

PROVISIONAL SYLLABUS FOR FYUGP IN ECONOMICS HONOURS/RESEARCH UNDER KOLHAN UNIVERSITY  
FROM ACADEMIC SESSION 2022-2026



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Provisional Syllabus for  
Four-Year Undergraduate Programme (FYUGP) in  
**ECONOMICS HONOURS/ RESEARCH**

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UNDER KOLHAN UNIVERSITY

As per the Provisions of National Education Policy (NEP)-2020  
Implemented from Academic Session 2022-2026 onwards

Economics instantly responds to the shifting demands and objectives of society, it has become one of the most popular social science courses. Under the NEP, 2020, the curriculum has been designed to be more realistically applicable and job-oriented in the diverse environment that includes study of information technology, trade, industry, infrastructure, and other interdisciplinary fields. The curriculum also provides enough academic stimulation to get students ready for a career in economics research or teaching. The curriculum has a strong emphasis on both the theoretical and applied aspects of the subject, which has seen significant revisions recently.

### PROGRAMME OUTCOMES

The Undergraduate programme in Economics aims to

1. Foster a thorough comprehension and analytical reasoning in students.
2. Help understand fundamental economic theories and policies
3. Cultivate the skill to apply knowledge in order to evaluate and scrutinize historical and contemporary economic circumstances and challenges.
4. Empower students with mathematical and statistical methods to cultivate the capacity for economic evaluation.
5. Encourage the growth of a deeper understanding in every student in order to empower them to face the challenges of self-employment.
6. Foster comprehension of the significance of economic, social, and environmental aspects important for achieving the targeted sustainable development goals.
7. Empower students with the skill to reevaluate the principles and practices of economics and adapt to continuous social transformations.

### PEDAGOGY

The present Economics Bachelor's Programme focusses on blending of lecture-based instruction, active learning techniques and exposing students to technology-based learning to enhance student engagement and comprehension. This would involve some of the innovative and common pedagogical approaches to teaching Economics as listed below-

- **Lecture-Based Learning:** The curriculum will concentrate on covering the core concepts along with real-world application-based learning. Thus, strengthening the foundation for further learning.
- **Active Learning Techniques:** This will involve problem-solving activities, group discussions, project-based learning etc.
- **Technology Integration:** Digital empowerment of teachers and students both encompass the use of ICT tools. The role of modern ICT is well acknowledged for generation and dissemination of knowledge in the form of research-led teaching through presentations, online platforms, spreadsheets, available software etc. The programme will encourage both teachers and students to use ICT tools in their learning process.
- **Flipped Classroom:** It is a pedagogical approach in which the traditional notion of classroom-based learning is inverted and the students first explore new course content outside class by viewing a pre-recorded lecture or digital module or completing a pre-assigned reading or preparatory assignment. Then, the students are engaged in the class time to apply that knowledge through activities, discussions, or problem solving. This will make the sessions more interactive between the students and mentors.

*Aradhya Jaiswal*      *the ~~same~~*      *Santana Jaiswal*      *Aradhya*

## **HIGHLIGHTS OF REGULATIONS OF FYUGP**

### **PROGRAMME DURATION**

The Full-time, Regular UG programme for a regular student shall be for a period of **four years** with multiple entry and multiple exit options.

### **ELIGIBILITY**

- ❖ The selection for admission will be primarily based on availability of seats in the Major subject and marks imposed by the institution. Merit point for selection will be based on marks obtained in Major subject at Class 12 (or equivalent level) or the aggregate marks of Class 12 (or equivalent level) if Marks of the Major subject is not available.
- ❖ Reservation norms of The Government of Jharkhand must be followed as amended in times.
- ❖ UG Degree Programmes with Research shall be provided only to those students who secure a minimum of overall 75% marks (7.5 CGPA) or higher.
- ❖ Other eligibility criteria including those for multiple entry will be in light of the UGC Guidelines for Multiple Entry and Exit in Academic Programmes offered in Higher Education Institutions.

### **ADMISSION PROCEDURE**

The reservation policy of the Government of Jharkhand shall apply in admission and the benefit of the same shall be given to the candidates belonging to the State of Jharkhand only. The candidates of other states in the reserved category shall be treated as General category candidates. Other relaxations or reservations shall be applicable as per the prevailing guidelines of the University for FYUGP.

### **VALIDITY OF REGISTRATION**

Validity of a registration for FYUGP will be for maximum for Seven years from the date of registration.

### **ACADEMIC CALENDAR**

Academic Year: Two consecutive (one odd + one even) semesters constitute one academic year.

Semester: The Odd Semester is scheduled from July to December and the Even Semester is from January to June. Each week has a minimum of 40 working hours spread over 6 days.

Each semester will include – Admission, course work, conduct of examination and declaration of results including semester break.

An academic year comprising 180 working days in the least is divided into two semesters, each semester having at least 90 working days. With six working days in a week, this would mean that each semester will have  $90/6 = 15$  teaching/ working weeks. Each working week will have 40 hours of instructional time.

*Copy sent to the same Sanjay Jyoti*



## PROGRAMME OVERVIEW/ SCHEME OF THE PROGRAMME

Undergraduate degree programmes of either 3 or 4-year duration, with multiple entries and exit points and re-entry options within this period, with appropriate certifications such as:

EXIT OPTION FOR STUDENTS	AWARD
After successfully completing 1 year (2 semesters) of programme of study and additionally completing one vocational course of 4 credits during the summer vacation of the first year or internship/ Apprenticeship in addition to 6 credits from skill-based courses earned during first and second semester.	UG Certificate in Economics
After successfully completing 2 years (4 semesters) of programme of study and additionally completing one vocational course of 4 credits or internship/ Apprenticeship/ skill based vocational courses offered during first year or second year summer term in addition to 9 credits from skill-based courses earned during first, second, and third semester	UG Diploma in Economics
After successfully completing 3 years (6 semesters) programme of study	Bachelor of Arts Degree in Economics
After successfully completing 4 years (8 semesters) programme of study	Bachelor of Arts Degree with Honours in Economics
After successfully completing 4 years (8 semesters) programme of study and undertaking 12 credit Research component in fourth year of FYUGP.	Bachelor of Arts Degree (Honours with Research) in Economics

A student will be allowed to enter/re-enter only after the odd semester and they can only exit after even semester. Lateral re-entry to academic programmes will be based on the above mentioned earned proficiency test records. Validity of a registration for FYUGP will be for maximum for seven years from the date of registration. Re-entry after exit will be allowed only within this time frame.

## CREDIT OF COURSES

The term 'credit' refers to the weightage given to a course, usually in terms of the number of instructional hours per week assigned to it. The workload relating to a course is measured in terms of credit hours. It determines the number of hours of instruction required per week over the duration of a semester (minimum 15 weeks).

- One hour of teaching/ lecture or two hours of laboratory /practical work will be assigned per class/interaction.

**One credit for Theory = 15 Hours of Teaching i.e., 15 Credit Hours**

**One credit for Practicum = 30 Hours of Practical work i.e., 30 Credit Hours**

- For credit determination, instruction is divided into three major components:

**Hours (L) – Classroom Hours of one-hour duration.**

**Tutorials (T) – Special, elaborate instructions on specific topics of one-hour duration**

**Practical (P) – Laboratory or field exercises in which the student has to do experiments or other practical work of two-hour duration.**

*Cesed Antena* *the future* *Sanjana* *fuji* *A*

### **CALCULATION OF MARKS FOR THE PURPOSE OF RESULT**

- ❖ Student's final marks and the result will be based on the marks obtained in Semester Internal Examination and End Semester Examination organized taken together.
- ❖ Passing in a subject will depend on the collective marks obtained in Semester internal and End Semester University Examination both. However, students must pass in Theory and Practical Examinations separately.

### **PUBLICATION OF RESULT**

- ❖ The result of the examination shall be notified by the Controller of Examinations of the University in different newspapers and also on University website.
- ❖ If a student is found indulged in any kind of malpractice/ unfair means during examination, the examination taken by the student for the semester will be cancelled. The candidate has to reappear in all the papers of the session with the students of next coming session and his one year will be detained. However, marks secured by the candidate in all previous semesters will remain unaffected.
- ❖ There shall be no Supplementary or Re-examination for any subject. Students who have failed in any subject in an even semester may appear in the subsequent even semester examination for clearing the backlog. Similarly, the students who have failed in any subject in an odd semester may appear in the subsequent odd semester examination for clearing the backlog. Regulation related with any concern not mentioned above shall be guided by the Regulations of the University for FYUGP.

### **REVIEW**

The University may, review, alter, substitute, amend any of the provisions of this regulation subject to such conditions as may be prescribed by the UGC and as per any special situation arising during the operation of this regulation as perceived by the Academic Council of the University.

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**SEMESTER WISE COURSES IN ECONOMICS FOR FYUGP**

**Table: 1 Semester wise Course Code and Credit Points:**

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		
	Code	Papers	Credits
<b>I</b>	AEC-1	Language and Communication Skills (MIL-1 - Hindi/ English)	2
	VAC-1	Value Added Course-1	4
	SEC-1	Skill Enhancement Course-1	3
	MDC -1	Multi-disciplinary Course-1	3
	MN-1A	Minor from Discipline-1	4
	MJ-1	Major paper 1 (Disciplinary/Interdisciplinary Major)	4
<b>II</b>	AEC-2	Language and Communication Skills (MIL-2 - English/ Hindi)	2
	SEC-2	Skill Enhancement Course-2	3
	MDC -2	Multi-disciplinary Course-2	3
	MN-2A	Minor from Vocational Studies/Discipline-2	4
	MJ-2	Major paper 2 (Disciplinary/Interdisciplinary Major)	4
	MJ-3	Major paper 3 (Disciplinary/Interdisciplinary Major)	4
<b>III</b>	AEC-3	Language and Communication Skills (Language Elective 1 - Modern Indian language including TRL)	2
	SEC-3	Skill Enhancement Course-3	3
	MDC -3	Multi-disciplinary Course-3	3
	MN-2A	Minor from Vocational Studies/Discipline-3	4
	MJ-4	Major paper 4 (Disciplinary/Interdisciplinary Major)	4
	MJ-5	Major paper 5 (Disciplinary/Interdisciplinary Major)	4
<b>IV</b>	AEC-3	Language and Communication Skills (Language Elective - Modern Indian language including TRL)	2
	VAC-2	Value Added Course-2	2
	MN-2B	Minor from Vocational Studies/Discipline-2	4

*W. Antia* *Dr. S. K. Sahoo* *Barlaam Gupta* *Cisail* *B*

PROVISIONAL SYLLABUS FOR FYUGP IN ECONOMICS HONOURS/RESEARCH UNDER KOLHAN UNIVERSITY  
FROM ACADEMIC SESSION 2022-2026

	MJ-6	Major paper 6 (Disciplinary/Interdisciplinary Major)	4
	MJ-7	Major paper 7 (Disciplinary/Interdisciplinary Major)	4
	MJ-8	Major paper 8 (Disciplinary/Interdisciplinary Major)	4
V	MN-1C	Minor from Discipline-1	4
	MJ-9	Major paper 9 (Disciplinary/Interdisciplinary Major)	4
	MJ-10	Major paper 10 (Disciplinary/Interdisciplinary Major)	4
	MJ-11	Major paper 11 (Disciplinary/Interdisciplinary Major)	4
	IAP	Internship/Apprenticeship/Field Work/Dissertation/Project	4
VI	MN-2C	Minor from Vocational Studies/Discipline-2	4
	MJ-12	Major paper 12 (Disciplinary/Interdisciplinary Major)	4
	MJ-13	Major paper 13 (Disciplinary/Interdisciplinary Major)	4
	MJ-14	Major paper 14 (Disciplinary/Interdisciplinary Major)	4
	MJ-15	Major paper 15 (Disciplinary/Interdisciplinary Major)	4
VII	MN-1D	Minor from Discipline-1	4
	MJ-16	Major paper 16 (Disciplinary/Interdisciplinary Major)	4
	MJ-17	Major paper 17 (Disciplinary/Interdisciplinary Major)	4
	MJ-18	Major paper 18 (Disciplinary/Interdisciplinary Major)	4
	MJ-19	Major paper 19 (Disciplinary/Interdisciplinary Major)	4
VIII	MN-2D	Minor from Vocational Studies/Discipline-2	4
	MJ-20	Major paper 20 (Disciplinary/Interdisciplinary Major)	4
	RC/	Research Internship/Field Work/Dissertation	12
	OR		4
	AMJ-1	Advanced Major paper-1 (Disciplinary/Interdisciplinary Major)	4
	AMJ-2	Advanced Major paper-2 (Disciplinary/Interdisciplinary Major)	4
	AMJ-3	Advanced Major paper-3 (Disciplinary/Interdisciplinary Major)	4
Total Credit			160

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SEMESTER WISE COURSES IN ECONOMICS FOR FYUGP

**Table: 2 Semester wise Examination Structure in Discipline Courses:**

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Examination Structure			
	Code	Papers	Credits	Mid Semester Theory (F.M.)	End Semester Theory (F.M.)	End Semester Practical/ Viva (F.M.)
I	MDC - 1/2/3	Introduction To Economics	3	---	75	---
	MJ-1	Introduction to Microeconomics - I	4	25	75	---
	MN-1A	Principles of Economics	4	25	75	---
II	MJ-2	Introduction to Microeconomics - II	4	25	75	---
	MJ-3	Introduction to Macroeconomics - I	4	25	75	---
	MN-2A	Entrepreneurial Economics	4	15	60	25
III	MJ-4	Introduction to Macroeconomics - II	4	25	75	---
	MJ-5	Indian Economics - I	4	25	75	---
	MN-1B	Public Finance and Public Policy	4	25	75	---
IV	MJ-6	Indian Economics - II	4	25	75	---
	MJ-7	Basic Statistics for Economist- I	4	25	75	---
	MJ-8	Economics of Growth and Development	4	25	75	---
	MN-2B	Economics of Climate Change	4	15	60	25
V	MJ-9	Basic Statistics for Economist- II	4	25	75	---
	MJ-10	Basic Mathematics for Economist- I	4	25	75	---
	MJ-11	History of Economic Thought	4	25	75	---
	MN-1C	Programmes and Policies of Indian Economy	4	25	75	---
	IAP	Internship/Apprenticeship/Field Work/Dissertation/Project	4	---	---	100
	MJ-12	Basic Mathematics for Economist- II	4	25	75	---
	MJ-13	International Economics	4	25	75	---

