demerits - World Back and economic development

15 Hours

- 1. M.L. Jhingan Economics of Development and Planning
- 2. Mishra and Phenic Economics of Development and Planning
- 3. Lekhi The Economics of development and planning
- 4. Higgins .B. Economic development : Past and Present
- 5. Todano & Micheal Economic Development
- 6. Ray Debray Development Economics
- 7. World back reports Various issues.

# III B.A. - V Semester

# SAE-251 <u>Paper- VI. Economic Doctrines</u> (Optional)

# **Course Objectives:**

- To enable the students to understand the rich contributions of eminent thickness to economic thought.
- To enable he students to understand the evolution of economic ideas from time to time.
- To enable the students to understand the importance of the economic ideas as developed by various thinkers.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### Module -1: Pre-classical and Classical School

Significance of the study of economic doctrines - Mercantilism -

Physiocracy - Adam Smith - David Ricardo - T.R. Malthus - J.S.Mill.

20 Hours

### Module -2: Socialist and Marginal School

Karl Marx - Karl Menger - Jevons - Leon Walras

15 Hours

#### Module -3: Neo - Classical and Welfare School:

Alfred Marshall - J.M. Keynes - Pareto - Kenneth J. Arrow.

15 Hours

#### Module -4: Indian Economic Thought

Kautilya - M.K. Gandhi -Nehru - B.R. Ambedkar.

#### Module -5: Nobel Economists

Amartya Sen. J.R. Hicks, Gunnar Mirdal.

15 Hours

- 1. Bhatia- A History of Economic Thought
- 2. Srinivasa A History of Economic Thought
- 3. Yokanatav A History of Economic Thought
- 4. Harvey. L. H. A History of Economic Thought
- 5. C. K. Renukarya A History of Economic Thought (Kannada)
- 6. T.N. Hajela A History of Economic Thought
- 7. Taylor .D.H. A History of Economic Thought
- 8. R.R. Paul- A history of Economic Thought
- 9. B.N. Ganguli- Indian Economic Thought
- 10. Dr. H.R. Krishnaiah Gowda Arthika Chintane
- 11. H. R. Krishnamurthy- Arthika Chintane.

#### III B.A. V Semester

# SAE-261 Paper- VI. Karnataka Economy (Optional)

# **Course Objectives:**

- To enable a student to have an overview of the working of the Karnataka economy.
- To enable a student to understand the changes in the Karnataka economy.
- To enable a student to understand the leading issues in the Karnataka economic development.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### Module 1: Karnataka Economy an Overview

Features of Karnataka economy - growth of SDP -PCI - HDI - natural resources : minerals - water - forest - land - power resources etc. Population dynamics : growth - composition - density - problems -rural - urban migration - unemployment - remedies.

15 Hours

# Module 2: Agriculture in Karnataka

Importance of agriculture -productivity - causes for low productivity -trends in agricultural production - land reforms - agricultural marketing - problems - agriculture prices and price policy - procurement price - PDS - agriculture finance - irrigation - watershed development -dry land farming - Fisheries Sericulture.

15 Hours

#### Module -3: Industry in Karnataka

Growth of industries in Karnataka: importance -recent industrial policy. problems and prospects of large and small scale industries - industrial finance -sources of finance - energy sector -growth and problems -impact of global meltdown on Karnataka industrial development.

#### Module -4: Karnataka Finance

Sources of revenue - growth of revenue -VAT - growth of expenditure - causes for growth of public expenditure -Karnataka debt - burden - redemption -Karnataka Budget : Classification : revenue and capital budget-development -non-development -growth trends -causes for growth of non-development expenditure -impact on Karnataka economy.

20 Hours

#### Module -5 Social Development in Karnataka

Poverty - inequality - unemployment - gender inequality - problems of SC/ST's and minorities - regional imbalances -to overcome the above problems an over view of wage employment, self employment and habitat development programmes in Karnataka.

