

  
**KANNUR UNIVERSITY**

(Abstract)

MA Applied Economics Programme - under Choice Based Credit Semester System in Departments-Revised Scheme, Syllabus and Model Question Papers Implemented with effect from 2015 Admission - Orders issued.

ACADEMIC 'C' SECTION

U.O No. Acad/C1/5005/2015

Civil Station (PO), Dated, 15-10-2015

- Read: 1. U.O.No.Acad/C3/2049/2009 dated 11/10/2010  
 2. U.O.No.Acad/C3/2049/2009 dated 05/04/2011  
 3. Meeting of the Syndicate Sub-Committee held on 16/01/2015  
 4. Meeting of the Department Council held on 31/03/2015  
 5. Meeting of the Curriculam Committee held on 10/04/2015  
 6. U.O.No.Acad/C4/14536/2014 dated 29/05/2015  
 7. Letter from the HoD, Dept.of Applied Economics  
 8. Meeting of the Curriculam Committee held on 03/09/2015

ORDER

1. The Regulations for P.G. Programmes under Choice Based Credit Semester System were implemented in the Schools / Departments of the University with effect from 2010 admissions as per paper read (1) above and certain modifications were effected to the same vide paper read (2) .

2. The meeting of the Syndicate Sub- Committee recommended to revise the Scheme & Syllabus of all the PG Programmes in the University Departments /Schools under Choice Based Credit Semester System (CCSS) w.e.f. 2015 admission vide paper read (3) above.

3. The Department Council vide paper read (4) above has approved the Scheme, Syllabus & Model Question Papers for MA Applied Economics Programme under Choice Based Credit Semester System for implementation with effect from 2015 admission.

4. As per the paper read (5) above, the meeting of the Curriculam Committee recommended certain modifications/ additions to the Regulations for PG Programmes under Choice Based Credit Semester System and the Regulations were modified in the University w.e.f. 2015 admission vide paper read (6).

5. The HoD, Dept.of Applied Economics, vide paper read (7) above has forwarded the Scheme, Syllabus & Model Question Papers for MA Applied Economics Programme in line with the revised Regulations for Choice Based Credit Semester System for implementation with effect from 2015 admission.

6. The meeting of the Curriculam Committee held on 3-09-2015 approved the Scheme, Syllabus and Model question papers for MA Applied Economics Programme under Choice Based Credit Semester System in the Department vide paper read (8) above.

(PTO)

7. The Vice Chancellor after considering the matter in detail and in exercise of the powers of Academic Council conferred under section 11 (1) of Kannur University Act 1996 and all other enabling provisions read together with has accorded sanction to implement Scheme, Syllabus and Model Question Papers for MA Applied Economics Programme under Choice Based Credit Semester System offered in University Department with effect from 2015 admission subject to report before the Academic Council.

8. Orders are, therefore, issued accordingly.

9. Effective revised Scheme, Syllabus and Model Question Papers of MA Applied Economics Programme from 2015 admission are appended.

Sd/-  
JOINT REGISTRAR (Academic)  
For REGISTRAR

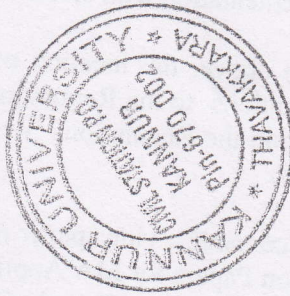
To

The HoD, Dept. of Applied Economics, Palayad Campus, Thalassery.


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8/10  
15/10/15



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SECTION OFFICER

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**(U.O.No.Acad/C1/5005/2015 dtd, 15 -10-2015)**

**KANNUR  UNIVERSITY**  
**M.A APPLIED ECONOMICS-2015**  
**UNDER CCSS**

**(Revised syllabus with effect from 2015 Admission)**

**CONTENTS:**

**CREDIT AND MARK PATTERN**

**LIST ELECTIVES**

**SYLLABUS**

**SCHOOL OF DEVELOPMENT STUDIES**

**Department of Applied Economics**

## **M.A. APPLIED ECONOMICS**

### **Syllabus and Course content under Choice based Credit and Semester System REVISED SYLLABUS (2015 Admission onwards)**

#### **Eligibility for Admission**

Bachelors degree in Economics/ Development Economics/Applied Economics with 50% in Part III including subsidiary or B. Com or B. Sc Mathematics or Statistics with 50% marks in Part III including subsidiary.

Admission to M. A Applied Economics is on the basis of **Entrance Examination**. The questions for Entrance Examination are of multiple choices from Economics (70%), Statistics (20%) and remaining from Mathematics.

In the absence of conducting written test, the eligibility criteria for Non Economic Stream will be a minimum of 70% for B. Sc Mathematics or Statistics and 60% for B. Com in the part III of the qualifying examination including subsidiary.

**Reservation** – As per Government rules.

#### **Duration of the Course**

This Course of study is based on choice based credit and semester system. This course shall consist of four semesters covering a total of two academic years.

#### **Course of the Study**

The course of the Degree in Masters of Arts in Applied Economics under the Choice based Credit and Semester System according to syllabus to be prescribed from time to time. This Course consists of Core Subjects and Elective Subjects.

#### **List of Core and Elective Papers**

Given below is the list of Core and Optional Papers proposed for the P. G course in Applied Economics.

## Core Papers

Sl. No	Course Code	Course Title	Core/ Elective	Credit	Instructional hours /week
1	AE1C001	MICRO ECONOMIC THEORY I	core	5	5
2	AE1C002	MACRO ECONOMIC THEORY I	core	5	5
3	AE1C003	QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS	core	5	5
4	AE1C004	DEVELOPMENT ISSUES OF INDIAN ECONOMY WITH SPECIAL REFERENCE TO KERALA	core	5	5
5	AE2C005	MICRO ECONOMIC THEORY II	core	5	5
6	AE2C006	MACRO ECONOMIC THEORY II	core	5	5
7	AE2C007	MATHEMATICAL ECONOMICS	core	5	5
8	AE2C008	FINANCIAL INSTITUTIONS AND MARKETS	core	5	5
9	AE3C009	ECONOMETRICS	core	5	5
10	AE3C010	ENVIRONMENTAL ECONOMICS	core	5	5
11	AE4C011	INTERNATIONAL ECONOMICS	core	5	5
12	AE4C012	OPERATIONS RESEARCH FOR ECONOMIC ANALYSIS	core	5	5
13	AE4C013	PROJECT/DISSERTATION	core	8	
14	AE4C014	VIVA VOCE	core	2	

## Elective Papers

Sl. No	Course Code	Course Title	Core/Elective	Credit	Instructional hours /week
1	AEE001	PUBLIC ECONOMICS	Elective	4	4
2	AEE002	ECONOMICS OF GROWTH AND DEVELOPMENT	Elective	4	4
3	AEE003	POPULATION STUDIES	Elective	4	4
4	AEE004	HEALTH ECONOMICS	Elective	4	4
5	AEE005	DEVELOPMENT OF ECONOMIC IDEAS	Elective	4	4
6	AEE006	COMPUTER APPLICATION IN ECONOMIC ANALYSIS	Elective	4	4
7	AEE007	APPLIED WELFARE ECONOMICS	Elective	4	4
8	AEE008	APPLIED ECONOMETRICS	Elective	4	4
9	AEE009	BUSINESS ECONOMICS	Elective	4	4
10	AEE010	AGRICULTURAL ECONOMICS	Elective	4	4
11	AEE011	INDUSTRIAL ECONOMICS	Elective	4	4
12	AEE012	ENERGY ECONOMICS	Elective	4	4
13	AEE013	TRANSPORT ECONOMICS	Elective	4	4
14	AEE014	SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT	Elective	4	4
15	AEE015	PROJECT FORMULATION AND EVALUATION	Elective	4	4
16	AEE016	RESEARCH METHODOLOGY	Elective	4	4
17	AEE017	ECONOMICS OF ENVIRONMENT AND SOCIAL SECTOR	Elective	4	4

18	AEE018	ECONOMICS OF GENDER	<b>Elective</b>	<b>4</b>	<b>4</b>
19	AEE019	ECONOMICS OF TOURISM	<b>Elective</b>	<b>4</b>	<b>4</b>
20	AEE020	RESEARCH METHODOLOGY AND COMPUTER APPLICATION	<b>Elective</b>	<b>4</b>	<b>4</b>

### **Scheme of Studies Semester wise**

A minimum of 20 credits is to be offered/required in each semester. In the fourth semester there shall be a project report and comprehensive viva voce. The project report is equivalent to 8 credits. The viva voce examination is based on the presentation of dissertation work made by the candidate in the department with an external expert.

#### **Semester I**

Course Code	Course Title	Core/Elective	Credit	Instructional hours /week	Instructional hours /Semester	Internal Marks	End Sem. Marks	Total
AE1C001	MICRO ECONOMIC THEORY I	core	5	5	80 (16 x 5)	40	60	100
AE1C002	MACRO ECONOMIC THEORY I	core	5	5	80 (16 x 5)	40	60	100
AE1C003	QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS	core	5	5	80 (16 x 5)	40	60	100
AE1C004	DEVELOPMENT ISSUES OF INDIAN ECONOMY WITH SPECIAL REFERENCE TO KERALA	core	5	5	80 (16 x 5)	40	60	100
	SEMINAR/DEBATES		-	5	80 (16 x 5)			
		<b>total</b>	<b>20</b>	<b>25</b>	<b>400</b>	<b>160</b>	<b>240</b>	<b>400</b>

#### **Semester II**

Course Code	Course Title	Core/Elective	Credit	Instructional hours /week	Instructional hours /Semester	Internal Marks	End Sem. Marks	Total
AE2C005	MICRO ECONOMIC THEORY II	core	5	5	80 (16 x 5)	40	60	100
AE2C006	MACRO ECONOMIC THEORY II	core	5	5	80 (16 x 5)	40	60	100
AE2C007	MATHEMATICAL ECONOMICS	core	5	5	80 (16 x 5)	40	60	100
AE2C008	FINANCIAL INSTITUTIONS AND MARKETS	core	5	5	80 (16 x 5)	40	60	100
	SEMINAR/DEBATES		-	5	80 (16 x 5)			
		<b>total</b>	<b>20</b>	<b>25</b>	<b>400</b>	<b>160</b>	<b>240</b>	<b>400</b>

### Semester III

Course Code	Course Title	Core/Elective	Credit	Instructional hours /week	Instructional hours /Semester	Internal Marks	End Sem. Marks	Total
AE3C009	ECONOMETRICS	core	5	5	80 (16 x 5)	40	60	100
AE3C010	ENVIRONMENTAL ECONOMICS	core	5	5	80 (16 x 5)	40	60	100
	ELECTIVE-I	elective	4	4	64 (16 x 4)	40	60	100
	ELECTIVE-II	elective	4	4	64 (16 x 4)	40	60	100
	ELECTIVE-III	elective	4	4	48 (16 x 3)	40	60	100
	SEMINAR/DEBATES		-	4	64 (16 x 4)			
		<b>total</b>	<b>22</b>	<b>26</b>	<b>400</b>	<b>200</b>	<b>300</b>	<b>500</b>

### Semester IV

Course Code	Course Title	Core/Elective	Credit	Instructional hours /week	Instructional hours /Semester	Internal Marks	End Sem. Marks	Total
AE4C011	INTERNATIONAL ECONOMICS	core	5	5	80 (16 x 5)	40	60	100
AE4C012	OPERATIONS RESEARCH FOR ECONOMIC ANALYSIS	core	5	5	80 (16 x 5)	40	60	100
	ELECTIVE-IV	elective	4	4	64 (16 x 4)	40	60	100
	ELECTIVE-V	elective	4	4	64 (16 x 4)	40	60	100
AE4C013	PROJECT/DISSERTATION	core	8	5	80 (16 x 5)		60	60
AE4C014	VIVA VOCE	core	2				40	40
	SEMINAR/DEBATES		-	6	96 (16 x 6)			
		<b>total</b>	<b>28</b>	<b>25</b>	<b>400</b>	<b>160</b>	<b>340</b>	<b>500</b>

Total credits of four semesters = 90

Total Marks = 1800

## **ELECTIVE COURSES/ OPTIONAL PAPERS:**

1. PUBLIC ECONOMICS – AEE001
2. ECONOMICS OF GROWTH AND DEVELOPMENT– AEE002
3. POPULATION STUDIES – AEE003
4. HEALTH ECONOMICS – AEE004
5. DEVELOPMENT OF ECONOMIC IDEAS – AEE005
6. COMPUTER APPLICATION IN ECONOMIC ANALYSIS – AEE006
7. APPLIED WELFARE ECONOMICS – AEE007
8. APPLIED ECONOMETRICS – AEE008
9. BUSINESS ECONOMICS – AEE009
10. AGRICULTURAL ECONOMICS – AEE010
11. INDUSTRIAL ECONOMICS – AEE011
12. ENERGY ECONOMICS – AEE012
13. TRANSPORT ECONOMICS – AEE013
14. SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT – AEE014
15. PROJECT FORMULATION AND EVALUATION – AEE015
16. RESEARCH METHODOLOGY – AEE016
17. ECONOMICS OF ENVIRONMENT AND SOCIAL SECTOR - AEE017
18. ECONOMICS OF GENDER- AEE018
19. ECONOMICS OF TOURISM - AEE019
20. RESEARCH METHODOLOGY AND COMPUTER APPLICATION  
– AEE020

(Students can select Five Optionals from these lists.)

**Dissertation Work:** The students admitted to the M.A Applied Economics course have to submit a dissertation in the last semester of the course and they have to submit the same for qualifying the University examination.



## **MICROECONOMIC THEORY –I**

### **CORE COURSE**

#### **COURSE CODE – AE1C001**

##### **Module-1**

The methodology of microeconomics: The scientific method – economic models – the role of theory – usefulness versus realism of assumptions – the role of mathematics – complementary role of induction and deduction – ceteris paribus assumption – comparative static approach – positive versus normative economics.

##### **Module-2**

Theory of consumer choice-I: Individual behaviour in the face of risk and uncertainty: Risk and uncertainty in demand choices – contingent consumption – utility functions, probability distribution and expected utility – measuring risk – risk aversion and risk preference – choice between insurance and gambling with different shapes of the utility function – risk spreading – Neumann-Morgenstern method of constructing utility index – Friedman-Savage hypothesis – trade off between risk and return – the investor's choice problem: household portfolio decisions under conditions of uncertainty – reducing risks and uncertainty – benefits of diversification – risk aversion and indifference curves – the mean-variance analysis.– the state preference theory.

##### **Module-3**

Theory of consumer choice-II: Recent developments in the theory of market demand: Attribute theory of demand: maximizing satisfaction from attributes – attribute approach and the law of demand – implicit prices – inter temporal choice: the inter temporal budget constraint, indifference map and optimal choice of consumption – Hick's logical ordering theory of demand – pragmatic approach to demand analysis – constant elasticity demand function – distributed lag models of demand – Nerlove's model – Houthakker's and Taylor's model – linear expenditure systems.

##### **Module-4**

Theory of production: Production function – homogeneous production function – Cobb- Douglas production function – CES production function – fixed coefficient production function – technical progress and production function – equilibrium of the multi product firm in terms of the production-possibility curve and iso revenue curve – elasticity of substitution – linear programming maximization problem (both graphic and simplex methods) – dual problem: its formulation and economic interpretation – input-output analysis and its application.

## Module-5

Duopoly and Oligopoly: Characteristics of duopoly and oligopoly – interdependence and

indeterminateness of demand curve under oligopoly – collusive and non-collusive models – Cournot's model – Edgeworth's model – Bertrand's model – Chamberlin's model – Stackelberg's model – Sweezy's kinked-demand model – price leadership models of low-cost price leader, dominant firm price leader and barometric price leadership – cartels aiming at joint profit maximization and market sharing cartels – welfare effects of oligopoly.

## Module-6

Markets with asymmetric information: Quality uncertainty and the market for 'lemons' – quality choice – hidden actions: principals, agents and moral hazard – hidden characteristics: the problem of adverse selection – market signaling to convey private information – screening to induce information revelation – incentives – the winner's curse – asymmetric information and public policy – asymmetric information in labour markets: efficiency wage theory.

### Reference:

1. N. Gregory Mankiw, Principles of Microeconomics, South Western Cengage Learning, 2009.
2. Robert Y. Awh, Microeconomics: Theory and Applications, John Wiley and Sons, 1976
3. James M. Henderson and Richard E. Quandt, Microeconomic Theory: A Mathematical Approach, Tata McGraw-Hill Publishing Co. Ltd., New Delhi, 2003.
4. George J. Stigler, The Theory of Price, Prentice Hall of India Pvt. Ltd., 1996,
5. Dominick Salvatore, Microeconomics: Theory and Applications, Oxford University Press, 2003.
6. Robert S. Pindyck and Daniel L. Rubinfeld, Microeconomics, Prentice Hall of India, 2003,
7. Hal R. Varian, Intermediate Microeconomics: A Modern Approach, Affiliated East West Press, Delhi, 2000.
8. Jack Hirshleifer, Amihai Glazer and David Hirshleifer, Price Theory and Applications: Decisions, Markets and Information, Cambridge University Press, 2005.
9. David M. Kreps, Microeconomics for Managers, W.W. Norton & Co., London, 2004.
10. William J. Baumol, *Economic Theory and Operations Analysis*, Prentice Hall of India Pvt.Ltd., 2000.
11. Walter Nicholson, Microeconomic Theory: Basic Principles and Extensions, The Dryden Press, Orlando, 1992.
12. H.A. John Green, *Consumer Theory*, Mac Millan, 1976.
13. David Laidler, *Introduction to Microeconomics*, Heritage Publishers, New Delhi, 1981.

14. David Begg, Stanley Fisher and Rudiger Dornbusch, *Economics*, Mc Graw-Hill Publishing Company, 1994.
15. Richard G. Lipsey and K. Alec Chrystal, *Principles of Economics*, Oxford University Press, 1999..
16. Hicks, *A Revision of Demand Theory*, Oxford University Press, 1956.
17. Koutsoyiannis A, *Modern Microeconomics*, Mac Millan, 1979..
18. Robert H. Frank, *Microeconomics and Behaviour*, Irwin Mc. Graw Hill, 2000.
19. Donald Stevenson Watson and Malcolm Getz, *Price Theory and its Uses*, AITBS Publishers and Distributors, Delhi, 1996.
20. Edwin Mansfield & Gary Yohe, *Microeconomics*, W.W.Norton & Co., 2004.
21. John P. Gould, Edward P. Lazear, *Microeconomic Theory*, Richard D. Irwin Inc., 2003,
22. A Gravelle and R. Rees, *Microeconomics*, Pearson Education (Singapore) Pvt. Ltd., 2004

## **MACROECONOMIC THEORY- I**

### **CORE COURSE**

#### **COURSE CODE – AE1C002**

#### **Module-1: Development of Macro Economics**

Classical, Keynesian, Neoclassical, Post Keynesian, Neo –Keynesian, New Classical, New Keynesian Developments – New Macro Economics – Investment Multiplier – Static and Dynamic Multiplier – Keynesian Model of Income Determination in Three Sector and Four Sector Economies

#### **Module-2: Neo-classical and Keynesian Synthesis**

Hicks-Hansen ISLM Model – General Equilibrium – Relative Effectiveness of Monetary and Fiscal Policies – Keynesian and Classical Versions – Extension of ISLM Model with govt. sector –Extension of ISLM model with Labour market and flexible prices – Unemployment and labour market – Three sector macro model – Keynesian and Neo-classical versions.

#### **Module-3: Behavioural Foundations of Macro Economics**

Sectoral Demand Functions – Consumption Demand – Kuznet’s Consumption Puzzle –

Absolute Income Hypothesis – Relative Income Hypothesis – Permanent Income Hypothesis – Life Cycle Hypothesis – Inter-temporal Choice in Consumption. Investment Demand – Keynesian Approach – MEC – Post Keynesian Approach – Tobin’s Q-ratio – Accelerator Theory of Investment – Financial Theory of Investment.