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PROVISIONAL SYLLABUS FOR FYUGP IN ECONOMICS HONOURS/RESEARCH UNDER KOLHAN UNIVERSITY  
FROM ACADEMIC SESSION 2022-2026

VI	MJ-14	Rural Economics		4	25	75	---
	MJ-15	Economics of Social Sector		4	25	75	---
	MN-2C	Excel Basics for Data Analysis		4	15	60	25
VII	MJ-16	Jharkhand Economy		4	25	75	---
	MJ-17	Urban Economics		4	25	75	---
	MJ-18	Financial Institutions and Banking		4	25	75	---
	MJ-19	Basic Econometrics		4	25	75	---
	MN-1D	Economics of Platforms		4	25	75	---
VIII	MJ-20	Climate Change and the Economy		4	25	75	---
	RC	Research Internship/Field Work/ Dissertation	RC-I Research Methodology	4	25	75	---
			RC-II (Research Proposal/Synopsis and Dissertation Writing)	8	---	---	200
	OR						
	AMJ-1	A. Applied Econometrics or B. Agricultural Economics		4	25	75	---
	AMJ-2	A. Micro Finance and Rural Development or B. Labour and Industrial Economics		4	25	75	---
	AMJ-3	A. Advanced Mathematical Economics or B. Demography & Environmental Economics		4	25	75	---
	MN-2D	Financial Literacy		4	15	60	25
			Total Credit	160			






PROVISIONAL SYLLABUS FOR FYUGP IN ECONOMICS HONOURS/RESEARCH UNDER KOLHAN UNIVERSITY  
FROM ACADEMIC SESSION 2022-2026

Table: 2 Semester wise Course Code and Credit Points for Multi-disciplinary and Minor Courses:

Semester	Introductory, Minor Courses		Examination Structure			
	Code	Papers	Credits	Mid Semester Theory (T.M.)	End Semester Theory (T.M.)	End Semester Practical/ Viva (T.M.)
I/ II/ III	MDC	Introduction to Economics	3	---	75	---
I	MN-1A	Principles of Economics (Minor from Discipline-1)	4	25	75	---
II	MN-2A	Entrepreneurial Economics (Minor from Vocational studies/ Discipline-2)	4	25	75	---
III	MN-1B	Public Finance and Public Policy (Minor from Discipline-1)	4	25	75	---
IV	MN-2B	Economics of Climate Change (Minor from Vocational studies/ Discipline-2)	4	25	75	---
V	MN-1C	Programmes and Policies of Indian Economy (Minor from Discipline-1)	4	25	75	---
VI	MN-2C	Excel Basics for Data Analysis (Minor from Vocational studies/ Discipline-2)	4	25	75	---
VII	MN-1D	Economics of Platforms (Minor from Discipline-1)	4	25	75	---
VIII	MN-2D	Financial Literacy (Minor from Vocational studies/ Discipline-2)	4	25	75	---

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## SEMESTER I

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### **MAJOR PAPER –MJ 1:**

(4 Credits)

Marks:25 (5 Attd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100

Pass Marks: 40

#### ***Instruction to Question Setter for***

##### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

##### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 marks each. **Question No.2 & 3** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **INTRODUCTION TO MICROECONOMICS –I**

(60 Lectures )

#### **Course Objectives:**

1. This course aims to familiarize students with the basic micro economic theory.
2. It will enable them to understand real world economic issues & problems related to consumer's behaviour, production and markets.

#### **Course Learning Outcomes:**

1. The student will be able to understand the concepts of basic micro economic theory.
2. They will be able to understand the economic behaviour of consumer, firms and perfect and imperfect markets.

#### **Course Content:**

##### **MODULE I: Introduction to Principles of Economics**

(10 Lectures)

- 1.1 How People Make Decisions (concept of trade offs, opportunity cost, rationality and thinking at the margin, incentives)
- 1.2 How People Interact (concept of trade and its advantages, market, role of Government)
- 1.3 How the Economy as a Whole Works as a whole (PPC and standard of living, money supply and inflation, inflation and unemployment)
- 1.4 Problems and application of the principles of economics.

**MODULE II: Markets forces of demand and supply**

**(12 Lectures)**

- 2.1 Concept of market and competition
- 2.2 Definition of demand, individual and market demand, shifts in demand, abnormality in demand-price relationship
- 2.3 Definition of supply, individual and market supply, shifts in supply, abnormality in supply-price relationship
- 2.4 Equilibrium between demand and supply, price as a signal for resource allocation, elasticity of demand and supply, applications of elasticity.

**MODULE III: Theory of Consumer Choice**

**(15 Lectures)**

- 3.1 Utility; Marshallian Utility Analysis- Law of Diminishing Marginal Utility and Law of Equi-Marginal Utility
- 3.2 Indifference curve Analysis- Definition, Properties of Indifference curves, Budget line, Consumer's Equilibrium, changes in consumer preferences due to changes in price, changes in consumer preferences due to changes in income, price, income and substitution effects (Hicks and Slutsky) and application of Indifference Curve Analysis.

**MODULE IV: Theory of Production**

**(15 lectures)**

- 4.1 Concept, Characteristics and types of Production Function.
- 4.2 The Production Decision of a Firm, Law of Variable Proportions (Short run Law of Production). Law of Returns to Scale (Long-run Law of Production).
- 4.3 Isoquant and Iso-cost line- Definition and Properties
- 4.4 Producer's Equilibrium – Concept & Measurement with the help of Isoquant and Isocost lines; Expansion Path
- 4.5 Theory of Cost: Different types of cost to a producer, Shape of the cost curves, relationship between average and marginal cost.

**MODULE V: Firms in Competitive Markets**

**(8 Lectures)**

- 1.1 Meaning of competition, features of perfect competition, revenue of a competitive firm, Profit Maximization and the Competitive Firm's Supply Curve in the short run and long run, The Firm's Short-Run Decision to Shut Down. The long run supply curve of a competitive firm.

**Suggested readings:**

1. Mankiw, N.G.(2018).Principles of Microeconomics 8th ed.
  2. Varian, Hal R., Intermediate Microeconomics, 8th Edition, Affiliated East-West Press.
  3. Stonier, Alfred W. & Hague, Douglas C., A Textbook of Economic Theory, 5TH Edition, Pearson.
  4. Koutsoyiannis, A., Modern Microeconomics, 2ND Edition, Palgrave Macmillan.
  5. Pindyck, Robert & Rubinfeld, Daniel, Microeconomics, 8th Edition, Pearson
  6. Ahuja, H.L., Advanced Economic Theory.
  7. Samuelson and Nordhaus, Economics, Irwin McGraw Hill
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## SEMESTER I

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### **MINOR FROM DISCIPLINE (MN 1)**

(4 Credits)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100

Pass Marks: 40

#### ***Instruction to Question Setter for***

##### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45 < Attd. < 55, 2 marks; 55 < Attd. < 65, 3 marks; 65 < Attd. < 75, 4 marks; 75 < Attd. 5 marks)

##### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 marks each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **PRINCIPLES OF ECONOMICS**

(60 Lectures)

#### **Course Objectives:**

1. To understand the basics of economic theory.
2. To provide students with the core knowledge needed to understand the functioning of an economic system.
3. To boost economic literacy which will serve as a base for students interested to study other areas of economics.

#### **Course Learning Outcomes:**

By the end of this course, students will be able to:

1. Use the knowledge of microeconomic supply and demand analysis to assess the consequences of government policy
2. Explain consumers' and producers' decision-making processes and identify their optimal outcomes
3. Contrast the outcomes produced by different market structures
4. Define and use core macroeconomic concepts like GDP, unemployment, interest rates, and inflation
5. Show how open economies are interdependent with one another.

## **Course Content:**

### **MODULE I: Introduction to Economics**

**(15 lectures)**

- 1.1 Why study Economics?
- 1.2 Understanding the Problem of Scarcity and Choice
- 1.3 The Scope and method of Economics
- 1.4 Opportunity cost and PPF
- 1.5 Demand, Supply and Market Equilibrium
- 1.6 Elasticity of Demand & Supply
- 1.7 Applications of Elasticity

### **MODULE II: Principles of Microeconomics**

**(15 lectures)**

- 2.1 Household Behavior and Consumer Choice: Cardinal and ordinal utility analysis, consumer equilibrium and consumer surplus
- 2.2 Production Process and Firm Behavior: Analysis of Production, The behavior of profit-maximizing Firms, Short Run Costs and Output Decision, Long Run Costs and Output Decision, Firm Behavior in Perfect and Imperfect Markets

### **MODULE III: Principles of Macroeconomics**

**(15 lectures)**

- 3.1 Measuring National Output and National Income
- 3.2 Inflation, Unemployment and Business Cycles
- 3.3 Role of Money and the Central Bank

### **MODULE IV: International Trade**

**(15 lectures)**

- 4.1 Trade as an Engine of Growth
- 4.2 Absolute and Comparative Advantage of Trade
- 4.3 Gains from Trade
- 4.4 Free Trade Vs. Protectionism

### **Suggested Readings**

1. Mankiw, N.G. (2018). Principles of Microeconomics 8th ed.
  2. Pindyck Robert S., and Daniel L. Rubinfeld, (2012) Microeconomics, Pearson Prentice Hall, New Delhi.
  3. Ahuja, H.L., Advanced Macro Economics, S.Chand Publications.
  4. Ackley, G. Macroeconomics: Theory and Policy, Macmillan, New York
  5. N. Gregory Mankiw, Macro Economics, Worth Publishers.
  6. Krugman, Paul R International Economics-Theory and Practice, Pearson Publication
  7. D. Salvatore, International Economics, Wiley India
  8. Sodersten, B.O. and Geoffrey Reed, International Economics, Palgrave Macmillan Publisher.
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**SEMESTER I/ II/ III**

**MULTI-DISCIPLINARY COURSE**  
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**MULTI-DISCIPLINARY COURSE (MDC-1/2/3)**

**(3 Credits)**

**Marks: 75 (ESE: 3Hrs) = 75**

**Pass Marks: Th (ESE) = 30**

***Instruction to Question Setter for***

***End Semester Examination (ESE 75 marks):***

***There will be two groups of questions. Group A is compulsory which will contain three questions.***

***Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question***

***No.2 & 3 will be short answer type of 5 marks. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.***

***Note: There may be subdivisions in each question asked in Theory Examinations.***

**INTRODUCTION TO ECONOMICS**

**(45 Lectures)**

**Course Objectives:**

1. To present an overview of the field of Economics for students studying other disciplines.
2. To instill a broad understanding of the essential concepts and structures that characterize the subject among the students.

**Course Learning Outcomes:**

The course shall help the students understand the similarities between Economics and other disciplines while equipping them with basic tools that economics uses to understand and evaluate policy and find applicable solutions to practical problems.

**Course Content:**

**MODULE I: Introduction: Thinking like an Economist**

**(10 lectures)**

- 1.1 Why study economics? Scope and methods of economics
- 1.2 The 5 principles of Economics (Scarcity, Cost-benefit, Incentive, Specialization and Exchange)
- 1.3 Economic problems and decision making in Economics (rationality, efficiency, trade, free market/ socialism/ mixed systems etc.)
- 1.4 Basic principles of Macroeconomics (concepts of consumption, investment and savings)

**MODULE II: How Markets Work? The Theory of Supply and Demand**

**(15 lectures)**

- 2.1 Production possibilities, Specialization and Division of labour
- 2.2 The price mechanism, supply and demand (law of demand, law of supply, determinants of demand and supply, individual and market demand and supply, shifts in demand and supply curves)
- 2.3 Price determination and market equilibrium, price adjustments for temporary imbalances in the market (deficit and surplus), concepts of Consumer and Producer surplus, elasticity and its application.

**MODULE III: The Household and the Firm**

**(15 lectures)**

- 3.1 Cardinal and ordinal utility theory, price and income consumption curves and equilibrium of the consumer.
- 3.2 Theory of production
- 3.3 Concepts of Cost and Revenue

**MODULE IV: The International Economy**

**(5 lectures)**

- 4.1 Concept of Globalization
- 4.2 Importance of international trade as an engine of growth
- 4.3 The Role of international agencies (WTO/ IMF/ World bank)

**Suggested Readings:**

- 1. Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8th Edition, 2007.
  - 2. N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, apart of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.
  - 3. Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.
  - 4. Hal R. Varian: Microeconomic Analysis, W.W. Norton & Company. New York, Landan.
  - 5. Salvatore, D. (1997), International Economics, Prentice Hall, Upper Saddle River, N.J, New York.
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## SEMESTER II

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### **MAJOR PAPER –MJ 2:**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100**

**Pass Marks = 40**

#### ***Instruction to Question Setter for***

##### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

##### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 marks each. **Question No.2 & 3** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **INTRODUCTION TO MICROECONOMICS – II**

**(60 Lectures)**

#### **Course Objectives:**

1. This course aims to familiarize students with the applications of micro economic theory.
2. It will enable them to understand real world economic issues & problems related to markets, distribution and measurement of welfare.

#### **Course Learning Outcomes:**

1. The student will be able to understand the applications of micro economic theory.
2. They will be able to understand the economic operation of perfect and imperfect markets, how factor payments are distributed and the concept and measurement of welfare.

#### **Course Content:**

##### **MODULE I: Markets and Welfare**

**(10 Lectures)**

- 1.1 The concepts of consumer and producer surplus, market equilibrium,
- 1.2 Market efficiency and market failure, concept of deadweight loss, determinants of deadweight loss;
- 1.3 Government intervention in markets – price ceiling, price floor, taxes.

**MODULE II: Imperfect Markets (Monopoly & Oligopoly)** (18 lectures)

- 2.1 Monopoly- Characteristics; Equilibrium of Firm in short run and long run; Degrees of Price Discrimination
- 2.2 Oligopoly- Characteristics; Collusive and Non-Collusive Oligopoly; Kinked Demand curve
- 2.3 Monopolistic Competition- Meaning; Characteristics; Examples from the Real world Definition and characteristics
- 2.4 Price discrimination; public policy towards monopolies, Quantity, Competition Model (Cournot Model), Introduction to Game Theory, Nash Equilibrium and Dominance Strategy.