15 Hours

- 1. Dr. D. M. Nanjundappa- Regional Imbalance Report
- 2. K. Puttaswamaiah-Economic Development of Karnataka, Volume I & II
- 3. Abdul Aziz- Economy of Karnataka
- 4. Dr. M. Madaiah Karnataka Economy
- 5. Erranna Hatti Karnataka Arthikathe
- 6. Nayak Karnataka Arthikathe
- 7. H.R. Krishnamurthy Karnataka Arthikathe
- 8. H.R. Krishnaiaha Gowda- Karnataka Arthikathe

# IIIB.A. - VI Semester

# SAF – 240 Paper-VII. Indian Economy

### (Compulsory Paper)

# **Course Objectives:**

- To enable a student to have an overview of the working of the Indian economy.
- To enable a student to understand the changing trends in the Indian economy.
- To enable a student to understand the leading issues in India's economic development.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### **Module -1: Structure of Indian Economy:**

India - developing economy: features - National income: trends - composition - PCI - PQLI - HDI - Regional inequalities :causes - remedies - poverty : poverty line - extent - causes - poverty alleviation programmes : regional imbalances : causes - remedies.

10 Hours

#### **Module -2 : Demographic Profile:**

Trends the population growth - density -age - sex - size - composition - Population Policy of 2000- changes in occupational structure - Unemployment : extent - measurer - rural - urban migration.

10 Hours

#### Module - 3 : Agriculture in India

Trends in agricultural production - causes for low production and productivity - Green Revolution -II- food security and self sufficiency- New Agricultural Strategy -National Agricultural Policy 2000- agricultural finance: institutional and non - institutional - agricultural marketing -

problems - agricultural prices policy - PDS - irrigation: defects - Water Preservation - rain water harvesting - Water Shed Development - dry land farming.

20 Hours

#### Module -4: Indian Industry:

Industrial policy -recent issues - problems of public sector enterprises - disinvestment - medium and small industries : problems - prospects - challenges - current issues in Indian service sector - IT- education, tourism - industrial sickness - labour problems and policies - latest trends.

15 Hours

#### Module -5: Financial System in India

Money market - features and composition - capital market - features and composition - mutual funds - venture capital - stock market - SEBI -monetary policy in India - financial sector reforms: banking and insurance :

10 Hours

#### Module -6: Public Finance and Trade

Finances of Central Government - revenue - sources and trends - problems of Indian's tax system - expenditure- items and trends public debt : types - trend and management - Parallel economy: causes - remedies - Foreign trade : recent trends and trade policy- balance of payments : problems - causes - remedies.

15 Hours

- 1) Rudar Dutt Indian Economy
- 2) Dhingra I.C Indian Economy
- 3) Misra and Puri Indian Economy
- 4) Alak Gosh Indian Economy
- 5) Uma Kapila An Overview of Indian economy.

# III B.A. - VI Semester

# SAF-241 <u>Paper-VIII.</u> <u>Public Economics</u> (Optional)

# **Course Objectives:**

- To enable a student to have an overview of the working of the public economics.
- To enable a student to understand the changing trends in the public finance.
- To enable a student to understand the role of Government under liberalized environment.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### Module -1: Nature and Scope of Public Economics

Meaning -scope - importance of public finance - distinction between private and public finance -failures of market economy - public goods - private goods - merit goods - non -merit goods - externalities - role of government in mixed economy - Principles of Maximum Social Advantage.

15 Hours

#### Module-2: Public Revenue

Meaning -sources of public revenue (Centre, State and Local) -taxation : meaning -classification of taxes -direct and indirect taxes - merits and demerits -canon's of taxation - progressive - proportional - regressive - the benefit and ability to pay approaches - impact and incidence of taxes - shifting - Taxable capacity : meaning - factors determining taxable capacity - Optional taxation (Laffer Curve) - effects of taxation - recent tax reforms : VAT -GST

#### **Module -3: Public Expenditure**

Meaning - need for public expenditure -classification of public expenditure: Plan and non -plan- development and non development -canon's of public expenditure -effects of public expenditure -Wagner - Peacock and Wiseman hypotheses - causes for growth of public expenditure.

15 Hours

#### Module-4: Public Debt

Meaning -need for public debt - sources of public borrowing / classification of public debt effects of public debt: growth of public debt on economic development -burden of public debt - debt burden and future generation - methods of redemption of public debt.

15 Hours

#### **Module -5: Financial Administration**

Budget: meaning -kinds of budget - classification of budget: revenue-capital -balanced and unbalanced budget: arguments for and against - need for zero Base Budgeting -the concept of Gender Budgeting -causes for growth of deficit budget -remedies -fiscal policy for a developing economy.

