

DEPARTMENT OF ECONOMICS

Vinoba Bhave University, Hazaribag



Four Year Under Graduate Programme (FYUGP)

As per provisions of NEP-2020

To be implemented from the Academic Year 2022-23

APPROVED BY BOARD OF STUDIES ON 11.09.2023

1. (Dr. Umendra Singh)

Dept. of Economics, VBU

2. (Dr. Ifsha Khurshid)

Dept. of Economics, VBU

3. (Dr. Mukesh Kumar)

Dept. of Economics, SCC

4. (Dr. Somak Biswas)

Dept. of Economics, SCC

5. (Krishna Pradhan)

Dept. of Economics, KBW

6. (Dr. Q.M. Qaiser)

Dept. of Economics, MCC

7. (Mercy A. Tirkey)

Dept. of Economics, MCC

EXTERNAL EXPERTS

1. (Dr. Sishir Choudhary)

H.O.D, Economics, SXC, Ranchi

2. (Dr. Pushpa Kumari)

H.O.D, Economics, BBM KU & Dean
Social Sciences, BBM KU

CHAIRMAN

(Dr. Prakash Chandra Deogharia)

H.O.D. University Dept. Economics, VBU &
Dean Social Sciences, VBU

CURRICULUM FOR FYUGP IN ECONOMICS, VINOBA BHAVE UNIVERSITY, HAZARIBAG

DEPARTMENT OF ECONOMICS

Vinoba Bhave University, Hazaribag

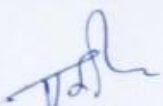


Four Year Under Graduate Programme (FYUGP)

As per provisions of NEP-2020

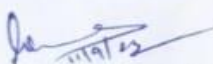
To be implemented from the Academic Year 2022-23


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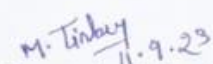

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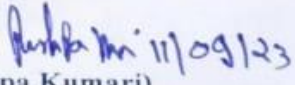

5. (Krishna Pradhan)
Dept. of Economics, KBW

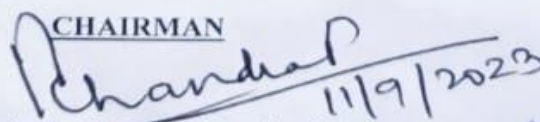

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Head
Department of Economics
Vinoba Bhave University
Hazaribag

AIMS OF BACHELOR'S DEGREE PROGRAMME IN ECONOMICS

The broad aims of bachelor's degree programme in Economics are to provide:

- i) To mould a responsible citizen who is aware of most basic domain-independent knowledge, including critical thinking and common
- ii) To provide broad and balanced knowledge in economics in addition to understanding of key (concepts, principles, and theories of Economics).
- iii) To provide knowledge and skill to the students' thus enabling them to undertake further studies in economics and related areas or multidisciplinary areas that can be helpful for self-employment/entrepreneurship.
- iv) To develop students' ability and skill to acquire expertise over solving both theoretical and applied economic problems.
- v) To provide the latest subject matter, both theoretical as well as empirical in such a way to foster their core competency and discovery learning. A graduate in economics as envisioned in this framework would be sufficiently competent in the field to undertake further discipline-specific studies, as well as to begin domain-related employment.
- vi) To enable the graduate, prepare for national as well as international competitive examinations, especially UGC-CSIR NET and UPSC Civil Services Examination

PROGRAMME LEARNING OUTCOME

The student graduating with the Degree B.A. (Honours/Research) in Economics should be able to:

- (i) **Core Competency:** Students will acquire core competency in the subject, and in allied subject areas.
- (ii) **Systematic and coherent understanding** of the fundamental concepts and all other related allied subjects of Economics
- (iii) Students will be able to use the evidence-based approach to explain the economic/socioeconomic problems.
- (iv) The students will be able to understand the characterization of materials.
- v) Students will be able to understand the basic principle of economics used for understanding the economic problems and may use them from planning. Students will be able to demonstrate the experimental techniques and methods of their area of specialization in Economics.

(vi) **Disciplinary Knowledge and Skill:** A graduate student are expected to be capable of demonstrating comprehensive knowledge and understanding of both theoretical and experimental/applied knowledge of economics in various fields of interest like budgeting and economic planning.

(vii) **Skilled communicator:** The course curriculum incorporates basic and advanced training in order to make a graduate student capable of expressing the subject through technical writing as well as through oral presentation.

(viii) **Critical Thinker and Problem Solver:** The course curriculum also includes components that can be helpful to graduate students to develop critical thinking ability by way of solving problems/numerical using basic knowledge of economics.

(ix) **Sense of Inquiry:** It is expected that the course curriculum will develop an inquisitive characteristic among the students through appropriate questions, planning and reporting experimental investigation.

(x) **Team player:** The course curriculum has been designed to provide opportunity to act as team player by contributing in field-based situation and industry.

(xi) **Skilled Project Manager:** The course curriculum has been designed in such a manner as to enabling a graduate student to become a skilled project manager by acquiring knowledge about economic analyst

(xii) **Digitally Literate:** The course curriculum has been so designed to impart a good working knowledge in understanding and carrying out data analysis, use of library search tools, and use of software and related computational work.

(xiii) **Ethical Awareness/Reasoning:** A graduate student requires to understand and develop ethical awareness/reasoning which the course curriculum adequately provide.

(xiv) **Lifelong learner:** The course curriculum is designed to inculcate a habit of learning continuously through use of advanced ICT technique and other available techniques/books/journals for personal academic growth as well as for increasing employability opportunity.

**TRANSFORMATIVE INITIATIVES FOR FOUR-YEAR UNDERGRADUATE
PROGRAMME UNDER NEP**

The curriculum framework of Four Year Under Graduate Programme (FYUGP) envisages several transformative initiatives in higher education in Jharkhand, in line with the revised UGC Guideline on the adoption of the Choice Based Credit System (CBCS) to implement NEP-2020. These include:

- a) Introducing holistic and multidisciplinary undergraduate education.
- b) Adoption of flexible curricular structures to enable creative combinations of disciplinary areas for study in multidisciplinary contexts
- c) **Undergraduate Degree Programmes** of either 3 or 4-year duration, with multiple entries and exit and re-entry options within this period, with appropriate certifications such as:
 - A Certificate after completing 1 year (2 semesters) of study in the chosen fields of study.
 - A Diploma after 2 years (4 semesters) of study,
 - A Bachelor after a 3-year (6 semesters) programme of study,
 - A Bachelor (with Hons:/Research) after a 4-year (8 semesters) programme of study
- d) Inclusion in the curricula of credit-based courses and projects in the areas of community engagement and service, environmental studies and value-based education.

Now an Undergraduate student will have to study:

- a) Major Paper (MJ) and
- b) Minor Paper (MN)
- c) Advance Major (AMJ)

CURRICULUM FOR FYUGP IN ECONOMICS, VINOBA BHAVE UNIVERSITY, HAZARIBAG

Multi disciplinary Course (MDC) and of Economics is to be studied by the students opting major subject other than Economics.

- a) Students opting Economics as major subject will have to select a subject other than Economics as Multi disciplinary Course (MDC) and

Marking Pattern of Each Paper:

- a) **In** Multi disciplinary Course (MDC) and **Major (MJ), Minor (MN) and Advanced Major (AMJ)** Total Marks in a paper will be 100 (Internal Examination 25+ End Semester Examination 75)

Marks: 25 (5 Attendance & others + 20 SIE: 1.5Hr) +75 (ESE: 3Hrs) = 100 Pass Marks: 40

Instructions to Question Setters

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Written Test (SIA) of 20 Mark (b) Class Attendance Score (CAS) including the behavior of the student towards teachers and other students of the College of 5 marks. End Semester Examination (ESE 75 marks):

In the End Semester Examination there will be three groups of questions.

Group A will contain very short answer type questions (Not MCQ) in which all are to be answered.

Group B (Question 2) will be short answer type, five questions of five marks each out of which any three questions to be answered.

Group C will contain descriptive type (Long answer type) five questions of fifteen marks each, out of which any three questions to be answered.

Note: There may be subdivisions in each question of group B.

DEPARTMENT OF ECONOMICS
VINOBA BHAVE UNIVERSITY HAZARIBAG
CURRICULUM FOR THE FOUR –YEAR UNDERGRADUATE PROGRAMME (FYUGP)
ECONOMICS
(Revised)

	Paper Code	Paper	Credit
SEM-I	<i>MN - 1A</i>	<i>Micro Economics</i>	4
	MJ - I	Micro Economics	4
SEM-II	<i>MN – 1B</i>	<i>Indian Economy and Development</i>	4
	MJ-2	Indian Economics and Policies	4
	MJ-3	Macro Economics	4
SEM –III	MJ-4	Environmental Economics	4
	MJ - 5	Theory of Statistics	4
SEM-IV	MJ- 6	Economics of Growth and Development	4
	MJ- 7	Mathematical Economics	4
	MJ- 8	Public Finance and International Trade	4
SEM-V	<i>MN-1C</i>	<i>Money Banking, Public Finance and International Trade</i>	4
	MJ - 9	Introduction to Econometrics	4
	MJ – 10	History of Economics Thought	4
	MJ - 11	Research Methodology	4
SEM-VI	MJ - 12	Agriculture Economics	4
	MJ – 13	Industrial Economics	4
	MJ - 14	Financial Institutions	4
	MJ - 15	Demography	4

CURRICULUM FOR FYUGP IN ECONOMICS, VINOBA BHAVE UNIVERSITY, HAZARIBAG

SEM- VII	MJ- 16	Advance Micro Economics	4
	MJ -17	Advance Macro Economics	4
	MJ -18	Development Economics	4
	MJ- 19	Economics of Gender	4

SEMESTER- VIII **MJ-20** **Economics of Social Sector**

AMJ-I	Advance Major
AMJ-II	
AMJ-III	

Advance Major (AMJ) – There will be three groups of Advanced Major (AMJ), (A, B &C)
Students will have to choose one of the following groups:

- GROUP - A** Mathematical Economics and Econometrics
- GROUP – B** Agriculture Economics
- GROUP – C** Industrial Economics and Financial Institutions

Group – A **Mathematical Economics & Econometrics**

AMJ- 1	Mathematical Economics– I	4
AMJ – II	Econometrics- I	4
AMJ – III	Econometrics- II	4

Group – B **Agriculture Economics**

AMJ- 1	Agriculture Economics– I	4
AMJ – II	Agriculture Economics - II	4
AMJ – III	Indian Agriculture	4

Group – C **Industrial Economics and Financial Institutions**

AMJ- 1	Industrial Economics– I	4
AMJ – II	Industrial Economics - II	4
AMJ – III	Financial institutions	4

Semester I
ECN MN-1 A (4 Credits)
MICRO ECONOMICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Introduction:

(5 Classes)

- 1.1: Subject Matter of Economics;
- 1.2 Central Economic Problems, Production Possibility Frontier.
- 1.3: Micro and Macro Economics;
- 1.4 Positive and Normative Economics.

Unit 2: Consumer Behavior and Demand

(10 Classes)

- 2.1: Cardinal Utility Analysis: Total and marginal Utility.
- 2.2: Law of Diminishing Marginal Utility; Law of Equi-Marginal Utility. Consumer's Equilibrium
- 2.3: Ordinal Utility Analysis: Indifference Curves; Budget Constraints: Equilibrium.
- 2.4: Consumer's Surplus: Marshall and Hicks.
- 2.5: Theory of Demand; Elasticity of Demand: Price, Income and Cross.

Unit 3: Theory of Cost and Production

(15 Classes)

- 3.1 Concepts of Costs and Production
- 3.2: Concept of Cost and their inter-relationship: Short Run and Long Run.
- 3.3 Concepts of Revenue and their inter-relationship; Break-Even Analysis.
- 3.4: Iso-quant Analysis; Iso-Cost Line; Producer's Equilibrium.
- 3.5: Law of Variable Proportions; Returns to Scale: Economies of Scale.

Unit 4: Market Structure

(15 Classes)

- 4.1: Forms of Market: perfect and Imperfect Markets: Salient Features.
- 4.2 Equilibrium of the Firm and Industry under Perfect Competition.
- 4.3: Monopoly, Price and Output Determination; Price Discrimination.
- 4.4: Monopolistic Competition: Price and Output Determination.

Unit 5: Factor Pricing

(15 Classes)

- 5.1: 5.1: Marginal Productivity Theory of Distribution
- 5.2: Theories of Wage determination: Demand and Supply Theory and Collective Bargaining.
- 5.3: Rent: Scarcity Rent; Differentiated Rent
- 5.4: Interest: Classical and Keynesian Theories.
- 5.5: Profit: Innovation and Risk Theories.

Basic Reading List

- Ahuja, H.L. *Advance Economic Theory*, S Chand Publication. (Hindi & English Addition)
- W. Stonier & Hague, D.C., *A Textbook of Economic Theory*, The English Language Book Society and Longman Group Limited.
- Jingan, M. L., *Micro Economic Theory*. (Hindi & English Addition)
- Koutsoyiannis, A. (1979), *Modern Microeconomic* (second edition) Macmillan Press, London.
- Stigler, G. (1996), *Theory of Price* (4th edition) Prentice Hall of India, New Delhi.
- Varian, H. (2000), *Intermediate Microeconomic Analysis*, W.W. Norton, New York.
- Case KE, Fair R C Osters, (2009)*Principles of Economics* (9th edition), Pearson
- Samuelson, P.A. (1947), *Foundations of Economic Analysis*, Harvard University Press, Cambridge, Mass.
- N Gregory Mankiw (2007) *Economics: Principles and Applications*, Learning India private limited.
- Joseph's Stiglitz and C. E Walsh (2007) *Economics*, W.W Norton and Co

Semester I
ECN: MJ – I (4 Credits)
MICRO ECONOMICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Consumer Behavior and Demand (10 Classes)

- 1.1: Cardinal and Ordinal Utility: Indifference Curves; Budget Constraints; Income Effect, Price Effect and Substitution Effect [Hicks and Slutsky]
- 1.2: Cardinal and Ordinal, Superiority of Indifference Curve Analysis, Mathematical Derivation of Consumer's Equilibrium (Lagrangian Method).
- 1.3: Derivation of Demand Curve from Indifference Curve; Factors Influencing Demand; Changes in Demand and Engles' Curve, Demand for Complementary and Substitute Goods.
- 1.4: Consumer's surplus and its Measurement, Marshall and Hicksian. Application of Consumer's Surplus: Water- Diamond Paradox.
- 1.5: Price Income and Cross Elasticity. Measurement of Elasticity of Demand, Elasticity of Substitution, Relationship between Price elasticity, Income Elasticity and Substitution Elasticity.