**MODULE III: Theories of Distribution** (20 Lectures)

- 3.4 Marginal Productivity Theory of Distribution
- 3.5 Rent- Ricardian Theory; Classical Theory; Modern Theory
- 3.6 Interest- Classical Theory; Keynesian Theory; IS-LM Theory
- 3.7 Wages- Classical Theory; Marginal Productivity Theory of Distribution
- 3.8 Profit- Innovation Theory; Risk Bearing Theory; Uncertainty Theory

**MODULE IV: Welfare Economics** (12 Lectures)

- 4.1 Meaning of Welfare, Economic Welfare, Individual Welfare and Social Welfare
- 4.2 Classical Welfare Economics
- 4.3 Pareto Optimality; Pareto Optimality in Production, Consumption and Exchange
- 4.4 Compensation Criteria (Kaldor & Hicks)
- 4.5 Problems in measuring welfare

**Suggested Readings:**

1. Varian, Hal R., Intermediate Microeconomics, 8th Edition, Affiliated East-West Press.
  2. Stonier, Alfred W. & Hague, Douglas C., A Textbook of Economic Theory, 5TH Edition, Pearson.
  3. Koutsoyiannis, A., Modern Microeconomics, 2ND Edition, Palgrave Macmillan.
  4. Pindyck, Robert & Rubinfeld, Daniel, Microeconomics, 8th Edition, Pearson
  5. Ahuja, H.L., Advanced Economic Theory.
  6. Samuelson and Nordhaus, Economics, Irwin McGraw Hill
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## SEMESTER II

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### **MAJOR PAPER –MJ 3:**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100**

**Pass Marks = 40**

#### ***Instruction to Question Setter for***

##### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

##### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A** is **compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 marks each. **Question No.2 & 3** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **INTRODUCTION TO MACROECONOMICS – I**

**(60 Lectures)**

#### **Course Objectives:**

1. The course aims to introduce the students to the basic concepts of Macro Economics.
2. To empower the students to be able to recognize the macroeconomic movements in an economy.

#### **Course Learning Outcomes:**

1. After completing this course, the students will be able to explain the basic concepts of GDP, National Income, Money, Functions of Central bank, Credit Creation and Credit Control.
2. Additionally, the students shall be able to explain real life changes in interest rates, prices, growth rates of a nation etc.

#### **Course Content:**

##### **MODULE I: Introduction to Macroeconomics**

**(20 lectures)**

- 1.1 Macroeconomics, Meaning and Scope;
- 1.2 Concept and Measurement of GDP, GNP, NDP and NNP at market price and factor cost
- 1.3 Methods of measuring National Income (Product Method, Expenditure, Income Method)
- 1.4 Circular Flow of Income in a Two Sector, Three Sector and Four Sector Model; Real and

Nominal GDP.

1.5 Balance of payment

**MODULE II: Money and Inflation**

**(10 lectures)**

- 2.1 Functions of money
- 2.2 Determinants of Demand for and Supply of Money
- 2.3 Quantity Theory of Money – Cash Transaction and Cash Balance Approach; Keynesian Approach
- 2.4 Inflation and its Types; Demand Pull and Cost Push Inflation; causes and effects of Inflation on different sectors of the economy
- 2.5 Measures to control inflation- Fiscal and Monetary policy
- 2.6 Classical, Neo-Classical, Keynesian and Post Keynesian Theories of Interest
- 2.7 Phillips Curve

**MODULE III: Banking**

**(15 lectures)**

- 3.1 Objectives, Functions of Central bank and Commercial banks
- 3.2 Credit creation by Commercial banks and its limitations
- 3.3 Methods of Credit Control by Central bank – Quantitative and Qualitative methods;
- 3.4 Regional Rural Banks - Definition; Scope; Functions.
- 3.5 Development Banks – Definition; Scope; Functions.

**MODULE IV: Macro Economic Policies and Global issues in Development**

**(15 lectures)**

- 4.1 Role of Monetary policy in Economic Development.
- 4.2 Role of Fiscal Policy in Economic Development.
- 4.3 Indian Planning Commission and NITI Aayog.
- 4.4 Financial Instability in Globalised Economies.,
- 4.5 Trade and Perpetuation of Global Inequalities.

**Suggested Readings:**

- 1. Dornbusch, Fischer, Startz, Macro Economics, Mc Graw Hill.
  - 2. N. Gregory Mankiw, Macro Economics, Worth Publishers.
  - 3. Seth, M.L., Macro Economics, Laxmi Narayan Publications.
  - 4. Ahuja, H.L., Advanced Macro Economics, S.Chand Publications.
  - 5. Vaish, M.C. Macroeconomic Theory, Vikas Publishing House
  - 6. Ackley, G. Macroeconomics: Theory and Policy, Macmillan, New York.
  - 7. Gupta, Suraj B. Monetary Planning for India, Oxford University Press.
  - 8. Harris, Monetary Theory, McGraw Hill Publication.
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## SEMESTER II

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### MINOR FROM VOCATIONAL STUDIES / DISCIPLINE-2 (MN 2A)

[Credits: Theory (03) + Practical (01)]

**Marks:**

**Theory: SIE (15) + ESE (60) = 75 (F.M)**

**Practical: Report Presentation (15) + viva (10) = 25 (F.M)**

**Pass Marks: 40 [Th (SIE + ESE) (30) + Practical (10)]**

#### *Instruction to Question Setter for*

##### Semester Internal Examination (SIE 10+5=15 marks):

There will be **two** group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks) and (c) practical examination consisting of Report presentation of 15 marks and Viva of 10 marks.

##### End Semester Examination (ESE 60 marks):

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks each. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to be answered.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

## ENTREPRENEURIAL ECONOMICS

(45 Lectures)

### Course Objectives:

1. This course aims to familiarize students with the importance of entrepreneurship in an emerging economy.
2. It also aims to provide the students with the necessary exposure to the entrepreneurial culture so as to prepare them for an entrepreneurial journey.
3. It will enable them to understand real world entrepreneurial activities, its ecosystem and its opportunities.

### Course Learning Outcomes:

After the successful completion of the course, the student will be able to;

1. Find career opportunities in business.
2. Be enabled to gain knowledge and skills needed to run a business successfully.

## **Course Content:**

### **MODULE I: Entrepreneur and Entrepreneurship** (20 Lectures)

- 1.1 Entrepreneur and Entrepreneurship – Meaning, Definitions, Evolution, types- Characteristics, qualities, functions of entrepreneur- Distinction between entrepreneur and manager, Distinction between entrepreneur and intrapreneur.
- 1.2 Role and importance of Entrepreneurship in economic development: Role and importance- Factors influencing entrepreneurship’- Psychological, social, Economic and Environmental.
- 1.3 New generations of entrepreneurship viz. social, Health, Tourism and Women entrepreneurship; Barriers to entrepreneurship.

### **MODULE - II: Launching Entrepreneurial Ventures** (25 Lectures)

- 2.4 Generation of ideas: Methods and process - sources of ideas - screening process- Assessing Opportunities-Challenges, pitfalls and critical factors of new venture;
- 2.5 Business Plan- New Ventures: Steps involved in setting up a Business – identifying, selecting a Good Business opportunity, Market Survey and Research, Techno-Economic Feasibility Assessment.
- 2.6 Role of Innovation & Creativity: Innovation- Meaning and importance of innovation; Types of innovation; Sources of innovation; Conditions for effective innovation at Organization level.
- 2.7 Creativity: Concept and process of creativity; role and importance of creativity; concepts of branding, trademarks, patents, copyrights, and registered design protection.

#### **Practical Work (1Credit)**

1	Case studies of successful entrepreneurs
2	Share Your Story: Identify area of innovation and prepare a project in the area of Your choice and present it through Sketch modeling (Preparing project proposal)
3	Conduct Market survey to know the demand for different products.
4	Solution finding exercise: students find solutions to problems they see in the world around them thus developing their ability to clearly define a problem and understand it.

#### **Suggested Readings:**

1. Donald F Kuratko, “Entrepreneurship – Theory, Process and Practice”, 9th Edition, Cengage Learning, 2014.
2. Khanka. S.S., “Entrepreneurial Development” S. Chand & Co. Ltd., Ram Nagar, New Delhi, 2013.
3. Kuratko and Rao, Entrepreneurship: A South Asian Perspective; Ferrell, Fraedrich, Farrell, Business Ethics, Cengage Learning.
4. Entrepreneurship, R. Saibaba, Kalyani Publishers, New Delhi.
5. Entrepreneurship Development and Business Ethics, Sanjeet Sharma – V.K. Global Pvt. Ltd., New Delhi.
7. SS Khanka, Entrepreneurial Development, S. Chand & Co, Delhi.
8. Schumpeter, J. (1934). The theory of economic development. Cambridge, MA: Harvard University Press
9. Shane, S. (2003). A general theory of entrepreneurship. Cheltenham: Edward Elgar
10. Barney, J. (1991). Firm resources and sustained competitive advantage. Journal

of Management, 17(1), 99–120.

11. Gartner, W. (2001). Is there an elephant in entrepreneurship? Blind assumptions in theory development. *Entrepreneurship: Theory and Practice*, 25(4), 27–39.
  12. Kirzner, I. (1973). *Competition and entrepreneurship*. Chicago, IL: University of Chicago Press.
  13. Busenitz, L, & Barney, J. (1997). Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making. *Journal of Business Venturing*, 12(1), 9–30
  14. Low, M, & MacMillan, I. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14(2), 139–161
  15. Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791
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## SEMESTER III

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### **MAJOR PAPER –MJ 4:**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100**

**Pass Marks = 40**

#### ***Instruction to Question Setter for***

##### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

##### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

## **INTRODUCTION TO MACROECONOMICS – II**

**(60 Lectures)**

### **Course Objectives:**

1. The course aims to introduce the students to the basic concepts of Macro Economics.
2. To empower the students to be able to recognize the macroeconomic movements in an economy.

### **Course Learning Outcomes:**

1. After completing this course, will empower the students with the basic understanding of theories of output and employment, relationship between inflation and unemployment, inflation in India and relevance of balance payment and exchange rate in an economy.
2. Additionally, the students shall be able understand the persisting issues of globalization, poverty and inequality.

### **Course Content:**

#### **MODULE I: Theories of Output and Employment**

**(25 lectures)**

- 1.1 Say's Law of Market and Classical theory of Employment; Keynesian theory of Effective Demand.
- 1.2 Consumption Function, Saving Function – MPC and MPS; Factor affecting Consumption Function; Investment Function- Autonomous and Induced Investment.



1.3 Keynesian Multiplier

1.4 Investment Function: Autonomous and Induced Investment; MEC and Rate of Interest.  
Theory of Acceleration

1.5 Principle of Effective Demand: Equality and Equilibrium of AD/AS and S/I

1.6 Derivations of the IS and LM functions; IS-LM and aggregate demand (AD); shifts in the AD curve.

**MODULE II: Inflation and unemployment**

**(15 lectures)**

2.1 Inflation and unemployment - Phillips Curve in the short run and long run, shifts in Phillips Curve, the role of inflationary expectations in driving inflation, inflation inertia.

2.2 Fiscal indiscipline, debt monetisation and inflation

2.3 Inflation in India, anti-inflation policies.

**MODULE III: Balance of Payments and Exchange Rate**

**(20 lectures)**

3.1 Balance of Payments- current and capital accounts, greater open-ness in current and capital accounts under external liberalisation.

3.2 Market for foreign exchange and exchange rate determination, shifts in demand and supply in foreign exchange market originating in current and capital accounts and impact on the exchange rate, Real exchange rate.

3.3 Exchange rate regimes- fixed, flexible and managed, Intervention in the foreign exchange market and money supply, Devaluation as policy, exchange rate and inflation. Economic reforms and external liberalisation in India.

3.4 Purchasing Power Parity principle and its limitations

**Suggested Readings:**

1. Dornbusch, Fischer, Startz, Macro Economics, Mc Graw Hill.
  2. N. Gregory Mankiw, Macro Economics, Worth Publishers.
  3. Sikdar, Soumyen, Principles of Macroeconomics, Oxford University Press, India, 3<sup>rd</sup> Edition
  4. Blanchard, Oliver. J, Johnson, David. R., Macroeconomics, Pearson.
  5. Ahuja, H.L., Advanced Macro Economics, S. Chand Publications.
  6. Bhagwati, J., In Defense of Globalization, Oxford University Press.
  7. Stiglitz, J. E., Globalisation and Its Discontents, Penguin India.
  8. Vaish, M.C. Macroeconomic Theory, Vikas Publishing House
  9. Ackley, G. Macroeconomics: Theory and Policy, Macmillan, New York.
  10. Gupta, Suraj B. Monetary Planning for India, Oxford University Press.
  11. Harris, Monetary Theory, McGraw Hill Publications
  12. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, International Economics, Pearson Education Asia.
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## SEMESTER III

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### **MAJOR PAPER -MJ 5:**

(4 Credits)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks = 40

#### ***Instruction to Question Setter for***

##### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

##### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A** is **compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **INDIAN ECONOMICS –I**

(60 Lectures)

#### **Course Objectives:**

On completion of the course, students will be able to develop an understanding of the basic structure of the Indian economy. They will understand the importance, causes and impact of population growth and relate them with economic development.

#### **Course Learning Outcomes:**

They will also be able to forecast the future course of development through their knowledge of policies and programmes set by the Government and other development agencies.

#### **Course Content:**

##### **MODULE I: Structure of the Indian Economy**

(20 lectures)

- 1.1 Major economic features of the Indian economy at the eve of independence.
- 1.2 Sectors and Sub-sectors of the Indian Economy Their income and employment generation; contribution to GDP.
- 1.3 Basic economic indicators: GDP; Growth Rate; National Debt; Balance of Trade.

1.4 Appraisal of growth and development status of Indian Economy.

**MODULE II: Planning and Development**

**(20 lectures)**

- 2.1 Economic Planning in India–Historical background up to NITI Aayog.
- 2.2 Objectives of Indian Planning.
- 2.3 New Economic Policy (1991)-Objectives, Features, Impact on different sectors.
- 2.4 Recent initiatives for development–MGNREGA; NRLM; Make in India Program Start Up India Scheme; Pradhan Mantri Kaushal Vikas Yojana.