#### **Module-4: Theory of Demand and Supply of Money**

Classical and Keynesian Approach to demand for and supply of money – Post Keynesian

Approach – Real Balance Effect – Pigou, Patinkin, Baumol, Friedman and Tobin – Monetarism and Fiscalism – Money supply in an open economy – High Powered Money – Money Multiplier – Control of Money supply – Behavioural Model of Money supply – Endogenous Money supply theory.

#### **References:**

1. Ackley G, Macro Economics; Theory and Policy, Macmillan, New York, 1978
2. Andrew B. Paul and Ben S Bernanke, Macro Economics, Pearson Education, New Delhi
3. Eugene Diulio, Theory and Problems of Macro Economics, Schaum's Outline Series, McGraw Hill Publishing Company, Singapore
4. Keynes, J. M, General Theory of Employment, Interest and Money, Macmillan, London,1961
5. Mankiw N. G, Macro Economics
6. Richard T Froyen, Macro Economics; Theory and Policy, Macmillan Publishing Co., New York, 1990
7. Rosalind Levasic and Alexander Rebmann, Macro Economics: An Introduction to Keynesian-Neoclassical Controversies, The Macmillan Press Ltd, London
8. RudigerDornbusch, Stanley Fischer and Richard Startz, Macro Economics, Tata McGraw Hill Publishing Company Ltd, New DelhiNew Delhi, 1998
9. Snowdown B, H.R Vane and F. Wynarczyk, A Modern Guide to Macro Economics: An introduction to competing schools of thought
10. Y. P. Venieries and F. D. Sebold, Macro Economic Models and Policy

### **QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS**

#### **CORE COURSE**

#### **COURSE CODE – AE1C003**

#### **Module I**

Matrices-Addition and Subtraction of matrices-Multiplication of matrices-Determinant of matrices-Inverse matrices-Solving Linear equations with the inverse-Crammer's rule for matrix solutions – Solution of simultaneous equations using Cramer's Rule-Application of matrices in Input Output analysis.

#### **Module II**

Probability theory- Concept of Probability- Different approaches of Probability: Classical, Empirical and Axiomatic approaches- Theorems of Probability: Addition and Multiplication Theorem- Conditional Probability –Bayes’ theorem- Random variables and Probability distribution, Mathematical expectation.

Probability Distributions: Discrete and Continuous Distributions: Binomial, Poisson, Multinomial, Negative Binomial, Lognormal, Pareto and Normal distributions-properties and applications-

### **Module III**

Population and Sample-sampling and sample designs-theoretical basis of sampling-methods of sampling- Parameter and Statistic–Sampling Distribution and Standard Error-Central limit theorem- Distribution of Sample mean, Student’s t test, Z,  $\chi^2$  and F distributions- Theory of Estimation: Point estimation and Interval estimation-Properties of good estimator – Tests of significance for attributes –Tests of significance for large samples and small samples.

### **Module IV**

Testing of hypothesis: Null and alternative hypothesis- Type I and Type II errors –Critical region – Level of significance-Power of test – Procedure of testing of hypothesis-  $\chi^2$  test of goodness of fit,  $\chi^2$  test for independence –Analysis of Variance techniques- F test and ANOVA –One-way and Two way classification.

### **Reference**

1. McClave James T, P.George Benson and Terry Sincich, 2000, Statistics for Business and Economics, Prentice Hall.
  2. Murray R Spigel, Probability Theory, Shaum Series, 1990.
  3. Damodar Gujarathi, Basic Econometrics, 5<sup>th</sup> edition, 2008.
- Agarwal,Bharadwaj and Gupta, Quantitative techniques in Economics, Kalyani Publications,1996.
4. Bowers David, Statistics for Economics,Macmillan,1984.
  5. Alpha C. Chiang, Fundamental Methods of Mathematical Economics, Me. GrawHill.
- Elhance, Fundamental methods of Statistics.
6. Gupta.S.P, Statistical Methods, Sulthan Chand and Sons, New Delhi.
  7. Kothari.C.R, Quantitative techniques, Vikas publishing house, New Delhi.
  8. Taro Yamane, Mathematics for Economists, Printice Hall of India, New Delhi
  9. Willaim.G.Kochran, Sampling Techniques, Wiley India, 2007.
  10. Ajay.S.Gaur & Sanjay.S.Gaur – Statistical Methods for Practice and Research, Response Books, 2009.

## **DEVELOPMENT ISSUES OF INDIAN ECONOMY**

**(WITH SPECIAL REFERENCE TO KERALA)**

**CORE COURSE**

**COURSE CODE – AE1C004**

### **Module-1**

Growth Vs Development: basic need approach- HDI, GDI and HPI- Sustainable Development - Structural changes in Indian Economy – Agriculture Commercialization of Indian agriculture -Shift to Industry and Tertiary sectors -debate on Market – Plan Socialism, Neoliberalism- Washington Consensus -Structural adjustment Programme. Impact of economic recession 2008 on Indian economy- Second Generation Reform

### **Module-2**

Demography, Poverty and Unemployment – Population statistics -Demographic changes – Ageing-- Concepts and measurements of Poverty and Inequality– Amartya Sen. – Entitlement and standard of living approach –Capability approach to poverty – gender & poverty – Changing trends & magnitude of unemployment-An assessment of poverty alleviation and employment generation programmes- Introduction to databases on Indian economy-NSSO, NAS, Handbook of statistics, Economic Review, Economic Survey, CSO, ASI.

### **Module-3**

Agriculture & Industry –changing interrelations -terms of trade between Industry & Agriculture- Markets in agriculture -land and credit markets-New agricultural policies and agrarian crisis-WTO and Indian Agriculture– viz., Agreement on Agriculture with reference to India – Intellectual Property Rights – TRIPs– concepts of Food Security -Food Availability –National Food Security Mission- Industrial policy of 1991–organized and unorganized sectors – Privatization and Disinvestment- Industrial development in India-Inclusive growth-micro finance-National Rural Employment Guarantee Programme (NREGP), National Rural Health Mission (NRHM).

### **Module-4**

India & Global Economy –India’s share in global trade- BOP position of India-Capital Account Convertibility -Balance of Trade (Export and Import) Impact on Domestic Money Supply – Inflation- Debate on WPI vs. CPI–WTO, regional economic integration and Indian Economy.

### **Module-5**

A profile of Kerala Economy since its formation –land reforms Kerala -Model of Development – Structural changes in Kerala Economy – Demographic changes – ageing – health – migration – transformation in labour culture –migrant labour in Kerala, social security of labour -Emerging issues

– policies-formation of SEZs--Kerala & WTO – Fisheries and Plantation sectors-land market in Kerala– People’s plan – role of Panchayat Raj – ICT and development-tourism-women empowerment-role of micro finance-Privatization and human capital formation- Kerala’s higher education- Environment Degradation- Fiscal Crisis.

References:

1. A P Thirlwall: Growth and Development, 6th Edition Macmillan Press Ltd., 1999
2. Vijay Joshi & IMD Little: India’s Economic Reforms; OUP, New Delhi,19912001
3. Nayyar Deepak, Liberalization And Development: Collected Essays, OUP, 2008.
4. Bhagavathi, Jagadish: India in Transition: OUP, 1993.
5. BimalJalan: 1992, Indian Economic Crisis: The Way Ahead; OUP, New Delhi,
6. AmartyaSen: Poverty and FamineAn Essay on Entitlement and Deprivation; OUP, New Delhi,1982
7. The Standard of Living: Tanner Lectures – CUP, 1987. India Development and Participation; OUP, 2002
8. On economic inequality, Clanderon Press, Oxford, 1973
9. RBI (website: rbi.org): Database on Indian Economy
10. Bardhan, Pranab 1994: The Political Economy of Development in India; OUP, New Delhi, 11. V M Dandekar: The Indian Economy 194797; Transforming Traditional Agriculture Vol. I
11. A P Thirlwall: Growth and Development, 6th Edition Macmillan Press Ltd., 1999
12. Vijay Joshi & IMD Little: India’s Economic Reforms; OUP, New Delhi,19912001
13. Uma Kapila 200809: India’s Economic development since 1947, 3rd edition, Academic Foundation, New Delhi.
14. Recent Developments in Indian Economy, Part 3 & 4, Academic Foundation New Delhi, 1994&95
15. R K Sinha: Economic Development, Planning and Policy in India; Deep&Deep,1998
16. Robert, E B Lucas and Gustar F Papaneck; Indian EconomyRecent Developments and Future Prospects; OUP, New Delhi, 1989
17. Terence J Byres, Major Debates on Indian Economy, OUP, 1999.
18. RuddarDutt& KPM Sundaram: Indian Economy; S Chand & Co. Ltd., New Delhi, 2009
19. A D N Bajpai, S K Chaubey, N G Pendsc, S K Shrivastava: Emerging Trends in Indian Economy; Atlantic Publishers & Distributors, New Delhi, 1995
20. Basu, Kaushik, ed, India’s emerging economy, OUP, 2007.
21. RBI monthly bulletin.

22. Nayar Deepak, Liberalization And Development: Collected Essays, OUP, 2008.
23. Patnaik, Prabhat: Time, Inflation And Growth: Some Macroeconomic Themes In An Indian Perspective (R.C. Dutt Lectures On Political Economy, 1984), Orient Longman, 1988.
24. S. S. Tarapore: Issues in Financial Sector Reforms; UBS Publishers & Distributors Ltd., New Delhi, 2000, 2006.
25. C. Rangarajan: Indian Economy; UBS Publishers & Distributors Ltd., New Delhi, 1998
26. 2000: Select Essays on Indian economy, Vol. 1 &2
27. Bhagavathi, Jagadish: India in Transition: OUP, 1993.
28. BimalJalan: 1992, Indian Economic Crisis: The Way Ahead; OUP, New Delhi,
- 29.1996, India's Economic Policy Preparing for the 21st Century; Penguin, New Delhi,
30. C T Kurian: Poverty, Planning and Social Transformations – An Alternative in Development Planning; Allied Publishers, New Delhi, 1978
31. The Economy: An interpretative introduction, Sage Publications,
32. George K.K 1993: Limits to Kerala Model of Development: an analysis of fiscal crisis and its implications, CDS, Trivandrum.
33. Gulati, Leela 1993: In the absence of their men: the impact of male migration on women, Sage.
34. Parayil, Govindan (ed), 2000: Kerala: The Development Experience: Reflections On Sustainability And Replicability, Zed Books.
35. Frank, Richard &T.M.Thomas 2000, local democracy and Development: people's plan for decentralized planning in Kerala
36. P. P. Pillai: Kerala Economy Four Decades of Development; 1994
37. M A Oommen: Essays on Kerala Economy
38. B A Prakash: Kerala Economy Problems and Prospects; Sage Publications, New Delhi, 1994
39. P Surendran: The Kerala Economy; Vrinda Publications, New Delhi, 1999 & 2002.

## **MICROECONOMIC THEORY-II**

### **CORE COURSE**

**COURSE CODE – AE2C005**

#### **Module-1**



Extension of the traditional theory of the firm: Baumol's theory of sales revenue maximization – Marris' model of the managerial enterprise – Williamson's model of managerial discretion – behavioural model of Cyert and March – theory of games – decision theory

#### **Module-2**

Theory of product pricing: Basic assumptions underlying the traditional theory of pricing – Hall and Hitch report and the 'full cost' pricing principle – the mark-up rule – Bain's limit-pricing theory – Model of Sylos-Labini – Model of Franco Modigliani.

#### **Module-3**

Theory of distribution: Neoclassical approach to distribution- Marginal productivity theory: Product exhaustion theorem: Euler's theorem and the 'adding up' controversy – Clark-Wicksteed-Walras product exhaustion theorem – Keynesian or Neo Keynesian theories of distribution or Alternative distribution theories: Kaldor- modified model of Pasinetti –Alternative widow's cruse models- Classical theory of distribution-The Ricardian model – Marxian theory – Modern theory of distribution or post Keynesian theory of distribution-'degree of monopoly' by Kalecki

#### **Module-4**

General equilibrium: Interdependence in the economy – partial and general equilibrium –

Walrasian general equilibrium – two-factor, two-commodity, two-consumer general equilibrium model. – existence, uniqueness and stability of general equilibrium – Brouwer's fixed point theorem.

#### **Module-5**

Welfare economics: Criteria of old social welfare economics-growth criteria-cardinalist criteria-Bentham's criteria- Pareto optimality- New welfare economics-Kaldor –Hicks compensation criteria-Scitovsky criteria-social welfare function- Bergson-Samuelson-Arrows impossibility theorem-Pigouvian welfare economics-point of bliss-theory of second best-Rawlsian concept of justice-Coase theorem

#### **References:**

1. N. Gregory Mankiw, Principles of Microeconomics, South Western Cengage Learning, 2009.
2. Robert Y. Awh, Microeconomics: Theory and Applications, John Wiley and Sons, 1976
3. James M. Henderson and Richard E. Quandt, Microeconomic Theory: A Mathematical Approach, Tata McGraw-Hill Publishing Co. Ltd., New Delhi, 2003.
4. George J. Stigler, The Theory of Price, Prentice Hall of India Pvt. Ltd., 1996,
5. Dominick Salvatore, Microeconomics: Theory and Applications, Oxford University Press, 2003.
6. Robert S. Pindyck and Daniel L. Rubinfeld, Microeconomics, Prentice Hall of India, 2003,
7. Hal R. Varian, Intermediate Microeconomics: A Modern Approach, Affiliated East West Press, Delhi, 2000.

8. Jack Hirshleifer, Amihai Glazer and David Hirshleifer, *Price Theory and Applications: Decisions, Markets and Information*, Cambridge University Press, 2005..
9. David M. Kreps, *Microeconomics for Managers*, W.W. Norton & Co., London, 2004.
10. William J. Baumol, *Economic Theory and Operations Analysis*, Prentice Hall of India Pvt.Ltd., 2000.
11. Walter Nicholson, *Microeconomic Theory: Basic Principles and Extensions*, The Dryden Press, Orlando, 1992.
12. H.A. John Green, *Consumer Theory*, Mac Millan, 1976.
13. David Laidler, *Introduction to Microeconomics*, Heritage Publishers, New Delhi, 1981.
14. David Begg, Stanley Fisher and Rudiger Dornbusch, *Economics*, Mc Graw-Hill Publishing Company, 1994.
15. Richard G. Lipsey and K. Alec Chrystal, *Principles of Economics*, Oxford University Press, 1999.
16. Hicks, *A Revision of Demand Theory*, Oxford University Press, 1956.
17. Koutsoyiannis A, *Modern Microeconomics*, Mac Millan, 1979.
18. Robert H. Frank, *Microeconomics and Behaviour*, Irwin Mc. Graw Hill, 2000.
19. Donald Stevenson Watson and Malcolm Getz, *Price Theory and its Uses*, AITBS Publishers and Distributors, Delhi, 1996.
20. Edwin Mansfield & Gary Yohe, *Microeconomics*, W.W.Norton & Co., 2004.
21. John P. Gould, Edward P. Lazear, *Microeconomic Theory*, Richard D. Irwin Inc., 2003,
22. A Gravelle and R. Rees, *Microeconomics*, Pearson Education (Singapore) Pvt. Ltd., 2004
23. G. C. da Costa, *Value and Distribution in Neoclassical and Classical Systems*, Himalaya Publishing House, Second Edition, 1992.

## **MACRO ECONOMIC THEORY – II**

### **CORE COURSE**

**COURSE CODE – AE2C006**

#### **Module-1: Macro Economics in an Open Economy**

ISLM Analysis in an open economy – Foreign Exchange Market – Determination of

Exchange Rates: Fixed Vs Flexible – Pegging of the currency – Balance of Payment/ Accounts – Disequilibrium in BOP – Depreciation, Appreciation, Revaluation, Devaluation, J-curve Effect – BOP in Keynesian Analysis – Exchange Rates – Money and Capital Flows in an Open Economy – Mundell-Fleming-Keynesian Model – Monetary and Elasticity Approach to Balance of Payments.

### **Module-2: Theory of Inflation and Unemployment**

Keynesian and Monetarist Approach to Inflation – Structuralist Theory of Inflation – Phillips Curve – Short run, Long run Phillips Curve – The Natural Rate of Unemployment Hypothesis – Modified Phillips Curve – Adaptive Expectation Hypothesis – Augmented Phillips Curve – Cost of Inflation and Inflation Targeting – Unemployment and Labour Market – Under Employment Equilibrium.

### **Module-3: Current Controversies in Macro Economics**

Keynesian Counter revolution – R. W. Clower, and Leifohnu fund – Dual Decision

Hypothesis, Walrasian General Equilibrium – Neo-Keynesian Quantity Constrained Model – Rational Expectations – New Classical Macro Economics – Supply side Economics – Laffer Curve – Wedge Model – Real Business Cycle Approach – New Keynesian Economics – Stanley Fischer, Edmund Phelps and John Taylor.

### **Module-4: Macro Economic Policy**

Objectives of Macro Economic Policies – Target Variable and Instrument variable –Main

Policy Instrument – Monetary Policy Vs Fiscal Policy Monetary – Okun's Law – Fiscal Policy and Budget Deficit – Crowding out Effect and Government Budget – Income Policy – Stabilisation Policy – New Cambridge Approach.

### **References:**

1. Ackley G, Macro Economics; Theory and Policy, Macmillan, New York, 1978
2. Andrew B. Paul and Ben S Bernanke, Macro Economics, Pearson Education, New Delhi
3. Culbertson J. M, Macro Economic Theory and Stabilisation Policy, McGraw Hill, Tokyo
4. Dasgupta, A. K. and Hagger, A. J, The Objectives of Macro Economic Policy, Macmillan, London, 1971
5. Denberg, Thomas. F, Macroeconomics: Concepts, Theories and Policies, McGraw-Hill, New York, 1985
6. Eugene Diulio, Theory and Problems of Macro Economics, Schaum's Outline Series, McGraw Hill Publishing Company, Singapore
7. Friedman, M, Studies in the Quantity Theory of Money, TheUniversity of Chicago Press, Chicago
8. Gordon R. and S.G. Harris, Macro Economics, Addison Wesley, Massachusetts

9. Keynes, J. M, The General Theory of Employment, Interest and Money, Macmillan, London, 1961
10. Mankiw N. G, Macro Economics
11. Piston, M. H, Theory of Macroeconomic Policy, Philip Allen, Oxford, 1974
12. Prachowney, Martin F. J, The Goals of Macroeconomic Policy, Routledge, London, 1994
13. Richard T Froyen, Macro Economics; Theory and Policy, Macmillan Publishing Co., New York, 1990
14. Rosalind Levacic and Alexander Rebmann, Macro Economics: An Introduction to Keynesian-Neoclassical Controversies, The Macmillan Press Ltd, London
15. RudigerDornbusch, Stanley Fischer and Richard Startz, Macro Economics, Tata McGraw Hill Publishing Company Ltd, New Delhi, 1998
16. Salvatore, D, International Economics, Macmillan, New York, 1990
17. Shapiro, E, Macroeconomic Analysis, Galgotia Publications, New Delhi, 1994
18. Sodersten, B, International Economics, Macmillan, New York,
19. Snowdown B, H.R Vane and F. Wynarczyk, A Modern Guide to Macro Economics: An introduction to competing schools of thought
20. Y. P. Venieries and F. D. Sebold, Macro Economic Models and Policy
21. Ackley G, Macro Economics; Theory and Policy, Macmillan, New York, 1978
22. Andrew B. Paul and Ben S Bernanke, Macro Economics, Pearson Education, New Delhi
23. Culbertson J. M, Macro Economic Theory and Stabilisation Policy, McGraw Hill, Tokyo
24. Dasgupta, A. K. and Hagger, A. J, The Objectives of Macro Economic Policy, Macmillan, London, 1971
25. Denberg, Thomas. F, Macroeconomics: Concepts, Theories and Policies, McGraw-Hill, New York, 1985
26. Eugene Diulio, Theory and Problems of Macro Economics, Schaum's Outline Series, McGraw Hill Publishing Company, Singapore
27. Friedman, M, Studies in the Quantity Theory of Money, TheUniversity of Chicago Press, Chicago
28. Gordon R. and S.G. Harris, Macro Economics, Addison Wesley, Massachusetts
29. Keynes, J. M, The General Theory of Employment, Interest and Money, Macmillan, London, 1961
30. Mankiw N. G, Macro Economics
31. Piston, M. H, Theory of Macroeconomic Policy, Philip Allen, Oxford, 1974

32. Prachowney, Martin F. J, The Goals of Macroeconomic Policy, Routledge, London, 1994
33. Richard T Froyen, Macro Economics; Theory and Policy, Macmillan Publishing Co., New York, 1990
34. Rosalind Levacic and Alexander Rebmann, Macro Economics: An Introduction to Keynesian-Neoclassical Controversies, The Macmillan Press Ltd, London
35. Rudiger Dornbusch, Stanley Fischer and Richard Startz, Macro Economics, Tata McGraw Hill Publishing Company Ltd, New Delhi, 1998
36. Salvatore, D, International Economics, Macmillan, New York, 1990
37. Shapiro, E, Macroeconomic Analysis, Galgotia Publications, New Delhi, 1994
38. Sodersten, B, International Economics, Macmillan, New York,
39. Snowdown B, H.R Vane and F. Wynarczyk, A Modern Guide to Macro Economics: An introduction to competing schools of thought
40. Y. P. Venieries and F. D. Sebold, Macro Economic Models and Policy

## **MATHEMATICAL ECONOMICS**

### **CORE COURSE**

#### **COURSE CODE – AE2C007**

#### **Module - 1** (Theory of Consumer Demand)

Maximization of utility - demand functions - Elasticity - Properties of demand

functions - Slutsky equation - Direct and cross effects - Separable and additive utility functions - Homogeneous and homothetic utility functions - Indirect utility function - Duality in consumption - Roy's identity- Linear expenditure system - The problem of choice involving risk – Expected utility - Risk and insurance.