Unit 2: Theory of Cost and Production (10 Classes)

- 2.1: Short Run and Long Run Production Function. Isoquant Analysis; Production Decision and Expansion Path
- 2.2: Law of Variable Proportions: Returns to Scale, Economies of Scale.
- 2.3: Homogeneous Production Function, Cobb-Douglas Production Function and its Properties.
- 2.4: Concepts of Costs and their Inter-relationship: Short Run and Long Run Cost Curves,
- 2.5: Explanation of the U-Shape of the Long-Run Average Cost Curve and L-shaped Long-Run Average Cost Curve.

Unit 3: Market Structure (15 Classes)

- 3.1: Revenue and their inter-relationship. Determining Average and Marginal Revenue Curves from Total Revenue Curve. Relationship between AR, MR and Elasticity of Demand
- 3.2: Markets: Perfect and Imperfect Markets, Equilibrium of the Firm and Industry under Perfect Competition; Derivation of Supply Curve, Price determination Under Perfect Competition.
- 3.3: Monopoly: Price and Output Determination [Short Run and Long Run]; Price Discrimination;
- 3.4: Monopolistic Competition: Price and Output Determination (Individual and Group Equilibrium); Importance of Selling Costs.
- 3.5: Oligopoly: Kinked Demand Curve Theory.

Unit 4: Factor Pricing (15 Classes)

- 4.1: Theory of Distribution: Marginal Productivity Theory of Distribution; Adding-Up Problem [Euler's Theorem].
- 4.2: Wage Determination: Demand and Supply Theory; Collective Bargaining Theory.
- 4.3: Ricardian and Modern Theory of Rent.
- 4.4: Classical and Keynesian Theories of Interest.
- 4.5: Innovation, Risk and Uncertainty Theories of Profit

Unit 5: Welfare Economics

(10 Classes)

- 5.1: Welfare Economics: Individual and Social Welfare, , Role of Value Judgements in Welfare Economics.
- 5.2: Pareto Criterion of Social Welfare, Marginal Conditions of Pareto Optimum.
- 5.3: Classical Welfare Economics: Pigou.
- 5.4: Arrow's Possibility theorem.

BASIC READING LIST

- Ahuja, H.L. Advance Economic Theory, S Chand Publication. (Hindi & English Addition)
- * A. W. Stonier & Hague, D.C., A Textbook of Economic Theory, The English Language Book Society and Longman Group Limited.
- * Jingan, M. L., Micro Economic Theory. (Hindi & English Addition)
- Kreps, David M. (1990), A Course in Microeconomic Theory. Princeton University Press, Princeton.
- Koutsoyiannis, A. (1979), Modern Microeconomic (second edition) Macmillan Press, London.
- Layard, P.R.G. and A.W. Walters (1978), Micro economic Theory, McGraw Hill, New York.
- Sen, A. (1999), Microeconomics Theory and Applications Oxford Univesity Press, New Delhi.
- Stigler, G. (1996), Theory of Price (4th edition) Printice Hall of India, New Delhi.
- Varian, H. (2000), Microeconomic Analysis, W.W. Norton, New York.
- Case KE, Fair R C Osters, (2009) Principles of Economics (9th edition), Pearson
- Nicholas, B. (Ed.) (2001), Economic Theory and the Welfare State, Edward Elgar Publishing Ltd., U.K.
- Quirk, J. and R. Saposnik (1968), Introduction to General Equilibrium Theory and Welfare Economics, McGraw Hill, New York.
- Samuelson, P.A. (1947), Foundations of Economic Analysis, Harvard University Press, Cambridge, Mass.
- N Gregory Mankiw (2007) Economics: Principles and Applications, Learning India private limited.
- Joseph's Stiglitz and C. E Walsh (2007) Economics, W.W Norton and Co

Semester - II
ECN MN- I B (4 Credits)
Indian Economy and Development

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Structure of Indian Economy (15 Classes)

- 1.1: Basic Features of Indian Economy
- 1.2: Natural Resources: Land, Water and Forest Resources, Broad Demographic Features.
- 1.3: Objectives, Achievements and Failures of Planning in India; Analysis of Current Five year plan, NITI Aayog
- 1.4: New Economic Reforms: Liberalization, Privatization and Globalization; Their progress.

Unit 2: Important Areas of Concern (10 Classes)

- 2.1: Poverty and Inequality: 2.2: Problem of Unemployment:
- 2.3: Problem of Rising Prices:

Unit 3: Agriculture (15 Classes)

- 3.1: Nature, Importance and Trends of Indian Agriculture.
- 3.2: Land Reforms.
- 3.3: New Agricultural Strategy and Green Revolution.
- 3.4: Rural Credit, NABARD

Unit 4: Industry (10 Classes)

- 4.1: Industrial Development during the Planning Period.
- 4.2: Industrial Policies of 1948, 1956 1980 and 1991.
- 4.3: Large Scale Industries: Sugar, Iron and Steel, Jute and Cotton Textile Industries.
- 4.4: Small Scale Industries: Growth, Importance and Problems, MSME.

Unit 5: External Sector (10 Classes)

- 4.1: Role of Foreign Trade.
- 4.2: Trends of Export and Import in India.
- 4.3: Composition and Direction of India's Foreign trade.

BASIC READING LIST

- Ahluwalia, I. J. and M.D. Little (Eds.) (1999), Indian's Economic Reforms and Development (Essays in honour of Manmohan Singh), Oxford University Press, New Delhi.
- Bardhan, P.K. (9th Edition) (1999), The Political Economy of Development in India, Oxford University Press, New Delhi,
- Bawa, R.S. and P.S. Raikhy (Ed.) (1997), Structural Changes in India Economy, Guru Nanak Dev University Press, Amritsar.
- Brahmananda, PR and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy: Inter-State Perspectives, Bookwell, Delhi
- Chakravarty, S. (1987), Development Planning: The Indian Experience, Oxford University Press, New Delhi
- Dantwala, M.L. (1996), Dilemmas of Growth: The Indian Experience, Sage Publications, New Delhi.
- Dutt R. and Sundram: Indian Economy Mishra and Puri: Indian Economics
- Goyal, Ashima (2015) A Concise Handbook of Indian Economy in the 21" Century
- Uma Kapila, 2008) Indian Economy Since Independence (latest edition)
- Bhagwati, J (2012) Reforms and Economic Transformation in India
- Kaushik Basu and A Maertens eds (2013) The New Oxford Companion to economics, Oxford University Press
- Himanshu (2010) Towards New Poverty Lines for India, EPW, Jan 2010
- Jean Dreze and Amartya Sen (2013) An Uncertain Glory: India and its Contradictions, Princeton University Press.
- Pulpare Bal krishnan (2010) Economic growth in India: History and Prospects, Oxford Press.

Semester II
ECN: MJ – II (4Credits)
Indian Economy & Policies

Full Marks-100 (25+75)

In the End Semester Examination[Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Structure of Indian Economy (10 Classes)

- 1.1: Basic Features of Indian Economy
- 1.2: Natural Resources: Land, Water and Forest Resources.
- 1.3: Broad Demographic Features: Population Size, Structure [Sex and Age]; Characteristics; Change in Population; Problem of Over-Population; Population Policy.

Unit 2: Problems and Planning in India (15 Classes)

- 2.1: Poverty and Inequality; Rural & Urban Poverty, Poverty Line
- 2.2: Problem of Unemployment; Rural Unemployment & MGNREGS
- 2.3: Problem of Rising Prices;
- 2.4: Objectives, Strategy, Achievements and Failures of Planning in India; Analysis of Current plan, NITI Aayog
- 2.5: New Economic Reforms: Liberalization, Privatization, Globalization and its progress.

Unit 3: Agriculture and Industry (15 Classes)

- 3.1: Nature and Importance of Agriculture: Factors Affecting Production and Productivity and Agricultural Marketing
- 3.2: Land Reforms, Green Revolution, Agriculture Reform after 1991
- 3.3: Rural Credit and Micro Finance and Role of SHGs
- 3.4: Industrial Policies of 1956 and 1991, Large Scale Industries: (Sugar, Iron and Steel, Jute and Cotton Textile Industries.)
- 3.5: Cottage and Small-Scale Industries: Growth, Importance and Problems of Cottage Industries, MSME

Unit 4: External Sector (10 Classes)

- 4.1: FDI and Role of Foreign Trade in India.
- 4.2: Trade Policy of Government of India, Foreign Trade Policy (2009-2023)
- 4.3: Foreign Capital and Aid.
- 4.4: India's Exchange Rate Policy, Foreign Exchange Account Convertibility.
- 4.5: Multinational Corporations(MNCs), FERA and FEMA

UNIT 5: Economy of Jharkhand

(10 Classes)

5.1: Characteristics of Jharkhand Economy.

5.2: Agriculture Sector in Jharkhand, Growth, Importance & Role of Horticulture, Fishery in Jharkhand

5.3: Major Minerals in Jharkhand (Coal, Iron, Bauxite, Mica)

5.4: Large Scale Industries in Jharkhand (TISCO, BSL, HINDALCO & HCE).

5.5: Cottage Industries in Jharkhand, JHARCRAFT, KVIC & KVI

BASIC READING LIST

- Jean Dreze and Amartya Sen, Jean Dreze and Amartya Sen, 2013. *An Uncertain Glory: India and its Contradictions*, Princeton University Press.
- S.K. Mishra and V.K. Puri : Indian Economy (Hindi and English Edition)
- Datt & Sundharam: Indian Economy (Hindi & English Edition)
- Pulapre Balakrishnan, 2007, The Recovery of India: Economic Growth in the Nehru Era, *Economic and Political Weekly*, November.
- Pulapre Balakrishnan, 2010, *Economic Growth in India: History and Prospects*, Oxford University Press.
- Uma Kapila, editor, *Indian Economy Since Independence*, 19th edition, Academic Foundation.
- Chakravarty, S. (1987) *Development planning: The Indian Experience*, Oxford University Press
- Jharkhand Economy (Hindi) Bidyanand Choudhary Rudra Publication
- Introduction to Jharkhand Economy J.P. Mishra

Semester II
ECN: MJ-III (4 Credits)
MACRO ECONOMICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: National Income and Social Accounting (10 Classes)

- 1.1: Meaning of National Income, Concept of Circular Flow of Economic Activities- Output and Employment Relation.
- 1.2: Concept and Measurement of National Income, Difficulties in the Measurement of National Income, Concept of Social Accounting.
- 1.3: Nominal GNP and Real GNP- the Concept of Green GDP Limitations of GNP as a measure of Social Welfare.
- 1.4: Environmental Concerns in National Income; Green Accounting.

Unit 2: Theory of Output and Employment (15 Classes)

- 2.1: Say's Law of Market and Classical Theory of Employment, Critical Analysis and Keynes' Objections.
- 2.2: Consumption Function Factors Affecting Consumption Function. And Saving Function. APC; MPC; APS; MPS and Multiplier.
- 2.3: Investment Function: Autonomous and Induced Investment; MEC and Rate of Interest. Theory of Acceleration
- 2.4: Principle of Effective Demand: Equality and Equilibrium of AD/AS and S/I; Paradox of Thrift.

Unit 3: Trade Cycle (15 Classes)

- 3.1: Nature, Phases of Trade Cycle Characteristics of Trade Cycle.
- 3.2: Hawtrey's Monetary Theory of Trade Cycle.
- 3.3: Hayek's Over-Investment Theory of Trade Cycle.
- 3.4: Keynesian Theory of Trade Cycle.

Unit 4: Money in a Modern Economy (10 Classes)

- 3.1: Money: Meaning and Function: Role of Money in Capitalist, Socialistic and Mixed Economy.
- 5.2: Money Supply and Concept of Money in a Modern Economy; Demand for Money: Keynesian Demand for Money and Liquidity Trap.
- 5.3: Quantity Theory of Money: Transactions Approach and Cash Balance Approach,
- 5.4: Keynesian Theory of Money and Prices.

Unit 5: Inflation

(10 Classes)

- 4.1: Definition, Types, Causes and Effects of Inflation, Remedies
- 4.2: Measures to Control Inflation, Monetary and Fiscal Policy.
- 4.3: Concept of Inflationary Gap, Convergent and Divergent Inflationary Gap
- 4.4: Theories of Inflation, Demand Pull, Cost Push and Mixed Inflation.

Basic Readings:

- H.L.Ahuja Macroeconomic Theory (Hindi& English Edition)
- M.L. Jhingan Macroeconomic Theory (Hindi& English Edition)
- Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
- N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
- Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009. 4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
- Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
- Errol D'Souza, *Macroeconomics*, Pearson Education, 2009.
- Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

Semester- III
ECN: MJ-4 (4 Credits)
ENVIRONMENTAL ECONOMICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Environmental Issues (10 Classes)

- 1.1 Economic Development and Environment- Inter-relationship between Economic Development and Environment.
- 1.2: Elementary Ecology, Entropy Law.
- 1.3: Environment- Linkage: Environment as necessary and luxury. Population environment
- 1.4 Environmental use and Environmental Disruption as allocation problem linkage.

Unit 2: Basic Concepts (15 Classes)

- 2.1: Basic Concepts: Elements of Capital Theory;
- 2.2 Concept of Externalities, Types and Measures to control Negative Environmental Externalities.
- 2.3 Environment as Public Goods; Renewable and Non-renewable resources; Common Property Resources.
- 2.4: Valuation of Devourment Damages, Land, Water, Air and Forest, Social Cost-Benefit Analysis.