**MODULE III: Population and Human Development**

**(20 lectures)**

- 3.1 Demographic trends in size, population growth rate, age, sex, rural-urban and occupational distribution in India.
- 3.2 Human development: Meaning; Indicators: HDI; GDI- Concept and India's global ranking.
- 3.3 Human capital and its Components: Education (Importance, Gross Enrolment Ratio, Literacy rate);
- 3.4 Health (Importance, Status and Trends of MMR, IMR, Life Expectancy); Skill Enhancement; Workforce Participation.
- 3.5 Problem of Indian Population: Malnutrition, Poverty and Unemployment-Meaning, Status and Government measures to eradicate.

**Suggested Readings:**

- 1. Puri V.K and Mishra S. K, Indian Economy, (English and Hindi) (January2022), Himalaya Publication. House.
  - 2. Dutt, Gaurav and Sundaram, Indian Economy, (English and Hindi) (Latest edition) S Chand & Co Ltd.
  - 3. Kapila, Uma, Indian Economy: Performance and Policies, (22ndedition2021), Academic Foundation Publications.
  - 4. Jalan Bimal, India's Economic Policy (2000), Penguin India Publication.
  - 5. Sinha V.C, Indian Economy Performance and Policies (2019), SBPD Publications
  - 6. Verma Sanjeev, The Indian Economy (2020), Unique Publishers.
  - 7. Mishra J.P, Bharat ki Arthik Nitiyan (2019), Sahitya Bhavan Publications.
  - 8. Singh, Ramesh, Bharitiya Arthavyavastha (14<sup>th</sup> edition), Mc Graw Hills
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## SEMESTER III

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### **MINOR FROM DISCIPLINE-1 (MN 1B)**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100**

**Pass Marks = 40**

#### ***Instruction to Question Setter for***

##### ***Semester Internal Examination (SIE 20+5=25 marks):***

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

##### ***End Semester Examination (ESE 75 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **PUBLIC FINANCE AND PUBLIC POLICY**

**( 60 Lectures)**

#### **Course Objectives:**

This course is designed to develop comprehensive understanding of theories related to public policy and rational choice and public expenditure and their application. Further, the course will focus to identify differences in processes, revenue sources, and budgetary challenges faced by the government.

#### **Course Learning Outcomes:**

1. The students will be enabled to understand the intricacies of public finance and public policy.
2. To provide comprehensive understanding of theories of public expenditure and principles of taxation.

#### **Course Content:**

##### **MODULE I: Nature and Scope of Public Finance**

**(10 lectures)**

- 1.1 Meaning and Scope of Public Finance
- 1.2 Role of Government and Changing Perspective in a Mixed Economy, Capitalist and Socialist Economy

- 1.3 Government as an agent for operationalizing the planning process; public goods, private goods and merit goods; Principle of Maximum Social Advantage Dalton, Musgrave and Hicks Optima
- 1.4 Market Failures- Imperfections, Externalities

**MODULE II: Rationale for Public Policy** (10 lectures)

- 2.1 Impossibility of Decentralized provision of public goods- contributions of Samuelson and Musgrave
- 2.2 Revealing Social Preferences through Majority Voting—Arrow's Impossibility Theorem
- 2.3 Tiebout Model-Theory of Club Goods-Stabilization Policy- Keynesian case

**MODULE III: Public Expenditure** (14 lectures)

- 3.1 Budget – Structure and concept of budgetary deficits
- 3.2 Stimulus packages and other policy measures introduced in wake of the pandemic
- 3.3 Wagner's law of increasing state activities- Wiseman-Peacock Hypothesis Pure theory of public expenditure-structure and growth of public expenditure
- 3.4 Criteria for public investment –social cost- benefit analysis – Project Evaluation, Estimation of costs- Discount rate; Reforms in expenditure budgeting- programme budgeting and zero-based budgeting
- 3.5 Measures and Policy responses to Covid 19 – fiscal and monetary

**MODULE IV: Taxation and Public Debt** (14 lectures)

- 4.1 Trends in Public Debt
- 4.2 Sources and Burden of Public Debt
- 4.3 Division of tax burden—The Benefit Approach; Ability-to-Pay Approach.
- 4.4 Impact and Incidence of Taxes.
- 4.5 Indian Tax system
- 4.6 Tax reforms; VAT and GST

**MODULE V: Fiscal Federalism in India** (12 lectures)

- 5.1 Financial issues in a Federal Set up
- 5.2 Centre-State Financial relations
- 5.3 Vertical and horizontal devolution –issues and approaches
- 5.4 Concept of Fiscal Consolidation, Fiscal Responsibility and Budget Management (FRBM), Fiscal Deficit in India
- 5.5 14<sup>th</sup> and 15<sup>th</sup> Finance Commission

**Suggested Readings:**

1. Musgrave and Musgrave, (2017) Public Finance in Theory and Practice Mc Graw- Hill International Edition
2. Srivastava, D.K., (Ed) (2000) Fiscal Federalism in India, Har-Anand Publication, Ltd. New Delhi
3. Bhatia H.L. (2012) Public Finance, Vikas Publishing House Pvt.Ltd. New Delhi
4. Jha R. (2010), Modern Theory of Public Finance. New Age International Publishers
5. Chelliah, R.J. (1971) Trends in Taxation in Developing Countries. IMF Staff Papers, 18, 254-325. <https://doi.org/10.2307/3866272>
6. Hemlata Rao (2006) Fiscal Federalism –Issues and Policies, New Country Publications, New Delhi.

7. Mithani D.M. (2017). Modern Public Finance: Theory and Policy, Himalaya Publishing House, New Delhi.
8. Vaish, M.C., Money, Banking, Trade & Public Finance, New Age International Pvt Ltd.
9. Sundaram, K.P.M., Money, Banking and International Trade, S Chand Publications.
10. Atkinson A.B. and J.E. Siglitz (2015). Lectures on Public Economics, Tata McGraw Hill Delhi
11. J.E. Stiglitz (2000). Economics of the Public Sector (third Edition)
12. Buchaman J.M. (1970), The Public Finances, Richard D.Irwin, Homewood.
13. Chand, S.N.(2008), Public Finance, Atlantic Publishers
14. Singh, S.K(2008), S. Public Finance: Theory and Practice, Chand Publishing
15. Tyagi B.P. (2016), Public Finance, Jai Prakash Nath Co. Meerat, U.P.

**Websites:**

<https://dea.gov.in/indian-public-finance-statistics>

<https://finmin.nic.in/>

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## SEMESTER IV

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### **MAJOR COURSE-MJ 6:**

(4 Credits)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100

Pass Marks: = 40

#### ***Instruction to Question Setter for***

##### ***Semester Internal Examination (SIE 20+5=25 marks):***

There will be **two** group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

##### ***End Semester Examination (ESE 75 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. **Group B will contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **INDIAN ECONOMICS-II**

(60 Lectures)

#### **Course Objectives:**

On completion of the course, students will be able to develop an understanding of the basic structure of the Indian economy. The course also enables the students to understand the agricultural and industrial structure, their problems and contributions to the economy. Further, it deals with foreign trade of the economy.

#### **Course Learning Outcomes:**

At the end of the course student will be able to pinpoint and understand the past and present economic conditions of the country in various sectors.

#### **Course Content:**

##### **MODULE I: Indian Agriculture**

(15 lectures)

- 1.1 Role of agriculture in the Indian economy; Trend of share of Agriculture in GDP
- 1.2 Problems of Indian agriculture
- 1.3 Land reforms; Green revolution



- 1.4 Regional disparities in Indian agriculture (in Gross Cultivated area, Production and Productivity of food grains, Percentage share in Gross State Domestic Product)

**MODULE II: Indian Industry**

**(15 lectures)**

- 2.1 Role of industry in the Indian economy; Trend of share of industry in GDP
- 2.2 Large Scale Industries: Importance; Pattern of industrialization
- 2.3 MSME: Composition; Importance; Major Problems faced by MSME
- 2.4 New Industrial Policy 1991-Goals, Objectives, Main features

**MODULE-III India's Foreign Trade**

**(15 lectures)**

- 3.1 Composition of Foreign Trade; Direction of Foreign Trade.
- 3.2 India's Balance of Payment since 1991.
- 3.3 Foreign Trade Policy -Importance, Objectives, Features of 2015 Policy.
- 3.4 Regulatory bodies of Foreign Trade-FEMA; WTO and India-Favourable and Unfavourable Impact of WTO on Indian Economy

**MODULE IV: Development in Indian Infrastructure**

**(15 lectures)**

- 4.1 Rationale for private and public participation in infrastructure
- 4.2 Financing of infrastructure; BOT (Build, Operate, Transfer) models
- 4.3 Regulation in Indian infrastructure
- 4.4 Experiences in different sectors – electricity, telecom, railways

**Suggested Readings:**

- 1. Puri V.K and Mishra S. K, Indian Economy, (English and Hindi) (January 2022), Himalaya Pub .House.
- 2. Dutt, Gaurav and Sundaram, Indian Economy, (English and Hindi) (Latest edition), S Chand & Co Ltd.
- 3. Kapila, Uma, Indian Economy: Performance and Policies, (22<sup>nd</sup> edition 2021), Academic Foundation Publications.
- 4. Jalan Bimal, India's Economic Policy (2000), Penguin India Publication.
- 5. Sinha V.C, Indian Economy Performance and Policies (2019), SBPD Publications
- 6. Verma Sanjeev, The Indian Economy (2020), Unique Publishers.
- 7. Mishra J.P, Bharatki Arthik Nitiyan (2019), Sahitya Bhavan Publications.
- 8. Singh, Ramesh, Bharitiya Arthavyavastha (14<sup>th</sup> edition), Mc Graw Hills.
- 9. Indian economic survey for relevant years
- 10. Jharkhand economic survey for relevant years.

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## SEMESTER IV

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### **MAJOR COURSE-MJ 7:**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100**

**Pass Marks = 40**

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

#### ***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks each. **Group B will contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.*

**Note:** *There may be subdivisions in each question asked in Theory Examinations.*

### **BASIC STATISTICS FOR ECONOMISTS-I**

**( 60 Lectures)**

#### **Course Objectives:**

The Course aims to introduce the students to the basic concepts of Statistics and its application in real world.

#### **Course Learning Outcomes:**

After completing this course, the students will be able to have a good understanding of the basic concepts of data and its measurement, univariate and bivariate analysis. Further, the students will learn preliminary data analysis & interpretation that are widely used to solve the economic and business problems.

#### **Course Content:**

#### **MODULE I: Introduction to Statistics**

**(20 lectures)**

1.1 Definition and scope of Statistics

1.2 Types of Data–Primary and Secondary Data, Variables, and Observations, Scales of Measurement -Qualitative and Quantitative Data-Cross-Sectional and Time Series data sources

1.3 Methods of Collection of Data-Census and Sampling methods

1.4 Classification and Presentation of Data-Tabular; Diagrammatic and Graphic

**MODULE II: Univariate Analysis**

**(20 lectures)**

- 2.1 Measures of Central Tendency: Mathematical average –Arithmetic Mean, Geometric Mean and Harmonic Mean, Positional Average- Median and Mode.
- 2.2 Measures of Dispersion: Absolute measure of Dispersion, Range, Inter Quartile Range, Quartile Deviation, Mean Deviation, Standard Deviation, Relative measure of Dispersion, Co-efficient of Range, Quartile Deviation, Mean Deviation and Standard Deviation (co-efficient of variation).
- 2.3 Skewness Moments and Kurtosis

**MODULE III: Bivariate Analysis**

**(20 lectures)**

- 3.1 Meaning and Types of Correlation, Methods of Computation of Correlation Coefficient – Karl Pearson's Method, Spearman's Rank Correlation Method and Properties of Correlation co-efficient
- 3.2 Meaning and Importance of Regression Analysis, Simple Regression Lines and Equations and Fore casting (Two Variables Only); Ordinary Least Square (OLS) Method.
- 3.3 Co-efficient of determination; Interpretation of Regression co-efficient and Relation with Correlation co -efficient.

**Suggested Readings:**

1. Gupta, S. P. (2012) Statistical Methods, S.Chand and Company ,New Delhi
  2. Das, N. G. (2017) Statistical Methods (Combined Edition Volume & 2), McGraw Hill Education (India) Private Limited.
  3. Murray R. Spiegel and Larry J. Stephens (1998), Schaum Outline of Theory and Problem of Statistics, Tata Mc Graw-Hill Education, 3<sup>rd</sup> Edition.
  4. Agrawal, V.L. Basic Statistics, New Age International Publishers.
  5. Gupta, V.N., Quantitative Technique (Hindi Edition), SPBD Publication.
  6. Sinha, V.C. and Gupta Alok, Business Statistics, SPBD Publication.
  7. Gupta, S.C., Fundamental of Statistics, Himalaya Publishing House.
  8. Medhi , J. (1992), Statistical Methods: An Introductory Text,2<sup>nd</sup> Edition,Wiley.
  9. Bradley, Teresa (2007), Essential Statistics for Economics, Business and Management, John Willey & Sons.
  10. Agresti, Alan. (2017), Statistical Methods for the Social Sciences, 5th Edition, Pearson
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## SEMESTER IV

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### **MAJOR COURSE-MJ 8:**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100**

**Pass Marks: = 40**

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

#### ***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

**Note:** *There may be subdivisions in each question asked in Theory Examinations.*

### **ECONOMICS OF GROWTH AND DEVELOPMENT**

**(60 Lectures)**

#### **Course Objectives:**

The course begins with a discussion of issues of growth and development, their measures and indicators. Human Development and international comparisons with India. Basic growth models and theories of development have been included.

#### **Course Learning Outcomes:**

This course is designed to enable students to have an understanding of the basics of economics of growth and development along with theories and models and giving a direction to minds of students to take a wholistic view on growth and development.

#### **Course Content:**

#### **MODULE I: Economic Growth and Development**

**(16 Lectures)**

- 1.1 Meaning and Measurement of Economic Growth; Distinction between Economic Growth and Development, Indicators of Economic Development

- 1.2 Factors affecting Growth and Development; Main obstacles to Economic Development; Sustainable Development
- 1.3 Indices of Development: HDI, GDI, GEM, PQLI; International variations in these measures; Comparisons with India.