15 Hours

- 1. Bhatia H L Public Finance
- 2. Musgrave and Musgrave Modern Public Finance
- 3. Mithani Public Finance
- 4. Thyagi B P Public Finance
- 5. Kulkarni and Kalkundrikar Public Finance
- 6. Sreekantaradhya B S Structure and reforms of Taxation in India.

# III B.A. VI Semester

# SAF – 251 <u>Paper- VIII.</u> <u>Environmental Economics</u> (Optional)

# **Course Objectives:**

- To build the students knowledge of the conceptual and theoretical foundation of environmental economics as a special branch of economics.
- To appraise a student of emerging environmental issues and policies at national and international level.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### **Module -1: Fundamentals of Development**

Meaning - importance - relationship between environment and development - sustainable development - Hardwick - London School - Safe Minimum Approach - Daly's Operational Principles - policy approach to sustainable development - environment and ecology - ecology and resource economics - nature and types of environment goods.

15 Hours

# **Module -2: Natural Resource and Degradation**

Features of natural resources - Renewable resources : land resources - water resources - forest resources - mineral resources - power resources - causes for degradation of natural resources - consequences - conservation of natural resources

15 Hours

#### Module -3: Environmental Pollution

Meaning - Air pollution : causes and effects - water pollution : sources of water pollution - causes and evil effects - Noise pollution: causes and effects - Water : problem of waste - case for pesticides - waste

management - pollution control -local environmental problems - methods of disposal - economics of recycling - importance and benefits .

20 Hours

#### **Module - : Theory of Exhaustable Resources**

Economics of exhaustible resources - classification - contribution of Adam Smith - Ricardo -J.S. Mill - Marshall - Herald Hotelling - resource scarcity - managing renewable resources - free access and problem of common property.

15 Hours

#### Module -5: Population, Energy and Environment

Trends in global population - population: growth and environment - evil effects - energy and environment - energy production - consumption - its impact on environment- energy crisis - Environment policy of GOI - international environmental issues - Acid rain - pollution issues - global warming - green house effect - Ozone effect - Helsinki Convention of 1974 - Montreal Protocol 1989 - Debt, for nature swap.

15 Hours

- 1. Bhattacharya .R.N. Environmental Economics
- 2. Senguptha Ecology and Economics
- 3. Sankar Ulaganathan Environmental Economics
- 4. Hill Understanding Environmental Pollution
- 5. Kolstad .C.D. Environmental Economics
- 6. H.R. Krishnaiah Gowda Parisara Arthashastra
- 7. N.T. Somashekar Development and Environmental Economics.

# III B.A. VI Semester

# SAF – 261 Paper- VIII. Quantitative Methods

(Optional)

# **Course Objectives:**

- To help students to acquire some basic skills in statistics.
- To develop analytical and graphical presentation of skills

#### Methodology:

- Emphasis to be given on teaching basic concepts and definitions.
- Theories and laws to be taught with the help of simple statistics and diagrams.
- Questions to be designed to evaluate the student's utility to use diagrams.

Note: The award of Internal Assessment (IA) is based on the performance in one internal test and skill development activity (weightage: 50% + 50%)

#### Module -1: Fundamental of Statistics:

Definition of statistics: uses of statistics in economics - statistics in relation to economics - Data: primary and secondary-methods of collecting primary data - tabulation and presentation of data - graphical representation of data .

20 Hours

#### Module - 2: Measures of Central Tendency:

Mean - Median - Mode - Geocentric and Harmonic means - Measures of dispersion: range - mean deviation - inter quartile range -standard deviation.

20 Hours

#### **Module -3: Correlation and Regression**

Correlation analysis: Karl Pearson coefficient of correlation - Spear man's Rank correlation - Regression analysis: Y on X and X on Y regression calculations:

20 Hours

#### Module -4: Time Series and Index Numbers

Time series analysis: components of time series - methods of decomposing trend - seasonal and cyclical components - Index Numbers: fixed and chain based simple relations - calculation of composite index numbers - index numbers by aggregates - Laspeyer's - Paache's - Fisher's index number - time and factor reversal tests.

20 Hours

#### Reference:

1. Veerachamy .R. - Quantitative methods for economics

2. Croxton F.E. - Applied General Statistics

3. Gupta . S.C & V.K. - Kapoor - Fundamental of applied statistics

4. Speigal M.R. - Meaning and Problems of Statistics.