#### **Module - II** (Theory of Production)

Production function - Cob-Douglas production function - CES production

function - VES production function - Translog production - Cost function : Derivation of cost as a function of output -.Input demand function - Technological progress - Embodied and disembodied technology- Neutrality.

#### **Module - III** (Monopoly and Imperfect Competition)

Monopoly and profit maximisation - Price discrimination - Taxation and monopoly - Multiple plant and multiple product monopoly - Revenue maximization monopoly - monopoly in the input market - Cournot- Nash model – Stackelberg model - Sweezy model.

#### **Module - IV** (Optimisation over time)

Basic concept - Multi period consumption - Investment theory of firm –interest rate determination - Investment theory and role of time - Retirement and role of durable equipment.

### **Module - V (Linear Models)**

Theory of games: Two person zero-sum game - Pure and mixed strategy – Saddle point theorem. Linear programming: Primal and dual problem – General linear programme - Complementary slackness theorem. - Simplex solution. Input output analysis: Open and closed Leontief system - Hawkins –Simons condition-Growth Models- Harrod-Domar-Mahalanobis-Solow-John Robinson and Kaldors Growth Models- New Endogenous Growth Models.

### **References**

1. Allen R.G.D, *Mathematical Economics*, Macmillan Co. Ltd., 1956
2. Allen R.G.D, *Macroeconomic Theory*, Macmillan Co., Ltd., 1967.
3. Amitabh Kundu, et. Al, *Input Output framework and Economic Analysis*, Centre for the study of Regional Development, New Delhi, 1976.
4. Birchenhall. C. and Grout. P. *Mathematics for Modern Economics* Philip Alien. Harness and Noble Books, Oxford, 1984.
5. David. F. Heithfield and Soren Wibe, *Introduction to Cost and Production Functions*, Macmillan Education Ltd., 1987.
6. Eugene Silberberg, *The Structure of Economics a Mathematical Analysis* (Second Edition), Me, Graw Hill International (ed). 1990.
7. J.M. Henderson and R.E.Quandt, *Microeconomic Theory a Mathematical Approach*, Me. Graw Hill International Ltd, 1980.
8. Leontief. W.W., *The Structure of American Economy 1919-1939*, Vora and Co. Publishers (Pvt.) Ltd., Bombay., 1971.
9. Krishna K.L. (ed.) *Econometric Applications in India*, Oxford University Press, New Delhi, 1997.
10. Gerald M Meier and James E Rench (Ed), *Leading Issues in Economic Development*, 7<sup>th</sup> Edition.
11. A.P.Thirwall, *Growth and Development with Special Reference to Development Economics*, Palgrave,2003.
12. Michael P. Todaro&Stephen C. Smith, *Economic Development*, 8<sup>th</sup> Edition, 2004

## **FINANCIAL INSTITUTIONS AND MARKETS**

### **CORE COURSE**

#### **COURSE CODE – AE2C008**

##### **Module I**

The financial system-Structure, nature and role of financial system- financial system and Economic development-Theories of the impact of financial development –Indicators of financial development-Criteria to evaluate financial system-Over View of Indian Financial system- Financial sector reforms in India.

##### **Module II**

Financial Market-Meaning-Classifications-Money Market-objectives-functions-Importance-Components-Call Money Market-Treasury bill market-Commercial bill market-Certificate of Deposit Market-Acceptance Market- Collateral Loan Market-DFHI-Money market reforms in India -capital market- objectives-functions-Importance-Structure-primary and secondary market-stock exchange-meaning and functions-trading procedure and settlement-regulatory framework-Indian stock exchanges-SEBI-Role and Functions-Capital market Reforms in India.

##### **Module III**

Non Banking Financial Intermediaries-Insurance Companies-Miscellaneous NBFIs-Structure and Growth-Role and Functions-Hire Purchase-Lease Finance-Housing Finance-Merchant Banking-Venture Capital-Mutual Funds-Credit Rating Agencies-Depository and Custodial services.

##### **Module IV**

Global Financial Markets-Global Innovative Instruments-Global Foreign Exchange Market-Global Banking-Offshore Banking-Global Equity Market and major Global Financial Market-Derivative Market- New Generation Banks.

##### **Module V**

Portfolio Management-Meaning and Definition-Specification of investment objectives and constraints- Choice of asset mix-Formulation of portfolio strategy-Selection of securities-Portfolio Execution-Portfolio revision-Portfolio evaluation.

##### **References**

- 1.L.M.Bhole, Financial Institutions and Markets,McGraw Hill Company , New Delhi,2007
2. M.Y.Ghan, Indian Financial System, McGraw Hill Company , New Delhi, 2008
3. Hazel J Johnson,Global Financial Institutions and Markets, McGraw Hill Company, UK, 2000
4. Meir Kohn, Financial Institutions and Markets, Tata McGraw Hill, UK, 2007
5. Rajesh Chakravarty, The Financial Sector in India, Oxford 2009

6. S Guruswamy, Financial Institutions and Markets, Tata McGraw Hill, 2009.
7. ChandraPrasanna, Managing Investment, TMH, New Delhi, 2007
8. ChandraPrasanna, Financial Management, 7<sup>th</sup> Ed. Tata McGraw Hill, 2008.
9. ChandraPrasanna, Investment Analysis and Portfolio Management 8<sup>th</sup> Ed. Tata McGraw Hill, 2009.
10. Pallale V Bharati, Indian Financial System, Pearson, NewDelhi, 2012.

## **ECONOMETRICS**

### **CORE COURSE**

#### **COURSE CODE – AE3C009**

#### **Module 1**

Definition and scope of Econometrics — methodology of econometrics — nature and sources of data for econometric analysis — contribution of econometric methods to the development of Economics — limitations of econometric methods.

#### **Module II**

Two variable regression analysis : Method of ‘ordinary leastsquares’— properties of OLS estimators —the Gauss Markov theorem — estimation and testing — multiple regression analysis : estimation and testing – Violation of assumptions of Classical Linear regression models- problems of multicollinearity, heteroscedasticity and autocorrelation ; sources, detection, consequences and remedial measures.

#### **Module – III**

Dummy variables: Use of dummy variables- Regression on dummy variables dummy variable trap – Dummy dependent variable models- LPM, Logit, Probit,Tobit Models - Errors in variables – Instrument variables.

#### **Module – IV**

Lagged variables - Regression with Lagged Variables – Distributed Lag Models-Koyck and Nerloves Model.

#### **Module – V**

Simultaneous Equation models: Simultaneous equation bias and inconsistency of OLS estimators — structural and reduced form equations — the identification problem: order condition and rank condition for identification — simultaneous equation methods- ILS, 2SLS, Method of maximum Likelihood.



## References

- 1) Damodar N. Gujarati, Basic Econometrics, McGraw Hill, 1995,
- 2) Michael D. Intriligator, Econometric Models, Techniques and Applications, Prentice Hall of India, New Delhi, 1980.
- 3) A. Koutsoyiannis, Theory of Econometrics, Palgrave, 2004.
- 4) Johnston . J. Econometric Methods, McGraw Hill Book Company, New York, 1972.
- 5) Klien L.R. A Text Book of Econometrics, Prentice Hall Inc., Englewood Cliffs. New Jersey, 1974
- 6) Maddalla G.S. Econometrics, McGraw Hill, New York, 1977.
- 7) Desai, Meghand, Applied Econometrics McGraw Hill Book Co., New York 1976.
- 8) Klien L.R., Introduction to Econometrics, Prentice Hall Inc., Englewood Cliffs. New Jersey.
- 9) Damodar N. Gujarati, Essentials of Econometrics, McGraw Hill, 1992.
- 10) Damodar N. Gujarati, Econometrics, 2000.
- 11) G. M. K Madnani, Introduction to Econometrics: Principles and Applications, Oxford and IBM Publishing Company.

## ENVIRONMENTAL ECONOMICS

### CORE COURSE

COURSE CODE – AE3C010

#### Module-1

The economy and environment- inter linkages between the economy and environment. Material balance model and the law of thermo dynamics - environmental ethics. Resource taxonomy – economics of natural resources – managing renewable and non- renewable resources – common property resources.

#### Module-2

Economics of sustainable development – key aspects of sustainable development – intergeneration equity and intra generation equity-guideline for sustainable society - indicators of sustainability – Hartwick, Solow approach. Safe minimum standard – Daly’s operational principle – Water conservation, rainwater harvesting and watershed management- Water resources in India, issues and concerns – Water ethics.

#### Module-3

Climate change and Agriculture development-Climate change issues and sustainable approach- Montreal Protocol and amendments – five principles of economic incentives for tackling international

environmental problems – full cost principle, cost effectiveness principle, property right principle, sustainability principle and the information principle- Disaster management-major disasters- floods, earth quakes, cyclones, landslides -mitigation measures.

#### **Module-4**

Environment Impact Assessment (EIA)- Environmental planning and management. Accounting for environment-Carbon taxes and carbon emission trading – economic and distribution impacts of carbon taxes – biodiversity - magnitude and levels- value of biodiversity and threats to biodiversity.

#### **Module-5**

Regulating pollution – command and control – economic incentives for environmental protection (price, rationing, liability rules, quantity rationing, pollution taxes, tradable pollution permits) cost-benefit Analysis.

#### **References:**

1. Tom Tietenberg (2004), Environmental and Natural Resource Economics; Pearson
2. Prakash Vohra & Ragesh Mehta (2007), Environmental Economics; Commonwealth Publishers, New Delhi.
3. Charles D. Kolstad (2000), Environmental Economics; Oxford University Press.
4. Nick Hanley & Collin J. Roberts (2002), Blackwell Publishers Oxford.
5. Nick Hanley, Jagonf, Shogern and Benwhite, Environmental Economics; Macmilian 1997.
6. Saxeena H M (2006), Environmental Studies: Rawat Publications.
7. Misra S P & Pandey S N (2009), Essential environmental Studies; Ane Book Pvt. Ltd.
8. Aravind Kumar (2004), Environment and Health, APH Publishing Co., New Delhi.
9. U. Shankar, Environmental Economics.
10. Russel S Clifford (2001), Applying Economics to Environment; Oxford University Press.
11. Eban S Goodstein (2002) Economics and the environment, John Wiley and Sons

## **INTERNATIONAL ECONOMICS**

### **CORE COURSE**

#### **COURSE CODE – AE4C011**

#### **Module I**

Pure Theory of International Trade –Theories of Absolute Advantage and comparative Advantage – Opportunity cost approach –offer curves- Reciprocal demand theory- Specific factor model –Specific factors and income distribution – H.O.Model –Factor price equalization theorem \_Rybczynski Theorem – Empirical Testing of H.O Theorem- Leontief Paradox – Factor intensity reversal – Terms of trade.

#### **Module II**

New theories of International trade –Kravis-Linder-Posner-Vernon-Kenen and Emmanuel-Trade based on product differentiation – Intra industry trade –Empirical test on Intra industry trade-Monopolistic Competition and international trade. Technology differences and trade -Theory of Immiserising Growth -Prebish Singer model-Application to developing economies.

### **Module III**

Commercial policies of trade- case of free trade and protection – Trade restriction –Tariff and non trade barriers – effects of tariff –partial and general equilibrium Analysis – Small Country and large country cases-Effective Rate of Protection — Optimum Tariff – Tariff and real reward for factors – Stolper Samuelson Theorem – Metzler paradox, Lerner symmetry theorem- effects of import quota and other restrictions on trade-Economic integration-Forms of economic integration-FTA-Common market-Economic union-customs union- Effects of custom union-Partial and General equilibrium analysis.

### **Module IV**

Balance of payment -exchange depreciation and devaluation – Theories of Balance of Payment-The elasticity approach- The Marshal Lerner Mechanism. The absorption approach-The monetary approach- Foreign exchange rate policy -Fixed and Flexible exchanges-Exchange rate regimes.India's foreign trade and balance of payments.

### **Module V**

Trade as an engine of growth – Export promotion Vs import substitution strategies – Problems facing developing economies –borrowing and debt problems – MNCs and direct investment-. Globalization – WTO and World Trade System—Significance of regional trade organizations.

### **References**

1. Paul R Krugman& Maurice Obstfeld, International Economics, Theory and Practice,Pearson Education, Singapore2003
2. B O Sodersten and Geoffrey Reed, International Economics, Macmillan, London 2003
3. Dominic Salvatore, International Economics, John Wilkey& Sons, New York, 2003
4. Francis Cherunilam, International Economics, TMH, 2000.
- 5.Sugata Margit, International Trade and Economic Development, Oxford University Press,2008.
6. Chacoliades: International trade, Theory and Policy, McGraw Mills, 1978.
7. Kindleberger C.B., International Economics, Taraporewala and Sons, Bombay.
8. Deepak Nayyar: Trade and Industrialisation, Oxford University Press, 1997.
- 9.JagadishBhagavathi: Writings on International Economics (ed) Balasubramanyam, Oxford University Press.
10. Theory and Practice of Commercial Policy, 1968
11. Meier G.M: International Economics of Development, Harper and Row, New York,. 1968
12. problems of a World Monetary Policy: Brettonwoods and After; Macmillan, London.
13. Bardhan P.K: Economic Growth Development and Foreign Trade Wilet. York,1970

14. JagadishBhagavathi and Ronald W.Jones: Trade Balance of Payments and Growth, . North Holland Nayyar, ;
15. A Stream of Windows: Unsetting Reflections on Trade, Immigration and Democracy; OUP.
16. Mundell. R.A: The Appropriate Use of Fiscal and Monetary Policy for International External Stability, IMF. Staff Papers; 1962.
17. Scammel W: International Policy,,Brettonwoods and After; Macmillan, London. 1975.
18. Machlup,F: International Monetary Economics, George Alien and Unwin , V London; .1970.
19. Evan Luard: The Management of the World Economy,,Macmillan, London; 1983.
20. M.R. Aggarval: International Institutions and Economic Development of Underdeveloped Countries; Indian Economic Association,
21. Nagesh Kumar: Foreign Direct Investment and the WTO; OIP.
- 22.Robert J Carbouhh :International Economics:Thomson South Western Edition ;2004

## **OPERATIONS RESEARCH FOR ECONOMIC ANALYSIS**

### **CORE COURSE**

#### **COURSE CODE – AE4C012**

#### **Module-I**

Operations Research : History and development of OR-meaning and scope- applications-modeling in Operations Research- OR models and their applications- Linear programming problems: formulation of problem- graphical solution- simplex procedure for maximization and minimization-duality concept-solution of dual problem- economic interpretation of dual problem-Integer linear programming-solution-algorithms-branch and bound algorithm-zero – one implicit-enumeration algorithm-cutting plane algorithm.

#### **Module- II**

Transportation model: Mathematical formulation- general structure of the problem- transportation tables- methods to obtain Initial Basic Feasible Solution (IBFS)- NWCR and VAM- conditions for testing optimality- MODI method for testing optimality solution of balanced and unbalanced problems- Assignment model: methods for solving assignment problems- balanced and unbalanced assignment problems- maximization problems.

#### **Module- III**

Non linear programming: Introduction, Lagrangian method- algebraic forms-constrained maxima and minima-Kuhn Tucker analysis- Kuhn Tucker conditions for solutions of non linear programming

problems- Quadratic programming- methods of solving quadratic programming-Goal programming- formulation-algorithms-weighting method preemptive method-queing system.

#### **Module- IV**

Decision Theory: Introduction- basic concepts- pay off table- opportunity loss or regret table- decision rule- decision making under certainty- under uncertainty- Laplace criterion- maximin or minimax principle- maximax or minimax principle- Harwicz  $\alpha$  criterion- under risk- Expected Opportunity Loss- Expected Value of Perfect Information (EVPI)- Bayecian decision theory- Decision tree- Game theory: Introduction- meaning-the zero sum games- pay off matrix- minimax and maximin principle- solution of zero sum two person games- saddle point theorem- mixed strategies- algebraic method, dominance properties- optimal mixed strategies- graphical method and solution of games by LPP-  $2 \times n$  and  $m \times 2$  games- reducing the game problem to LPP- n-person games (concept)-simulation modeling-types-Monte Carlo simulation analysis.

#### **Module- V**

Network Techniques: PERT and CPM- Basic concepts- constructin of networks- critical path- event times- float and slack, time cost- trade off- resource allocation and scheduling- resource levelling- resource smoothing- project control- updating- difference between PERT and CPM-deterministic inventory models-general inventory model-static and dynamic EOQ models.

#### **References**

1. William J. Baumol, Economic Theory and Operations Analysis- Prentice Hall of India, New Delhi, 1999.
2. Rao S.S, Optimisation Theory and Applications, New Age International.
3. Taha.H.A, Operations Research- An Introduction ,Mc.Millan.
4. Kanthi Swarup, Gupta and Man Mohan, Operations Research, Sultan Chand & Sons.
5. Philips Ravindran and Solberg, Operations research, principles and Practice, John Wiley.
6. Gross and Harris, Fundamentals of Queing Theory, Jon Wiley.
7. R. Pannerselvam,"Operations Research", PHI(2002).
8. J.K Sharma. Operations Research- Theory and Applications, 1997.

### **ELECTIVE COURSES**

#### **PUBLIC ECONOMICS**

#### **ELECTIVE COURSE**

#### **COURSE CODE – AEE001**

#### **MODULE. 1: The Case for a Public Sector.**

**Unit I:** The case for a public sector- The dynamics of the role of government in a capitalist economy and Mixed economy.

**Unit.2 :**Market failures due to market imperfections, decreasing cost, externalities, uncertainty - Multiple Theory of Public Household-Multiple functions of the government- Allocation, Distribution and Stabilization Functions- Provision of Public Goods: characteristics of public goods, the optimal

provision of pure public goods, impure public goods( congested public goods) theory of Clubs, Local public goods (Tiebout Model), Public intermediate goods, Mixed goods/ quasi public goods, Merit wants and merit goods- Theories of Public Goods Allocation: Marginal Utility theory, Voluntary Exchange Theory, Samuelsons Model of Public goods allocation.