**MODULE II: Growth and Development Models and Empirics**

**(16 Lectures)**

- 2.1 The Harrod - Domar Model
- 2.2 Solow Model and its variants
- 2.3 Ricardian Theory
- 2.4 Marxian Theory
- 2.8 Rostow's Stages of Growth Theory

**MODULE III: Theories of Growth and Development**

**(16 Lectures)**

- 3.1 Structural change and Lewis Model of Unlimited Supplies of Labour
- 3.2 The Big Push Theory
- 3.3 Leibenstein's Theory of Critical Minimum Efforts
- 3.4 Balanced and Unbalanced Growth Theories

**MODULE IV: Contemporary Models of Development and Underdevelopment**

**(12 Lectures)**

- 4.1 Theories of Endogenous Growth with special reference to Romer's Model
- 4.2 Underdevelopment as coordination failure
- 4.3 Theory of Multiple Equilibria

**Suggested Readings:**

1. Ray, D. (1998). Development economics. Princeton University Press.
  2. Meier, G., Rauch, J. (2005). Leading issues in economic development. Oxford University Press.
  3. Gully baba IGNOU, MEC-004 Economics of Growth and Development.
  4. Ahuja, H. L, (2016) Development Economics. S Chand Publishing.
  5. Sinha, UP, Economic Development and Growth Models. Bharti Publications.
  6. Human Development Report. Relevant years.
  7. Todaro, M., Smith, S. (2015). Economic Development. Pearson.
  8. Higgins, B (1959) Economic Development, WW Norton, New York.
  9. Lekhi, RK, Joginder Singh, The Economics of Development and Planning, Kalyani publishers.
  10. Mishra J P. (2022), Samvridhi evam Vikaska Arthshastra, Sahitya Bhawan Publications.
  11. Misra, S. K. and Puri, Growth and Development, Mumbai: Himalaya Publishers (current edition)
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## SEMESTER IV

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### **MINOR FROM VOCATIONAL STUDIES -2 (MN 2B)**

**[Credits: Theory (03) + Practical (01)]**

**Marks:**

**Theory: SIE (15) + ESE (60) = 75 (F.M)**

**Practical: Report Presentation (15) + viva (10) = 25 (F.M)**

**Pass Marks: 40 [Th (SIE + ESE) (30) + Practical (10)]**

#### ***Instruction to Question Setter for***

***Semester Internal Examination (SIE 10+5=15 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Group B will contain descriptive type two questions of five marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)and (c) practical examination consisting of Report presentation of 15 marks and Viva of 10 marks.*

***End Semester Examination (ESE 60 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type five questions of fifteen marks each, out of which any three are to be answered.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

### **ECONOMICS OF CLIMATE CHANGE**

**(45 lectures)**

#### **Course Objectives:**

The course aims to introduce the students to the fundamentals of economics of climate change. Further, imparting knowledge of economic instruments in addressing climate change and identifying the role of institutions for addressing climate change by application of economic principles. The course not only aims at addressing the impact of climate change on global economy but also on Indian Economy.

#### **Course Learning Outcomes:**

1. Basic understanding of the causes and consequences of climate change on global economy with special reference to India economy.
2. To examine the economic instruments at global and regional levels for making policy choices related to climate change

3. The students will be able to analyse the economic principles in work at institutional level to address the climate change problems.

**Course Content:**

**MODULE 1: The Economics of Global Climate Change** (30 Lectures)

- 1.1 Introduction
- 1.2 Causes and consequences of climate change – trends in global carbon emissions, trends and projections for global climate
- 1.3 Economic growth, well-being and sustainability
- 1.4 Economic Analysis of Climate Change – cost-benefit studies of global climate change, climate change and inequality
- 1.5 Policy Responses to Climate Change – Adaptation and Mitigation, carbon taxes, tradable permits and other policy tools: subsidies, standards, R&D and technology transfer.  
Green fiscal policy: from austerity to full Employment in a low-carbon economy.
- 1.6 Kyoto, Paris and other International Environmental Agreements

**MODULE 2: Impact of Climate Change in India** (15 Lectures)

- 2.1 Role of climate change in the economy
- 2.2 Adaptations to counter the harmful effects of climate change
- 2.3 India's domestic policy on climate and environmental action
- 2.4 Sustainable Development and Climate Change

**Practical:** (01 Credit)

Report presentation related to any one of the following topics –

- a. Review on literatures addressing to cause and consequences of climate change globally or in Indian context.
- b. Highlighting the issues of climate change and adaptations to counter the harmful effects of climate change globally or in Indian context or in Kolhan Region.

**Suggested Readings:**

1. Eckstein D., Kunzel V., Schafer L. (2021). Global Climate Risk Index 2021. *GermanWatch*.
2. Bello L. (2022, June 27). Rooftop solar: The missing piece of India's renewable ambitions. *The Third Pole*.
3. Byravan S., Rajan S. (2012). An Evaluation of India's National Action Plan on Climate Change. *Center for Development Finance (CDF), IFMR, and Humanities and Social Sciences, IIT Madras*.
4. Department of Economic Affairs, Ministry of Finance. (2020). Report of the Sub-Committee for the Assessment of the Financial Requirements for Implementing India's Nationally Determined Contribution (NDC). Government of India.
5. Felix R. Fitzroy and Elissaios Papyrakis, 2016, An Introduction to Climate Change Economics and Policy, Routledge.
6. Gap between resource availability, requirement pose challenge in NDC implementation: Eco Survey. (2021, Jan 29). *Economic Times*.  
<https://economictimes.indiatimes.com/news/economy/policy/gap-between-resource-availability-requirement-pose-challenge-in-ndc-implementation-eco-survey/articleshow/80590515.cms>
7. Harris, J. M., Roach B. and Codur. A.M. (2017) The Economics of Global Climate Change, A GDAE Teaching Module on Social and Environmental Issues in Economics, GDAE Institute Tufts University.  
[https://www.bu.edu/eci/files/2019/06/The\\_Economics\\_of\\_Global\\_Climate\\_Change.pdf](https://www.bu.edu/eci/files/2019/06/The_Economics_of_Global_Climate_Change.pdf)



8. Jain S. (2021). Five Ways How India Can Fuel Its Ambitious Renewable Energy Drive. *Outlook*. <https://www.outlookindia.com/website/story/business-news-five-ways-how-india-can-fuel-its-ambitious-renewable-energy-drive/403252>
9. Khanna N., Purkyastha D., Jain S. (2022, Aug 10). Landscape of Green Finance in India 2022. *Climate Policy Initiative*.
10. Kumar P. (2022, Aug 10). Energy Conservation Amendment Bill 2022: It all boils down to targets for industries. *Down To Earth*. <https://www.downtoearth.org.in/blog/energy/energy-conservation-amendment-bill-2022-it-all-boils-down-to-targets-for-industries-84252>
11. Ministry of New and Renewable Energy ([https://mnre.gov.in/solar/currentstatus/#:~:text=National%20Solar%20Mission%20\(NSM\)%20was,addressing%20India%27s%20energy%20security%20challenges.](https://mnre.gov.in/solar/currentstatus/#:~:text=National%20Solar%20Mission%20(NSM)%20was,addressing%20India%27s%20energy%20security%20challenges.))
12. Narasimhan E., Gopalakrishnan T., Gallagher K. (2021, Nov 11). India's policy pathways for deep decarbonisation. *Observer Research Foundation*. <https://www.orfonline.org/expert-speak/indias-policy-pathways-for-deep-decarbonisation/>
13. N. Stren, 2006, *The Economics of Climate Change: Stern Review*, Cambridge.
14. Mehta, L., Srivastava, S. and Nicolai Adam, H. (2021) *The Politics of Climate and Uncertainty in India*, London: Routledge <https://doi.org/10.4324/9781003257585>
15. Perman, R, Ma, Y, McGilvray, J and M. Common. (2003) *Natural Resource and Environmental Economics*. Chapter 16 (3rd or 4th Ed)
16. Hanley N., J. F. Shogren, and B. White (2007), *Environmental Economics: In Theory and Practice*, Palgrave Macmillan (2nd ed.)
17. Chaturvedi, Vaibhav (2015). *The Costs of Climate Change Impacts for India*. New Delhi: Council on Energy, Environment and Water. <https://www.ceew.in/publications/costs-climate-change-impacts-india> and <https://www.ceew.in/sites/default/files/ceew-research-climate-change-impact-on-indian-economy.pdf>
18. Sandhani, M., Pattanayak, A. and Kumar, K.S.K (2020), *Impact of Climate Change of Economic Growth: A Case Study of India*, Working paper 204/2020, Madras School of Economics, September, 2020. <https://www.mse.ac.in/wp-content/uploads/2021/05/Working-Paper-204.pdf>
19. Sharma M, Singh R, Kathuria A. Climate Change and the Indian Economy - A Review. *Current World Environment* 2022;17(1), 20-31.DOI: <http://dx.doi.org/10.12944/CWE.17.1.3>, [CWE Vol17 No1 p 20-31.pdf \(cwejournal.org\)](http://www.cwejournal.org/CWE_Vol17_No1_p_20-31.pdf)
20. Sharma, S. (2023, Jan 2016). India's Climate Change Policy: Challenges and Recommendations <https://www.ispp.org.in/indias-climate-change-policy-challenges-and-recommendations/>
21. Sustainable development and Climate Change Chapter-6, [https://www.indiabudget.gov.in/budget202122/economicsurvey/doc/vol2chapter/echap06\\_vo12.pdf](https://www.indiabudget.gov.in/budget202122/economicsurvey/doc/vol2chapter/echap06_vo12.pdf)
22. Pandey K. (2022, June 2). State of India's Environment in figures: India recorded 280 heat wave days across 16 states in 2022 — most in decade. *Down To Earth*. <https://www.downtoearth.org.in/news/climate-change/state-of-india-s-environment-in-figures-india-recorded-280-heat-wave-days-across-16-states-in-2022-most-in-decade-83131>
23. Picciariello A., Colenbrander S., Bazaz A., Roy R. (2021). The costs of climate change in India – A review of the climate-related risks facing India, and their economic and social costs. *ODI Literature Review*.
24. Rattani V. (2018). Coping with climate change – An analysis of India's National Action Plan on Climate Change. *Center for Science and Environment*.
25. RBI Bulletin. (2021). Green Finance in India: Progress and Challenges.
26. Sami N., Singh C., Bazaz A. Climate Change Policy in India and Goal 13. *Indian Institute of Human Settlements*.

27. View: Energy storage is the missing link in wider adoption of renewables. (2022, Apr 05). *Economic Times*. <https://economictimes.indiatimes.com/industry/renewables/view-energy-storage-is-the-missing-link-in-wider-adoption-of-renewables/articleshow/90660853.cms?from=mdr>
28. Emissions Gap Report. (2022). *MODULEed Nations Environment Programme*.
29. CO<sub>2</sub> and Greenhouse Gas Emissions Data Explorer, <https://ourworldindata.org/explorers/co2>
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## SEMESTER V

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### **MAJOR COURSE-MJ 9:**

(4 Credits)

Marks: 25 (5 Attnd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100

Pass Marks: 40

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45 < Attnd. < 55, 2 marks; 55 < Attnd. < 65, 3 marks; 65 < Attnd. < 75, 4 marks; 75 < Attnd, 5 marks)

#### ***End Semester Examination (ESE 75 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **BASIC STATISTICS FOR ECONOMISTS-II**

(60 Lectures)

#### **Course Objectives:**

The Course aims to introduce the students to the basic concepts of Statistics and its application in real world.

#### **Course Learning Outcomes:**

After completing this course, the students will be able to have a good understanding time series analysis, index number, probability and hypothesis testing. This will help the students to learn preliminary data analysis & interpretation that can be widely used to solve the economic and business problems.

#### **Course Content:**

#### **MODULE-I Time Series and Index Number**

(20 lectures)

- 1.1 Time Series Analysis – Concept; Component; Trend Line and Trend Value by Least Square Method
- 1.2 Index Number – Concept; Price relative; quantity relative; weighted Index Number; Problem in the construction of Index Number and Limitation of Index Number
- 1.3 Methods of Construction of Index Number – Laspeyre's, Pasche's, Fisher's, Marshall's, Edgeworth's and Consumer Price Index.
- 1.4 Tests for Adequacy of Index Number – Laspeyre's, Pasche's, Fisher's, Marshall's, Edgeworth's and Consumer Price Index.

**MODULE-II Probability**

**(20 lectures)**

- 2.1 Basic Concepts- Properties of Probability- Expected Values, Rules of Probability Addition and Multiplication Theorem; Conditional Probability Random Variables: Discrete and Continuous.
- 2.2 Probability Density Functions and Cumulative Distribution Functions – Expected values and Moments - The Binomial Probability Distribution, Poisson and Normal Distribution.

**MODULE-III Hypothesis Testing**

**(10 lectures)**

- 3.1 Meaning of Hypothesis Testing-Null and Alternative Hypothesis
- 3.2 Level of Significance, One-tailed and Two-tailed Tests, Type-I, Type-II Errors
- 3.3 Approaches to Hypothesis Testing - Confidence Interval Approach and Test of Significance Approach.

**MODULE-IV Data Analysis & Interpretation**

**(10 lectures)**

- 4.1 How can the representation and analysis of data help us to study real world problems based on publicly available data sets?
- 4.2 With Excel and available statistical software – steps in data storage, organisation and cleaning.

**Suggested Readings:**

1. Gupta S. P. (2012) Statistical Methods, S.Chand and Company ,New Delhi.
  2. Sah, N.M., Statistics for Economics, Arya Publication.
  3. Schaum Outline of Theory and Problem of Statistics, MurrayR. Spiegel, LarryJ. Stephens, Tata Mc Graw-Hill
  4. Agrawal, V.L. Basic Statistics, New Age International Publishers.
  5. Gupta, V.N., Quantitative Technique (Hindi Edition), SPBD Publication.
  6. Sinha, V.C. and Gupta Alok, Business Statistics, SPBD Publication.
  7. Gupta, S.C., Fundamental of Statistics, Himalaya Publishing House.
  8. Singh A, C., Sankhayaki, SCh and Publications.
  9. Medhi ,J. , Statistical Methods: An Introductory Text, Wiley, 1992
  10. MorrisH. Degroot and Mark sJ. Schervish, "ProbabilityandStatistics", 4th edition, 2012.
  11. Teresa Bradley, Essential Statistics for Economics, Business and Management, John Willey Publisher, 2007.
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## SEMESTER V

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### **MAJOR COURSE-MJ 10:**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100**

**Pass Marks: 40**

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

#### ***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

**Note:** *There may be subdivisions in each question asked in Theory Examinations.*

### **BASIC MATHEMATICS FOR ECONOMISTS-I**

**(60 Lectures)**

#### **Course Objectives:**

1. The course aims to transmit the basic understanding of mathematics for Economics and its application to the study of economic theory at the Undergraduate level.
2. Beginning with the basic concepts of set theory, functions and equations, the course deals with limits and the techniques of differentiation and their applications in economics.