Unit 3 Environmental Management (15 Classes)

- 3.1 Environmental Management- Concept. Types and Methods of Environmental Management; Environmental management and people's participation (PPP).
- 3.2 Environmental Degradation-Land Forest and natural resource degradation.
- 3.3 Problems of Pollution- Air Pollution and Water Pollution; National Environmental Policy.
- 3.4 Social Forestry- Rationale and Benefits, Joint Forest Management (JFM)

Unit 4: Environmental Pollution (10 Classes)

- 4.1: Pollution from Energy Use: Effects on Health, Land, Water and Air.
- 4.2: Pollution prevention, control and Abatement.
- 4.3: Pollution Control System and Policy in India.
- 4.4 Choice of Policy instruments for pollution control in developing countries.

Unit 5: Environment and Sustainable Development (10 Classes)

5.1: Environmental and Development trade off and the concept of Sustainable Development.

5.2 Sustainable Development Concept, Characteristics and Sustainable Development Goals(SDGs).

5.3 Environmental and Natural Resource Problems, Mechanism for Environmental Regulation.

Basic Readings:

- Chenery H. and TN. Srinivasan (Eds.) (1989), Hand Book of Development Economics, Vol. 1 & 2 Elsevier, Amsterdam.
- Baumol, WJ. and W.E. Oates (1988), The Theory of Environmental Policy, (2nd Edition), Cambridge University Press, Cambridge.
- Bramely, D.W. (Ed.) (1995), Handbook of Environmental Economics, Blackwell, London. Fisher, A.C. (1981), Resource and Environmental Economics, Cambridge University Press, - Cambridge.
- Hanley, N., J.F. Shogern and B. White (1997), Environmental Economics in Theory and Practice, Macmillan.
- Hussen, A.M. (1999), Principles of Environmental Economics, Routledge, London..
- Sinha U.P (2007), Economics of social sector and development, Concept Publishing company, New Delhi.
- United Nations-Human Development Report (various issues)
- Blaug. M (1972)-Introduction to Economics of Education (Penguin)
- Cohen, E and T. Gaske (1989) - Economics of Education. Pergamon Press, London
- Schultz, T. W(1971) - Investment in Human Capital, Free Press, New York.
- Tilak, J.B.G. (1994) - Education for Development in Asia, Sage Publications, New Delhi.
- World Bank (1993) - The World Development Report, 1993: Investing in Health, Oxford University Press, New York.
- Bhattacharya, R.N. (2001), "Environmental Economics An Indian Perspective', Oxford University Press, Delhi.
- Singh, K. and A. Shishodia, (2007), "Environmental Economics: Theory and Applications", Sage Publications, New Delhi
- Charles Kolstad (2010) Intermediate Environmental Economics, Oxford University Press.
- Robert N. Stavins (ed) (2005) Economics of Environment: Selected Readings

- Robert, Yue Ma, James McGilvray and Micle C (2003) Natural Resource and Environment Economics, Pearson Education.

Semester- III
ECN: MJ-5 (4 Credits)
THEORY OF STATISTICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Introduction to Statistics, Central Tendency & Dispersion (10 Classes)

- 1.1: Basic concepts: Population, Sample, Parameter, Frequency Distribution, Cumulative frequency
- 1.2: Techniques of Data Collection: Sampling vs Population, Primary and Secondary Data, Graphic and Diagrammatic Representation of Data,
- 1.3: Measures of Central Tendency: Mean, Median, Mode, Geometric mean and Harmonic mean
- 1.4: Measures of Dispersion: Range, Mean Deviation, Standard deviation, Coefficient of Variation, Quartile deviation, Skewness and Kurtosis.

Unit 2: Correlation and Regression (10 Classes)

- 2.1: Correlation: Coefficient of correlation -Kart Pearson and Rank Correlation, Partial and Multiple correlation Analysis.
- 2.2: Regression Analysis-Estimation of regression line in a bivariate distribution-Least squares Method, interpretation of regression coefficients.

Unit 3: Time Series and Index Numbers (10 Classes)

- 3.1: Time Series Analysis-Concept and components-Determination of regular, trend and seasonal Indices.
- 3.2: Index Numbers-Concept, price relative, quantity relative, value: relative; Laspeyer's, Paasche's and Fisher, Family budget method, Cost of Living Index Number.
- 3.3: Problems in the construction and limitations of index numbers, Tests for ideal index number.

Unit 4: Sampling Methods (15 Classes)

- 4.1: Random Sampling.
- 4.2: Sampling Distribution of the Mean & Variance.
- 4.3: Statistical Inference: Unbiasedness, Consistency and Efficiency of Estimator.
- 4.4: Testing of Hypothesis: Alternative Hypothesis and Null Hypothesis

Unit 5: Probability and Distribution

(15 Classes)

5.1: Probability: Concept, Rules of probability (Addition and Multiplication).

5.2: Random variables, Mathematical expectations.

5.3: Theoretical Distribution-Binomial, Poisson and Normal their properties and uses.

5.4: Chi-Square Test.

BASIC READING LIST

- Spiegel, M.R. (1992). Theory and problems of Statistics, McGraw Hill Co. Ltd, New York
- Chou, Y. (1975), Statistical Analysis, Holt, Reinhart and Winston, New York.
- Croxtion, Crowden and Klein (1971), Applied General Statistics, Prentice Hall of India, New Delhi
- Millar, I. (1996), Statistics for Advanced Level, Cambridge University Press, Cambridge.
- Nagar, A.L. and R.K. Das (1993) Basic Statistics, Oxford University Press, New Delh
- S. P. Gupta: Statistics
- S. C. Gupta: Fundamental of Statistics, Himalaya Publishing house
- D. N. Elhance: Fundamental of Statistics
- Spiegel M.R (2015) Theory of Statistics
- W.G. Cochran (2007) Sampling Techniques, J Willey
- Goon Am, Gupta M K and Dasgupta B (2002) Fundamental of Statistics, (Vol 18 111 World press
- Jay L Devore (2010) Probability and statistics for Engineer, CLearning
- John E Freund (1992) Mathematical Statistics, Prentice Hall
- Mood, AM, Gray Bill F.A & Bose DC (2007): Introduction to the theory of statistics, TaTa McGraw Hill.

Semester-IV

ECN: MJ-6 (Credit-4)

ECONOMICS OF GROWTH AND DEVELOPMENT

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Issues in Growth, Development and Sustainability (10 Classes)

- 1.1: Factors in Development; Capital formation (Physical and Human); technology; institutions.
- 1.2: Population and Economic Development Demographic trends; Urbanization.
- 1.3: Theory of Demographic Transition.
- 1.4: Employment; Occupational structure in the Organized and the Unorganized Sectors; Rural, Urban and disguised unemployment: Employment schemes and their impact.

Unit 2: Introduction to Economic Growth and Development (15 Classes)

- 1.1: Economic Growth and Development: Concepts and Contrasts.
- 1.2: Factors Affecting Economic Growth.
- 1.3: Development and Under-Development; Obstacles to Under-Development.
- 1.4: Concept of Poverty Line, Measurement of Poverty and Reduction in Poverty.

Unit 3: Indian Development Experience (15Classes)

- 3.1: Critical evaluation of growth.
- 3.2: Inequality, Poverty and Competitiveness, Pre and Post Reforms Era.
- 3.3: Performance of Economy Since 1991, Savings and Investment; Mobilisation of Internal and External Finance; Monetary and Fiscal Policies
- 3.4: Centre-State Financial Relations.

Unit 4: Macro Economic Policy and Economic Development (5Classes)

- 4.1: Role of Monetary and Fiscal Policies in Developing Countries including India.
- 4.2: External Resources: FDI, AID vs. Trade; Technology Inflow/MNC activity in India.

Unit 5: Theories of Growth and Development (15 Classes)

- 5.1: Classical Theories of Development: Adam Smith and David Ricardo.

5.2: Harrod-Damar Growth Model.

5.3: Schumpeter and Capitalistic Development.

5.4: Lewis Model, and Solow Model of Long Run Growth.

5.5: Rostow's Model of Growth.

Basic Readings:

- Debraj Ray, *Development Economics*, Oxford University Press, 2009
- Partha Dasgupta, *Economics, A Very Short Introduction*, Oxford University Press, 2007 .
- Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, *Understanding Povert* OxforUniversity Press, 2006.
- Thomas Schelling, *Micromotives and Macrobbehavior*, W. W. Norton, 1978.
- Albert O. Hirschman, *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States*, Harvard University Press, 1970.
- Raghuram Rajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, 2010. Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press, 1990.
- Dani Rodrik, *The Globalization Paradox: Why Global Markets, States and Democracy Can't Coexist*, Oxford University Press, 2011.
- Michael D. Bordo, Alan M. Taylor and Jeffrey G. Williamson (ed.), *Globalization in Historical Perspective*, University of Chicago Press, 2003.

Semester – IV
ECN-MJ-7(4 Credits)
MATHEMATICAL METHODS FOR ECONOMICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Basic Concepts

(15 Classes)

- 1.1: Set Theory: Concepts and set operations.
- 1.2: Variables and Functions; Equations and Systems of Equations;
- 1.3: Elements of Coordinate Geometry: Equation of Straight Line & Circle
- 1.4: Function and its Types, (Implicit & Explicit) Homogeneous Functions.

Unit 2: Functions Their Diagrammatic Representation

(10 Classes)

- 2.1: Limit and Continuity of a Function,
- 2.2: Function and Diagrams in Economic Theory.
- 2.3: Exponential & Logarithmic Function.
- 2.4: Function of Two or More Variables, Diagrammatic representation of Function.

Unit 3: Derivatives

(15 Classes)

- 3.1: Techniques of Differentiation, Higher Order Derivatives.
- 3.2: Partial Derivative, Applications of Derivatives and partial Derivative
- 3.3: Maxima and Minima; Its applications in Economics.
- 3.4: Pricing under Monopoly and Perfect Competition.

Unit 4: Integration

(10 Classes)

- 4.1: Integration of a Function: Definite & Indefinite.
- 4.2: Indefinite Integration and Inverse Differentiation.
- 4.3: Techniques of Integration.
- 4.4: Economic Application of Integrals: Obtaining Total Function from Marginal Function.

Unit 5: Matrix and Determinants

(10 Classes)

- 5.1: Various Types of Matrices, Matrix Operations.

5.2: Inverse of a Matrix.

5.3: Determinants and its properties.

5.4: Solution of equations by Cramer's Rule.

Basic Reading List

- Allen, R.G.D. (1974) Mathematical analysis for Economics, Macmillan press & ELBS London.
(Chapters:2,3,4,5,6,7,8,9,10,11,12,13,14,15,18)
- Chiang,A.C.(1986) Fundamental Methods of Mathematical Economics, McGrawHillCo.Ltd.,New York.
- HandryA.T.(1999) Operations Research, Prentice Hall of India, New Delhi.
- Taha, H.A.(1997) Operations Research: An Introduction (6thEdition) Prentice Hall of India (p) Ltd., New Delhi.
- Yamane, Taro (1975) Mathematics for Economics Prentice Hall of India, New Delhi
- A.C Chiang & K Wainwright (2013) Fundamental Method of Mathematical Economics, Mc Graw Hill
- E.T. Dowling (2001) Introduction to Mathemeatical economics, Mc Graw Hill
- K Sydsacter& P J Hammond (2015) Mathematics for economic Analysis, Pearson.

Semester IV

ECN: MJ-8 (4 Credit)

PUBLIC FINANCE AND INTERNATIONAL TRADE

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Nature and Scope of Public Finance

(5 Classes)

- 1.1: Meaning and Scope of Public Finance, Distinction between Private and Public Finance.
- 1.2: Principle of Maximum Social Advantage.

Unit 2: Public Expenditure & Public Revenue

(15 Classes)

- 2.1: Meaning, Classification and Scope of Principle of Public Expenditure, Effects of Public Expenditure on production and distribution.
- 2.2: Sources of Public Revenue, Taxation: Direct and Indirect Taxes, Progressive, Proportional and Regressive Taxes.
- 2.3: Principles of Taxation: Benefit and Ability to Pay Approaches.
- 2.4: Impact and Incidence of Taxes, Taxable Capacity.

Unit 3: Public Debt and Financial Administration

(10 Classes)

- 3.1: Public Debt: Meaning, Types, Sources and Need, Effects and Burden of Public Debt, Methods of Debt Redemption.
- 3.2: Public Budget: Concept of Good Budget, Types of Good Budget, Zero Based Budgeting
- 3.3: Economic and Functional Classification of Budget, Preparation of Budget in India
- 3.4: Deficit Financing, Meaning, Effect and Role

Unit 4: Scope of International Economics

(15 Classes)

- 4.1: International Economics: Definition, Nature and Importance, Gains from Trade: Measurement and Distribution.
- 4.2: Comparative Cost Advantage [Ricardian] and Heckcher-Ohlin Theory of International Trade.
- 4.3: Free Trade vs. Protection, Methods of Trade Restriction: Tariff and Quotas - Their Impact.
- 4.4: Exchange Rate Determination: Demand and Supply Theory; Purchasing Power Parity Theory.