**Unit.3** : Public Choice Theory: Private and public mechanism for allocating resources – The problem of preference revelation- Voting Models- Revealing social preference through Majority Voting : The Bowen - Black Majority Voting Model, Arrow's Impossibility Theorem, The Buchanan - Tullock Model - The Wicksell Approach (Absolute and Relative Unanimity) -Revealing social preference through Point Voting, Coleman Approach to revealing social preference-Down's model of Democracy Incentive Mechanism for preference revelation (Groves and Loeb, Tideman, Tulloch) - Bureaucracy, Special interest Groups - rent seeking Cost and Political process –Directly Unproductive Profit Seeking Activity.

#### **MODULE.II: Public Expenditure & Public Enterprise.**

Theories of Public Expenditure - Structure &Growth of Public Expenditure in India- economic effects public expenditure-changing attitude towards public enterprise in India, Privatization and Disinvestment of public Sector units in India- Administered Price Mechanism: Criteria for Public Investment (Social Benefit Cost Analysis)

#### **MODULE.III: Public Revenue.**

Theory of Optimal Taxation- Tax incidence under various market structure-Partial equilibrium Analysis, General equilibrium analysis- Incidence of major taxes in India-Measuring incidence- Musgrave's Approach- Allocative& Equity aspect of Personal Income Tax, Excise Duty, Sales tax-Taxable capacity-Tax Reforms in India: Chelliah Committee report, Long term Reforms in India's Indirect Tax Structure (Indirect Taxation Committee Reports)

#### **MODULE. IV: Public Debt**

Theories of Public Debt: Classical, Keynesian &Musgrave – forms and redemption of Public Debt- Burden of public debt- Inter-generation Equity aspect of Public debt- Buchanan's Thesis, Domer's views on Fiscal Deficit concept of public Debt- Growth & Structure of Central &State debt in India - Principles of Public Debt Management-Issues in debt management.

#### **MODULE.V: Fiscal Policy**

Fiscal policy-Sound Finance and Functional finance-Reforms in Budgeting - Programme, performance budgeting system, Zero based Budget-Budgetary Deficit and its measurement- fiscal policy in India

#### **MODULE.VI: Fiscal Federalism.**

Theory of Multilevel Government Finance - Centre — state Financial Relations in India- Vertical & Horizontal imbalance in intergovernmental transfers in India-An Evaluation of Working of Finance Commission in India- Criteria of devolution - - Modified Gadgil Formula –Local Finance-Role of Local self government in the light of 73rd constitutional amendment - Emerging issues in local financial relations in India.

*Reference:*

1. Dalton.H: Principles of Public Finance, Allied Publishers (1991).
2. Pigou.A.C. : A Study in Public Finance, Macmillan.
3. Prest.A.R&Barr.N.A.: Public Finance in Theory and Practice, ELBS, London.
4. Joseph.E. Stiglitz : Economics of the Public Sector, WAV, Notton& Company, New York.
5. Buchanan J.M. &Flowers M.R: Public Finance - An Introductory Text Book, Irwing Publishers-Illinois.
6. Bernard. P. Herber: Modern Public Finance, A Study of Public Sector Economics. Irving Publishers Illinois.
7. John.C. VVinfrey : Public Finance, Public Choice and The Public Economy –Harper & Row publishers New York.
8. R.A. & P.B. Musgrave: Public Finance in Theory and Practice, Me Grew Hill.
9. Robin.W. Boadway :Public Sector Economics, Winthrop Publishers.
10. John Cullis and Philip Jones, Public Finance and Public Choice, Oxford University Press.
11. Browing, J.M. &Browning E.K.- Public Finance &the Price System, Macmillan, New York.
12. Mishan.E.J. : Cost Benefit Analysis Alien &Unwin, London 1982.
13. Peacock.A.t &WisemanJ. : The Growth of Public Expenditure in thwe U.K George Alien &Unwin Ltd. 1967
14. Reddy.K.N. : Growth of Public Expenditure in India, 1872-1966, Sterling Publishers, Delhi.1972.
15. SudiptoMundle&GoviudRao : Public Expenditure in India : Trends &Issues in Public Finance-Policy Issues for India (ed.) SudiptoMundle , OUP, Calcutta, 1997.
16. Goyal.S.K.(ed)Public Enterprises, UPA, New Delhi, 1985.
17. Dwivedi.D.N: Reading in Indian Public Finance, Wiley Eastern Ltd, New Delhi, 1994.
18. Buchanan. J.M. Public Principles of Public Debt, Irwin, 1958.
19. SudiptoMundle; Public Finance policy issues for India, OUP,1997.
20. Chelliah. R.J.: Growth of Public Debt in the Indian economy (ed) by BimalJalan, Penguin Books, 1992.
21. David Novick :Programme budgeting, programme analysis and the federal Government, Hardware) University press.
22. Phyre.P.: Zero Base Budgeting , A Practical Tool for evaluating Expensed,, John Wiely.

23. Standford. C.T,: The Economics of Public Finance , Pergamon Press, Oxford, chapters. 11-12.
24. Thripathy. R.N.; Public Finance in Under Developed Countries, Sterling Publishers, 1985
25. SudiptoMundle and GovindRao.M. Issues in Fiscal Policy in the Indian Economy (ed) by BimalJalan.
26. Sudipto Mm id le.: Public Finance, Policy issues for India.
27. Rangarajan, Basu, Jadhve : Dynamics of Interrelationship between Government deficit and domestic debt in India, R.B.I. Occasional Paper, Vol.10,No.3.1989.
28. Chelliah. RJ. And Associates (NIPFP) Trends &Issues in Indian Federal Finance,
29. GovindRao.: Indian Fiscal federalism, major issues in Public Finance (ed) by SudiptoMundle, 1997.
30. Gulathi.I.S. and George. K.K. : Essays in federal Financial Relations, Oxford 1BH,198S.
31. Lakdwala . : I UNJOIN State Financial relations, Lalvanim

## **ECONOMICS OF GROWTH AND DEVELOPMENT**

### **ELECTIVE COURSE**

#### **COURSE CODE – AEE002**

#### **MODULE-1 GROWTH AND DEVELOPMENT**

Growth and Development -An overview-The Historical Records; Kuznet's characteristics-Development-Sources and Measurement – National Income- Percapita Income-Diamensions of Development gap-PQLI –HDI –HPI-Gender Related Development Index(GDI) – Gender Empowerment Measure(GEM) –Multi Diamensional Poverty Index – Sen'sEntitlement and Capabilities Approach-Development as freedom-Basic need approach Problems of Development.

#### **MODULE-2THEORIES OF DEVELOPMENT**

Classical Theories- Adam Smith- David Ricardo- Karl Marx- Joseph Schumpeter. Development paradigms- Modernist Paradigms- The stages of growth: Rostow - Surplus Labour :Lewis-Big Push :Rosenstein Rodan- Balanced Growth: Nurkse – Unbalanced Growth:Hirschman – Critical Minimum Effort Thesis:Leibenstein- Dual Economy Model:Fei and Ranis Model-

#### **MODULE-3 AGRICULTURE,INDUSTRY AND DEVELOPMENT**

Role of Industrialisation in Development –factors inhibiting –policies for Industrialisation-agriculture and Economic Development – Agricultural policy in Developing countries – complementary role of industry and agriculture in Development-Globalisation and agriculture.

#### **MODULE-4 ROLE OF CAPITAL AND TECHNOLOGY IN DEVELOPMENT**



Capital and Development- stages of capital formation- sources-Importance of ICOR--Role of technology in development-Production function approach and empirical applications – Choice of techniques – Significance of capital saving and labour saving techniques- role of Intermediate technology- Issues related to transfer of technology.

#### **MODULE-5 INTERNATIONAL ASPECTS OF DEVELOPMENT**

Role of foreign trade, foreign capital and foreign aid in the Development process-Myrdal's4

Backwash and spread effects-Inward looking and Outward looking strategies –Private foreign

Investment –MNCs and Development issues- Public foreign Investment – foreign aid and

Development –Tied aid and Untied aid - International Agencies and development- IMF-IBRD IFC- ADB-UNDP.

#### **MODULE-6 PLANNING AND DEVELOPMENT**

Rationale for planning –failure of market mechanism – Types of planning- Tools and techniques in planning— Indian Planning Experiences- NITI Aayog- Micro level planning- Decentralized planning experience in Kerala – Methodology of preparing Development Plans and its evaluation and monitoring at the local level in Kerala- Role of micro credit – SHGs- Examples of Bangladesh and Kerala – Contributions of Grameen Banks –Kudumba Sree in the development process .

#### **References:**

1. J.R. Hicks, Capital and Growth
2. Gunnar Myrdal, Asian Drama, II Vol.
3. World Bank Development Reports.
4. UNDP, Human Development Reports.
5. Debraj Ray, Economics of Development, OxfordUniversity Press, New Delhi, 2001
6. AmartyaSen, Development as Freedom, OxfordUniversity Press, New Delhi,1999
7. Gerald M Meier and James E Rench (Ed), Leading Issues in Economic Development, 7<sup>th</sup> Edition.
8. A.P.Thirwall, Growth and Development with Special Reference to Development Economics, Palgrave,2003.
9. Michael P. Todaro&Stephen C. Smith, Economic Development, 8<sup>th</sup> Edition, 2004
10. Hentry Wan(JR) Economic Growth, 1971
11. Bakul H Dholakya and Raveendra H Dholakya,Theory of Economic Growth and Technical Progress- An Introduction, MacMillian,Delhi,1998.
12. Hywd G Jones, An Introduction to Modern Theory of Economic Growth, McGraw Hill, 1976.
13. Agalwal and S.P. Singh (Ed) , The Economics of Underdevelopment,OUP, Delhi,1985
14. J.N. Bhagwati (Ed), Dependence and Interdependence- Essays in Development Economics, Vol-1&2, OUP, Bombay, 1985.
15. Michel P Todaro, Economics for Developing World, Longman, London,1998.
16. SukhomoyChakraborty, Development Planning –Indian Experience, OUP, Delhi,1998
17. Misra,S.K and Puri,V.K,Economics of Development and Planning,(2012),Himalaya PublishingHouse,Mumbai.
18. Mishra,R.P and Achyutha .R.N(Ed),Micro level planning principles , methods and case studies,Concept Publishers,New Delhi
19. Kaushik Basu;Analytical Development Economics ; the less developed economy revisited,Oxford Indian Paperbacks.

20. D.Nayyar(Ed)Industrial Growth and stagnation: The debate in India :Oxford University Press(1994)
21. J.Bhagawati and Padma Desai : Planning for Industrialisation, Oxford University Press(1970)
22. S.Chakrawarti, Development Planning : The Indian Experience
23. Dreze Jean and Sen ,Amartya,(1993),Hunger and public Action,OUP,Delhi

## **POPULATION STUDIES**

### **ELECTIVE COURSE**

#### **COURSE CODE – AEE003**

#### **Module-1**

Population studies-Meaning-Nature-Scope-Importance-basic concepts- Population data- Methods and Sources-World population growth and distribution- Population growth in India and Kerala-Theories of Population growth- Malthusian- Optimum and Demographic Transition Theories of Population.

#### **Module-2**

Structure and characteristics of Indian Population- Sex and Age structure- Marital status- Literacy and Education-Religious composition-Ethnic composition- Health- Life Expectancy Index- Population Ageing- Ageing in India and Kerala- Emerging Issues.

#### **Module-3**

Population Dynamics- Mortality- Measures of Mortality- Use of Life- Table Techniques- Sex and Age Pattern of Mortality- Mortality Differentials- Level and Trends in Mortality- Fertility- Level and Trends- Nature of Fertility- Measures- Differential Fertility- Theories of Fertility- Nuptiality- Marital Status- Mean age at marriage- Widowhood and Divorce-Population trends in modern economic growth-Mass education and fertility decline-co-operation, inequality and the family (Amartya Sen)

#### **Module-4**

Migration and Urbanization -Basic concepts- Importance- Types of Migration- Migration Differentials- Levels and Trends of Migration- Socio- Economic aspects of Migration-Theory of Migration- Techniques of Measurement of Migration- Urbanization – Growth- Distribution and Trends in Urban Population- Measures- Age, Sex and Occupational Structure of Urban Population-Factors affecting Urbanization.

#### **Module-5**

Population Projection and Population Policies in India- Population problem, Family planning and family welfare-Population Projection and Estimation- Methods and Importance of Population Projections- Population Policies and Programmes in India-India's Experiences-Population growth and socio economic development, environment and health-Conceptual issues and linkages with environment and health.

#### **References:**

1. Asha A. Bhande and Tara Kanikkar, Population Studies, Himalaya Publishing House,1988.
2. Prasad P.K., Population Planning, Policy and Programme,1990 Deep and Deep Publications, New Delhi.
3. Colin Neuwel, Methods and Models in Demography, Belhaven Press, London,1998.
4. Peter R. Cox, Demography, Universal Book Stall, New Delhi, 1989
5. K.C. Scaria AND S. Irudayarajan, Kerala's Demographic Transition- Determinants and Consequences, Sage Publications,1991.
6. P.G.K. Panikar and C.R. Soman, Health Status of Kerala, Centre for Development Studies, Trivandrum,1985.
7. Demeny and Geoffrey Menicoll, Population and Development, Earth Scan Publications,1998.
8. D.J. Bogue, Principles of Demography, Wiley,1971
9. B.D. Misra, An Introduction to the study of population, South Asian Publishers,1980
10. Rajendra K Sharma, Demography and Population Problems, Atlantic Publishers,2000-,2007.
11. S.C. Srivastava, Studies in Demography, Anmol Publications ,2004
12. Moneer Alam, Ageing in India; socio- economic and health dimensions, academic foundation, New Delhi, 2006.
13. D. S. Adhikari, Population challenge and world crisis: documents and case studies, cyber tech publications, New Delhi, 2008.
14. Samuel H Preston, Patrick heuveling and michel Guillot, Demography: Measuring and Modeling Population Processes, Black well Publishers, U.K and U. S. A, 2001.
15. Hansraj, Population Studies with special reference to India, Surjit Publications, Delhi.
16. B. A. Prakash and V. R. Prabhakaran Nair, Kerala's Development Issues in the New Millennium , serials publications, New Delhi, 2008.
17. B. A. Parkash, Kerala's Economic development- Performance and Problems in the post liberalized period ( Second edition, sage Publication, New Delhi, 2004.

## HEALTH ECONOMICS

### ELECTIVE COURSE

#### COURSE CODE – AEE004

**Module-1: Introduction** Why Health Economics? Nature and Scope- Determinants of Health - Health and Development – Issues of Availability, Accessibility, Cost and quality.

**Module-2: Theoretical Foundations in Health Economics** Demand and Supply for Health-Demand and Supply of Human resources for health -The Production of Health- The Demand and supply of health workers –Determinants of Demand and supply.

**Module-3: Health planning** Types – stages and challenges in planning – health inequalities – health financing – and health problem performance – concepts, criteria and measurement – health system organization models-What is health care system?-Why do health care system differs-Four models of health care system-Free market model-Social insurance-NHS and socialist.

**Module-4: Externalities and Market Failure** Issues of Externalities-Private sector in health care provision-the role of public/private mix in health system-privatization of public health –problem of

mixing public and private. - Government Intervention in Health Care Markets - Economic Rationale for Government Intervention - Government Failures and Competitive Strategies-Urban health system-overview of methods of studying urban health system.

**Module-5: Health Care Sector in Developing Countries** Health Care Sector in India- Public and Private Care Providers-Factors influencing the growth of private sector in health- Economic Reforms and Health Sector in India - Health Insurance: Issues and Strategies – User Financing: Issues. Health and nutritional deprivation among the marginalized - Health Care Development in Kerala - Is Kerala's Health Care Sector Sustainable? Growing population and health of elderly.

***Essential Readings:***

- 1) Holland, Goodman and Stano (2009) *The Economics of Health and Health Care*, Pearson Education
- 2) Zweifel, P and Breyer, F (1997) *The Health Economics*, OUP, Oxford.
- 3) Turshen, M (1989) *The Politics of Health*, Zed Books, Ltd. London.
- 4) Monica Das Gupta, Chen, L.C and Krishnan T. N (1996) *Health, Poverty and Development in India*, OUP, New Delhi.
- 5) John Davis (2001) *The Social Economics of Health Care*, Routledge, London
- 6) Imrana Quadeer ed. (2003) *Public Health and Poverty of Reforms*, Sage
- 7) Lee, Kenneth and Anne Mills ed. (1985) *The economics of Health in Developing Countries*, OUP, Oxford.
- 8) Baru, R,V(1998) *Private Health Care in India: Social Characteristics and Trends*, Sage.
- 9) Ashokan, A(2009) *Perspectives of Health Economics*, Serials Publications, New Delhi.
- 10) Berman Peter (1995), *Health Sector Reforms in Developing Countries, Making Health Developments Sustainable*, Harvard School of Public Health, Boston.
- 11) Gangadharan K. (2009), *Paradigm Shift in health and Education in India*, Serials, New Delhi.
- 12) Arrow, Kenneth J (1963): Uncertainty and welfare economics of medical care, *American Economic Review*, 53, 941-973.
- 13) Narayana D (2008): High Health Achievements And Good Access To Health Care At Great Cost: The Emerging Kerala Situation in Haddad et.al (ed): *Safeguarding the health sector in times of macro economic instability: policy lessons for low- and middle-income countries*.
- 14) Wagstaff, Adam (1986), *The Demand for Health: A Simplified Grossman Model*, *Bulletin of Economic Research*, Vol.38, No.1.
- 15) Gangadharan K. (2010), *Health and Development: The Millennium Perspectives*, Rawat Books, New Delhi.
- 16) Gangadharan K(2012)*Nutritional and Health care deprivation An inter caste analysis*, Manglam Publication, New Delhi
- 17) Guy Carrin(2009), *Health Systems Policy, Finance, and Organization*, Academic Press

**DEVELOPMENT OF ECONOMIC IDEAS**

**ELECTIVE COURSE**

**COURSE CODE – AEE005**

**Module - I**

Introduction : What is Economic thought - Definitions - Mercantilism –Major ideas of Mercantilists : Population, Interest, Wages, Production, Taxation. Physiocracy :Physiocratic doctrines : Natural Order, The Net Product, The circulation of wealth.

## **Module - II**

The Classical School : Adam Smith : Division of labour - Naturalism and optimism - Economic Liberty - Theory of Value - Theory of Distribution -on wages, on profit, on rent - Canons of taxation - Productive and unproductive labour - Theory of capital, economic development. David Ricardo : Theories of Value, Distribution, Wages, Profit, Foreign Trade, Money, Theory of Economic Development. T.R. Malthus : Theory of population, Malthusian Controversy of Market Glut. J.B. Say : Scope of Political Economy - Law of Market. Jeremy Bentham : The Systems J.S. Mill: Mill's Socialist Programme. VonThunen : Price, Distribution.

## **Module - III**

Critics of Classics : The Nationalist critics : Muller, Frederich List, Historical Critics : William Roscher, Gustav Schmoller. The British School : Walter Bagehot - Socialist Critics : St. Simon, Sismondi, Robert Owen, Charles Fourier, Louis Blanc, Joseph Proudhon, State Socialists : Karl Robertus. Ferdinand Lassals, Scientific Socialists : Karl Marx - Materialistic Interpretation of History, Dialectical Materialism - Theory of Surplus Value. Theory of Economic Development. Frederich Engels Karl Kautsky and Rosa Luxenberg, Rudolf Hilferding, V.I. Lenin.

## **Module IV**

Neo-Classicals : Subjective School : Karl Menger, Von Wieser and Bohm Bawerk,

Marginalists/Mathematical School, Heilmann Gossen, Jevons, Walras, Gustav Cassel, Vilfredo Pareto, J.B. Clark, Knut Wicksell, Wicksteed, Alfred Marshall, A.C. Pigou, Irving Fisher, Institutionalism Thorstein Veblen, J.R. Commons, W.C. Mitchell. Modern Economists; J.M. Keynes, Post Keynesians, Milton Friedman.