#### **Course Learning Outcomes:**

With the understanding of the fundamentals of mathematical economics, the course provides the mathematical foundations necessary for further study of a variety of disciplines including most of the theoretical papers of post-graduate economics, statistics, econometrics and data analysis that is essential for higher studies in economics as well as getting employment in corporate world/ banking/civil services by enhancing their skills in the field of data analysis.

#### **MODULE I: Basic Concepts**

**(15 Lectures)**

- 1.1 Nature of Mathematical Economics applications in Economic Analysis -Mathematical Model: Variables, Constants, Parameters, Set Theory: Types; Set operation; Use of Venn Diagram
- 1.2 Functions: Concept; Types of Function and graphical presentation; Homogeneous and

homothetic function.

1.3 Equations: System of equations and Economic application of equations.

**MODULE II: Limit and Differentiation**

**(15 Lectures)**

2.1 Limit: Concept; Rules.

2.2 Differentiation of functions of one independent variable [ $y=f(x)$ ]: Concept; first order and second order derivatives.

2.3 Partial Differentiation of Function with two independent variables: first order and second order.

**MODULE III: Application of Differentiation to Economics**

**(30 Lectures)**

3.1 Total and Marginal utilities; Total cost and Marginal cost; Total revenue and Marginal revenue, Relationship between Average revenue and Marginal revenue, Average cost and Marginal cost.

3.2 Elasticity: Income elasticity of demand; Price elasticity of demand; Supply elasticity; Cross elasticity of demand; Relationship of elasticity with Average revenue and Marginal revenue;

3.3 Unconstrained Maxima and Minima of a function in one independent variable: 1st order and 2nd order conditions.

3.4 Economic application of Maximization and Minimization in one independent variable; Unconstrained optimization: Maximization of total revenue; profit; Minimization of Average cost and Marginal cost

3.5 Equilibrium of a firm under Perfect Competition and Monopoly; Effect of tax and subsidy on equilibrium.

**Suggested Readings:**

1. Allen, R.G.D., Mathematical Analysis for Economists; All India publishers and distributors
  2. Chiang, A.C., Fundamental Methods of Mathematical Economics; McGraw Hill Publication
  3. Taro Yamane, Mathematics for Economists; Printing Hall of India
  4. Mehta, B.C. and Madhani, G.M.K.; Mathematics for Economists; Sultan Chand and sons.
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## SEMESTER V

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### **MAJOR COURSE-MJ 11:**

(4 Credits)

Marks:25 (5 Attd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100

Pass Marks: 40

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

#### ***End Semester Examination (ESE 75 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **HISTORY OF ECONOMIC THOUGHT**

(60 Lectures)

#### **Course Objectives:**

The course will seek to help the students to gain knowledge about the main schools of economic thought.

#### **Course Learning Outcomes:**

1. The students will be exposed to the fundamentals of economic philosophy and get an analytical outlook of learning of how the economic thought has evolved over time.
2. Based on the perspectives presented to the students through this course, will help them to refine their own ideas and perceptions.
- 3.

#### **Course Content:**

#### **MODULE I: Economic Thought of Early Modern School**

(5 lectures)

- 1.1 Mercantilism (16th to 18th century) - Main Characteristics; Thomas Munn as a Mercantilist.



**MODULE II: Economic Thought in the Classical Period**

**(10 lectures)**

- 2.1 Adam Smith (1723-1790) - Division of Labour; Theory of Value; Capital Accumulation; Distribution; Views on Trade; Economic Progress.
- 2.2 David Ricardo (1772-1823) – Value; Theory of Rent; Stationary State; Distribution; Ideas on International Trade.

**MODULE III: Economic Ideas of Neo-Classical School, Marginalists and Keynesian School**

**(25 lectures)**

- 3.1 Leon Walras (1834-1910) - Marginal Theory of Value; General Equilibrium Theory; Walras law.
- 3.2 A. Marshall (1842-1924) - Markets and Role of Time in Price Determination; Ideas on Consumer's Surplus; Elasticity; Representative Firm; Quasi-Rent; External and Internal Economies; Partial Equilibrium Analysis.
- 3.3 A.C. Pigou (1877-1959) - Dual Criteria for Increase in Social Welfare; Conditions for Welfare Maximisation; Policy Recommendations for Increasing Social Welfare.
- 3.4 Vilfredo Pareto (1848-1923) - Pareto Principle (80/20 Rule), Welfare Economics-Pareto Optimality; Pareto Efficiency
- 3.5 J.M. Keynes (1883-1946) - A Monetary Economist; Keynesian Revolution; General Theory; Liquidity Preference; Multiplier; Rejection of Say's Law and Laissez-Faire; Recommendations for Economic Policy.

**MODULE IV: Economic Thought of Indian Writers**

**(20 lectures)**

- 4.1 Kautilya (375-283 BC): Wealth, Varta and importance of agriculture, labour, trade, population, welfare state, public finance.
- 4.2 M. K. Gandhi (1869-1948): Non-Violent Economy, Decentralisation- Cottage industries, Khadi Industry, Village Sarvodaya, Trusteeship Doctrine, Food problem, Population, Labour Welfare, Exchange economy.
- 4.3 Amartya Kumar Sen (1933): Poverty and Famines, Poverty and Inequality, Concept of Capability and Entitlement.

**Suggested Readings:**

- 1. Schumpeter J., A History of Economic Analysis. Oxford University Press, (1954).
  - 2. Keynes J.M. General Theory of Employment, Interest and Money., Atlantic Publishers and Distributors
  - 3. Schumpeter J.A. Ten Great Economists: From Marx to Keynes. (Any edition).
  - 4. Bhatia, H.L., History of Economic Thought, (English, Hindi) Vikash Publishing House.
  - 5. Ganguli, B.N(1977): Indian Economic Thought: A 19th Century Perspective, Tata Mcgraw Hill.
  - 6. Hajela, T.N (2011): History Of Economic Thought (English, Hindi) , Ane Books.
  - 7. Jhingan, M.L (2008): Aarthik Vicharon Ka Itihas, Vrinda Publications, New Delhi.
  - 8. Kautilya (1992), The Arthashastra, Translated and Introduced by L.N. Rangarajan, Penguin Books.
  - 9. Loknathan, V (2009): History of Economic Thought, S. Chand & Company.
  - 10. Roll, Eric: History of Economic Thaught, Faber.
  - 11. Sinha, V.C (2011): Aarthik Vicharon Ka Itihas, Mayur Publications.
  - 12. Staley, Charles.E, "A History of Economic Thought: From Aristole to Arrow", Blackwell Publishing.
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## SEMESTER V

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### **MINOR FROM DISCIPLINE-1 (MN 1C)**

(4 Credits)

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100**

**Pass Marks: 40**

#### ***Instruction to Question Setter for***

##### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type** in **Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

##### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **PROGRAMMES AND POLICIES OF INDIAN ECONOMY (60 Lectures)**

#### **Course Objectives:**

1. On completion of the course, students will be able to get an understanding of strategies, programmes and policies for the development of Indian economy.
2. The students will understand the needs, importance and impact of programmes and policies for the economic development in India.
3. The course will also enable the students to understand the respective contributions of the three sectors-agricultural, industrial and service to the Indian economy.

#### **Course Learning Outcomes:**

At the end of the course student will be able to understand, compare and mark the past and present economic conditions of their country in various sectors. They will also be able to forecast the future course of development through their knowledge of policies and programmes set by the Government and other development agencies.

#### **Course Content:**

##### **MODULE I: Planning and Development**

(15 lectures)

- 1.1 Major Issues for Development in India.
- 1.2 Major Strategies for Development in India.

- 1.3 Economic Planning in India – Historical background up to NITI Aayog.
- 1.4 New Economic Policy (1991) – Objectives; Features; Impact on Different Sectors.

**MODULE II: Policies and Schemes for Primary Sector Development** (15 lectures)

- 2.1 Role of primary sector in the Indian economy.
- 2.2 Primary Sector – Issues and Challenges.
- 2.3 Schemes - e-NAM, National Mission for Sustainable Agriculture (NMSA).
- 2.4 New Agriculture Policy, 2020. – Goals, Objectives and features.

**MODULE III: Policies and Schemes for Secondary sector Development** (15 lectures)

- 3.1 Role of Secondary Sector in the Indian Economy.
- 3.2 Secondary Sector – Issues and Challenges
- 3.3 MSME: Composition, Importance, Major Problems faced by MSME.
- 3.4 National Single Window System (NSWS), Industrial Corridor Development Programme.

**MODULE IV: Policies and Schemes for the development of Tertiary sector** (15 lectures)

- 4.1 Role of Service Sector in Indian economy.
- 4.2 Tertiary sector - Issues and Challenges.
- 4.3 Foreign Trade Policy – Importance; Objectives and Features.
- 4.4 National Road Transport Policy; Swadesh Darshan Scheme; Gati Shakti Scheme.

**Suggested Readings:**

- 1. Puri V.K and Mishra S.K, Indian Economy, (English and Hindi) (January 2022), Himalaya Pub. House.
  - 2. Dutt, Gaurav and Sundaram, Indian Economy, (English and Hindi) (Latest edition), S Chand & Co Ltd.
  - 3. Kapila, Uma, Indian Economy: Performance and Policies, (22nd edition 2021), Academic Foundation Publications.
  - 4. Jalan Bimal, India's Economic Policy (2000), Penguin India Publication.
  - 5. Sinha V.C, Indian Economy Performance and Policies (2019), SBPD Publications
  - 6. Verma Sanjeev, The Indian Economy (2020), Unique Publishers.
  - 7. Mishra J.P, Bharat ki Arthik Nitiyan (2019), Sahitya Bhavan Publications.
  - 8. Singh, Ramesh, Bharitiya Arthavyavastha (14th edition), McGraw Hills.
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## SEMESTER V

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### **IAP- Internship/Apprenticeship/Project Course**

(4 Credits)

Marks: 100

#### **Course Description:**

This IAP course aims at providing students with the opportunity to procure practical experience in a professional setting related to their field of study. The students will go in for various tasks such as research, writing, project management, and more, under the guidance of experienced professionals. The program focuses on bridging the gap between academic learning and real-world application, helping students to explore potential career paths. The program will help students in developing essential skills for their careers while also providing them opportunities to actively engage in an on-site experiential learning.

In this Internship/Apprenticeship/Project course the students will have the option to undergo an Apprenticeship or Internship training of 8-week or 2-month duration. The students who do not opt either for Internship or Apprenticeship training will be required to carry out a Field Project based on a topic to be assigned by the concerned department.

#### **Course Objectives:**

- Apply academic knowledge and skills to the real-world tasks and projects in a professional environment.
- Enhance professional skills in research, writing, communication, and project management.
- Gain insight into potential career paths and industries relevant to the student's field of study.
- Strengthen critical thinking and problem-solving skills through engagement with practical challenges and assignments.

#### **Course Learning Outcomes:**

At the end of the Internship/Apprenticeship/Project course, students will be able to:

- Demonstrate the ability to apply academic theories and skills to practical tasks and projects.
- Exhibit proficiency in professional communication, including writing reports, emails, and presenting ideas effectively.
- Manage and complete projects efficiently, demonstrating strong organizational and time-management skills.
- Conduct thorough and efficient research using appropriate methods and sources.
- Build and maintain a network of professional contacts that can support career development.

#### **The Internship/Apprenticeship avenues may include the following:**

- Local industry, business organisations, health areas and research laboratories.
- Local governments such as Panchayats, Municipalities and other such bodies, offices of Parliamentarians or other elected representatives, government and non-government social service organisations.
- Media organisations, publication houses, academic institutions, literary and cultural organisations, artists and craft persons.

The students should undertake their Apprenticeship or Internship training preferably in their related discipline in order to enhance their learning.

**On successful completion of Internship/Apprenticeship the students will be required to:**

- Produce a certificate of having undergone an Internship/Apprenticeship training of 8-week or two-month duration.
- Submit a report of about 40 to 50 pages based on their Internship/Apprenticeship training.

**Alternatively**, the students who do not opt either for Internship or Apprenticeship training will be required to carry out a Field Project on a topic to be assigned by the concerned department. The students will prepare their Project/Dissertation of about 40 to 50 pages on their assigned topics under the supervision of a faculty.

**Examination and Evaluation:** The students opting for Internship/ Apprenticeship training will prepare a Project Report based on their I/A training and submit the same to the department along with a proper certificate of their I/A training of 8-week or 2-month duration.

The students opting to write a project or dissertation on the topic assigned by the concerned department will submit a Dissertation /Project of about 40-50 pages.

The Project Reports/Dissertations submitted by the students will be examined by an external examiner who will also conduct a viva voce examination of the students to assess their understanding of the Dissertation/ Project Report prepared by them.

<b>Internship/Project Report or Project/Dissertation</b>	<b>75 marks</b>
<b>Viva-voce</b>	<b>25 marks</b>
<b>Total</b>	<b>100 Marks</b>



## SEMESTER VI

### **MAJOR COURSE-MJ 12:**

**(4 Credits)**

**Marks:25 (5 Attd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100**

**Pass Marks: 40**

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

#### ***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

*Note: There may be subdivisions in each question asked in Theory Examinations.*

### **BASIC MATHEMATICS FOR ECONOMIST-II**

**(60 Lectures)**

#### **Course Objectives:**

1. The course aims to transmit the basic understanding of the concept of integration, matrix, determinants and their basic applications in solution of equation, linear programming and game theory.
2. These concepts will inculcate the knowledge of the essentials of mathematics for Economics and its application to the study of economic theory at the Undergraduate level.