Unit 5: Balance of Trade and Balance of Payment

(15 Classes)

CURRICULUM FOR FYUGP IN ECONOMICS, VINOBA BHAVE UNIVERSITY, HAZARIBAG

- 5.1: Concepts and Components of Balance of Trade and Balance of Payment.
- 5.2: Equilibrium and Disequilibrium in Balance of Payment; Consequences of Disequilibrium in Balance of Payment; Measures to Correct Deficit in Balance of Payment.
- 5.3: Balance of Payment Crisis; Need and Importance of Foreign Capital
- 5.4: Functions of IMF; World Bank; WTO with reference to India.
- 5.5: Asian Development Bank (ADB), and SAARC

Basic Readings:

- Musgrave and Musgrave; *Public Finance in Theory and Practice*, McGraw Hill, Tokyo.
- Dalton: *Public Finance*
- Tyagi: *Public Finance*
- Bhatia, H.L: *Public Finance*
- J. Hindriks, G. Myles: *Intermediate Public Economics*, MIT Press, 2006. 2. H. Rosen, T. Gayer: *Public Finance*, 9 ed., McGraw-Hill/Irwin, 2009.
- Joseph E. Stiglitz, *Economics of the Public Sector*, W.W. Norton & Company, 3rd edition, 2000.
- R.A. Musgrave and P.B. Musgrave, *Public Finance in Theory & Practice*, McGraw Hill Publications, 5th edition, 1989.
- John Cullis and Philip Jones, *Public Finance and Public Choice*, Oxford
- Harvey Rosen, *Public Finance*, McGraw Hill Publications, 7th edition, 2005.
- Mahesh Purohit, *Value Added Tax: Experiences of India and Other Countries*, 2007.
- Kaushik Basu and A. Maertens (ed.), *The New Oxford Companion to Economics in India*, Oxford University Press, 2013.
- M.M. Sury, *Government Budgeting in India*, 1990.
- M. Govinda Rao, *Changing Contours of Federal Fiscal Arrangements in India*, Amaresh Bagchi (ed.), *Readings in Public Finance*, Oxford University Press, 2005.
- Paul Samuelson, 1955, —Diagrammatic Exposition of a theory of Public Expenditure, *Review of Economics and Statistics*, Volume 37.
- hankar Acharya, 2005, —Thirty Years of Tax Reform in India, *Economic and Political Weekly*, May 14-20. Rangarajan and D.K. Srivastava, 2005, —Fiscal Deficit and Government Debt: Implications for Growth and Stabilization”, *Economic and Political Weekly*, July 2-8.

- M. Govinda Rao, 2011, —Goods and Services Tax: A Gorilla, Chimpanzee or a
- Report of the 13th Finance Commission, 2010-15.
- *Economic Survey*, Government of India (Latest).
- *State Finances: A Study of Budgets*, Reserve Bank of India (Latest).

Semester -V

ECN: MN -I C (4 Credits)

MONEY BANKING, PUBLIC FINANCE & INTERNATIONAL TRADE

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Money

(10 Classes)

- 1.1: Money: Meaning & Function: Role of Money in Capitalistic, Socialistic & Mixed Economies.
- 1.2: Quantity Theory of Money: Transactions Approach and Cash Balance Approach.
- 1.3: Inflation: Definition, Types, Causes and Effects of Inflation.
- 1.4: Measures to Control Inflation, Fiscal and Monetary Policy.

Unit 2: Banking

(10 Classes)

- 2.1: Central Bank: Objectives, Functions and Limitations of Central Bank with reference of RBI.
- 2.2: Quantitative and Qualitative Methods of Credit Control.
- 2.3: Commercial Meaning, Types, Functions and Principles of Commercial Banks, Process of Credit Creation.
- 2.5: Commercial Banking in India: Evaluation of Banking Sector since Independence; Critical Appraisal of Commercial Banking after Nationalization.

Unit 3: Nature and Scope of Public Finance

(15 Classes)

- 3.1: Meaning and Scope of Public Finance; Public Finance and Private Finance.
- 3.2: Principle of Maximum Social Advantage.
- 3.3: Sources of Public Revenue, Taxation: Meaning and Classification.
- 3.4: Impact and Incidence of Taxes; Effects of Taxation.
- 3.5: Meaning, Classification and Principle of Public Expenditure, Effects of Public Expenditure.

Unit 4: International Trade

(15 Classes)

- 4.1: International Economics: Definition, Nature and Importance.
- 4.2: Inter-Regional and International Trade, Free Trade vs. Protection.
- 4.3: Gains from Trade: Their Measurement and Distribution.
- 4.4: Comparative Costs Theory of International Trade.

Unit 5: International Financial Institutions

(10 Classes)

5.1: Objectives and Functions of IMF and IBRD

5.2: WTO: Their Objectives and Functions.

5.3: SAARC: Their Objectives and Functions

Basic Reading List:

- M.L. Jhingan: *Monetary Economics* (Hindi& English Edition)
- D.M. Mithani *Money, Banking International trade and public finance.*(Hindi& English Edition)
- M.L.
- Sen S.N. *Central banking in underdeveloped money market.*
- Dommic Salvatore: *International Economics.*
- Musgrave and Musgrave; *Public Finance in Theory and Practice*, McGraw Hill, Tokyo.
- Dalton: *Public Finance*
- Tyagi: *Public Finance*
- Bhatia, H.L: *Public Finance*
- J. Hindriks, G. Myles: *Intermediate Public Economics*, MIT Press, 2006. 2. H. Rosen, T. Gayer: *Public Finance*, 9 ed., McGraw-Hill/Irwin, 2009.
- Joseph E. Stiglitz, *Economics of the Public Sector*, W.W. Norton & Company, 3rd edition, 2000.
- R.A. Musgrave and P.B. Musgrave, *Public Finance in Theory & Practice*, McGraw Hill Publications, 5th edition, 1989.
- John Cullis and Philip Jones, *Public Finance and Public Choice*, Oxford

Semester-V
ECN MJ-9 (6 Credit)
INTRODUCTION TO ECONOMETRICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Unit -1: Definition Scope and Goals of Econometrics

(10 Classes)

- 1.1: Definition and Scope of Econometrics.
- 1.2: Goals of Econometrics.
- 1.3: The Nature of the Econometrics Approach.
- 1.4: Theoretical and Applied Econometrics Assignment.

Unit-2: Classical Statistical Inference

(10 Classes)

- 2.1: Estimator- Estimation of a Model.
- 2.2: Properties of Estimation.
- 2.3: Alternative Method of Estimation.
- 2.4: Meaning of Hypothesis Testing.
- 2.5: Types of Error and Level of Significance.

Unit-3: Simple Regression Analysis

(15 Classes)

- 3.1: Stochastic and Non-stochastic Relations.
- 3.2: The Simple Linear Regression Model.
- 3.3: Estimation of Regression Parameters.
- 3.4: Statistical Properties of Least Square Estimators.

Unit- 4: Regression Analysis and Analysis of Variance

(15 Classes)

- 4.1: Concept of Analysis of Variance.
- 4.2: Method of Analysis of Variance as Statistical Method.
- 4.3: Regression Analysis and Analysis of Variance (ANOVA), Comparison between Regression Analysis and Analysis of Variance.
- 4.4: Test Based on Analysis of Variance Assignment.

Unit- 5: Autocorrelation

(10 Classes)

5.1: The Assumption of Serial Independence, Sources of Autocorrelation.

5.2: The First-Order Autoregressive Scheme.

5.3: Consequences of Autocorrelation, Tests for Autocorrelation.

5.4: Multicollinearity

Basic Reading List:

- Koutsoyiannis, A. (1977), Theory of Econometrics (2 ed.) The Macmillan Press Ltd., London.
- J. Johnston 2016 Econometric model
- D.N Gujrati & d C Porter (2009) Essential of econometrics McGraw hill
- William H Green (2006) Econometric Analysis, Pearson.

Semester-V
ECN MJ-10 (4 Credits)
HISTORY OF ECONOMIC THOUGHT

vFull Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Pre-Classical Thoughts (10 Classes)

1.1: Mercantilism.

1.2: Physiocracy.

Unit 2: Development of Classical Economics (15 Classes)

2.1: Adam Smith: Division of Labour, Theory of Value, Distribution, Views on Trade.

2.2: David Ricardo: Value, Theory of Rent, Distribution.

2.3: T.R.Malthus: Theory of Population, Theory of Gluts.

2.4: Economic Ideas of J B Say & JS Mill

Unit 3: Karl Marx & The Marginalist Revolution (15 Classes)

3.1: Jevons and Walrus.

3.2: Karl Marx: Dynamics of Social Change, Theory of Value, Surplus Value, and
Crisis of Capitalism.

3.3: Neo-Classical Thought: Alfred Marshall and the Cambridge School.

3.4: Welfare Economics: AC Pigou.

Unit 4: The Keynesian Revolution (10 Classes)

4.1: Economic Ideas of J. M. Keynes.

4.2: Keynes and the Classical Economics.

Unit 5: Indian Economic Thought (10 Classes)

5.1: Economic Ideas of Mahatma Gandhi.

5.2: Economic Ideas of Amartya Sen.

5.3: Economic Ideas of Kautilya

Basic Reading List

- Charles Gide & Charles Rist, A History of Economic Doctrines

- T.N. Hajela, History of Economic Thought
- Bhabatosh Datta, Indian Economic Thought
- B.N. Ganguli, Indian Economic Thought, 19th Century Perspectives

Semester-V
ECN-MJ- 11(4 Credits)
RESEARCH METHODOLOGY

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Unit 1: Research Methodology: An Introduction **(10 Classes)**

- 1.1: Meaning, Objectives, and Significance of Research
- 1.2: Types of Research, Research Approach, Literature Review: its Importance in Research
- 1.3: Research Proposal and its Types, Contents of Research Proposal
- 1.4: Research Design, Meaning and Types

Unit 2: Research Problem **(10 Classes)**

- 2.1: Research Problem; Definition, Necessity of Defining the Problem
- 2.1: Selecting the Research Problem
- 2.3: Technique Involved in Defining Research Problem Unit

3: Design of Sample Surveys **(10 Classes)**

- 3.1: Sample Design, Types of Sampling Designs, Sampling Design Process
- 3.2: Sampling and Non-Sampling Errors
- 3.3: Sample Survey Vs Census Survey
- 3.4: Characteristics of Good Sample

Unit 4: Classification and Tabulation **(15 Classes)**

- 4.1: Data: Primary vs Secondary Data, and Methods of their Collection
- 4.2: Classification and Tabulation of data and its Diagrammatic Representation
- 4.3: Graphical Representation of Data and Technique of Construction of Graphs
- 4.4: Choice of Diagram, and Limitations of Diagrams and Graphs

Unit 5: Sampling Theory and Design of Sample Surveys **(15 Classes)**

5.1: Universe or Population.

5.2: Sampling Distribution, Limitations of Sampling

5.3: Parameters and Statistic

5.4: Types of Sampling: Simple Random Sampling and Stratified Random Sampling

Basic Readings

- Blange M., Research Methodology in Economics
- Good WS and Hatt PK (1992): Methods in Social Science Research, McGraw Hill
- Kothari, Research Methodology
- Pannerselvam R.(2004), Research Methodology, Prentice Hall, India
- Wilkinson & Bhendarkar, Methodology and Techniques of Social Research

Semester-VI
ECN- MJ -12 (4Credits)
AGRICULTURAL ECONOMICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Unit 1: Agriculture and its Development in India (15 Classes)

- 1.1: Role of Agriculture in Indian Economy, Features of Indian Agriculture and its Problems
- 1.2: Agriculture Production and Productivity, Low Agriculture Productivity- Backwardness of Indian Agriculture- Causes and Remedies
- 1.3: Cropping Pattern in India, Change in Cropping Pattern and Factors Determining Cropping Pattern.
- 1.4: Land Tenure and Land Reforms in India: Land Tenure Systems in India, Land Reforms in India, Need of Role Land Reforms in India.
- 1.5: Agriculture Holding in India- Problems of Sub- Division and Fragmentation of Holding.

Unit 2: Agriculture and Allied Sector (10 Classes)

- 2.1: Horticulture in India
- 2.2: Fisheries and Aquaculture in India
- 2.3: Livestock and Animal Husbandry in India
- 2.4: Forestry in India: Growth, Problems and State Policies.

Unit 3: Indian Agriculture Policy (10 Classes)

- 3.1: Introduction and Objective of Agriculture Policy
- 3.2: Agriculture Policy Followed since Independence: Main Features or Elements
- 3.3: National Agriculture Policy Resolution, 1993
- 3.4: National Agriculture Policy Document, 2000

Unit 4: New Agricultural Strategy -Green Revolution (10 Classes)

- 4.1: New Agricultural Strategy or Green Revolution and Its Features
- 4.2: Impact of Green Revelation in India
- 4.3: National Policy for Farmers, 2007
- 4.4: National Food Security Mission (NFSM).

Unit 5: Agriculture Credit and Agriculture Marketing (15 Classes)

- 5.1: Types of Agriculture Credit in India, Source of Agriculture Credit in India, Kisan Credit Card

5.2: Bank Linkage Programme for Micro Finance & Self -Help Group (SHGs), National Bank for Agriculture Development (NABARD)

5.3: Agriculture Marketing in India, Ware House & FCI

5.4: Regulated Markets and Agriculture Marketing Reforms, Co- operative Market

Basic Reading List:

- Bhaduri, A. (1984), *The Economic Structure of Backward Agriculture*, Macmillan, Delhi
- Bilgrami, S. A. R. (1996), *Agriculture Economics*, Himalaya Publishing House, Delhi.
- Dantwala, M. L. et al. (1991), *Indian Agricultural Developments since Independence*, Oxford and IBH, New Delhi.
- Deogharia, P. C. (2008) *Rural Credit in India*, Satyam Publication, New Delhi.
- Government of India (1976), *Report to the National Commission on Agriculture*, New Delhi.
- Government of India, *Economic Survey (Annual)*
- Gulati, A. and T. Kelly (1999), *Trade Liberalization and Indian Agriculture*, O. U. P. New Delhi
- Joshi, P. C. (1975) *Land Reforms in India: Trends and Prospects*. Allied Publishers, Bombay
- Kahlon, A. S. and D. S. Tyagi (1983), *Agriculture Price Policy in India*, Allied Publishers, Bombay
- Barbara Harriss-White - *Rural Commercial Capital - Agricultural Markets in West Bengal*
- *Agricultural Markets From Theory To Practice: Field Experience In Developing Countries* by Barbara Harriss-White

Semester-VI
ECN- MJ -13 (4Credits)
INDUSTRIAL ECONOMICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Unit 1: Introduction

(15 Classes)

- 1.1: Industry and Its Types, Public, Private, Joint and Co-operative Sector.
- 1.2: Public Sector Enterprises in India
- 1.3: Private Sector in India
- 1.4: Industrial Sickness in India

Unit 2: Industrial Development in India

(10 Classes)

- 2.1: Industrial Development since Independence
- 2.2: Trends of Industrial Production and Rate Industrial Growth in India.
- 2.3: Location Pattern of Indian Industries
- 2.4: Capacity Utilization of its Results

Unit 3: Industrial Policy in India

(10 Classes)

- 3.1: Industrial Policy, 1948, 1956, 1980
- 3.2: New Industrial Policy, 1991, New Industrial Policy Reforms 1992-93 onwards
- 3.3: Exit Policy, National Renewal Fund (NRF) and Voluntary Scheme (VRS)

Unit 4: Large Scale Industries in India

(10 Classes)

- 4.1: Cottage and Synthetic Textile Industry, Jute Industry
- 4.2: Iron and Steel Industry, Cement Industry
- 4.3: Sugar Industry and, Paper Industry
- 4.4: Food Processing Industry, Information Technology and Electronic Industry and Automobile Industry

Unit 5: Small and Cottage Industries in India

(15 Classes)

- 5.1: Definition of Small and Cottage Scale Industries, Distinction between Small and Cottage Industries, Present Position and Performance of Small and Cottage Industry in India
- 5.2: New Small Sector Industrial Policy, 1991, Policy Measure for SSI Sector Undertaken during 2004-05

5.3: Policy Initiative and Measures Undertaken for Micro and Small Enterprise (MSEs) During 2006-07 and MSMED Act, 2006.