## **Module - V**

Indian Economic Thought : Ancient Economic Thought : Koutilya, Modern Economic Thought - Dadabai Naoroji, M.G. Ranade, Mahatma Gandhi, Ambedkar.

## **References:**

1. Eric Roll, *A History of Economic Thought*
2. L.H. Haney, *History of Economic Thought*
3. J.P. Bell, *A History of Economic Thought*
4. V.A. Schumpeter, *A History of Economic Analysis*.
5. O.H. Taylor, *A History of Economic Thought*.
6. Robert Lekachman, *A History of Economic Ideas*.
7. P.C. Newman - *History of Economic Doctrines*

8. Gide & Rist, *A History of Economic Thought*
9. Alexander Gray, *Development of Economic Doctrines*
10. E. Whittaker - *Schools and Streams of Economic Thought*
11. M.K. Gandhi, *Collected Works* (3 Volumes)
12. Karl Marx, *Theory of Surplus Value* (3 volumes)

## **COMPUTER APPLICATION IN ECONOMIC ANALYSIS**

### **ELECTIVE COURSE**

#### **COURSE CODE – AEE006**

#### **Module – I**

Introduction to computers - Generations and classifications of computers - computer organization - hardware-- software and firmware -data base management system - [basic concepts of DBMS, RDBMS - kinds of data base - conventional filing system – data models] data base file - record fields- basic concepts of data processing - introduction to networks - types of networks - impact of computers on modern society Introduction to Mobile phone technology-An Overview of IT applications in business, commerce, industry, defence, communication and media.

#### **Module – II**

Social Informatics - IT and society-Issues and concerns- IT & development, the free software debate-IT industry: new opportunities and threats- cyber ethics, cyber crime, security privacy issues-cyber laws-Health issues-guide lines for proper usage of computers- internet and mobile phones-E wastes and green computing. -Internet, E-commerce and Internet Banking

Internet Basics-Services available on internet using search engines-e mail-important websites on economics. E-commerce- meaning, advantage and limitation-application of e-commerce-trading stocks -online ordering products-online travel and tourism services, employment placement and job market- Internet banking

#### **Module – III**

Introduction to operating system - functions of operating systems -types of OS - multi-programming - time sharing and real time operating systems - application of software packages - word processor and spread sheets - introduction to excel - data entry - building formulae and functions -formatting and calculation - graphs and charts.

#### **Module – IV**

Economic Data : Classification - frequency distribution - relative frequency distribution, cumulative frequency distribution, relative cumulative frequency distribution, frequency tables, Lorenz Curve -

pictorial presentation of data - histograms, pie charts, graphs and time series plots, [practice with Excel, SPSS, Gretel).

#### **Module – V**

Descriptive Measures: Measures of central location : Mean, mode, median - comparison - geometric mean, harmonic mean; measures of spread : range, variance, standard deviation; Bivariate data - measures of association : scatter plots, correlation, simple linear regression, (practice with Excel, SPSS, Gretel)

#### **Module – VI**

Analysis of time series; Trend analysis, smoothing, seasonal variation - ratio to trend - link relatives, cyclical fluctuations; Index Numbers ; methods of construction - simple, chain, weighted - deflating time series, shifting and splicing, test of adequacy (Practice with Excel or SPSS).

#### **Modules – VII**

Further Topics : Optimization - linear optimization - (linear programming); financial mathematics - simple interest, compound interest; growth rates calculation; discounting techniques - present value, net present value (NPV), internal rate of return (IRR) Correlation and Regressing analysis; Estimation of Growth Rates; An overview of Techniques used in Research Univariate, Bivariate and Multivariate analysis; Trends Forecasting; Testing the significance of parameters. different types of functions in Excel- Application in economics and statistics. Data entry/Database creation-operations- Descriptive Statistics, Graphs, correlation and regression [Practice with Excel, SPSS, Gretel].

#### **References**

1. Leon Alex and Mathews Leon, *Fundamentals of Information Technology*, Leos Press and Vikas Publishing House Pvt. Ltd., New Delhi.
2. Guy Hart Davis, *Word 2000*, BPB Publications, New Delhi (ABC series can also be used)
3. Gene, *MS Excel 2000*, BPB Publications, New Delhi (ABC series can also be used)
4. *Office 2000 - Made easy, CD ROM, SSI, Software Solution International.*
5. David Whigam, *Quantitative Business Methods using Excel*, Oxford University Press, 1998.
6. Chandan. S. Jit, *Statistics for Business and Economics*, Vikas Publishing House Pvt. Ltd.. 1998
7. Prem S. Mann, *Statistics for Business and Economics*, Wiley 86 Sons, New York.
- 8.R.J. Wonnacott and T.H. Wonnacott, *Introductory Statistics for Business and Economics*, Wiley, New York.

#### **Books for Additional Reading**

1. Saxena S. MS. *Office 2000*. Vikas Publication, New Delhi.

2. Hutchinson S & Coulthard. G. (1997), *Microsoft Office 97 Professional*, Me Graw Hill (available latest version can be used )
3. Gupta. S.P. *Statistical Method*, Sultan Chand & Sons.
4. Barrow. M. (1996), *Statistics for Economics, Accounting and Business Studies*, 2nd edition, Longman.
5. Chakravarti et. al. *Handbook of Methods of Applied Statistics : Techniques of Computation, Descriptive Methods and Statistical Inference*, Vol. 1, John Wiley & Sons, New York.
6. Goode, W. J and P.F Hatt (1952): "Methods in Social Research", McGraw Hill Book Company, New York.
7. Kothari C. R (1990): "Research Methodology, Methods and Techniques", Wiley Eastern Ltd. New Delhi.
8. Wisonsky and Bhadarkar (1992): "Methodology and Techniques of Social Research", Himalaya Publishing House, Bombay
9. Young, Pauline (1988): "Scientific Social Surveys and Research", Prentice Hall India Pvt. Ltd , New Delhi
10. Estelle M. Phillips and D. S Pugh (1993): "How to get a Ph. D", UBS Publishers and Distributors Ltd., New Delhi.

## **APPLIED WELFARE ECONOMICS**

### **ELECTIVE COURSE**

#### **COURSE CODE – AEE007**

#### **Module -1**

Scope and purpose of Welfare Economics

#### **Module - II**

The welfare of the household: Measurement of welfare change for an

Individual

#### **Module - III**

Welfare in a many household economy: Measurement of welfare changes in a many consumer economy.

#### **Module – IV**

Measurement of inequality and poverty : Gini coefficient - Lorenz Curve - Atkinson's measure of inequality - Sen's measure of inequality and poverty.



## **Module - V**

Standard of living and quality of life : Output and resource-based approaches - the notion of functioning and capabilities - use of these concepts to measure standard of living and quality of life.

### **References**

1. A.B. Atkinson, *The Economics of Inequality*, Oxford University Press, 1983.
2. A.K. Sen, *On Economic Inequality*, Oxford University Press, 1972.
3. A.K. Sen, *Standard of Living*, Cambridge University Press, 1987.
4. A.K. Sen, *Inequality Re-examined*, Clarendon Press, 1992
5. A.K. Sen and M.Nussbaum, *The Quality of Life*, Clarendon Press, 1993.
6. R. Broadway and N. Bruce, *Welfare Economics*, Blackwell, 1984.

## **APPLIED ECONOMETRICS**

### **ELECTIVE COURSE**

### **COURSE CODE – AEE008**

#### **Module I**

Nature of time series data – time series regression models – Finite sample properties of OLS – Functional form, dummy Variables and index numbers – trend and seasonality – Stationarity and weakly dependent time series – Asymptotic properties of OLS – Properties of OLS with serially correlated errors – testing and correcting for serial correlation – Differencing and serial correlation – Heteroscedasticity in Time Series Regression.

#### **Module II**

Simultaneous Equation Models – Macro Economic Models Estimation – forecasting and policy analysis lagged models- methods of estimation of lagged models (Koyck transformation model, Almon approach, Nerlove model etc) - Infinite distributed lag models – Koyck and rational distributed lag models

#### **Module III**

Pooling independent cross sections across time – Policy analysis with pooled cross sections– two period panel data analysis - Policy analysis with two period panel data – differencing with more than two time periods-. Simultaneous equations models with panel data.

#### **Module IV**

Time series econometrics- Forecasting with multivariate regression model- time series models and forecasting: MA, AR and ARIMA models Unit roots –Testing for unit roots – Spurious regression –

Cointegration and error correction models –Forecasting Stationary –VAR models -The Box Jenkins methodology.

#### **Module V**

Econometric applications in India with statistical packages Agriculture–industry - monetary economics- macro economic modeling –international economics.

#### **Module VI**

The nature of empirical project- the model – the data- the estimation of the model- writing up an empirical paper.

#### REFERENCES:

1. Johnston. J, Econometric Methods, Me Graw Hill Book Company, New York, 1972.
2. Klien L.R, A Text Book of Econometrics, Prentice Hall Inc., Englewood Cliffs, New Jersey, 1974.
3. Maddalla G.S Econometrics, Me Graw Mil, New York, 1977.
4. Desai. Meghand, Applied Econometrics Me Graw Hill Book Co., New York 1976.
5. K.L.Krishna. Econometrics. Oxford University Press 1998
6. Intriligator, M, D (1978): Econometric Models, Techniques and Applications, Prentice Hall of India.
7. William .S. Brown: Introductory Econometrics, West Publishing Company
8. Damodar.N.Gujrathi: Basic Econometrics, Mcgrw hill international edition (third edition)
9. R.S.Pindyck and D.Rubinfeld: econometric models and econometric forecasts, international student edition.
10. Gujarathi, D & Sangeetha (2006): Basic Econometrics, McGraw Hill Book Co.
11. Wooldrige, J. M. (2007): Introductory Econometrics, A Modern Approach, Thomson, Akash Press, New Delhi.
12. Green, W. H. (2003): Econometric Analysis, Pearson Education.

## **BUSINESS ECONOMICS**

### **ELECTIVE COURSE**

#### **COURSE CODE – AEE009**

#### **MODULE I Firm in Theory and Practice**

Alternative motives of the firm - Marginal theories Baumol's model, Williamsons, Marris model – Behavioral theories ( Simon's model, Cohen and Cyret model, Cyret and march model)

#### **MODULE II. Demand Analysis and Demand Forecasting**

Types of elasticity of demand, interrelationship between elasticity, income elasticity and cross, elasticity Demand forecasting; types, factors involved, determinants, steps in the forecasting process, criteria of good forecasting method -Methods of forecasting

#### **MODULE III Cost Analysis and Profit Planning**

.Short run cost functions, long run cost functions - Economics of. scale - Cost elasticity and out elasticity, forms of cost functions, cost estimation methods - Techniques of cost control – Application cost analysis (Optimum output, inventory level, breakeven output).

#### **MODULE IV Investment Decisions**

Need for capital budgeting, capital budgeting process"- Investment criteria and investment appraisal investment decision under risk, degrees of risk, risk return trade off, adjusting the valuation model for - Certainty equivalent, adjustment, risk adjusted discount rate, decision tree analysis, simulation sensitivity analysis - Decision making under uncertainty - Wald decision criterion, Hurwicz decision criterion, Laplace decision criterion.

#### **MODULE V Pricing Strategy**

Factors involved in the formulation of pricing policy - Pricing policies and pricing practices - problems -Price discounts and price differentials

#### **Reference**

1. Koutsoyannis A, Modern Microeconomics, Macmillan, London
2. W J Baumol, Economic Theory and Operation Analysis, Prentice Hall
3. G C Anchilad (Ed.). Theory of Firm, Penguin
4. Jae K Shim. Joel G Siegel and C J Liew , Strategic Business Forecasting, Jaico Publishing Bombay .
5. Makridakis S and C Steron, Forecasting Methods and Applications, John Wiley and Sons NewYork
6. P Katler, Marketing Management Analysis - Planning and Content, -Prentice Hall of India, New Delhi
7. R R Barthwal, Industrial Economics, New Age International (P) Ltd,

8. Peters and Lewis, Managerial Economics , Prentice Hall of India , New Delhi
9. Dominik Salvatore Managerial Economics in a Global Economy, McGraw Hill
10. Prasanna Chandra. Financial Management Theory and Practice, Tata McGraw Hill Publications Company Ltd.
11. Van Home and James C, Financial Management and Policy
12. Brigham and Pappal Managerial Economics. Dryden Press Illinois
13. Seo K K, Managerial Economics Surjeeth Publication , New Delhi.
14. Evans J Douglas, Managerial Economics --Theory, Practice and Problem
15. Dorfman R. The Price System, Prentice Hall of India
16. Thompson Arthur, Economics of the Firms - Theory and Practice, Prentice Hall

## **AGRICULTURAL ECONOMICS**

### **ELECTIVE COURSE**

#### **COURSE CODE – AEE010**

#### **Module – 1**

Nature and scope of Agricultural Economics – Role of agriculture in economic development – Theories of agricultural development – Schultz, Mellor, Lewis and Boserup – Inter-relationship between agriculture and industry – Some empirical evidence.

#### **Module – 2**

Agricultural Development in India – Agricultural policy since independence – Institutional and technological changes – Impact of agricultural development on environment – Organic farming – Agricultural biotechnology – Problems of agricultural development – New Economic Policy and agriculture – Agricultural Policy since 2000 AD – National Commission on Farmers – Impact of WTO Agreements on Agriculture – Trade liberalization and agricultural exports – Globalization of Indian economy and challenges and prospects of Indian agriculture.

#### **Module – 3**

Agricultural Production Economics – Production relationships – Resource use and efficiency – Production function analysis in agriculture – Systems and types of farming – Supply response of crops – Perverse supply response in traditional agriculture – Agricultural subsidies – Rationale for input subsidies in Indian agriculture – Risk and uncertainty in farming – Crop insurance – Futures trading.

#### **Module – 4**

Demand and supply of agricultural products – Characteristics of demand and supply – cobweb theorem – Agricultural prices – Behavior of agricultural prices – Stabilization of agricultural prices – Agricultural price policy and food security in India – Agricultural marketing – Present system of agricultural marketing in India – Agricultural credit – Structure and problems of credit in India.

## Module – 5

Agricultural performance of Kerala – Trends in agricultural growth – Land reforms – Group farming – Lease land farming – Current problems of the agricultural sector – Shift in cropping pattern – Sustainable agriculture – Total Factor Productivity Growth Rate – Emerging constraints and prospects of agricultural development in the 21<sup>st</sup> century.

## References

1. T. W. Shultz, "Transforming traditional Agriculture", New Haven, London Yale, University Press, 1965
2. J. W. Mellor, The Economics of Agricultural Development, Vora & Co, Bombay
3. S. Ghatak & K. Ingersent, Agriculture and Economic Development, New Delhi.
4. W. A. Lewis, "Economic Development with unlimited supplies of labour"
5. Karl Eicher & Lawrence Witt, Agriculture in Economic Development, Vora & Co Publishers Pvt. Limited
6. C. E. Bishop & W. D. Toussiant, Introduction to Agricultural Economic Analysis
7. O. S. Srivastava, Theoretical Issues in Agricultural Economics Allied Publishers Pvt. Ltd.
8. R. N. Soni, Leading Issues in Agricultural Economics, Vishal Publishing Co.
9. R. K. Lekhi, Joginder Singh, Agricultural Economics, Kalyani Publishers
10. R. Desai, Agricultural Economics, Himalaya Publishing House
11. S. A. R. Bilgrami, An Introduction to Agricultural Economics, Himalaya Publishing House
12. Sadhu & Singh, Fundamentals of Agricultural Economics, Himalaya Publishing House
13. B. P. Tyagi, Agricultural Economics and Rural Development, Jai Prakash & Co., Meerut-19.
14. C. A. Robertson, An Introduction to Agricultural Production Economics and Farm Management
15. E.O. Heady, Economics of Agricultural Production and Resource use, Prentice Hall, 1961
16. C. H. Hanumantha Rao, Agricultural Production Function Costs and returns in India, Tata McGraw Hill, 1965
17. P. C. Joshi, Land Reforms in India: Trends and Prospects, Allied Publishers
18. S. S Acharya & D. S. Agarwal, Agricultural Price Analysis and Policy, Oxford & IBH Publishing Co. Ltd
19. A.S. Kalthon & D. S Tyagi, Agricultural Price Policy in India, .Allied Publishers, New Delhi
20. P. C. Malhothra, Stabilisation of Agricultural Prices in India
21. Uma Kapila, Understanding the Problems of Indian Economy, Academic Foundation
22. Uma Kapila, Indian Economy Since Independence, Academic Foundation
23. M. A. Oommen, Kerala Economy Since Independence, Oxford & IBH Publishing Co.
24. B.A. Prakash (Ed), Kerala Economy Problems and Prospects, Sage Publications, New Delhi
25. M. A. Oommen (Ed), Kerala's Development Experience – II, Institute of Social Science, Concept Publishing Co
26. .B. A. Prakash. (Ed), Kerala's Economic Development, Performance and Problems in the Post Liberalization Period, Sage Publications, New Delhi
27. G. S. Bhalla, "Globalization & Agricultural Policy in India", Indian Journal of Agricultural Economics, Vol. 50, No. 1, January-March, 1995.
28. C. H. Hanumantha Rao, "Liberalization of Agriculture in India", Indian Journal of Agricultural Economics, Vol. 50, No. 3, July-September, 1995
29. D. Rudrappan, "Economic Reforms and Agriculture", Yojana, Vol. 47, No. 11, November, 2003
30. Dr. P. Bhattacharya & Dr. Krishna Bihan, " Scope of Organic Farming in India" Yojana, Vol. 47, No. 11, November, 2003

31. C. H. Hanumantha Rao, "WTO and Viability of Indian Agriculture", *Economic & Political Weekly*, September 8-14, 2001, Vol. XXXVI, No. 36
32. Dr. P. K. Singh, "Reforms in the Agricultural Sector", *Yojana*, Vol. 47, No. 11, November, 2003.
33. Dr. Swami Prakash Srivastava, "Biotechnology industry and its future role in Indian Economy", *Yojana*, Vol. 47, No. 11, November 2003.
34. Karunakaran. N (2013), "Change in cropping pattern and food security – a challenge to poor population: a Kerala experience", *Social Action*, Vol. 63, No 1, PP: 48-58
35. Karunakaran. N (2012), "Crop Diversification and chemical pollution: A conflict in the sustainability of the agricultural sector of Kerala", *Indian Journal of Social Development*, Vol. 12, No. 2, PP: 357-368.
36. Karunakaran. N and Gangadharan. K (2013), "Growth of Output of Principal Crops in Kerala: A Decomposition Analysis", *Middle-East Journal of Scientific Research*, Vol. 17, No. 8, PP: 1087-1097.
37. Srikumar Chattopadhyay and Richard W Franke (2006), "Causes of concern: land use change", *Striving for sustainability, Environmental stress and Democratic initiatives in Kerala*, Concept Publishing Company, New Delhi.
38. Mohandas. M (2005), "Agricultural Development in Kerala", in *Kerala Economy-Trajectories, Challenges and Implications* (Ed), by Rajasenan D and Gerald de Groot
39. Mani. K. P (2009), "Cropping pattern in Kerala - spatial inter-temporal analysis", *Kerala Economy: Trends during the post-reform period* (Ed), by Rajan K, Serials Publications, New Delhi.
40. Websites of Agricultural Statistics, Agricultural Network Information Centre, State Planning Board, Planning Commission, etc.
41. Current articles related to various modules in EPW, *Indian Journal of Agricultural Economics*, *Agricultural Situations in India*, *Yojana* and other referred journals.