#### **Course Learning Outcomes:**

With the understanding of the fundamentals of mathematical economics, the course provides the mathematical foundations necessary for further study of a variety of disciplines including most of the theoretical papers of post-graduate economics, statistics, econometrics and data analysis that is essential for higher studies in economics as well as getting employment in corporate world/ banking/civil services by enhancing their skills in the field of data analysis.



**Course Content:**

**MODULE I: Integration**

**(20 Lectures)**

- 1.1 Integration: concepts; Definite Integrals, Indefinite Integrals
- 1.2 Economic applications: Obtaining primitive Function from Marginal Function - Obtaining total functions from Marginal cost; Marginal revenue; Marginal Propensity to Consume (MPC) and Marginal Propensity to Save (MPS)
- 1.3 Economic applications of Definite Integrals: Consumer surplus and producers' surplus under perfect competition.

**MODULE II: Matrix and Determinants**

**(20 Lectures)**

- 2.1 Matrix: Meaning and Types of matrices
- 2.2 Matrix Operations- Addition and Subtraction, Matrix Multiplication, Commutative, Associative and Distributive Laws; Transpose of a Matrix.
- 2.3 Determinants: Determinant of a square matrix, Properties of determinants, minor, Co-factors, Adjoint and Inverse of a Matrix, Rank of Matrix, Cramer's Rule, Derivation and its Applications in Economics.

**MODULE III: Application of Matrix Algebra**

**(20 Lectures)**

- 3.1 Linear Programming: Meaning; Features; Graphical Solution.
- 3.2 Game Theory: Meaning; Concepts; Graphical Solution

**Suggested Readings:**

1. Allen, R.G.D., Mathematical Analysis for Economists; All India publishers and distributors
  2. Chiang, A.C., Fundamental Methods of Mathematical Economics; McGraw Hill Publication
  3. Taro Yamane, Mathematics for Economists; Printing Hall of India
  4. Mehta, B.C. and Madhani, G.M.K.; Mathematics for Economists; Sultan Chand and sons.
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## SEMESTER VI

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### **MAJOR COURSE-MJ 13:**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100**

**Pass Marks: 40**

#### ***Instruction to Question Setter for***

***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks each. **Group B will contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

### **INTERNATIONAL ECONOMICS**

**(60 Lectures)**

#### **Course Objectives:**

1. To expose the students to the theory and practice of international trade and of trade-related policies.
2. This course emphasizes on analyzing the gains from trade, the changing patterns of trade, the balance of payments and foreign trade and international macroeconomic policies.

#### **Course Learning Outcomes:**

1. The successful completion of this course will yield the students a good understanding of different theories of international trade and their economic implications, international macroeconomic policies, foreign exchange and balance of payment.
2. Further, this course will familiarize the students with the major recent developments in the world trading system, and thus, helping them critically analyze key international issues.

#### **Course Content:**

##### **MODULE I: Trade Theories**

**(15 Lectures)**

- 1.1 The Law of Absolute advantage
- 1.2 The Law of Comparative Advantage
- 1.3 Theory of reciprocal demand and Offer curves

- 1.4 Heckscher – Ohlin trade model
- 1.5 Factor Reversal and Leontief paradox
- 1.6 Monopolistic competition and international trade

**MODULE II: Terms of Trade, Gains from trade and Instruments of trade policies** (15 Lectures)

- 2.1 Concepts of terms of trade and factors affecting terms of trade
- 2.2 Measurement of gains from trade and factors determining gains from trade
- 2.3 Tariffs and Quotas- Types of tariffs and quotas, effects of tariffs under partial equilibrium and optimum tariff, effects of import quotas, non-tariff barriers to trade.

**MODULE III: Balance of Payments and Foreign Exchange** (15 Lectures)

- 3.1 Problems, Adjustment Process and Absorption Approach
- 3.2 Foreign Trade Multiplier
- 3.3 Spot and Forward Rates of Exchange, Fixed and Flexible Exchange Rate
- 3.4 Purchasing Power Parity Theory
- 3.5 Current Account Convertibility of the Rupees.

**MODULE IV: International Macro Economic Policies** (15 Lectures)

- 4.1 International Monetary System-Gold Standard and Bretton Woods
- 4.2 Functions of IMF, World Bank and W. T. O in the Context of India
- 4.3 Globalization and Financial Crisis
- 4.4 Concept of Regional Trade Blocks – BRICKS, ASEAN and their Role in the Promotion of Trade.

**Suggested Readings:**

- 1. Bhagwati, J. International Trade, Cambridge Uni. Press
  - 2. Verma, M.L. International Trade, Vikas Publication
  - 3. Singh, S.K. International Monetary System-Trends & Issues, Indus Publishing Company
  - 4. Mannur, H.G. International Economics, Vikas publication
  - 5. Krugman, Paul R International Economics-Theory and Practice, Pearson Publication
  - 6. D. Salvatore, International Economics, Wiley India
  - 7. Sachdeva, International Economics, Vikas Bharati Publication
  - 8. Vaishya & Sachdeva Singh -Antarashtriya Arthshastra, Oxford & IBH Com.
  - 9. Sodersten, B.O. and Geoffrey Reed, International Economics, Palgrave Macmillan Publisher.
  - 10. Mithani, D.M., International Economics, Himalaya Publishing House
  - 11. Kindleberger, C. P. , International Economics, R. D. Irwin, Homewood.
  - 12. Salvatore, D. L., International Economics, Prentice Hall, Upper Saddle River, N. J.
  - 13. Rana, K.C & Verma, K. N. International Economics, Vishal Publishing Co, Delhi.
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## SEMESTER VI

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### **MAJOR PAPER –MJ 14:**

**(4 Credits)**

**Marks:25 (5 Attd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100**

**Pass Marks: 40**

#### **Instruction to Question Setter for**

#### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

#### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **RURAL ECONOMICS**

**(60 Lectures)**

#### **Course Objectives:**

1. The course aims to introduce the students to the basic understanding of rural development emphasizing on the characteristics, problems and programmes of rural development.
2. To realize the importance of infrastructural facilities and governance in rural development.
3. To study the significance of rural enterprises and agriculture allied activities.

#### **Course Learning Outcomes:**

The students will gain the basic understanding of characteristics, problems and programmes of rural development. Further, it will enable the students to identify the issues and challenges towards rural development in an economy.

#### **Course Content:**

#### **MODULE I: Introduction to Rural Economy**

**(7 lectures)**

- 1.1 Meaning and Objectives of Rural economy
- 1.2 Characteristics of Rural Economy
- 1.3 Indicators of Rural Development
- 1.4 Concepts of inclusive and sustainable development

**MODULE II: Approaches to Rural Development**

**(8 lectures)**

- 2.1 Gandhian Model
- 2.2 Community Development Approach,
- 2.3 Minimum Needs Approach,
- 2.4 Integrated Rural Development and Inclusive Growth Approach

**MODULE III: Poverty and Unemployment in Rural India**

**(8 lectures)**

- 3.1 Meaning and Measurement of Poverty and Causes of Poverty
- 3.2 Farm and Non-farm employment Measurement and Types employment
- 3.3 Review of Poverty Alleviation and Employment Generation Programmes in India.

**MODULE IV: Rural Enterprises**

**(6 lectures)**

- 4.1 Meaning and Importance, Classification of MSME Progress and Problems of MSME  
Khadi and Village Industries

**MODULE V: Rural Infrastructure**

**(8 lectures)**

- 5.1 Educational and Health Infrastructure Housing and Sanitation
- 5.2 Drinking Water Supply
- 5.3 Rural Transport and Communication
- 5.4 Rural Electrification

**MODULE VI: Rural Development Programmes**

**(8 lectures)**

- 6.1 Wage Employment Programmes
- 6.2 Self-employment and Entrepreneurship Development Programmes
- 6.3 Rural Housing Programmes
- 6.4 Rural Sanitation Programmes

**MODULE VII: Rural Markets**

**(8 lectures)**

- 7.1 Meaning and Types of Rural Markets
- 7.2 Defects and Government Measures for Removal of Defects in rural markets
- 7.3 Co-operative Marketing Societies
- 7.4 Meaning and Importance of Regulated Markets and Digital Marketing(e-NAM)

**MODULE VIII: Rural Governance**

**(7 lectures)**

- 8.1 Legislations powers, Functions, and sources of revenue of Panchayat Raj Institutions
- 8.2 Role of NGOs in rural development
- 8.3 People's participation in rural development

**Suggested Readings:**

- 1. Chambers, R. (1983): Rural Development: Putting the Last First, Longman, Harlow.
- 2. Dandekar, V.M. and N. Rath (1971): Poverty in India, GIPE, Pune.
- 3. Dantwala, M. L. (1973): Poverty in India: Then and Now, 1870-1970, Macmillan, Bombay.
- 4. Gupta. K .R. (Ed) (2003): Rural Development in India, Atlantic Publishers and Distributors, NewDelhi.
- 5. Jain, Gopal Lal (1997): Rural Development, Mangal Deep Publications, Jaipur,
- 6. Singh, Katar (1986): Rural Development: Principles, Policies and Management,

Sage Publications, New Delhi, (Second Edition).

7. Karalay, G. N. (2005): Integrated Approach to Rural Development: Policies, Programmes and Strategies, Concept Publishing Company, New Delhi.
  8. Maheshwari, S. R. (1985): Rural Development in India, Sage, Publications New Delhi.
  9. Satya Sundaram, I. (1997): Rural Development, Himalaya Publishing House, Delhi.
  10. Mehta, Shiv R. (1984): Rural Development Policies and Programmes, Sage Publications, New Delhi.
  11. Tyagi, B. P. (1998): Agricultural Economics and Rural Development, Jai Prakash Math and Co., Meerut.
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## SEMESTER VI

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### **MAJOR PAPER –MJ 15:**

**(4 Credits)**

**Marks:25 (5 Attd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100**

**Pass Marks: 40**

***Instruction to Question Setter for  
Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

### **ECONOMICS OF SOCIAL SECTOR**

**(60 Lectures)**

#### **Course Objectives:**

This course is designed to introduce the students to the basic structure of social sector of a economy and how does this sector contribute in the nation building. It also reviews the existing policies and programmes status in the social sector in India.

#### **Course Learning Outcomes:**

The students will be able to understand the role of health and education as a vital asset to determine the behaviour of an individual, institution and economy. Further, the course will generate awareness among the students regarding the development policies in social sector in India.

**Course Content:**

**MODULE I: Human Resource and its Role in Economic Development** (12 lectures)

- 1.1 Human Resource: Meaning and Importance in Economic Development.
- 1.2 Social Sector Meaning and Components.
- 1.3 Government Policies for Educational Development; NEP 2020.
- 1.4 Policies for Health: Ayushmann Bharat; System of Delivery of Public Health.

**MODULE II: Education and Development** (15 lectures)

- 2.1 Education as Public Goods; Education as an instrument of Economic Growth.
- 2.2 Benefits of Education: Private and Social Benefits; Cost Benefit Analysis of Education.
- 2.3 Committees and Commission on Education.
- 2.4 Demand for Education - Private Demand and Social Demand; Determinants of Demand for Education.
- 2.5 Costs of Education - Private Costs and Social Costs; Wastage and Stagnation in Education.

**MODULE III: Economics of Health** (15 lectures)

- 3.1 Health: Meaning and Determinants of Health, Mortality and Morbidity.
- 3.2 Measurement of Health Status - BMI; Stunting; Wasting; Underweight.
- 3.3 Factors Influencing Health and Nutrition.
- 3.4 Inequalities in Health in India: Class and Gender Perspectives.
- 3.5 Public Expenditure on Health in India.

**MODULE IV: Development Polices in India** (18 lectures)

- 4.1 Gender Analysis Framework; Gender Mainstreaming and Gender Budgeting.
- 4.2 Analysing Policy and Programmes: Gender blind; Gender Neutral and Gender Redistributive Policy.
- 4.3 Women's Education - Gender Bias in Enrolment, Drop-Outs, Information Technology - Impact on Women's Development Sustainable Development and Impact on Women.
- 4.4 Health Status of Women in India – Mortality and Morbidity Factors Influencing Health and nutrition.
- 4.5 Globalization and Women in India.

**Suggested Readings:**

1. Arya P.P. and B.B. Tandon (Ed) 2004: Human Resource Development, Deep & Deep Pub. New Delhi.
  2. Goel, S.L. and P.N. Gautam (2005): Human Resource Development in the 21st century, Concept and case studies, Deep & Deep Pub. New Delhi.
  3. Meier, Gerald M. and James' E. Rauch (2010): Leading issues in economic development, Oxford Univ. Press, New York.
  4. Todaro, Michael P and Stephen C. Smith (2003): Economic Development, Pearson Education Ltd.
  5. World Development Report (World Bank).
  6. Human Development Report (UNDP).
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## SEMESTER VI

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### **MINOR FROM VOCATIONAL STUDIES -2 (MN 2B)**

[Credits: Theory (03) + Practical (01)]

**Marks:**

**Theory: SIE (15) + ESE (60) = 75 (F.M)**

**Practical: Report Presentation (15) + viva (10) = 25 (F.M)**

**Pass Marks: 40 [Th (SIE + ESE) (30) + Practical (10)]**

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 10+5=15 marks):***

There will be **two** group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks) and (c) practical examination consisting of Report presentation of 15 marks and Viva of 10 marks.

#### ***End Semester Examination (ESE 60 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks each. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to be answered.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

## **EXCEL BASICS FOR DATA ANALYSIS**

**(45 lectures)**

### **Course Objectives:**

The course aims to make the students conversant with excel basics required for data analysis. This will include efficient data analysis, visualization for insights, database management, data cleansing, advanced formulas and pivot tables for summarizing data. This course ultimately aims to enhance the student's skill, productivity, facilitate informed decision-making, and derive insights from data.