5.4: Small Industries Development Bank of India (SIDBI) and its Role.

Basic Reading List:

- Ahluwalia, I.J. (1985), *Industrial Growth in India*, Oxford University Press, New Delhi.
- Barthwal, R.R. (1985), *Industrial Economics*, Wiley Eastern Ltd., New Delhi.
- Cherunilam, F. (1994), *Industrial Economics: Indian Perspective (3rd Edition)* Himalaya Publishing House, Mumbai.
- Desai, B. (1999), *Industrial Economy in India (3rd Edition)*, Himalaya Publishing House, Mumbai.
- Divine, P.J. and R.M. Jones et. Al. (1976) *An Introduction to Industrial Economics*, George Allen and Unwin Ltd., London.
- Government of India, *Economics Survey (Annual)*
- Hay, D. and D.J. Morris (1979) *Industrial Economics: Theory and Evidence*, Oxford University Press, New Delhi.
- Kuchhal, S.S. (1980), *Industrial Economy of India (5th Edition)*, Chaitanya Publishing House, Allahabad.
- Reserve Bank of India, *Report on Currency and Finance (annual)*.
- Singh, A. and A.N. Sadhu (1988), *Industrial Economics* Himalaya Publishing House, Bombay.
- Weber, Alfred. 1929. (translated by Carl J. Friedrich from Weber's 1909 book). *Theory of the Location of Industries*. Chicago: The University of Chicago Press

Semester-VI
ECN- MJ -14 (4Credits)
FINANCIAL INSTITUTIONS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Unit 1: Money

(10 Classes)

- 1.1: Money: Meaning; Functions and Types.
- 1.2: Supply of Money: Concept, Components and Aggregates.
- 1.3: Money Market and Capital Market.
- 1.4: Features and Defect of Indian Money Market.

Unit 2: Banking in India

(10 Classes)

- 2.1: Banking and NBFCs
- 2.2: Nationalization of and Development of Banking in India.
- 2.3: Regional Rural Banks (RRBs)
- 2.4: Banking Sector Reform in India

Unit 3: Commercial Banks

(15 Classes)

- 3.1: Commercial Banks: Objectives; Functions; Types.
- 3.2: Role of Commercial Banks in Economic development of India.
- 3.3: Liabilities and Assets of Commercial Banks.
- 3.4: Mechanism of Credit Creation by Commercial Banks: Purpose and Limitations.

Unit 4: Reserve Bank of India

(10 Classes)

- 4.1: RBI and Its Function.
- 4.2: CRR, SLR, Bank Rate, Repo Rate and Reverse Repo Rate.
- 4.3: Monetary Policy of RBI.
- 4.4: Working of Indian Monetary System

Unit 5: Foreign Exchange Markets

(15 Classes)

- 5.1: Foreign Exchange; Foreign Exchange Rate; Foreign Exchange Market.
- 5.2: Determination of Exchange Rates under Fixed and Flexible Exchange Rate Regimes.
- 5.3: India's Foreign Exchange Reserves, Convertibility of Rupee: Current and Capital Account

5.4: Foreign Exchange Management Act (FEMA)

Basic Reading List:

- M.L. Jhingan: *Monetary Economics* (Hindi& English Edition)
- D.M. Mithani *Money, Banking International trade and public finance.*(Hindi& English Edition)
- Sen S.N. *Central banking in underdeveloped money market.*
- Dommic Salvatore: *International Economics.*
- Ackley, G. (1978), *Macroeconomics: Theory and Policy* Macmillan, New York
- Blackhouse, R and A. Salansı (Eds.) (2000) *Macroeconomics and the real world* (Volumes),Oxford University Press, London.
- Branson, W.A. (1989) *Macroeconomics Theory and Policy* (3rd edition), Harper & Row, New York.
- Dombusck R and F, Stanley (1997), *macroeconomics*, McGraw Hill Inc., New York.
- Hall, R.E. and J.B. Taylor (1986), *Macroeconomics*, W.E. Norton, New York.
- Heijdra, B.J. and V.P. Fredrick (2001) *Foundations of Modern Macroeconomics*, Oxford University Press, New Delhi.
- Jha, R. (1999), *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., New Delhi.
- Romer, D.L. (1996) *Advanced Macroeconomics*. McGraw Hill Co. Ltd., New York.
- Scarfe, B.L. (1977) *Cycles Growth and Inflation* McGraw Hill, New York.
- Shapiro, E. (1996) *Macroeconomics Analysis*, Gigotia Publications, New Delhi.
- Surrey, N.J.C. (Ed.), (1976) *Macroeconomics them.* Oxford University Press, Oxford.
- Sinha, U.P (2010) *Monetary and Fiscal actions in India*, Concept Publishing Company New Delhi.
- F.S Mishkin & S G Eakins (2009) *Financial Markets and Institutions*, Pearson
- F.J Fabozzi, F Modigliani, FJ Jones, M G Ferri(2009) *Foundations of Financial Market and Institutions*, Pearson
- MR Baye and D W Jansen (1996) *Money Banking and Financial Market*, AITBS
- MY Khan (2011) *Indian Financial System*, Tata McGraw Hill

Semester-VI
ECN- MJ -15 (4Credits)
DEMOGRAPHY

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Unit 1: Techniques of Analysis

(20 Classes)

- 1.1: Meaning and Scope of Demography, Determinants of Population Growth, (Fertility and Mortality)
- 1.2: Crude Birth and Death Rates; Age-specific Birth and Death Rates; Standardized Birth and Death Rates: Concepts, Relative Merits and Demerits.
- 1.3: Study of Fertility: Concepts of Total Fertility Rate, Gross Reproduction Rate and Net Reproduction Rate; Their Relative Merits and Demerits; Factors Affecting Fertility.
- 1.4: Marriage and Marital Status: Concept and Measurement.
- 1.5: Reproductive and Child Health [RCH] in India, NFHS

Unit 2: Population Projection

(15 Classes)

- 2.1: Meaning, Types and Uses of Population Projection.
- 2.2: Techniques of Population Projection: Their Relative Merits and Demerits.
- 2.3: Ageing of Population: Concept, Status and Assessment with reference to India.
- 2.4: Changes in Family Structure and Old Age Security in India.

Unit 3: Population Policy of India

(15 Classes)

- 3.1: Evolution of Population Policy in India.
- 3.2: New National Population Policy (2000): Assessment.
- 3.3: Family Planning and Family Welfare Programme: Achievements and Failures; Shift from Population Control to Family Welfare and Women Empowerment.
- 3.4: Salient Features of Recent Census.

Unit 4: Demography Transition

(10 Classes)

- 4.1: Demography Transition, Demography Change & Economic Growth.
- 4.2: Gender Equity and Demographic Transition.
- 4.3: Urbanization and its Impact.

Basic Reading List:

- Agarwala S.N. (1972), India's Population Problem. Tata McGraw-Hill Co.,
- Bombay 77 Bose, A. (1996), India's Basic Demographic Statistics, B.R. Publishing Corporation, New Delhi (1)
- Bogue, DJ. (1971), Principles of Demography, John Wiley, New York
- Chenery H. and TN. Srinivasan (Eds.) (1989), Hand Book of Development Economics, Vol. 1 &2, Elsevier, Amsterdam.
- Choubey, RK. (2000), Population Policy in India, Kanishka Publications, New Delhi.
- Coale AJ. and EM. Hoover (1958), Population Growth and Economic Development in Low Income Countries: A Case Study of India's Prospects, Princeton University Press, Princeton.
- Gulati, S.C. (1988), Fertility in India: An Econometric Study of a Metropolis. Sage, New Delhi.
- Bamol, W.J. and W.E. Oates (1988), The Theory of Environmental Policy. (2nd Edition). Cambridge University Press, Cambridge.
- Berman, P. (Ed.) (1995), Health Sector Reform in Developing Countries: Making Health Development Sustainable, Boston: Harvard Series on Population and International Health

Semester-VII
ECN- MJ -16 (4Credits)
MICRO ECONOMIC ANALYSIS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Module-I Theory of Market-I (15 Classes)

- 1.1 Equilibrium of firm & industry, Supply curve of an Industry
- 1.2 Monopoly: Monopoly Power, Profit Maximization and output choice, Monopoly and product quality,
- 1.3 Monopolistic Competition: General and Chamberlin Approach of equilibrium, Excess capacity, Product differentiation, Selling Cost
- 1.4 Bilateral Monopoly: Price and Output determination under Bilateral Monopoly

Module-II Theory of Market-II (10 Classes)

- 2.1 Price and Output Determination under Oligopoly
- 2.2 Oligopoly with fixed number of firms, Traditional model of oligopoly-Cournot, Edgeworth
- 2.3 Kinked Demand curve and Collusive-Cartels and Mergers, Price Rigidity
- 2.4 Price leadership at basin point price system

Module -III Alternative Theory of Firms-I (10 Classes)

- 3.1 Critical evaluation of marginal Analysis, Baumol's Sales revenue Maximization Model
- 3.2 Williamson's Model of Managerial Discretion
- 3.3 Marris Model of Managerial Enterprise, full cost pricing rule behaviour model
- 3.4 Bains limit pricing theory

Module-IV Alternative Theory of Firms-II (10 Classes)

- 4.1 Behavioural Model of Cyert and March
- 4.2 Goals of firm: Sacrificing Behaviour, Process of Decision Making
- 4.3 Simple Model of Behaviourism
- 4.4 Game Theory Model

Module-V Market Equilibrium (10 Classes)

- 5.1 Cobb- Web Model

5.2 Partial and General equilibrium analysis

5.3 Walrasian excess demand and input-output approaches to general equilibrium

5.4 Existence, stability and uniqueness of equilibrium

Basic Reading Lists:

- Kreps, David M. (1990), A Course in Microeconomic Theory, Princeton University Press, Princeton.
- Koutsoyiannis, A. (1979), Modern Microeconomic (second edition) Macmillan Press, London. Layard, P.R.G. and A.W. Walters (1978), Microeconomy Theory, McGraw Hill, New York.
- Sen, A. (1999), Microeconomics Theory and Applications Oxford University Press, New Delhi
- Stigler, G. (1995), Theory of Price (4th edition) Printice Hall of India, New Delhi.
- Varjan, H. (2000), Microeconomic Analysis, W.W. Norton, New York.
- Case KE, Fair RC Osters, (2009) Principles of Economics (9th edition), Pearson
- Myint, H. (1948), Theories of Welfare Economics, Longmans, London.
- Ng Y.K. (1979), Welfare Economics, Macmillan, London. Nicholas, B. (Ed.) (2001), Economic Theory and the Welfare State, Edward Elgar Publishing Ltd, UK
- Pigou, A.C. (1962), The Economics of Welfare (4th Edition), Macmillan.
- Quirk, J. and R. Saposnik (1968), Introduction to General Equilibrium Theory and Welfare Economics, McGraw Hill, New York.
- Samuelson, P.A. (1947), Foundations of Economic Analysis, Harvard University Press, Cambridge, Mass N Gregory Mankiw (2007) Economics: Principles and Applications, Learning India private limited.
- Joseph's Stiglitz and CE Walsh (2007) Economics, W.W Norton and Co.