## **INDUSTRIAL ECONOMICS**

### **ELECTIVE COURSE**

#### **COURSE CODE – AEE011**

#### **Module-1**

Theoretical foundations of Industrial Economics determinants of market structure – the organizational form growth of the firms and merger, integration and acquisitions (Marrio, Mursen and Downs, Williamson and Galbraith)

Industrial Location and Analysis - Theories of industrial location – Weber ,August Losch and Sargent Florence- determinants Industrial Organisation and Development - role of state in industrial development empirical studies on Industrial Structure.

#### **Module-2**

Industrial growth in India: Trends and prospects- Public sector enterprises in India: efficiency, productivity and performance constraints.

Industrial development through plans stagnation Performance of public enterprises in India Industrial Policy resolutions.

### **Module-3**

Role of Industrialization in Economic Development - Factors for and against industrial development- role of state in industrial development.

Issues in industrialization pricing policies short run behaviour of prices and quantities of industry competitiveness of Indian industry policies regarding sick firms – small firms in India cottage and small industry.

### **Module-4**

The concepts of labour productivity determinants– total factor productivity debate in Indian Industry labour policy: Industrial Finance -Sources of Industrial Finance - Private, Public and Co-operative Sector - Shares, Debentures, Bonds, Deposits, Loans ,Foreign Direct Investment and Foreign Institutional Investment- Industrial finance institutions and functions 1DBI, ICICI changing role stock market, industrial development and the finance of corporate growth in India.

### **Module-5**

Industrialization in Kerala trends and strategies.

### **References:**

1. Stephen Martin, Advanced Industrial Economics, Basic Blackwell, 1993 (Module I)
2. Dilip Mookherjee, Indian Industry Policies and Performances, Oxford University (Module I Chapter 1, Remaining Chapters for Module III ).
3. R.R Barthwal, Industrial Economics, Wiley Eastern Ltd., New Delhi, 1985. (Module I Chapter 3, 8, 16, Module IV : Chapter 18)
4. Deepak Nayyar, Trade and Industrialisation, Oxford University Press, New Delhi, 1977 (Module I : Chapter 2, Module III: Chapter 4, Module IV: Chapter 5)
5. Isher Judge Ahulwalia. Industrial Growth in India, Oxford University Press
6. Deepak Nayyar, Industrial Growth and Stagnation. Oxford University Press, 1994 (Module I)

## **ENERGY ECONOMICS**

### **ELECTIVE COURSE**

### **COURSE CODE – AEE012**

#### **Module – I**

Introduction : Concepts and techniques of energy sector analysis -origin and development of energy and energy sources at the global and national level – energy parameters - energy and economic growth : historical perspective - energy constraints.

#### **Module – II**

Supply: Sources, uses and substitution possibilities - Demand: technology of use and demand - energy conservation and efficiency - market and institutional barriers - demand side management: concepts and case studies.

### **Module III**

Integrated framework for energy pricing and investment - cost analysis - energy tariff - electricity pricing - fixed charges, capacity charges -administered prices - marginal pricing - cost-plus pricing - energy price modeling-Shadow price, demand and supply analysis.

### **Module-IV**

Energy for development: Demand for energy-conventional approach-paradigm shift-demand side management(capital and DSM)-policies of DSM –Energy audit theory and practice.

Energy and the environment : Models of energy-Environmental interaction : bottom up and top down - Models of integrated assessment of climate change – Regional and global models - environmental issues of energy development - Policy alternatives.

### **Module – V**

Energy strategies for developing countries: Alternative perspective -India's energy sector: markets and institutions - international environmental constraints and National Energy Policy - role of SEBs in India - recent policy changes in the context of globalization, liberalization and privatization. Projects : [Project work in the form of case studies may be carried out compulsorily]

\* Energy audit at the firm level or households level

\* Energy demand estimation at the micro level.

Inter-industry analysis in terms of energy parameters — Efficiency and Productivity.

### **References**

1. Robert Hill, Keefe O Phil and Snap Colin, *Future of Energy Use*, Earth Scan Publication, London, 1993.
2. J.M. Griffin, *Energy Economics and Policy*, Academic Press, 1986.
3. L. Schipper and S, Meyers, *Energy Efficiency and Human Activity : Past Trends, Future Prospects*, Cambridge University Press, 1982.
4. J. Goldemberg et.al., *Energy for a Sustainable World*, Wiley Eastern Ltd., New Delhi, 1988.
5. M. Munasinghe and G. Schramm, *Energy Economics, Demand Management and Conservation Policy*, Van Nostrand Reinhold Co., 1983.
6. R. Sengupta, *Perspective Planning and Policy for Commercial Energy*, Planning Commission, Government of India, 1989.



7. D.W. Jorgenson, P. Wilcoxon, 'Energy, the Environment and Economic Growth', in A.V. Kneese and J.L. Sweeny (Eds) *Hand Book of Natural Resources and Energy Economics*, Vol. III Elsevier Science Publishers, 1983.
8. Government of India : Ministry of Finance, Infrastructure Report, 1997, New Delhi, 1998.
9. Tata Energy Research Institute (TERI), *TEDDY - Tata Energy Development Directory*, Annual Publications.
10. M, Munasinghe, *Pricing of Electricity in India*
11. P.R. Sukla and U.A. Pandya, *Long Term Energy and Environment Forecasts for India, Modelling and Policy Analysis*, 1992. Journals :
  1. *Energy Policy*, Butterworth and Heinemann U.K.
  2. *Economic and Political Weekly* - Bombay
  3. *Energy Sources*, Elsevier Science Publishers.
  4. *Energy Economics*, Journal of the Association of International Energy Economists.
  5. *Urja* , Central Electricity Authority
  6. *TIDE*, TERI publication
  7. *Energy ~ Environment Monitor* - TERI Publication
  8. *Power line* ~ New Delhi

## **TRANSPORT ECONOMICS**

### **ELECTIVE COURSE**

**COURSE CODE – AEE013**

#### **Module - I**

Role of transport in Economic Development - environmental and sociological aspects of transportation - Transport and tourism.

#### **Module - II**

The demand for transport - The problem of the peak - Seasonal variation - Factors

affecting demand for transport - The elasticity of demand- Demand measurement and market research - Characteristics of demand and supply- Models of Freight and Passenger Demand. -Special Problems of Individuals Modes of Transport- Intermodal condition in the Indian Situation-Location of Economic Activities-The supply of transport -The economics of market structures - Economies of scale - the interaction of supply and demand.

#### **Module - III**

Principles of transport pricing - Pricing and market structure - Cost of service principle - Value of service - Subsidies in transport - Problems and justification for subsidies-Regulations-safety-Contemporary Urban Transportation Problems

#### **Module - IV**

Investment criteria in transport - Cost Benefit Analysis of transport projects - Appraisal Methodology - Economic cost - Forecasting traffic -Economic Benefits.

#### **Module - V**

Performance of transport in India - Road, Railways, Air and Water -. Urban transport - Pattern of growth - Issues associated with urban transport - Issues related to private sector participation - Financing legal and regular aspects.

#### **References**

1. S.K. Srivasthva, *The Economics of Transport*, Sulthan Chand and Company (Module -1)
2. P.C. Stubbs, W.J. Tyson and M.Q. Dalvi, *Transport Economics*, George Alien and Unwin, Boston, 1986. (Module - II)
3. G.J. Bell, D.A. Blackledge, P.J. Bowen, *The Economics and Planning of Transport*, Henemann, London, 1983. (Module 11,111,1V)
4. Kirth Parik, *India Development Report, 1997 and 2000* (Two reports), Oxford University Press, New Delhi.

### **SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT**

#### **ELECTIVE COURSE**

#### **COURSE CODE – AEE014**

#### **Module – I**

Nature and scope of Investment Management - Investment setting - risk and return -investment avenues - outline of Indian capital market – investment management - functions of investment management - managed portfolio – portfolio management in India.

#### **Module – II**

Portfolio analysis -- total risk and its components - risk in finance theory - source of risk - classification - diversification of risk - portfolio risk and return - security analysis - macro, industry and company analysis.

#### **Module – III**

Technical analysis: fundamental Vs technical analysis - tools - Dows theory - price, volume and other indicators of market - price indicators of individual stock - price volume analysis of individual stock.

#### **Module – IV**

Efficient market theory - concept of efficient security - Cootner's price value interaction model - Samuelson's continuous equilibrium model - random walk theory - efficient market hypothesis.

#### **Module – IV**

Risk and required rates of return on equities - ex-post and ex-ante rates of return on equities - standard deviation as a measure of risk - measurement of rate of return and risk for a portfolio - the capital asset pricing model - issues behind capital asset pricing model.

#### **REFERENCE**

1. Avandhani V,A., *Investment and Securities Market in India*, Himalaya Publishing House 1992.
2. Prassanna Chandra, *The investment Game How to Win* T.M.H. 1992.
3. Brigham E.F. and Gapinski L.C., *Financial Management llieory and Practice*, The Drydress Press, New York 1991.
4. Fischer D.E. and Jordhan R.J., *Security Analysis and Portfolio Management .*, Prentice Hall of India, 1992
5. Jack Clark Francis, *Investment Analysis and Management*, McGraw Hill Book Company, New York 1937
6. Donald E Fischer and Ronald J Jordan, *Security Analysis and Portfolio Management*, Prentice Hall of India, 1995
7. N.J. Yasaswy, *Equity Investment Strategy*, TMH 1986.

### **PROJECT FORMULATION AND EVALUATION**

#### **ELECTIVE COURSE**

#### **COURSE CODE – AEE015**

#### **Module - 1**

Project formulation and analysis - nature and scope - project analysis, an overview - capital expenditures - phases of capital budgeting - levels of decision making - facets of project analysis - key issues in project analysis - objectives of capital budgeting - resource allocation, criteria, tools, approaches and issues - generation and screening of project ideas - scouting for project ideas.

#### **Module - II**

Project analysis and evaluation - market and demand analysis - methods of demand forecasting - qualitative, time series, and casual methods - technical analysis materials and inputs - product mix - plant capacity - project charts and layouts – work schedule - financial analysis - project cost - sources of finance - estimates - cost of production - break-even point - cash flow statements - balance sheets.

#### **Module - III**

Measuring project cash flows - components - biases in cash flow C estimation - time value of money - cost of capital - basic concepts, premises and rationale - cost of capital in practice - appraisal criteria,

net present value, benefit cost ratio - internal rate of return - pay back period - accounting rate of return - assessment of various methods – risk analysis - types and measures of project risk - sensitivity analysis - Monte Carlo simulation - decision tree analysis - risk analysis and selection of a project.

#### **Module -IV**

Special decision situations - choice between mutually exclusive projects - determination of economic life- inflation and capital budgeting - firm risk and market risk - social cost benefit analysis - multiple projects and constraints - options and flexibility - qualitative factors.

#### **Module - V**

Project Management - network techniques of project management - PERT model and CPM model - network cost system - project review -performance evaluation.

#### **Reference**

1. Prasanna Chandra, *Projects, Planning, Analysis, Selection Implementation and Review*, Tata McGraw Hill Publishing Co., New Delhi 1995.
2. Ajith K. Dasgupta & D.W. Pearce, *Cost Benefit Analysis*, Macmillan ELBS London 1978.
3. Bussey L.E., *The Economic Analysis of Industrial Projects*, Prentice Hall, Englewood, 1978.
4. William J. Baumol, *Economic Theory and Operations Analysis*, Prentice Hall Englewood, 1978.
5. Brealey, R. & S. Myers, *Principles of Corporate Finance*, McGraw Hill, New York, 1991.
6. Prasanna Chandra, *Financial Management - Theory and Practice*, Tata McGraw Hill, New Delhi, 1993.
7. Charnes. A & W.W. Cooper, *Management Models and Industrial Applications of Linear Programming*, John Wiley & Sons, New York, 1961.
8. Gass, S.I. *Linear Programming: Methods and Applications*, McGraw Hill, New York, 1969.
9. Haley, C.W. and L.D. Schall, *The Theory of Financial Decisions*, McGraw Hill, New York.
10. Little I.M.D. and J.A. Mirrlees, *Project Appraisal and Planning for Developing Countries*, Hienemann Educational Books, London, 1974.
11. Lutz, F. & Lutz, *The Theory of Investment of the firm*, Princeton University Press, 1951.
12. Masse, P. *Optimal Investment Decisions : Rules of Action and Criteria for Choice*, Prentice Hall, Englewood, 1962.
13. Miller R.W., *Schedule Cost and Profit Control with PERT*, McGraw Hill, New York, 1963.
14. Mize J.H. & J.G. Cox, *Essentials of Simulation*, Prentice-Hall, England.
15. Moder, J.J. and C.R. Philips, *Project Management with CPM and PERT*, Reinhold Publishing Corporation, New York, 1964.

### **Journals :**

1. *Economic & Political Weekly, Bombay*
2. *Commerce*
3. *Financial Management, Winter and Summer*
4. *Business today*
5. *Journal of Finance*
6. *Indian Journal of Accounting*
7. *Chartered Accountant, Journal of CA's Association*

## **RESEARCH METHODOLOGY**

### **ELECTIVE COURSE**

**COURSE CODE – AEE016**

### **Module I**

Meaning of Research-Types of research-research methods and research methodology- The relation between theory and research – Scientific and Social Science research – Types of research (descriptive vs. analytical, fundamental vs. applied, qualitative vs. quantitative, conceptual vs. empirical, empirical vs. simulation based, conclusion oriented vs. decision-oriented, historical vs. a-historical) – research in Social science – Approaches in social research-process of research-statement of objectives-Selection and formulation of research problem-Research design-Criteria of good research and problems encountered by researchers in India.

### **Module II**

Approach to research problems - inductive and deductive methods- historical and dialectical methods. Scientific method-sampling design- error minimization-evaluation of time and cost-collection of information

### **Module III**

Methods of Data collection, sources of data- primary and secondary – Time series and cross section data – Sample survey – Methods - interview methods-questionnaire methods –case study method-Construction of questionnaire

### **Module IV**

Data Analysis- Estimation of mean, median and mode – Standard deviation and coefficient of variation – Presentation of charts – Line, sub divided, multiple, pie charts–Estimation of growth rates and trend equations – Estimation of single and multiple regression equations -Scaling: Problems and Techniques- Hypothesis and testing (Using EXCEL/SPSS for computation and estimation-Gretel)

## **Module V**

Research report writing- references and bibliography

### **References**

1. William J Goode & Paul K Hatt, Methods in Social Research, McGraw Hill Book Company, 1985.
2. Pauline V. Young, Scientific Social Surveys and Research, Printice Hall India, New Delhi, 1984.
3. C.R. Kothari, Research Methodology Methods and Techniques, Wiley Eastern Limited, New Delhi 2000.
4. William. M.K.Traochim, Research Methods, 2<sup>nd</sup> Edn., Biztantra, 2003.
5. Ellen.R.Griden, Evaluating Research Articles, SAGE, 2001.
6. Bridget Somekth & Cathy Liwin (Ed) Research Methods in Social Sciences, Vistar, 2005.
7. John Adams, Research Methods for Graduate Business & Social Science Students, Response, 2007

## **ECONOMICS OF ENVIRONMENT AND SOCIAL SECTOR**

### **ELECTIVE COURSE**

**COURSE CODE : AEE017**

#### **Module 1: Basic Environmental Issues**

Environment and Ecology-Linkages between Ecology-Environment and Economic system-Material Balance Approach-Environment Development Tradeoffs-Sustainable Development-Concepts and Indicators-Environmental Accountings-Environmental Problems- Environmental pollution:-Air and Water- Land use- Deforestation, Urbanization and their impact on Environment-Environmental Costs of Economic Growth.

#### **Module 2: Economics of Education**

Education and Economic growth-Education and Human Development-Components of Human Capital-Human capital Vs.Physical capital- The Demand for Education-Private Vs Social Demand- The Cost Benefit Analysis of Education- Private and Social Costs-The State and Social Expenditure on Education-Benefits of Education-Direct and Indirect Benefits- Private and Social benefits of education.

#### **Module 3: Economics of Health**

Health Economics-Nature and Scope-Health and Development-Determinant of Health- Health system organization models- Free market model- Social Insurance Model-Natural Health Service model- Socialist model-Current Issues in Health-Economic Dimensions of Health Care-Demand and Supply of Health Care-Health inequalities - Health financing -Health planning-Types, stages and challenges in planning.

## References

1. Fisher A C (1981): Resource and Developmental Economics, Cambridge University Press  
Cambridge Dorfman and Dorfman (1994) Environmental Economics 2nd Edition W W Norton
2. Tietenbery. T (1994): Environmental Economics and policy, Haper Collins, NEW York
3. Hanley.N J F Shogem and B White (1997): Environmental economics in theory and practice, Macmillan
4. Jeroon, C J M VamdenBersh (1997): Handbook of Environmental and Resource Economics, Edward Elgar publishing Ltd. U K
5. Dasguptha and Maler(ed) (1997): Environment and emerging developmental issues, Cambridge university press, Cambridge
6. Baumol. W.J.and W E Oats(1988): The theory of Environmental Policy(2<sup>nd</sup> edition),Cambridge University press, Cambridge
7. Kolstad. C D (1999) Environmental Economics, UP. New Delhi
8. Kelly.D. L (1997): On Kuznet's Curves Arising from Stock Externalities, Department of Economics Working paper, university of California, Santa Barbara Oct
9. Sankar. U (Edu) (2001): Environmental Economics OUP, New Delhi
10. Blaug. M (1972): Introduction to Economics of Education Penguin London
11. Cohen E and Gask (1989) Economics of Education, Pergamoun Press, London
12. MC Mohan (1999) Education and Development, Measuring the social Benefis.OUP, Oxford.
13. Tilak J b G (1994) Education for Development in Asia, Sage Publications, New Delhi.
14. Vaizey (1962) Economics of Education, Fabor and Fabor, London
15. Woodhall. M (1992) Cost Benefit Analysis in Education and planning, UNESCO, Paris
16. Schutz. T W. (1971): Investment in human capital. Free press New York
17. David R Phillips and YalaVerhasset (1994) Health and Development Routledge, London
18. Guy C Arrin (2008): Health System , Policy, and Finance and Organizations.

19. James. W. Henderson (2001) Health Economics and Policy, South Western Educational publishing.
20. Berman, P. M.E Khan(1993) Paying for India's Health Care, sage publications new Delhi.  
LIPS(2006) national family health survey 2005-06, Bombay
21. World Bank (1993) world Development Report: Investing in Health, OUP, New York.
22. Berman, P. (Ed.) (1995), Health Sector Reforms in Developing Countries :Making Health Development Sustainable, Boston: Harvard Series on Population and International Health.
23. Becker, G. S. (1974), Human Capital (2nd Edition), National Bureau of Economic Research, New York.
24. Baru, R. V. (1998), Private Health care in India : Social Characteristics and Trends, Sage Publications, New Delhi.
25. Panchamukhi, P. R. (1980), Economics of Health : A Trend Report in ICSSR, A Survey of Research in economics, Vol. VI, Infrastructure, Allied, Delhi.

## **ECONOMICS OF GENDER**

### **ELECTIVE COURSE**

#### **COURSE CODE: AEE018**

#### **Module-1**

Gender studies:-Concepts-Importance- Population distribution- Demography of female population- Causes of declining sex ratios and fertility rates in India- Gender gap in education- Gender conflict- Gender inequality- Gender justice in India.

#### **Module- 2**

Women empowerment:- women and their access to nutrition, health, education and community resources- women knowledge and awareness on legal rights- custom, law and violence against women in India. Factors affecting decision making by women: property rights, access to and control over economic resources, assets, power of decision making at household, class, community level, economic status of women and its effect in income level, health and education in developing countries. Child Trafficking- Globalization and its impact in Indian working women-Role of NGO's in empowering women-Gender and community economic development (CED)-self-employed women's association(SEWA) kudumbasree in Kerala.

#### **Module- 3**

Social security for women entitlements, economic independence and risk coverage, access to credit and insurance markets- impact of technological development and modernization on women's work participation, female activities and ecological and environmental, concerns- role of new technologies for helping women- Review of legislation for women's entitlements in India -Importance of 73rd



Amendment of constitution in gender empowerment-Protection of property rights- schemes for safety net for women – Effectiveness of collective bargaining-Public and Private programmes to improve women’s health-National Commission for Women(NCW)-The National Credit Fund for Women –Mahila Samridhi Yojana(MSY) –National policy for empowering women- International measures to protect womens’ rights-U.N Decade for women -UN convention on CEDAW and DEVAW.

#### References:

1. Amsden, A.H(ed) (1980): The economics of women and work, Penguin, Harmondsworth.
2. Borerup.E (1970): Women’s role in economic development, George Allen and Unwin, London.
3. Engels. F(1985): The origin of the family, private property and the state, progress publication, Moscow.
4. Kabeer. N (1994): Reversed Realities: Gender hierarchies in Development Thought, Kali for women, ND.
5. Krishnaraj.M, R.M.Sudarshan and A.Shariff (1999): Gender, population and development, OUP, ND.
6. Kuhn.A and A.N.Wolpe(eds) (1978): Feminism and materialism, Routledge and Kegan Paul, London.
7. Mies.M (1998): Patriarchy and accumulation on a world scale: women in the international division of labour, Zed books, London.
8. Mitra.A (1979): Implications of declining sex ratio in India’s population, Allied, ND.
9. Murthy, K.R (ed) (2001): Building women’s capacities.
10. Sen.h. and K.Brown (1987): Development, crises and alternative visions, monthly review press, NY.
11. Seth.M (2000): Women and development: The Indian Experience, Sage, ND.
12. Dr.D.K.Bansal (2006): Gender violence, Mahaveer and sons. New Delhi-110002.
13. Subhash Chandra Singh (2009): Gender justice, serials publications, New Delhi.
14. Kedilezo Kikhi, Narola Dangti Kikhi (2009): Changing Gender equations with special reference to Nagaland.

## ECONOMICS OF TOURISM

### ELECTIVE COURSE

#### COURSE CODE: AEE019

#### Unit-1

Economics of tourism- concepts- types of tourism- cost and benefits of tourism- impacts of tourism- sociological,economical and environmental, tourism industry- components, the multiplier effect- displacement effect globalisation- general equilibrium approach- tourism and international trade-BOP effects-exchange rate effects.

#### Unit-2

Demand and supply analysis- Tourism demand- theoretical background- factors determining tourism demand- elasticity of demand- measurement of tourism demand- national and international tourism demand- Tourism supply- components- elasticity of supply.

### Unit-3

Cost and price- concepts- cost analysis in tourism- return to factors- economies of scale- concept of break-even-point-Pricing in tourism- determinants of price- Pricing tourism products- Approaches to pricing- Public and private sectors in Tourism- Government's role in Tourism.

#### Reference books

1. ShashiPrabhaSharma(2004) 'Tourism Education: Principles, Theories and Practices'- Krishka Publications, New Delhi.
2. SipraMukhoPadhy(2008) 'Tourism Economics' Ane books.
3. Donald G Reid(2003) 'Tourism, Globalisation and Development, Responsible Tourism' Pluto books.
4. M.T.Sinclair& Mike Stabler(1997), 'Economics of tourism &Devpt', Routledge, New York.
5. Lundberg, Stavenca and Krishnamoorthy(1995). Tourism economics. John Wiley and sons.
6. Sharma K.K(2005) 'Tourism and Development' Saup and Sons, New Delhi.
7. A.K.Raian and NeeluJain(2004) 'Dynamics of Tourism- concepts, philosophy and strategies' Krishka Publications.
8. AbhilashMallya(2006) 'Wildlife Tourism and Conservations' Gnosis.
9. DwivediDN(2001) 'Managerial Economics',Vikas, New Delhi.
10. Maddala(2004), 'Micro economics', TMH, New Delhi.
11. SenAnindya(1999), 'Micro economics Theory and application' Oxford University Press.
12. R.K.Goswami(2007) 'Tourism and Environment' Cybertech Publication, New Delhi.
13. N.GregoryMankiw(2007) 'Principles of Micro economics' South-Western Cengage Learning USA.

### RESEARCH METHODOLOGY AND COMPUTER APPLICATION

#### ELECTIVE COURSE

#### COURSE CODE – AEE020

##### Module: 1

Meaning of Research-type of research- applied and fundamental-analytical and descriptive- qualitative and quantitative-conceptual and empirical-research methods and research methodology- Scientific and social science research- -approaches in social research- inductive and deductive methods- case research-interpretive research –characteristic and design-qualitative and content analysis-ethnography and phenomenology-interdisciplinary research- objectivity and ethics in social science research.

##### Module: 2

Selection and formulation of research problem- survey of literature-research design- meaning and contents- types of research design –exploratory and formulative, descriptive and diagnostic, evaluation and experimental, historical and survey design-Models- steps in the research process.

##### Module: 3

Methods of data collection-sources of data – primary and secondary –time series and cross section – sample survey- methods –interview methods –questionnaire method – Constructing of questionnaire /interview schedule-case study method- sampling methods-random, stratified,

multistage, systematic, cluster, quota, judgement, convenient, purposive samples- data analysis and techniques-drawing inferences from analysis-writing of report, references and bibliography.

#### **Module: 4**

Computer application – estimation of mean, median and mode – standard deviation and co-efficient of variation- presentation of charts-line, subdivided, multiple, pie charts- estimation of growth rates and trend equation- estimation of simple and multiple regression equation –using Excel/SPSS for computation and estimation-Gretel-R

Note: ***Module 4 has to be handled with practical orientation by ensuring computer accessibility for providing application knowledge and questions for the university examination will be of theoretical nature only without any practical's or lab based skill testing.***

#### **References:**

#### **Modules 1,2, &3**

1. Goode, W. J and P.F Hatt (1952): "Methods in Social Research", McGraw Hill Book Company, New York.
2. Kothari C. R (1990): "Research Methodology, Methods and Techniques", Wiley Eastern Ltd. New Delhi.
3. Wisonsky and Bhadarkar (1992): "Methodology and Techniques of Social Research", Himalaya Publishing House, Bombay
4. Young, Pauline (1988): "Scientific Social Surveys and Research", Prentice Hall India Pvt. Ltd , New Delhi
5. Estelle M. Phillips and D. S Pugh (1993): "How to get a Ph. D", UBS Publishers and Distributors Ltd., New Delhi.
6. One-On-One Interviews: A Qualitative Assessment Approach •  
[www.liberalarts.wabash.edu](http://www.liberalarts.wabash.edu)
7. Constantinos N. Phellas, Alice Bloch and Clive Seale, Structured Methods, interviews, Questionnaires and Observation, Chapter 11 [http://www.sagepub.in/upm-data/47370\\_Seale\\_Chapter\\_11.pdf](http://www.sagepub.in/upm-data/47370_Seale_Chapter_11.pdf).

#### **Module 4**

1. Sarma KVS (2001): "Statistics Made Simple – Do it yourself on PC" Prentice Hall India Pvt. Ltd , New Delhi.
2. Walkenbach, John (2005): "Favorite Excel Tips & Tricks", Wiley Publishing Inc.

**MODEL QUESTION PAPERS**

**FIRST SEMESTER M.A.DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE1C001- MICRO ECONOMIC THEORY I**

**Time: 3 Hours**

**Max. Marks: 60**

**PART A**

*Answer **all** questions.*

*Each question carries **1 mark**.*

1. Slack variable refers to.....
2. In Cobb Douglas production function elasticity of substitution is equal to.....
3. Walras law states that.....
4. Market signaling refers to .....
5. A group of firm that have joined together to make agreements on pricing and market strategy is called.....

**(5×1=5marks)**

**PART B**

*Answer **any five** questions.*

*Each question carries **2 marks**.*

*No answer should exceed one page*

6. Explain production possibility curve.
7. Explain the risk lover.
8. Explain 'stock adjustment principle'.
9. Explain the Hicksian approach to technical progress.
10. 'Economic Interpretation of dual' Explain.
11. Discuss the market for lemons.
12. Explain Stackelberg duopoly model.

**(5×2=10marks)**

### PART C

Answer **any five** questions.

Each question carries **5 marks**.

No answer should exceed two and a half pages

13. Explain how the N-M utility index is constructed?
14. Explain the properties of Cobb Douglas production function.
15. Explain Efficiency Wage Theory.
16. Explain the maximizing satisfaction from attributes.
17. Discuss the types of price leadership.
18. Explain household portfolio decision under uncertainty.
19. Solve the following linear programming problem by using graphical method.

$$\text{Maximize } Z=80X_1+120X_2$$

$$\begin{aligned} \text{S.T} \quad & X_1+X_2 \leq 9 \\ & X_1 \geq 2 \\ & X_2 \geq 3 \\ & 20X_1+50X_2 \leq 360 \\ & X_1, X_2 \geq 0 \end{aligned}$$

(5×5=25marks)

### PART D

Answer **any two** questions.

Each question carries **10 marks**.

No answer should exceed six pages.

20. Discuss the non collusive models of oligopoly.
21. Briefly examine the recent developments in the theory of market demand.
22. Discuss Linear Expenditure System.
23. Solve the following linear programming problem by using simplex method.

$$\text{Maximize } Z=3X_1+5X_2+4X_3$$

$$\begin{aligned} \text{S.T} \quad & 2X_1+3X_2 \leq 8 \\ & 2X_2+5X_3 \leq 10 \\ & 3X_1+2X_2+4X_3 \leq 15 \end{aligned}$$

$$X_1, X_2, X_3 \geq 0$$

(2×10=20marks)

**FIRST SEMESTER M.A. DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE1C002- MACROECONOMIC THEORY-I**

**Time: 3 Hours**

**Max. Marks: 60**

**PART A**

*Answer **all** questions.*

*Each question carries **1 mark**.*

1. The process of increase in demand for consumption goods leads to increase in investment on capital good is called .....
2. 'Money, interest and price' is written by.....
3. M3 definition of money is the sum of .....
4. If income increases according to Keynes, the APC .....
5. User cost of capital is.....

**(5×1=5 Marks)**

**PART B**

*Answer any **five** questions.*

*Each question carries **2 marks**.*

***No answer should exceed one page.***

6. What do you mean by classical dichotomy?
7. What is menu cost?
8. Differentiate between static and dynamic multiplier.
9. What do you mean by liquidity trap?
10. Explain marginal efficiency of capital.
11. Write a note on crowding out effect.
12. What do you mean by rational expectation?

**(5×2=10 Marks)**

**PART C**

*Answer any **five** questions.*

*Each question carries 5 marks.*

***No answer should exceed two and a half page.***

13. Even though money does not yield any return, why do people continue to hold it? Explain with the help of transaction theories of demand.
14. Explain accelerator theory of investment.
15. Discuss relative income hypothesis.
16. Distinguish between Keynes consumption function and Kuznets consumption function. How these two consumption function been reconciled?.
17. Discuss various measures of money supply in India.
18. Explain Baumol's inventory approach to demand for money.
19. Using simple Keynesian model, discuss the effect of following.
  - 1) Increase in government expenditure.
  - 2) Decrease in lumpsum taxes.

In this context compare the government expenditure multiplier and tax multiplier.

**(5x5=25 Marks)**

#### **PART D**

*Answer any two questions.*

*Each question carries 10 marks.*

***No answer should exceed six pages.***

20. Define consumption function. Discuss how do the permanent income and life cycle hypothesis resolve contradictory aspects of consumption behaviour.
21. Discuss effectiveness of monetary and fiscal policy in IS-LM framework with the help of appropriate diagrams
22. Explain how labour market attains equilibrium in both Keynesian and Neo-classical theory.
23. Critically examine Keynesian theory of demand for money. **(2x10=20 Marks)**

**FIRST SEMESTER M. A DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE1C003- QUANTITATIVE TECHNIQUES FOR ECONOMIC ANALYSIS**

Time: 3 Hours

Max. Marks: 60

**PART A**

Answer *all* questions

Each question carries **1 mark**.

1. The number of trials in a Poisson distribution is.....
2. An Idempotent Matrix means.....
3. Type II error explains.....
4. Test statistic applied in the case of large population is.....
5. Iso-quant of Input Output Analysis is.....shaped **( 5 x 1 = 5 Marks)**

**PART B**

Answer *any five* questions

**Each question carries 2 marks - No answer should exceed one page.**

6. Distinguish between Minors and Co-factors
7. Write a short note on Pareto distribution
8. What do you meant by Sample Space?
9. Explain Conditional Probability
10. Distinguish between Null and Alternative hypothesis
11. What do you mean by Rejection region

12. Given  $A + B = \begin{vmatrix} 2 & -1 \\ 3 & 0 \end{vmatrix}$  and  $A - B = \begin{vmatrix} 3 & 1 \\ 2 & 4 \end{vmatrix}$  find A, B **( 5 x 2 = 10 Marks)**

**PART C**

Answer *any five* questions

Each question carries **5 marks**, No answer should exceed two and half pages.



13. Explain the meaning and significance of the concept of standard error in sampling analysis

14. The probability that a batsman scores a century in a cricket match is  $\frac{1}{3}$ . What is the probability that in 4 innings he will score centuries in at least 3 innings

15. Find the Rank of A

$$A = \begin{vmatrix} 1 & -1 & 2 \\ 1 & 0 & 2 \\ 4 & 0 & 8 \end{vmatrix}$$

16. Give five examples which will conform to Poisson distribution

17. Briefly describe the major Parametric and Non parametric tests used in Economics

18. Following table gives the number of units produced by two workers A and B for a number of days. Test the variance by using F test at 5 % level of significance.

A	40	30	38	41	38	35		
B	39	38	41	33	32	49	49	34

19. An experiment was conducted to test the efficacy of Chloromycetin in checking Typhoid. Apply Chi-Square and test the effectiveness of Chloromycetin in checking Typhoid at 5% significance level

Typhoid/	Typhoid	No Typhoid
Chloromycetin	35	250
No Chloromycetin	15	57

( 5 x 5 =25 Marks)

#### PART D

Answer **any two** questions

Each question carries **10 marks**, No answer should exceed six pages.

20. Describe briefly the commonly used sampling distribution

21. Construct an ANOVA table and state your conclusion using the following data and also Check is there any significant difference in items A, B and C

A	B	C
14	14	18
16	13	16
18	15	16

22. Solve the Linear Equation by using Inverse of a Matrix

$$X_1 - X_2 = 3$$

$$X_2 + X_3 = 2$$

$$X_3 - X_1 = 1$$

23. Write an essay on Statistical Estimation

( 2 x 10 = 20 Marks)

**SECOND SEMESTER M.A.DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE2C005-MICRO ECONOMIC THEORY II**

**Time: 3 Hours**

**Max. Marks: 60**

**PART A**

*Answer all questions.*

*Each question carries 1 mark.*

1. Tattonment means.....
2. Zero sum game refers to.....
3. The concept of 'social optimum' was introduced in welfare economics by.....
4. Euler's theorem states that if each factor is paid according to the.....the total product will exhaust.
5. Sales revenue maximization model is developed by.....

**(5×1=5marks)**

**PART B**

*Answer any five questions.*

*Each question carries 2 marks.*

*No answer should exceed one page*

6. Examine the relevance of game theory in economic analysis.

7. What are the assumptions of  $2 \times 2 \times 2$  model?
8. Explain the methods of decision under risk.
9. Explain the concept of mark up pricing.
10. Prove Clark-Wicksteed-Walras product exhaustion theorem.
11. Explain the terms a) Point of constrained bliss b) Theory of second best
12. Find the saddle point and value of the game.

		Player B		
Player A		B1	B2	B3
A1	}	10	20	30
A2		15	25	10
A3		20	30	40

**(5×2=10marks)**

### PART C

*Answer any five questions.*

***Each question carries 5 marks. No answer should exceed two and a half pages***

13. Briefly explain Marris model of balanced growth.
14. Explain the basic approaches of decision making under uncertainty.
15. Briefly explain the limit pricing model of Bains.
16. Explain Ricardian theory of distribution.
17. Define welfare economics and explain Pareto conditions to maximize social welfare.
18. What are the basic assumptions of traditional theory of pricing?
19. Explain Kaldor-Hicks compensation criteria.

**(5×5=25marks)**

### PART D

*Answer any two questions.*

*Each question carries 10 marks.*

*No answer should exceed six pages.*

20. Give the features of Cobb-Douglas production function.
21. Critically evaluate managerial discretion theory.
22. Compare and contrast Kaldor and Pasinetti model of distribution.
23. Distinguish between partial and general equilibrium analysis. Discuss in detail Walrasian general equilibrium model.

**(2×10=20marks)**

**SECOND SEMESTER M. A DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE2C006 - MACRO ECONOMIC THEORY II**

Time: 3 Hours

Max. Marks:60

**PART A**

Answer all questions

Each question carries 1 mark

1. A monetary policy which central bank announces a specific target is called..... ..
2. Dual decision hypothesis is associated with .....
3. The law which states negative relationship between unemployment and real GDP IS .....
4. The idea of how expectation formed is called .....
5. 'Second thoughts on Keynesian economics' is a work done by -----  
(5×1=5)

**PART B**

Answer any five questions

**Each question carries 2 marks -No answer should exceed one page.**

6. State Marshall-Lerner condition.
7. What is Phillips curve?
8. Write a note on law of one price.
9. What do you mean by sterilization?
10. Write a note on crowding out effect.
11. Differentiate between depreciation and devaluation.
12. What is NAIRU?  
(5×2=10)

**PART C**

Answer any five questions

Each question carries 5 marks - No answer should exceed two and half page.

13. Explain dual decision hypothesis.

14. Compare the real business cycle theorist's view of the causes of fluctuations of output and employment with the view of new classical economists.
15. Discuss natural rate of unemployment hypothesis.
16. Explain how the labour market attains equilibrium in Neo-classical theory.
17. Explain various methods to correct balance of payment disequilibrium.
18. Briefly discuss macroeconomic character of Indian economy.
19. Explain monetary approach to balance of payment.

(5×5=25)

PART D

Answer any two questions

Each question carries 10 marks

No answer should exceed six pages.

20. Critically examine Walrasian general equilibrium analysis.
21. Explain Mundell-Fleming model of open economy.
22. Briefly discuss controversies in macroeconomics.
23. Analyse trends in inflation in India.

(2×10=20)

**SECOND SEMESTER M. A. DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE2C007- MATHEMATICAL ECONOMICS**

**Time : 3 Hours**

**Max. Marks: 60**

**PART A**

*Answer all questions*

*Each question carries 1 mark.*

1. Price effect of Giffen good is.....
2. Functional form of an indirect utility function is.....
3. MRTS is the ratio of.....

4. In a price discriminating monopoly prices are equal when demand elasticities are.....

5. Shape of an Iso-W curve is..... ( 5 x 1 = 5 Marks)

**PART B**

*Answer any five questions*

***Each question carries 2 marks - No answer should exceed one page.***

6. Distinguish between direct and indirect utility function

7. State the important properties of Indifference Curve

8. Write a note on VES Production function

9. Given the demand function  $Q = 100 - 2p - 2p^2$ . Calculate price elasticity of demand, when  $P=10$

10. Distinguish between short run and long run cost function

11. Explain Technological Neutrality

12. Distinguish between primal and dual LPP

**( 5 x 2 = 10 Marks)**

**PART C**

*Answer any five questions*

***Each question carries 5 marks***

*No answer should exceed two and half pages.*

13. Briefly describe Stackelberg solution

14. Explain the theory of price rigidity in oligopoly market

15. Write a short essay on Linear Expenditure System

16. Write about Expected Utility and Absolute risk aversion measure

17. Prove that elasticity substitution of CES production function is a constant

18. Distinguish between zero-sum and non zero-sum game with suitable examples

19. Briefly describe Hawkin-Simon condition and check the technological viability of A

$$A = \begin{pmatrix} 0.1 & 0.5 \\ 0.4 & 0.2 \end{pmatrix}$$

( 5 x 5 = 25 Marks)

#### PART D

*Answer any two questions*

*Each question carries 10 marks*

*No answer should exceed six pages.*

20. Derive Slutsky Equation

21. Determine the total output for the following input-output matrix, A and the final demand

vector, D

$$A = \begin{pmatrix} 0.5 & 0.1 & 0.1 \\ 0.2 & 0.6 & 0.2 \\ 0.1 & 0.2 & 0.6 \end{pmatrix} \quad D = \begin{pmatrix} 20 \\ 30 \\ 50 \end{pmatrix}$$

22. State the important features of Cobb-Douglas Production function

23. Solve the LPP graphically

$$\text{Min } Z = 2x + 3y$$

$$\text{Subject to } x + 3y \geq 90$$

$$5x + y \geq 100$$

$$3x + 2y \geq 120$$

$$x \geq 0, y \geq 0$$

( 2 x 10 = 20 Marks)

**SECOND SEMESTER M.A DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE2C008 - FINANCIAL INSTITUTIONS AND MARKETS**

Time: 3 Hours

Max. Marks: 60

**PART A**

Answer *all* Questions

Each Question carries **1 mark**.