Semester-VII
ECN- MJ- 17 (4 Credits)
MACRO ECONOMIC ANALYSIS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Module-1, Consumption Function (10 Classes)

- 1.1 Keynes Psychological law of consumption, Income-Consumption relationship,
- 1.2 Absolute income, Relative income, Life Cycle and Permanent Income Hypothesis
- 1.3 Consumption and Asset Price
- 1.4 Consumption under Uncertainty-Modern Approach

Module-II, investment Function (15 Classes)

- 2.1 Marginal Efficiency of capital and Investment-long run and short run, Factors affecting Investment Function, Derivation of MEC
- 2.2 Investment Multiplier,
- 2.3 Acceleration Principle, Investment Behaviour,
- 2.4 Super Multiplier, Tobin's 'q' of Investment

Module-III, Macro Economic models (10 Classes)

- 3.1 Classical Macro Economic Model
- 3.2 Neo-Classical Macro Economic Model
- 3.3 Keynesian Macro Economic Model
- 3.4 Post Keynesian Macro Economic Model-Rational and Adaptive Expectation Model, Mundell Fleming Model

Module-IV Theories of Inflation (10 Classes)

- 4.1 Classical, Keynesian and Monetarist approaches to Inflation, Structuralist theory of inflation.
- 4.2 Inflationary Gap, Measures to remove the gap, Demand Pull and Cost Push theory of inflation
- 4.3 Phillips curve Short-run and long-run: The Natural rate of Unemployment Hypothesis; Tobin's modified Philips Curve
- 4.4 Control of Inflation by Monetary Non-Monetary and fiscal measures

Module-V, Economic Fluctuations

(10 Classes)

- 5.1 Business cycle- Nature Scope, Phases, Monetary and Non-Monetary Theory
- 5.2 Trade Cycle of Hawtrey and Hayek and their Comparison
- 5.3 Traditional Theories of business Cycle (Schumpeter's and Kaldor)
- 5.4 Business Cycle Theories of Hicks and Samuelson

Basic Reading Lists:

- Ackley, G.(1997), Macroeconomics, Theory and policy Macmillan, New York.
- Blackhouse, R. and A. Salansi (Eds.) (2000), Macroeconomics and the Real World; [2 volumes) Oxford University Press, London.
- Branson, W.A. (1989), Macroeconomics Theory and Policy (3rd edition) Harper & Row, New York.
- Hall, R.E. and J.B. Taylor (1986), Macroeconomics W.E. Norton, New York.
- Heljdra, B.J. and V.P. Fredrick (2001), Foundations of Modern Macroeconomics, Oxford University Press, New Delhi.
- Jha, R. (1991), Contemporary Macroeconomic Theory and Policy, Wiley Eastern Ltd., New Delhi.
- Romer, D.L. (1996) Advanced Macroeconomics, McGRaw Hill Co. Ltd., New York.
- Scarfe, B.L. (1997) Cycles Growth and Inflation McGraw Hill, New York,
- Shapiro, E (1996) Macroeconomics Analysis, Gigotia Publications, New Delhi
- Errol Desuza (2009): Macro Economic Analysis, Pearson
- Dornbuseh Fischer and Startz(2010) Macroeconomics, McGrawHiall
- N Gregory mankiw(2010) Macroeconomics, Worth Publisher
- Oliver Blanchard (2009) Macroeconomics, pearson

Semester-VII
ECN- MJ- 18 (4 Credits)
DEVELOPMENT ECONOMICS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Module-I Theories of Development (10 Classes)

- 1.1 Economic Growth and Development Concept, measurement and Indicators of Economic
- 1.2 Factor affecting Economic growth-Capital, Labour and Technology Growth
- 1.3 Schumpeter and Capitalistic development, Innovation: Role of credit, Profit and degeneration of capitalism
- 1.4 Marxian Theory of Development

Module-II Economic Growth-I (15 Classes)

- 2.1 Harrod - Domar Growth Model, Knife edge problem
- 2.2 Neo-Classical growth Models: Solow, Kaldor, Lucas
- 2.3 Sectoral Models of Economic growth-Mahalanobis growth models
- 2.4 Feldman's Growth Model

Module-III Economic Growth-II (15 Classes)

- 3.1 Technological progress-embodied and disembodied; Production function approach to economic growth
- 3.2 Growth models of Hicks and Golden Rule of accumulation; Intellectual capital;
- 3.3 Explanation of cross-country differentials in economic growth.
- 3.4 A. K. Sen Growth Model

Module-IV Social and Institutional Aspects of Development (10 Classes)

- 4.1 Development and Underdevelopment-perpetuation of underdevelopment
- 4.2 Poverty-Absolute and Relative; Measurement, Causes and alleviation of poverty, Dependency Theory
- 4.3 Inequality and development Inter-linkages: Kuznets
- 4.4 Mrs. Joan Robinson's growth model

Module-V Partial theories of Growth and Development (10 Classes)

- 5.1 Vicious circle of poverty; Circular Causation

- 5.2 Unlimited supply of labour (Lewis), Ranis and Fei model, Big push Theory
- 5.3 Balanced and unbalanced growth, Leibenstein's Critical minimum-effort thesis
- 5.4 Harris - Todaro model, Stiglitz labour turnover model

BASIC READING LIST

- Adelman, I. (1961). Theories of Economic growth and Development, Stanford University Press, Stanford.
- Behrman, S. and T.N. Srinivasan (1995) Hand book of Development Economics, Vol. 3, Elsevier, Amsterdam
- Brown M. (1966) On the Theory and Measurement of Technical change Cambridge University Press, Cambridge Mass.
- Chenery, H.B. and TN Srinivasan (Eds) (1989) Hand Book of Development Economics, Vol. I and II Elsevier, Amsterdam.
- Ghatak, S. (1986) An Introduction to Development Economics, George Allen & Unwin, London.
- Todaro, M and Smith (2011) Economic Development, Pearson. Economic Development
- Ray, Debraj, Development Economics, Oxford University Press
- Meir, G.M.-Leading Issues in Economic Development
- Thirlwall, A.P.- Growth and Development
- Basu, K.-Analytical Development Economics
- Bhattacharya, Debesh-Political Economy of Development
- World Bank-World Development Report (various issues)
- Anand, S. and R. Kanbur (1993) "The Kuznets Process and the Inequality-Development Relationship", Journal of Development Economics, Vol. 40
- Anand, S. and R. Kanbur (1993a) - "Inequality and Development: A Critique", Journal of Development Economics, Vol. 41
- Kuznets, S. (1955) "Economic Growth and Economic Inequality, American Economic Review, Vol. 45,
- Kuznets, S. (1963)- "Quantitative Aspects of Economic Growth of Nations: VIII, Distribution of Income by Size", Economic Development and Cultural Change, Vol. 12.
- Ranis, G. and J. Fel- 'A Theory of Economic Development', American Economic Review, Vol. 51, 1961, Reprinted In Eicher and Witt (ed.) Agriculture in Economic Development

Semester-VII
ECN- MJ- 19 (4 Credits)
ECONOMICS OF GENDER

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit- I: Gender Issues

(10 Classes)

- 1.1: Concepts-CMR, SMR, GMR.
- 1.2: Determinants of Nuptality, Marital Dissolution
- 1.3: Fertility. Meaning, Concepts-CBR, ASBR, GFR, GRR
- 1.4: Factors affecting fertility. Nuptality: Meaning.

Unit- II: Demography of Female population

(10 Classes)

- 2.1: Age structure, mortality rates, and sex ratio-Causes of declining sex ratios and fertility
- 2.2: Women and their access to nutrition, health, education.
- 2.3: Economic status of women and its effect on work-participation, income level
- 2.4: Impact of technological development on women's work participation in agriculture and non-agriculture activities.

Unit- III: Social Security of Women

(20 Classes)

- 3.1: Entitlements, ensuring economic independence
- 3.2: Self help groups in providing social security, Schemes for safety net for women
- 3.3: Democratic decentralization (panchayats) and women's empowerment in India.
- 3.4: Economic growth and gender equality, gender in- equality Impact of gender equality on economic growth and socio economic development
- 3.5: Concept of the "feminisation of poverty". Basic causes of the feminisation of poverty

Unit- IV: Gender in the Labour Market

(20 Classes)

- 4.1: Factors affecting female entry in labour market
- 4.2: Female work participation in agriculture, non agricultural rural activities, cottage and small scale industries, and services sector
- 4.3: Problems of female Labour and Wage
- 4.4: Determinants of Women's Employment, Occupational Pattern of Women in India
- 4.5: Economic of tribal and rural women in Jharkhand problems and remedy

Basic Reading Lists:

- Boserup E. (1970), Women's Role in Economic Development, George Allen and Unwin, London,
- Desai, N. and M.K. Raj. (Eds.) (1979), Women and Society in India, Research Centre for Women Studies, SNDT University, Bombay.
- Government of India (1974), Towards Equality Report of the Committee on the Status of Women in India, Department of Social Welfare, Ministry of Education and Social Welfare, New Delhi.
- Krishnaraj, M., R.M. Sudarshan and A. Shariff (1999). Gender, Population and Development Oxford University Press, New Delhi.
- Seth, M. (2000), Women and Development: The Indian Experience, Sage Publications, New Delhi. Srinivasan K. and A. Shroff (1998), India: Towards Population, and Development Goals, Oxford University Press, New Delhi.
- Venkateswaran, S. (1995), Environment, Development and the Gender Gap, Sage Publications, New Delhi

Semester-VIII

ECN- MJ- 20 (4 Credits)

ECONOMICS OF SOCIAL SECTOR

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1 Social Sector in India

- 1.1: Social Sector: Health, Education, Housing & Water Supply and its Importance
- 1.2: Infrastructure; Role of Infrastructure, Energy & Power
- 1.3: Urban Infrastructure, & Transport
- 1.4: Social Security and Human Development, Human Development Index

Unit-II Human Capital (Education)

- 2.1: Human Capital Vs Physical Capital, Education as Instrument of Economic Growth
- 2.2: Human Capital Formation-Concept and Role in Social Sector Development
- 2.3: Cost of Education-Expenditure on Education, Education Sector- Status, Problems, Solutions
- 2.4: Financing of education In India, Benefit of Education
- 2.5: New Education Policy: Features

Unit-III Health

- 3.1 Health Sector- Status, Problems, Determinants of health
- 3.2 Poverty, malnutrition and environmental issues,
- 3.3 Solutions and Financing of Health Sector
- 3.4: Health and Family Welfare

Unit-IV Food Security

- 4.1: Concept of Food Security
- 4.2: Food Self Sufficiency and Food Security in India
- 4.3: Public Distribution System and Its Impact on Poverty
- 4.4: Food Insecurity at Global Level
- 4.5: National Food Security Act

Unit- V Government Programmes for Social Security

- 5.1: Sarva Shiksha Abhiyan, Mid Day Meal
- 5.2: Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)
- 5.3: Pradhan Mantri Gramin Awaas Yojana (PMGAY)
- 5.4: Beti Bacho Beti Padhav
- 5.5: Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MGNREGA)

Basic Reading Lists:

- Sinha U.P (2007), Economics of social sector and development, Concept Publishing company, New Delhi.
- United Nations-Human Development Report (various issues)
- Blaug. M (1972)-Introduction to Economics of Education (Penguin)
- Cohen, E and T. Gaske (1989) - Economics of Education. Pergamon Press, London
- Schultz, T. W(1971) - Investment in Human Capital, Free Press, New York.
- Tilak, J.B.G. (1994) - Education for Development in Asia, Sage Publications, New Delhi.
- World Bank (1993) - The World Development Report, 1993: Investing in Health, Oxford University Press, New York.
- Robert, Yue Ma, James McGilvray and Micle C (2003) Natural Resource and Environment Economics, Pearson Education.
- S.K. Miashra and V.K. Puri : Indian Economy (Hindi and English Edition)
- Datt & Sundharam: Indian Economy (Hindi& English Edition)
- Pulapre Balakrishnan, 2007, The Recovery of India: Economic Growth in the Nehru Era, *Economic and Political Weekly*, November.
- Pulapre Balakrishnan, 2010, *Economic Growth in India: History and Prospects*, Oxford University Press.
- Uma Kapila, editor, *Indian Economy Since Independence*, 19th edition, Academic Foundation.
- Chakravarty, S. (1987) Development planning: The Indian Experience, Oxford University Press

Semester-VIII
GROUP-A
ECN: AMJ-1
MATHEMATICAL ECONOMICS I

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Module-I Micro Economics Application (5+5+5+5=20Classes)

- 1.1: Cardinal and Ordinal utility maximization, Indirect Utility Function and Duality theorem, Substitution Effect and Slutsky equation, Compensated and normal demand function;
- 1.2: Homogeneous production function; Properties of Cobb-Douglas production function, Euler's Theorem, Production possibility curve, Technical progress through production function.
- 1.3: Unconstrained and constrained optimisations, Lagrange Multiplier, economic application of unconstrained optimization (maximisation of tax revenue, discriminating monopoly), and constrained optimization (utility maximization)
- 1.4 Cobweb model: (Supply lag and Demand Lag) Simple Continuous Cob-web Model and Model with stocks: Marshallian and Wairasian equilibrium conditions

Module-II Macro Economic Application (5+5+5+5=20Classes)

- 2.1 Difference Equations: Distributed and Lagged, First and second order difference equation.
- 2.2 Differential Equations: First order and second order differential equation (general and particular solution) with economic application (trade cycle theory Samuelson and Hicks)
- 2.3 Dynamic monetary model, Classical & Keynes macro system; Static and dynamic multiplier, Determinants of Investment; Accelerator, Multiplier - Accelerator model of Philips
- 2.4 Harrod Problem, Harrod- Domar growth model, neo- classical model of growth (Solow)

Module-III Theory of Matrix and Linear Programming (5+5+5+5=20Classes)

- 3.1 Matrix: Symmetric and Skew-Symmetric; Orthogonal matrix, Characteristics roots and vectors; Idempotent matrix; Quadratic forms, Solution of equations by matrix method
- 3.2 Linear Programming, Primal and Dual, Steps in construction of duality theorem
- 3.3 Solution of linear programming by graphical method.
- 3.4 Solving linear programming by simplex method

Module-IV Game Theory and Input Output Analysis (5+5+5+5=20Classes)

- 4.1. Concept of Game theory; Pure and Mixed strategies; Maximum and Mini-max solution: Saddle point; Solution of Games by pure and mixed strategy, Prisoners dilemma
- 4.2 Graphical solution of Games 2x2 Pay off matrix, Nash Equilibrium theory
- 4.3 Economic application of Game Theory
- 4.4 Input Output Analysis Open and Closed systems static and dynamic models; Hawkins-Siman Conditions; Solution under three industries

BASIC READING LIST

- Allen R.G.D. (1976) Mathematical, Economics, Macmillan
- Arrow, K.J. and M. Intriligator (Eds.) (1982) Hand book of Mathematical Economics, Vol. 1, 2 and 3 North Holland, Amsterdam.
- Henderson, J.M. and R.E. Quandt (1980) Micro Economic Theory: A Mathematical approach McGraw Hill, New Delhi.
- C Chiang & K Wainwright (2013) Fundamental Method of Mathematical Economics, McGraw Hill
- E. T. Dowling (2001) Introduction to Mathematical economics, McGraw Hill
- K Sydsacter & PJ Hammond (2015) Mathematics for economic Analysis, Pearson,

Semester-VIII
GROUP-A
ECN: AMJ-2
ECONOMETRICS -I

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Module-I: Introduction to Econometrics (15 Classes)

- 1.1 Nature, Meaning scope and importance of econometrics
- 1.2 Stochastic term and its Importance, Assumptions of error terms
- 1.3 Simple Regression Model, Estimation of Parameters and properties of Least square estimates
- 1.4 Gauss Markov theorem; Concept and derivation of R and Adjusted R²;

Module-II Econometric Problems in Regression Analysis (15 Classes)

- 2.1 Nature, Test and Consequence of Multicollinearity and Heteroscedasticity and Transformation of Heteroscedasticity into Homoscedasticity, Method of Generalized least Square (GLS)
- 2.2 Transformation of non-linear into linear ones; logarithmic, reciprocal and logarithmic reciprocal.
- 2.3 Auto correlation, First order Auto regressive scheme, Mean, variance and co-variance of auto co- related U's, Durbin Watson test and graphical test.
- 2.4 Problems of Auto-correlation-Application, Almond Approach to distributive lag model.

Module-III Regression with Qualitative Independent variables (15 Classes)

- 3.1 Nature and use of Dummy variables, ANOVA models with two qualitative variates
- 3.2 ANCOVA models with a mixture of qualitative and quantitative regression.
- 3.3 Use of Dummy Variable in seasonal analysis, Piece-wise linear regression, Panel Data Regression model
- 3.4 Qualitative response regression model: LPM and its application, the LOGIT model and its estimation, PROBIT model and the TOBIT mode.

Module-IV Dynamic Econometric model: Auto regressive and Distributed Lag Models (15 Classes)

- 4.1 Role of time or lag in economics, reasons for logs.
- 4.2 Estimation of Distributed lag models, The KOYCK Approach to distributed lag model
- 4.3 Partial adjustment model (PAM)
- 4.4 Error correction mechanism, causality test, Granger test

READING LIST

- Chung, J. W. (1993) Utility and production: Theory and application, Basil Blackwell, London.
- Ferguson, H. (1976) Neo Classical Production and distribution.
- Anemilys, T. (1985), Advanced Econometrics, Harvard Univ. Press, Cambridge, Mass
- Baltagi, B.H., (19) Econometrics. Springer, NY
- Doherty, C. (1992) Introduction to Econometrics, Oxford University Press, New York
- Goldberger, AS (1998) Introductory Econometrics, Harvard University Press Cambridge Mass.
- Gujarati, D.N. (1995) Basic Econometrics (2nd Edition) McGraw Hill, New Delhi:
- Hill, R..C, EG. William and GG Judge (1997), Undergraduate Econometries, willey, New York
- Kennedy, P. (1998). A Guide to Econometrics (4thEdn), MIT Press, New York
- Kmenta, J. (2008), Elements of Econometrics (Reprint Ed) Khosla Publishing House, New York
- Koutanyiannis, A. (1977). Theory of Econometrics (2 ed.) The Macmillan Press Ltd. London.
- Krishna, KL. (Ed) (1977) Econometrics Applications In India OUP. New Delhi.
- Maddala, GS. (Ed.) (1993), Econometrics Methods and Applications (2 Vols) Aldershot, U.K
- Theil, H. (1981), Introduction to Econometrics, Prentice Hall of India, New Delhi
- Stock, James H. and Mark W. Watson (2007), Introduction to Econometrics, 2/E, Pearson
- J. Jhonston 2016 Econometric model
- DN Gujrati &D C Porter (2009) Essential of econometrics McGraw hill
- Christopher Dougherty (2007) Introduction to Econometrics, Oxford University Press
- Nachanee econometrics
- William H Green (2006) Econometric Analysis, Pearson

Semester-VIII
GROUP-A
ECN: AMJ-3
ECONOMETRICS-II

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Module-I Simultaneous Equation Model (15 Classes)

- 1.1 The nature of simultaneous equation model and examples of simultaneous equation model
- 1.2 The Simultaneous equation-Bias and inconsistency of OLS estimators
- 1.3 Structural form and reduced form models;
- 1.4 Methods of estimating simultaneous equation system, recursive methods and OLS

Module-II Identification Problem (15 Classes)

- 2.1 Notations and Definitions, Identification problems
- 2.2 Rules of identification; Order and Rank Condition
- 2.3 Estimation of Just identified equation: The method of Indirect Least Square (ILS)
- 2.4 Estimation of Over Identified equation: The method of Two Stage Least Square (2SLS)

Module-III Time Series Analysis (15 Classes)

- 3.1 Stationary and Non-stationary Time series and Unit roots co-integration-Spurious regression,
- 3.2 Dickey Fuller Test, Engle Garner test, Random Walk Model
- 3.3 AR, MA and ARIMA Modeling of Time series data, estimation of ARIMA model and Forecasting
- 3.4 Vector Auto Regression (VAR), Problem with VAR Modeling, Box Jenkins Method

Module-IV Multivariate Analysis (15 Classes)

- 4.1 Probability distribution of disturbance U_i , The normality assumptions of U_i , properties of OLS estimator under normality assumptions
- 4.2 Maximum Likelihood (M-L) method,
- 4.3 General linear model (GLM)
- 4.4 Panel data and its uses, Panel data regression model

Reading list:

- Amemiya, T. (1985), Advanced Econometrics, Harvard Univ. Press, Cambridge, Mass
- Baltagi, B.H. (1998) Econometrics, Springer, New York
- Goldberger, A.S. (1998), introductory Econometrics, Harvard University Press, CambridgeMass
- Gujarati, D.N. (1995) Basic Econometrics (2ndEdn) McGraw Hill, New Delhi.
- Gujarati D.N., Dawn C Porter, Sangeetha Gunasekar (2012) Basic Econometrics (5thEdtr.) McGraw Hill, New Delhi
- Kmenta, J. (1997), Elements of Econometrics (Reprint Ed) University of Michigan Press, New York.
- Koutsoylannis, A. (1977), Theory of Econometrics (2 ed.) The Macmillan Press Ltd., London.
- Maddala, G.S. (Ed) (1993), Econometrics Methods and Applications (2 Vols) Aldershot, U.K.
- Franses, P.H. (1998), Time series models for business and Economic Forecasting, Cambridge University Press, Cambridge.
- Intriligator, M.D. (1978), Econometric Methods techniques and application Prentice Hall, Englewood cliffs, New Jersey.
- Anderson, T.W. (1958) Introduction to multivariate statistical Analysis, Chapman and Hall, London
- Chatfield, C and AJ, Collins, (1980), introduction to Multivariate Analysis, Chapman and Hell, Landon
- Nachana Econometrics

Semester -VII

GROUP- B

ECN: AMJ- I

AGRICULTURAL ECONOMICS-I

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Unit 1: Agricultural Economics-its Nature and Scope (15 Classes)

- 1.1: Nature and Scope of Agricultural Economics, Modernization of Agriculture as an Industry
- 1.2: Role of Agriculture in Economic Development, Share of Agriculture in Economic Development.
- 1.3: Inter-Dependence between Agriculture and Industrial Development
- 1.4: Resource Management in Agriculture: Factor Affecting the Productivity of Land, Land Leasing: Factor on which Leasing of Land Depends;
- 1.5: Labour Characteristics of Labour, Types of Labour, Efficiency of Labour. Capital: Characteristics of Capital.

Unit 2: Rural Economy of India (10 Classes)

- 2.1: Place of Agriculture in Rural Economy
- 2.2: Composition of Indian Rural Economy: Farm and Non-Farm Sector.
- 2.3: Diversification of Agriculture: Agriculture and Allied Activities (Fisheries, Horticulture, Floriculture).
- 2.4: Forestry in India: Growth, Problems and State Policies.

Unit 3: Development of Agriculture & Agrarian Relation (10 Classes)

- 3.1: Role and Importance of Agriculture in Economic Development: Linkages between Agricultural Sector and Non-Agricultural Sector: Changing Nature of Linkages
- 3.2: Trends in Agricultural Growth and Agricultural Productivity. 3.3: Agrarian Relations: Land Reforms Programme during 1960s.
- 3.4: Land Reforms Programme and Performance during 1970s and after.

Unit 4: Agricultural Strategy and Green Revolution (15 Classes)

- 4.1: Economic Effects of Green Revolution.
- 4.2: Food grain Production Policies in India Since 1951.
- 4.3: Irrigation Policy; Processing Sub-System.
- 4.4: Agricultural Price Policy in India; Need of Agricultural Price Policy.

Unit 5: Size of the Farm and Productivity and Cropping (10 Classes)

5.1: Economic Holding: Meaning of Large-Scale Farming: Advantage of Large-Scale Farming.

5.2: Policy to Induce Improvement in the Cropping Pattern.

5.3: Size of The Farm & Cropping Pattern

5.4: Meaning of Small-Scale Farming: Advantage of Small-Scale Farming.

BASIC READING LIST

- Bhaduri, A. (1984), *The Economic Structure of Backward Agriculture*, Macmillan, Delhi
- Bilgrami, S. A. R. (1996), *Agriculture Economics*, Himalaya Publishing House, Delhi.
- Dantwala, M. L. et al. (1991), *Indian Agricultural Developments since Independence*, Oxford and IBH, New Delhi.
- Deogharia, P. C. (2008) *Rural Credit in India*, Satyam Publication, New Delhi.
- Government of India (1976), *Report to the National Commission on Agriculture*, New Delhi.
- Government of India, *Economic Survey (Annual)*
- Gulati, A. and T. Kelly (1999), *Trade Liberalization and Indian Agriculture*, O. U. P. New Delhi
- Joshi, P. C. (1975) *Land Reforms in India: Trends and Prospects*. Allied Publishers, Bombay
- Kahlon, A. S. and D. S. Tyagi (1983), *Agriculture Price Policy in India*, Allied Publishers, Bombay
- Barbara Harriss-White - *Rural Commercial Capital - Agricultural Markets in West Bengal*
- *Agricultural Markets From Theory To Practice: Field Experience In Developing Countries* by Barbara Harriss-White
- Terence J. Byres *Paths of capitalist Agrarian transition in the past and in the contemporary world*.
- V. K. Ramachandran and Madhura Swaminathan *Agrarian Studies: Essay on*
- *Agrarian Relations in Less-Developed Countries* Edited, New Delhi: Tulika Books. 2002. ISBN 81-85229-57-0
- Utsa Pattnaik, *Indian agriculture in the world economy*

Semester-VIII

GROUP-B

ECN: AMJ-II

AGRICULTURE ECONOMICS -II

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered*

Module–I Agriculture and Economic Development (10 Classes)

- 1.1: Nature and scope of agriculture and rural economics: Traditional agriculture and its modernization;
- 1.2: Role of Agriculture in Economic Development; Sustainable Agriculture.
- 1.3: Problems of Inputs in Indian Agriculture: Irrigation, Power, Seeds, Fertilizer
- 1.4: Agricultural Development in India, Recent trends in agriculture growth in India

Module–II Diversification of Rural Economic Activities (10 Classes)

- 2.1: Diversification of Agriculture
- 2.2 : Livestock economics–livestocks sources and their productivity; Problems of Livestock marketing;
- 2.2 : White revolution; Fishery and poultry development;
- 2.3: Development of Forestry, and horticulture for Agriculture Development
- 2.4 : Rural Non-Farm Sector(RNFS)uses and challenges

Module–III Agricultural Productivity and Marketing (15 Classes)

- 3.1: Agricultural production: Resource use and efficiency production function analyses in agriculture.
- 3.2: Factor combination and resources substitution cost and supply curve size of farm and Productivity debate in India, laws of returns
- 3.3: Resource use efficiency in traditional agriculture; Technical change, labour absorption, Feminization of Agriculture
- 3.4: Marketing and state policy, Agricultural Markets and marketing efficiency–marketing functions and costs

Module–IV Land Reform, Land Policy & Co-operation in India (10 Classes)

- 4.1: Land Reform measure sand performance; Recent Changes in Land Policies
- 4.2: Land utilization; Land distribution structure and trends; Rent; Land tenures and Farming systems–collective and state farming; Tenancy and crops haring–forms, with special reference to India.
- 4.3: Co-operative movement in India; Genesis and growth of co-operative sector; agricultural cooperation in India;
- 4.4: Problem and prospect of cooperative institutions.

Module–V Rural Labour Market

(15 Classes)

- 5.1: Rural Labour Supply, Inter locking of factor markets; Mobility and Productivity of labour
- 5.2: Wage Determination: Classical, Neo-classical and bargaining theories of wage determination; Concept of minimum wage, leaving wage and fair wage in theory and practice; National wage policy; Bonus systems and profit sharing.
- 5.3: Nature extend and trends in rural unemployment, Agricultural wages in India, Male female wage differences
- 5.4: Non-Agricultural rural employment–trends and determinants.

BASIC READING LIST

- Bhaduri, A. (1984), *The Economic Structure of Backward Agriculture*, Macmillan, Delhi
- Bilgrami, S. A. R. (1996), *Agriculture Economics*, Himalaya Publishing House, Delhi.
- Dantwala, M. L. et al. (1991), *Indian Agricultural Developments since Independence*, Oxford and IBH, New Delhi.
- Deogharia, P. C. (2008) *Rural Credit in India*, Satyam Publication, New Delhi.
- Government of India (1976), *Report of to National Commission on agriculture*, New Delhi.
- Government of India, *Economic survey (Annual)*
- Gulati, A and T. Kelly (1999), *Trade Liberalization and Indian agriculture*, O. U. P. New Delhi
- Joshi, P. C. (1975) *Land Reforms in India: Trends and prospects*. Allied Publishers, Bombay
- Kahlon, A. S. and D. S. Tyagi (1983), *Agriculture price Policy in India*, Allied Publishers, Bombay
- Barbara Harriss-White- *Rural Commercial Capital- Agricultural Markets in West Bengal*
- *Agricultural Markets From Theory To Practice: Field Experience In Developing Countries* by Barbara Harriss-White
- Terence J. Byres *Paths of capitalist Agrarian transition in the past and in the contemporary world*.
- V. K. Rama Chandran and Madhura Swaminathan *Agrarian Studies: Essay on*
- *Agrarian Relations in Less-Developed Countries* Edited, New Delhi: Tulika Books. 2002. ISBN 81-85229-57-0
- Utsa Pattnaik, *Indian agriculture in the world economy*

Semester-VIII

GROUP-B

ECN: AMJ-3

AGRICULTURE ECONOMICS -III

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Module–I Economic of Rural Infrastructure (10 Classes)

- 1.1: Problems of Rural Economy–Economic, social and others, Modes and problems of rural electrification
- 1.2: Use of Land, water and energy; rural transport, communication
- 1.3: Problems of Rural finance; Rural credit, Financial inclusion
- 1.4: Rural social infrastructure–education and health and information dissemination

Module–II Agricultural & Rural Finance (15 Classes)

- 2.1: Need of agriculture finance, Role of capital and rural credit; rural saving and capital formation
- 2.2: Rural Indebtedness causes & nature, Measures to reduce rural indebtedness
- 2.3 Characteristics and sources of rural credit–Institutional and non-institutional; reorganization of rural credit–cooperatives banks Regional rural banks
- 2.4: Land Development Banks, commercial banks and Lead Bank Scheme, NABARD and its role in agriculture credit

Module–III Agricultural Prices (10 Classes)

- 3.1: Marketing and State Policy: Agricultural markets and marketing efficiency, Regulated marketed and marketable surplus, Behaviour of agricultural price–Cobweb model 3.2 Price and income stability; State policy with respect to agricultural marketing, ware housing; Prices, Taxation and crop insurance;
- 3.3: Terms of trade between agriculture and non-agricultural Prices; Need for state intervention
- 3.4: Objectives of agricultural Price policy; instruments, Food security in India and public distribution system.