1. The market regulator of Indian Capital Market is.....
2. The device adopted to make profit out of the differences in prices of a security in to different market is called.....
3. The small investors gateway to enter in to big company is called.....
4. Financial Institutions are also known as .....
5. The first bank in India to start factoring business is.....

**(5×1=5 Marks)**

**PART B**

Answer *any five* Questions

Each Question carries **2 marks** -No answer should exceed **one page**

6. Define Insider Trading.
7. Explain Finance Ratio.
8. What is mean by Price Rigging.
9. Differentiate between Call Option and Put Option.
10. Explain Venture Capital.
11. Define Money Market Mutual Funds.
12. Explain Securitization.

**(5×2=10 Marks)**

**PART C**

Answer *any five* Questions

Each Question carries **5 Marks**



No answer should exceed **two and half pages**.

13. Discuss the functions of financial system.
14. Examine developments of stock exchanges in India.
15. Explain equilibrium in Financial Markets.
16. Evaluate the performance of Insurance Companies in India.
17. What are the basic requirements of listing of securities?
18. Explain the role of venture capital in the Indian Financial System.
19. Explain the features of global financial instruments.

**(5×5=25 Marks)**

**PART D**

Answer **any two** Questions

Each Question carries **10 Marks**

No answer should exceed **six pages**

20. State the features of Money Market Instruments.
21. What are the basic problems of portfolio management?
22. Examine the performance of Derivative Markets in India.
23. Evaluate the performance of Non Banking financial Institutions (NBFIs) in India.

**(2×10=20 Marks)**

**THIRD SEMESTER M. A DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE3C009 - ECONOMETRICS**

**Time : 3 Hours**

**Max. Marks: 60**

**PART A**

Answer **all** questions

*Each question carries 1 mark.*

1. Degrees of freedom for a simple bivariate linear regression model is.....
2. ....theorem explains the theoretical justification for normality assumption.
3. ....is a test of significance for large samples.

4. Weighted least square method is used to solve.....problem.
5. Multi-collinearity is associated with.....models. ( 5 x 1 = 5 Marks)

**PART B**

*Answer any five questions*

***Each question carries 2 marks -No answer should exceed one page.***

Write Short notes on the following:

6. Restricted Least Square.
7. Student t test.
8. Interval Estimation.
9. Relationship between  $R^2$  and F ratio.
10. Park test.
11. Orthogonal Variable.
12. Types of Econometric data. ( 5 x 2 = 10 Marks)

**PART C**

*Answer any five questions*

***Each question carries 5 marks***

*No answer should exceed two and half pages.*

13. Explain the uses of dummy variable in Econometrics.
14. Distinguish between Mathematical and Econometric Model.
15. Explain the nature and consequences of Autocorrelation.
16. Explain the major assumptions of CLRM.
17. Write a short essay on Simultaneous Equation Methods.

18. Explain the types of Econometrics and various approaches to deal with Classical tradition.

19. Briefly describe the procedure for solving Multicollinearity.

( 5 x 5 =25 Marks)

**PART D**

*Answer any two questions*

***Each question carries 10 marks -No answer should exceed six pages.***

20. Prove that OLS estimates are BLUE.

21. Explain the Method of Maximum Likely Hood and find the estimates of a two Variable Model.

22. Discuss the method of estimating Simultaneous Equation Models.

23. Write an essay on Hetroscedasticity.

( 2 x 10 = 20 Marks)

**THIRD SEMESTER M.A.DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE3C010 - ENVIRONMENTAL ECONOMICS**

**Time: 3 Hours**

**Max. Marks: 60**

**PART A**

*Answer all questions.*

*Each question carries 1 mark.*

1. Product life extension is recommended as a measure of .....
2. The Stockholm conference on human environment was held in the year.....
3. The study of habitation of organisms and their habitats is known as.....
4. The cost of reducing the quantity of residuals being emitted into the environment is called.....
5. Entropy refers to.....

(5×1=5marks)

**PART B**

Answer *any five* questions.

Each question carries **2 marks**.

*No answer should exceed one page*

6. What is ozone depletion?
7. Explain the causes of deforestation.
8. Explain the components of sustainable development.
9. Explain tragedy of commons.
10. Explain resource taxonomy.
11. Explain the values of biodiversity.
12. Explain the linkage between economy and environment.

(5×2=10marks)

**PART C**

Answer *any five* questions.

Each question carries **5 marks**.

*No answer should exceed two and a half pages*

13. Why the environmental problem created as an economic problem?
14. Discuss environmental ethics.
15. Discuss the rules of sustainable development.
16. Discuss the methods for controlling pollution to the environment.
17. What do you meant by environmental degradation? Explain thermal pollution.
18. Discuss the relationship between environment and health.
19. Explain the importance of Environmental Planning and Management.

(5×5=25marks)

**PART D**

Answer *any two* questions.

Each question carries **10 marks**.

*No answer should exceed six pages.*

20. Discuss the application of Cost Benefit Analysis in environmental economics.
21. Discuss accounting for environment.
22. What are the basic tenets of Environmental Impact Assessment and explain the general EIA procedure followed in the assessment of development projects.
23. Discuss water conservation and watershed management.

**(2×10=20marks)**

**THIRD SEMESTER M.A. DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AEE001 - PUBLIC ECONOMICS**

**Time: 3 Hours**

**Max. Marks: 60**

**PART A**

*Answer all questions.*

***Each question carries 1 mark.***

1. The spillover cost is.....
2. The theory of club goods is introduced by.....
3. In Musgrave view, the incidence of tax depends on .....
4. The Net Primary Deficit is measured as.....
5. The Tax Reform Committee is also called as.....

**(5x1=5 Marks)**

**PART B**

*Answer any five questions.*

***Each question carries 2 marks.***

***No answer should exceed one page***

6. Define Federal Finance.
7. Explain Gadgil Formula.
8. State Optimal Taxation.
9. Give a note on congested public goods.
10. Explain Administered Price Mechanism.
11. Discuss the role of Special Interest Groups in revealing social preference.

12. Explain performance budgeting system.

(5x2=10 Marks)

**PART C**

*Answer any five questions.*

*Each question carries 5 marks.*

*No answer should exceed two and a half page.*

13. Discuss the market failure and allocative efficiency of public goods.
14. Examine the structure and growth of public expenditure in India.
15. Discuss the trends of disinvestment of public sector units in India.
16. Evaluate the functions of Planning and Finance Commissions.
17. Describe the Samuelson model of public good allocation.
18. Mention the basic principles of public debt management.
19. What are the emerging issues in local financial relations in India?

(5x5=25 Marks)

**PART D**

*Answer any two questions.*

*Each question carries 10 marks.*

*No answer should exceed six pages.*

20. Discuss the criteria for investment in public enterprises.
21. Explain the budgetary deficits in India and its measurement.
22. Examine the problems in intergovernmental financial transfers in India.
23. Describe the allocative and equity aspects of taxation.

(2x10=20 Marks)

**THIRD SEMESTER M.A. DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AEE002 - ECONOMICS OF GROWTH AND DEVELOPMENT**

Time: 3 Hours

Max. Marks: 60

**PART A**

**Answer all questions**

**Each question carries 1 mark**

1. Back wash and spread effects have been introduced by.....
2. The concept 'missing women' is associated with .....
3. Golden rule of capital was formulated by.....
4. 'The rise of south human progress in a diverse world' is a slogan of .....
5. 'Asian Drama' was written by..... (5x1=5)

**PART B**

**Answer any five questions**

**Each question carries 2 marks -No answer should exceed one page**

6. Define economic planning.
7. Explain vicious circle of poverty.
8. Write a note on entitlement and capability.
9. Distinguish between embodied and disembodied technology.
10. Write a note on multidimensional poverty index.
11. Explain ICOR.
12. Write a note on low level equilibrium trap. (5×2=10)

**PART C**

**Answer any five questions**

**Each question carries 5 marks -No answer should exceed two and half page**

13. State unbalanced growth strategy.
14. Explain the Physical Quality of life Index.
15. Discuss the women empowerment measures with special reference to Self Help Groups in Kerala.
16. Explain Kuznet's inverted U hypothesis.
17. Discuss Rostow's stages of economic growth.
18. How does Adam Smith explain the process economic development?
19. Discuss the foreign debt problem faced by the Developing countries. (5×5=25)

**PART D**

**Answer any two questions**

**Each question carries 10 marks-No answer should exceed six pages.**

20. Explain Fei-Ranis model and demonstrate how it is an improvement over Lewis model.
21. Discuss complementary role of agriculture and industry in economic development.
22. Discuss the role of human capital in the development process.
23. Analyse important strategies of Indian planning. (2×10=20)

**THIRD SEMESTER M.A.DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AEE003- POPULATION STUDIES**

**Time: 3 Hours**

**Max. Marks: 60**

**PART A**

Answer **all** questions.

Each question carries **1 mark**.

1. Cohort fertility rate refers to .....
2. According to 2011 census, Kerala's sex ratio is.....
3. The National Commission on Population was constituted on .....
4. The Government of India adopted a National Programme of Family Planning in the year.....
5. As per the 2011 census, the state with highest population is.....

**(5×1=5marks)**

### **PART B**

Answer **any five** questions.

Each question carries **2 marks**.

No answer should exceed one page

6. How fertility is measured?
7. Explain the concept of Demographic Transition.
8. Explain the measures of urban population.
9. What are the factors determining population growth?
10. Indicate the importance of census enumeration.
11. Distinguish between absolute and relative poverty.
12. Discuss the types of demography.

**(5×2=10marks)**

### **PART C**

Answer **any five** questions.

Each question carries **5 marks**. No answer should exceed two and a half pages

13. Explain the factors affecting urbanization.
14. Discuss the problem associated with ageing.
15. Explain the types and methods of measurement of migration.
16. Explain the Malthusian Theory of Population.
17. How environment affect the health and life expectancy of an individual?
18. Explain the measures of mortality rate.
19. Explain the uses of life table.

**(5×5=25marks)**

### **PART D**



Answer **any two** questions.

Each question carries **10 marks**. No answer should exceed six pages.

20. Explain the major objectives of National Population Policy 2000.
21. Explain the techniques used for measuring population projection.
22. Critically examine the Optimum Theory of Population.
23. Discuss population dynamics.

**(2×10=20marks)**

**FOURTH SEMESTER M.A.DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AE4C011 –INTERNATIONAL ECONOMICS**

Time: 3 Hours

Max. Marks: 60

**PART A**

**Answer all questions**

**Each question carries 1 mark**

1. Under flexible exchange rate system, the exchange rate is determined by .....
2. The availability theory of international trade was developed by..... .
3. The terms of trade indicate .....
4. The theory of customs union is formulated by .....
5. New protectionism in international trade stands for .....

**(5×1=5)**

**PART B**

**Answer any five questions**

**Each question carries 2 marks- No answer should exceed one page.**

6. What is optimum tariff?
7. What do you mean by Metzler paradox?
8. Write a note on trade creation and trade diversion.
9. Explain Leontief Paradox.
10. What do you mean by intra industry trade?
11. . Explain reciprocal demand theory.
12. What do you mean by Dutch disease?

**(5×2=10)**

**PART C**

**Answer any five questions**

**Each question carries 5 marks- No answer should exceed two and half page**

13. Explain immiserising growth.
14. What are the factors affecting terms of trade?
15. Critically examine absolute advantage theory of international trade.
16. Discuss India's foreign exchange policy.
17. Explain product cycle theory.
18. Briefly discuss Stolper-Samuelson theorem.
19. Explain elasticity approach to balance of payment. (5×5=25)

**PART D**

**Answer any two questions**

**Each question carries 10 marks- No answer should exceed six pages.**

20. Describe the effect of tariff under partial and general equilibrium.
21. Critically examine H-O theory.
22. How does trade function as an engine of growth? Explain based on past and present evidences of world nations.
23. Explain the theory of customs union.

(2×10=20)

FOURTH SEMESTER M.A.DEGREE EXAMINATION UNDER CCSS

APPLIED ECONOMICS

AE4C012 - OPERATIONS RESEARCH FOR ECONOMIC ANALYSIS

Time: 3 Hours

Max. Marks: 60

PART A

Answer *all* questions.

Each question carries **1 mark**.

1. Integer linear programming means.....
2. Goal programming refers to.....
3. Critical path is defined as.....
4. Assignment problem is a special case of.....
5. Quadratic programming is defined as.....

(5×1=5marks)

PART B

Answer *any five* questions.

Each question carries **2 marks**. No answer should exceed one page

6. Explain the essential ingredients of LPP.
7. Explain Monte Carlo simulation method.
8. State Kuhn-Tucker conditions.
9. Explain saddle point theorem.
10. What do you meant by time cost trade off?
11. Find the dual of the following primal

$$\text{Minimize } Z= 4X_1+2X_2+X_3$$

$$\text{Subject to } X_1+X_2\leq 7$$

$$3X_1+X_2+X_3\geq 30$$

$$6X_1-X_3=5$$

$$X_1, X_2, X_3\geq 0$$

12. Explain decision tree.

(5×2=10marks)

**PART C**

Answer **any five** questions.

Each question carries **5 marks**.

No answer should exceed two and a half pages

- 13. Discuss the methods for mixed strategy game problem.
- 14. Explain constraint maxima and minima.
- 15. Discuss the criteria of decision under risk.
- 16. Distinguish between PERT and CPM.
- 17. Solve the following LPP graphically

Maximize  $Z = 60X_1 + 40X_2$

Subject to  $2X_1 + X_2 \leq 60$

$X_1 \leq 25$

$X_2 \leq 35$

$X_1, X_2 \geq 0$

- 18. Find the initial feasible solution to the transportation problem by using North West Corner rule  
W1 W2 W3 W4 SS

14	9	18	6	11	F1
10	11	7	16	13	
25	20	11	34	19	F2
6	10	12	15		F3

DD

- 19. Solve the following assignment problem

I II III IV

32	26	35	38	A
27	24	26	32	B
28	22	25	34	C
10	10	16	16	D

(5×5=25marks)

**PART D**

Answer **any two** questions.

Each question carries **10 marks**.

No answer should exceed six pages.

20. Solve the following LPP by using simplex method

Maximize  $Z = 5X_1 + 3X_2$

Subject to  $X_1 + X_2 \leq 2$

$5X_1 + 2X_2 \leq 10$

$3X_1 + 8X_2 \leq 12$

$X_1, X_2 \geq 0$

21. Apply maximax, minimax, maximin, Laplace and Hurwicz  $\alpha$  criterion to the following problem

		Alternatives			
		A1	A2	A3	
State of nature		20	12	25	S1
		25	15	30	S2
		30	20	22	S3
$\alpha = 0.6$					

22. Solve the following transportation problem

W1 W2 W3 W4 SS

11	20	7	8	50	F1
21	16	10	12	40	F2
8	12	18	9	70	F3
30	25	35	40		DD

23. Estimate the critical path for the following network.

Activity	Time duration
1-2	2
1-3	7
2-4	8
3-5	5
4-5	3
4-6	5
5-6	3
6-7	1

**(2×10=20marks)**

**FOURTH SEMESTER M.A.DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AEE015- PROJECT FORMULATION AND EVALUATION**

**Time: 3 Hours**

**Max. Marks: 60**

**PART A**

*Answer **all** questions.*

*Each question carries **1 mark**.*

1. A qualitative method for demand forecasting is .....
2. Project Risk means.....
3. Critical path is defined as.....
4. Project Charts are used for.....
5. Project is accepted when Net Benefit Cost ratio is equal t..... **(5×1=5marks)**

**PART B**

*Answer **any five** questions.*

*Each question carries **2 marks**. No answer should exceed one page*

6. Explain project life.
7. Explain Product mix.
8. What is a work schedule?
9. Explain sensitivity analysis.
10. What do you meant by Break Even Point?
11. Explain decision tree.
12. Distinguish between Delphi method and executive opinion method **(5×2=10marks)**

**PART C**

*Answer **any five** questions.*

*Each question carries **5 marks**.*

*No answer should exceed two and a half pages*

13. Discuss the methods for demand forecasting
14. Explain the importance of balance sheets in financial analysis.
15. Discuss the steps in technical analysis
16. Distinguish between PERT and CPM.

17. Write a short essay on time value of money
18. Discuss the various methods of assessing risks
19. Explain the important portfolio planning tools used in recourse allocation **(5×5=25marks)**

**PART D**

*Answer **any two** questions. Each question carries **10 marks**.*

*No answer should exceed six pages.*

20. Explain the network techniques used in project management
21. Briefly describe the various project appraisal criteria
22. Write an essay on Social Cost Benefit Analysis with suitable examples.
23. Discuss the phases of Capital Budgeting. **(2×10=20marks)**

**FOURTH SEMESTER M. A. DEGREE EXAMINATION UNDER CCSS**

**APPLIED ECONOMICS**

**AEE020- RESEARCH METHODOLOGY AND COMPUTER APPLICATION**

Time:3 Hours

Max.Marks:60

**PART A**

*Answer **all** questions-Each question carries **1mark**.*

- 1.....design deals with the techniques by which the procedures specified in the sampling, statistical and observational designs can be carried out.
2. ....is the *n*th root of the product of the values of n times in a given series.
3. Full form of ANOCOVA is.....
4. The difference between the values of the extreme items of a series is known as.....
- 5The purpose of survey of literature is to fill the ..... **(5x1=5 Marks)**

**PART B**

*Answer **any five** questions.*

*Each question carries **2 marks**. No answer should exceed one page*

**Write Short notes on the following:**

6. Types of Research.



7. Questionnaire Method
8. Probability Sampling
9. Hypothesis
10. Steps in Research Process
11. ANOVA
12. Time Series Data

**(5x2=10 Marks )**

### **PART C**

*Answer **any five** questions*

*Each question carries **5 marks**.*

*No answer should exceed two and half pages.*

13. Prepare a note on Interdisciplinary Research
14. Pick out the differences between Analytical and Descriptive methods of Research.
15. Write a short essay on Research Design.
16. Explain the role of Survey of Literature in Research.
17. Bring out the differences between Inductive and Deductive Methods
18. How are computers used as a tool in research. Explain giving examples.
19. Explain the importance of Bibliography in the context of Research Report.

**(5x5=25 Marks)**

### **PART D**

*Answer **any two** questions*

*Each question carries **10 marks**- No answer should exceed six pages.*

20. Explain the Significance of a Research report and narrate the various steps involved in writing a Research Report.
21. Briefly discuss the significance of Social Science Research and point out the problems faced by Social Science Researchers.
22. "Research is much concerned with proper fact finding, analysis and evaluation". Do you agree with this statement? Give reasons in support of your answer.
23. Distinguish between;

(a) Convenience and Purposive Sampling;

(b) Systematic and Stratified Sampling;

(c) Quota and Cluster Sampling;

(d) Random and Non Random Sampling

**(2x10=20 Marks)**