Module–IV Agricultural Growth in India (15 Classes)

- 4.1: Cropping patterns, Crops shifting
- 4.2: Pricing of inputs and role of subsidies
- 4.3: Distribution of gains from technological change, Role of public investment and capital formation in Indian agriculture strategy of agricultural development and technological progress
- 4.4: Sustainable agriculture–indigenous practices; Bio-technological practices and growth potential, Need of Second Green Revolution, Climate change and its impacts

Module–V Agriculture and External Sector

(10 Classes)

5.1: International Trade in agricultural commodities

5.2 : Commodity agreements–Role of World Trade Organization

5.3 : International Trade in agriculture, Role of MNCs.

5.4 : Globalization of Indian Economy and problems and prospects of Indian agriculture, Impact of World Trade Organization on Indian Agriculture

BASIC READING LIST

- Bhaduri, A. (1984) *The Economic Structure of backward Agriculture*, Macmillan, Delhi
- Bilgrami, S. A. R. (1996), *Agricultural Economics*, Himalaya Publishing House, Delhi.
- Dantwala, M. L. et. Al (1991), *Indian Agricultural Development Since Independence*, Oxford & IBH, New Delhi.
- Deogharia P. C. (2008) *Rural credit in India*, Satyam Publication, New Delhi.
- Government of India (1976), *Report of the National Commission on Agriculture*, New Delhi.
- Government of India, *Economic Survey (Annual)*, New Delhi.
- Gulati, A. and T. Kelly (1999), *Trade Liberalisation and Indian Agriculture*, Oxford University Press, New Delhi.
- Joshi, P. C. (1975) *Land Reforms in India: Trends and prospects*, Allied Publishers, Bombay.
- Kahlon, A. S. and Tyagi, S. (1983), *Agriculture price Policy in India*, Allied Publishers, New Delhi.
- Rao, C. H. Hanumantha (1975), *Agricultural Growth, Rural Poverty and Environmental Degradation in India*, Oxford University Press, New Delhi.
- Reserve bank of India, *Report on Currency and Finance (Annual)*, Mumbai.
- Rudra, A. (1982), *Indian Agricultural Economics: Myths and Reality*, Allied Publishers, New Delhi.
- Saini, G. R. (1979), *Farm Size, Resource Use Efficiency and Income Distribution*, Allied Publishers, New Delhi.
- Datt, G. (1996), *Bargaining Power, Wages and Employment: An Analysis of Agricultural Labour Markets in India*, Sage Publications, New Delhi.
- Hajela, P. d. (1998), *Labour Restructuring in India: A Critique of the New Economic Policies*, Commonwealth Publishers, New Delhi.
- Jhabvala, R. and R. K. Subramanya (Eds) (2000). *The Unorganized Sector: Work Security And Social Protection*, Sage Publication, New Delhi.
- Lester, R. A. (1960), *Economics of Labour* (2nd Edition), Macmillan, New Delhi.

Semester-VIII

GROUP-C

ECN: AMJ-1

INDUSTRIAL ECONOMICS-I

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Module–I Framework and Problems of Industrial Economics (15 Classes)

- 1.1: Concept and organization of a firm, Classification of firm on the basis of Ownership structure (Public, Private, Joint and Cooperative Sectors); Objectives of firm, behavioural model of firm
- 1.2: Location of Industries-Weber, Sargent Florence, Factors Influencing Location of Industries
- 1.3: Industrial Sickness-Symptoms, Causes and Remedial Measures.
- 1.4: Diversification, Integration & Merger of Industrial Units

Module–II State of labour (10 Classes)

- 2.1: Social security of labour-Concepts of Social Security, Social assistance and social insurance; Policies with special respect to social security
- 2.2: labour welfare in India-Special Problems of labour, female labour, Child labour, need for safety nets.
- 2.3: Labour Reforms-Second National Commission on labour; labour marketer forms; exit policy.
- 2.4: Labour Market Policies: Mobility of Labour

Module–III Industrial Relations (10 Classes)

- 3.1: Theories of Labour movement growth; pattern and structure of labour unions in India.
- 3.2: Causes of industrial disputes and their settlement and prevention.
- 3.3: Current trends in collective bargaining.
- 3.4: Labour legislation in India.

Module–IV Industrial Productivity and Finance (15 Classes)

- 4.1: Productivity—Measurement, Factors affecting Productivity, Importance of Productivity in the Competitive Environment
- 4.2: National Production Movement in India.
- 4.3: Industrial Finance-Owned, external and other components of funds, Major funding agencies IDBI, IFCI, SFCs, SIDBI and Commercial banks.
- 4.4: Role of FDIs in Industrial development.

Module–V Indian Industrial Growth and Pattern

(10 Classes)

- 5.1: Industrial Policy in India—Role of Public and Private Sector.
- 5.2: Problems of MSME in India, Role of MNC's in India.
- 5.3: Recent trends in Indian Industrial growth, Regional Industrial growth in India.
- 5.4: Industrial Development and Environmental Preservation-Pollution control policies of industries.

Basic Reading List:

- Ahluwalia, I.J. (1985), *Industrial Growth in India*, Oxford University Press, New Delhi.
- Barthwal, R.R. (1985), *Industrial Economics*, Wiley Eastern Ltd., New Delhi.
- Cherunilam, F. (1994), *Industrial Economics: Indian Perspective (3rd Edition)* Himalaya Publishing House, Mumbai.
- Desai, B. (1999), *Industrial Economy in India (3rd Edition)*, Himalaya Publishing House, Mumbai.
- Divine, P.J. and R.M. Jones et. Al. (1976) *An Introduction to Industrial Economics*, George Allen and Unwin Ltd., London.
- Government of India, *Economics Survey (Annual)*
- Hay, D. and D.J. Morris (1979) *Industrial Economics: Theory and Evidence*, Oxford University Press, New Delhi.
- Kuchhal, S.S. (1980), *Industrial Economy of India (5th Edition)*, Chaitanya Publishing House, Allahabad.
- Reserve Bank of India, *Report on Currency and Finance (annual)*.
- Singh, A. and A.N. Sadhu (1988), *Industrial Economics* Himalaya Publishing House, Bombay.
- Weber, Alfred. 1929. (translated by Carl J. Friedrich from Weber's 1909 book). *Theory of the Location of Industries*. Chicago: The University of Chicago Press

Semester-VIII

GROUP-C

ECN: AMJ-2

INDUSTRIAL ECONOMICS-II

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Industrial Productivity

(15 Classes)

- 1.1: Concept and Measurement of Productivity: Productivity in Indian Industries.
- 1.2: Industrial Sickness, Under-Utilization of Capacity: Factors Accounting for it and Consequences
- 1.3: Major Large Scale Industries: Sugar; Cement; Iron and Steel; Jute Industries
- 1.4: Agro – Processing Industries.
- 1.5: Small- Scale Industries; Cottage and Village Industries and Rural Industrialization.

Unit 2: Industry and Development

(15 Classes)

- 2.1: Mode of Financing: Equity and Debt.
- 2.2: Institutional Finance: Bank Finance.
- 2.3: Industry and Economic Development
- 2.4: Industry and Sectoral Linkages
- 2.5: Industrial Classification and Information

Unit 3: Industrial Development in India

(15 Classes)

- 3.1: International Competitiveness of Indian Industry.
- 3.2: Privatization and Issues Relating to Disinvestment Policy.
- 3.3: Industrial Structure at the Time of Independence.
- 3.4: New Industrial Policy and Economic Reforms.
- 3.5: Industrial Growth and Pattern.

Unit 4: Industrial Labour in India

(15 Classes)

- 4.1: Structure of Industrial Labour.
- 4.2: Employment Dimension of Indian Industries.
- 4.3: Industrial Legislation.
- 4.4: Industrial Relations.
- 4.5: Issues of Social Security: Wages; Bonus; Exit Policy and Social Security.

Basic Reading List:

- Ahluwalia, I.J. (1985), *Industrial Growth in India*, Oxford University Press, New Delhi.
- Barthwal, R.R. (1985), *Industrial Economics*, Wiley Eastern Ltd., New Delhi.
- Cherunilam, F. (1994), *Industrial Economics: Indian Perspective (3rd Edition)* Himalaya Publishing House, Mumbai.
- Desai, B. (1999), *Industrial Economy in India (3rd Edition)*, Himalaya Publishing House, Mumbai.
- Divine, P.J. and R.M. Jones et. Al. (1976) *An Introduction to Industrial Economics*, George Allen and Unwin Ltd., London.
- Government of India, *Economics Survey (Annual)*
- Hay, D. and D.J. Morris (1979) *Industrial Economics: Theory and Evidence*, Oxford University Press, New Delhi.
- Kuchhal, S.S. (1980), *Industrial Economy of India (5th Edition)*, Chaitanya Publishing House, Allahabad.
- Reserve Bank of India, *Report on Currency and Finance (annual)*.
- Singh, A. and A.N. Sadhu (1988), *Industrial Economics* Himalaya Publishing House, Bombay.
- Weber, Alfred. 1929. (translated by Carl J. Friedrich from Weber's 1909 book). *Theory of the Location of Industries*. Chicago: The University of Chicago Press

Semester-VIII

GROUP-C

ECN: AMJ-3

FINANCIAL INSTITUTIONS

Full Marks 100 (25+75)

In the End Semester Examination [Full Marks 75

Time 3 Hrs]

*There will be three groups of questions (A, B, & C), **Group A** will contain very short answer type questions (5 questions of 3 marks, all are to be answered) **Group B** short answer type, five questions of five marks each out of which any three questions to be answered. **Group C** will contain Long answer type five questions of fifteen marks each, out of which three to be answered.*

Unit 1: Central Bank

(15 Classes)

- 1.1: Central Bank: Functions and Objectives.
- 1.2: Instruments of Credit Control: Quantitative and Qualitative Methods.
- 1.3: Role and Functions of RBI: Development and Regulatory Functions.
- 1.4: Monetary Policies: Objectives and Limitations; Recent Monetary Policies of RBI.

Unit 2: Financial Institutions in India

(15 Classes)

- 2.1: Importance of Financial System in India.
- 2.2: Financial Institutions in India: Function and Growth.
- 2.3: Measures to Liberalize Financial System.
- 2.4: Banking and Financial Sector Reforms: Impact on Economic Growth in India.

Unit 3: Development Banking

(15 Classes)

- 3.1: Structure of Cooperative Institutions and Development Banks in India [SIDBI, IDBI] Objective; Role and Limitations.
- 3.2: Definition and Types of NBFs: Mutual Funds; LIC.
- 3.3: Growth and Importance of NBFs.
- 3.4: Recent Measures taken by RBI and SEBI to regulate Working of NBFs.

Unit 4: Financial Markets

(15 Classes)

- 4.1: Structure of Financial Markets: Call Money; Treasury bills, Commercial Bills.
- 4.2: Stock market and Market for Gilt-Edged Securities.
- 4.3: Unregulated Credit Markets.
- 4.4: SEBI and Working of Capital Markets in India.

Basic Reading List:

- M.L. Jhingan: *Monetary Economics* (Hindi& English Edition)
- D.M. Mithani *Money, Banking International trade and public finance.*(Hindi& English Edition)
- Sen S.N. *Central banking in underdeveloped money market.*
- Dommic Salvatore: *International Economics.*
- Ackley, G. (1978), *Macroeconomics: Theory and Policy* Macmillan, New York
- Blackhouse, R and A. Salansı (Eds.) (2000) *Macroeconomics and the real world* (Volumes),Oxford University Press, London.
- Branson, W.A. (1989) *Macroeconomics Theory and Policy* (3rd edition), Harper & Row, New York.
- Dombusck R and F, Stanley (1997), *macroeconomics*, McGraw Hill Inc., New York.
- Hall, R.E. and J.B. Taylor (1986), *Macroeconomics*, W.E. Norton, New York.
- Heijdra, B.J. and V.P. Fredrick (2001) *Foundations of Modern Macroeconomics*, Oxford University Press, New Delhi.
- Jha, R. (1999), *Contemporary Macroeconomic Theory and Policy*, Wiley Eastern Ltd., New Delhi.
- Romer, D.L. (1996) *Advanced Macroeconomics*. McGraw Hill Co. Ltd., New York.
- Scarfe, B.L. (1977) *Cycles Growth and Inflation* McGraw Hill, New York.
- Shapiro, E. (1996) *Macroeconomics Analysis*, Gigotia Publications, New Delhi.
- Surrey, N.J.C. (Ed.), (1976) *Macroeconomics them.* Oxford University Press, Oxford.
- Sinha, U.P (2010) *Monetary and Fiscal actions in India*, Concept Publishing Company New Delhi.
- F.S Mishkin & S G Eakins (2009) *Financial Markets and Institutions*, Pearson
- F.J Fabozzi, F Modigliani, FJ Jones, M G Ferri(2009) *Foundations of Financial Market and Institutions*, Pearson
- MR Baye and D W Jansen (1996) *Money Banking and Financial Market*, AITBS
- MY Khan (2011) *Indian Financial System*, Tata McGraw Hill