### **Course Learning Outcomes:**

On completion of this course, learners will be able to:

1. Prepare an Excel Worksheet and enter data into the sheet.
2. Illustrate formatting and editing capabilities on the data.
3. Demonstrate basic calculations and save data.
4. Import and export data into the spreadsheet
5. Demonstrate basic visualizing, analyzing, organizing and sharing techniques

## **Course Content**

### **MODULE I: Creating a Basic Excel Worksheet**

**(5 lectures)**

- 1.1 Exploring Excel
- 1.2 Moving Around the Excel Screen
- 1.3 Entering Excel Data
- 1.4 Selecting Cells on a Spreadsheet
- 1.5 Editing a Worksheet
- 1.6 Moving and Copying Data
- 1.7 Working with Range Names

### **MODULE II: Working with Formulas**

**(5 lectures)**

- 2.1 Creating Formulas
- 2.2 Editing Formulas
- 2.3 Controlling Recalculation
- 2.4 Copying Formulas
- 2.5 Creating an Absolute or Mixed Formula Reference

### **MODULE III: Using Excel Functions More on Formulas and functions**

**(8 lectures)**

- 3.1 Considering Form versus Function
- 3.2 Understanding Function Syntax
- 3.3 Creating a Total with the SUM Function
- 3.4 Calculating Results Without Entering a Formula
- 3.5 Nesting Functions
- 3.6 More on Formulas and functions: Using the Financial functions, logical functions, text functions, date and time functions, lookup and reference functions, mathematical functions and using other functions.

### **MODULE IV: Correcting Formula Errors**

**(6 lectures)**

- 4.1 Displaying Formulas in a Worksheet
- 4.2 Understanding How Excel Handles Formula Errors
- 4.3 Telling Excel Which Errors to Flag
- 4.4 Telling Excel to Flag Result Cells with an Error
- 4.6 Checking for Errors Automatically One at a Time
- 4.7 Controlling Whether Errors Print

### **MODULE V: Making your Worksheet Look Good**

**(6 lectures)**

- 5.1 Adjusting Columns and Rows
- 5.2 Formatting Cell Content
- 5.3 Applying Numeric Formatting
- 5.4 Applying Conditional Formatting
- 5.6 Applying Office Themes and Layouts

### **MODULE VI: Handling Larger Workbooks**

**(5 lectures)**

- 6.1 Managing Large data
- 6.2 Sorting Data
- 6.3 Filtering Data
- 6.5 Preparing to Print

### **MODULE VII: Working with Graphics**

**(4 lectures)**

- 7.1 Creating Excel Charts
- 7.2 Inserting Illustrations

**MODULE VIII: Using Excel Tools**

**(6 lectures)**

- 8.1 Using Security Options
- 8.2 Using Pivot Tables

**MODULE IX: Practical**

**(1 credit)**

In this final module, the students will be introduced to a hands-on lab where they will complete a graded assignment for cleaning and preparing data, and then analyzing data using an Excel spreadsheet. This will involve the representation and analysis of data on the study of real-world problems based on publicly available data sets at India and international level. This final assignment will be graded by their peers.

**Suggested Readings:**

1. Wayne, L. Winston, Microsoft Excel 2019: Data Analysis and Business Modeling, PHI Learning Pvt. Ltd.
  2. Brown, N., Lave, B., Puncochar, H., Romey, J., Schatz, M., Schneider, A., and Shingledecker, D., Beginning Excel 2019, Open Oregon Educational Resources.  
<https://openoregon.pressbooks.pub/beginningexcel19/>
  3. Course Material for Basic Microsoft Excel 2010, Yashwantrao Chavan Academy of Development Administration
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## SEMESTER VII

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### **MAJOR PAPER -MJ 16:**

**(4 Credits)**

**Marks:25 (5 Attnd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100**

**Pass Marks: 40**

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attnd.<55, 2 marks; 55<Attnd.<65, 3 marks; 65<Attnd.<75, 4 marks; 75<Attnd, 5 marks)*

#### ***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks each. **Group B will contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.*

**Note:** *There may be subdivisions in each question asked in Theory Examinations.*

### **JHARKHAND ECONOMY**

**(60 Lectures)**

#### **Course Objectives:**

The course intends to expose the students to the evolution, structure and sectoral growth of Jharkhand. The major demographic features of the state with special focus on poverty and unemployment, migration, urbanisation, education and health have been included. Minerals, forests and environmental issues have been included in the course.

#### **Course Learning Outcomes:**

At the end of the course, the students be able to understand

1. The different aspects of demography and the problems associated with it like poverty, unemployment, malnutrition, migration, to name a few.
2. Students will comprehend the mineral, forest and environmental issues in the state. Lastly, they will learn about the important policies for development.

**Course Content:**

**MODULE I: Jharkhand Economy and its Growth** (10 lectures)

- 1.1 Evolution of Jharkhand Economy; Basic Economic Features of Jharkhand's Economy; Sectoral Composition of Jharkhand and Contributions to GSDP.
- 1.2 Growth in GSDP and Per Capita NSDP since 2000; Causes of Backwardness of Jharkhand Economy.
- 1.3 Composition, Production and Productivity in Agriculture in Jharkhand; Agricultural Growth in Jharkhand.
- 1.4 Major Industries of Jharkhand; Industrial Growth in Jharkhand; Main Problems of Industrial Development in Jharkhand.

**MODULE II: Demographic Features of Jharkhand** (20 lectures)

- 2.1 Population Growth; Density; Regional Distribution of Population.
- 2.2 Present Status and Change with Reference to Census 2001 and 2011 in - Literacy Rate; Sex Ratio; Sex Composition of Work Force; Occupational Distribution and Rural-Urban Composition.
- 2.3 Tribal Population in Jharkhand - Main Tribes; Proportion in Total Population; Demographic Features of Tribal Population in the State.
- 2.4 Status and Economic Causes of Problems of Human trafficking and Witch Craft.
- 2.5 Rural-Urban Migration and Intra State Migration in Jharkhand; Causes of Migration in Jharkhand – Push and Pull Factors.

**MODULE III: Poverty, Unemployment and Urbanisation in Jharkhand** (15 lectures)

- 3.1 Status of poverty in Jharkhand; Major Poverty Alleviation Programs in Jharkhand and their Outcomes (MGNREGA, PMGSY, NRLM).
- 3.2 Unemployment in Jharkhand - Status and Trend in Rural and Urban areas.
- 3.3 Urbanization in Jharkhand - Status and Trend; Causes of Rising Urbanisation; Consequences of Rising Urbanization in the State.

**MODULE IV: Minerals; Land; Forest and Environmental Issues in Jharkhand** (15 lectures)

- 4.1 Mineral Resources of Jharkhand; Land Reforms; Agrarian Relations in Jharkhand.
- 4.2 Forests in Jharkhand; Non-Timber Forest Products of Jharkhand (NTFPs); Issues and Challenges in NTFPs in Jharkhand.
- 4.3 Impacts of Development - Induced Displacement; Policy Initiatives Undertaken by Government.
- 4.4 Causes of Environmental Degradation in Jharkhand.

**Suggested Readings:**

1. Ranjan, Manish Jharkhand Samanya Gyan.
  2. Sahu, Dileep. Jharkhand Economy. Disha International Publishing House.
  3. Kunal Vikram Micro Planning of Jharkhand. Kunal Vikram Publication.
  4. Kumar, Raj and Ram, S. Jharkhand - Land and People, Arjun publication.
  5. Bhat, S. C. Jharkhand – A State Study Guide, Neeraj Kumar Jha, Jeevon sons Publications District Gazetteer of Jharkhand, Gyan Publishing House.
  6. Kumar, Sharat, Jha, Pravin Kumar. Development of Bihar and Jharkhand, Shipra Publications.
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## SEMESTER VII

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### **MAJOR COURSE-MJ 17:**

**(4 Credits)**

**Marks:25 (5 Attd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100**

**Pass Marks: 40**

#### ***Instruction to Question Setter for***

***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

### **URBAN ECONOMICS**

**(60 Lectures)**

#### **Course Objectives**

1. This course familiarizes students with the economics of cities and urban regions.
2. This subject helps students understand and critically apply core concepts, theories and tools to urban growth, urban development and urban policy-making.
3. It helps to examine the causes of urban problems such as poverty and urban sustainability and the urban and spatial structure of economic growth and change.

#### **Course learning outcomes:**

On successful completion of this subject, students should be able to:

- 1.Reveal a good theoretical understanding of urban problems and prospects and the process of urban economic growth and change within ecological limits.
2. Apply key urban economic concepts in real world situations.

**Course Content:**

**MODULE I: Introduction to Urban Economics**

**(10 Lectures)**

- 1.1 Nature and scope of urban Economics
- 1.2 Structure and growth of Urban economy
- 1.3 Urban Public Services
- 1.4 Growth of Urban Economy

**MODULE II: Urban Growth Theories**

**(10 Lectures)**

- 2.1 Urban Growth
- 2.2 Central Place Theory and its application to the study of Urban Growth
- 2.3 The Urban economic base and urban growth
- 2.4 The communication theory of Urban growth

**MODULE III: Urban Spatial Structure**

**(10 Lectures)**

- 3.1 City size and urban growth
- 3.2 Urban spatial structure
- 3.3 Concentric Zone Hypothesis-The Radial Sector theory
- 3.4 The Multiple Nuclei Hypothesis.

**MODULE IV: How Cities Develop?**

**(10 Lectures)**

- 4.1 Urban Housing
- 4.2 Labour Market and Poverty
- 4.3 Housing market Imperfection-trends in slum Housing-tearing down the slums.

**MODULE V: Urban Labour Market**

**(10 Lectures)**

- 5.1 Determination of Labour incomes-wage differentials-the culture of urban poverty
- 5.2 Measures of Urban poverty-The nature of urban poverty
- 5.3 The causes of urban poverty
- 5.4 Public Policies for reducing urban poverty.

**MODULE VI: Urban Development Problems in India**

**(10 Lectures)**

- 6.1 Land Prices and land Speculation-Urban Land ceiling
- 6.2 Congestion and Urban transport pricing Policy
- 6.3 Cost and supply of alternative urban transport system.
- 6.4 Urban Growth Strategies-An approach to Metropolitan Planning in Developing Countries
- 6.5 National urbanization policy with reference of India.

**Suggested readings:**

1. G. F. Bussars; Repid Problmes of Urbanisation in India.
2. Asok Owtra john: An Approach to urban Studies in India.
3. John D. Herbert and Alfrad P.Van: Urban Planning in the Developing. Countries.
4. Ashish Bose ; Studies in India's Urbanization.
5. R.K. Bharadwaj ; Urban Development in India.
6. NCAER; Market Towns and Spatial Development.
7. Richard F. Muth : Urban Economic Problems.
8. Harry, S. Perloff; Issues in Urban economics.
9. Harry, W. Richardson; Urban Economics.

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## SEMESTER VII

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### **MAJOR COURSE- MJ 18:**

**(4 Credits)**

**Marks: 25 (5 Attnd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100**

**Pass Marks: 40**

#### **Instruction to Question Setter for**

#### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attnd.<55, 2 marks; 55<Attnd.<65, 3 marks; 65<Attnd.<75, 4 marks; 75<Attnd, 5 marks)

#### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **FINANCIAL INSTITUTIONS AND BANKING**

**(60 Lectures)**

#### **Course Objective:**

This course is designed to familiarize the students to the basic concepts and principles of Banking, Banking & Non-Banking Financial Institutions, Banking Process and Banking Reforms in India.

#### **Course Learning Outcomes:**

1. The students will be able to understand the financial behaviour of the individual, institution and economy.
2. The course will enrich their knowledge about the Banking, Non-Banking Financial Institutions, Banking Process and Banking Reforms in India.

#### **Course Content:**

#### **MODULE I: Banking Institutions**

**(15 Lectures)**

- 1.1 Types of Financial Institutions - Banking & Non-Banking; Their Primary Functions.
- 1.2 Reserve Bank of India - History of Formation; Organization of RBI.
- 1.3 Commercial Banks- Meaning; Nationalization of Commercial Banks; Objectives of Commercial Banks.



- 1.4 Regional Rural Banks (RRBs) - Meaning; Functions.
- 1.5 Co-operative Banks - Meaning; Functions.
- 1.6 Development Banks - Meaning; Functions.

**MODULE II: Non-Banking Financial Institutions**

**(15 Lectures)**

- 2.1 Non-Banking Financial Institutions (NBFI) - Meaning; Types.
- 2.2 Insurance - Meaning; Objectives.
- 2.3 Insurance Companies - Functions; Types – LIC; GIC; ULIP Companies; Health, Life and Assets Insurance.
- 2.4 Micro Finance - Meaning; Functions; Micro Finance Institutions in India.
- 2.5 Mutual Funds - Meaning; Functions; Debt and Equity Component of Mutual Fund.

**MODULE III: Banking Process in India**

**(15 Lectures)**

- 3.1 Reserve Bank of India - Working; Instruments of Credit Control - Quantitative and Qualitative Measures; Types of Bills.
- 3.2 Commercial Bank - Credit Creation.
- 3.3 Digital Banking - Internet Banking; Mobile Banking; Unified Payments Interface (UPI) System.

**MODULE IV: Banking Reforms in India**

**(15 Lectures)**

- 4.1 Digital Rupee; Jan Dhan-Aadhaar-mobile (JAM) Penetration Driving India's Digitization.
- 4.2 Financial Literacy; Financial Inclusion.
- 4.3 Banking and Insurance Regulatory Bodies - Reserve Bank of India (RBI) Formation and Functions; Insurance Regulatory and Development Authority of India (IRDAI) - Formation and Functions; Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) (Central Registry) Rules, 2011.

**Suggested Readings:**

- 1. Vaish, M.C., Money, Banking, Trade & Public Finance, New Age International Pvt Ltd.
  - 2. Sundaram, K.P.M., Money, Banking and International Trade, S Chand Publications.
  - 3. Varian, Hal R., Intermediate Microeconomics, 8th Edition, Affiliated East-West Press.
  - 4. Mithani, D.M., Money Banking, International Trade & Public Finance, 20th Ed, Himalayan Pub.
  - 5. Boden, A., Banking On It, 2020, Penguin Business.
  - 6. Uppal, R. K., Banking Sector Reforms in India, New Century Publications (English).
  - 7. Aggarwal, A., Business Process of Banking: Regulations Operations Digital Banking IT Infrastructure, Notion Press, (Vol I, 2021) (English).
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## SEMESTER VII

### **MAJOR COURSE-MJ 19:**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100**

**Pass Marks: 40**

***Instruction to Question Setter for  
Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks each. **Group B will contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

### **BASIC ECONOMETRICS**

**(60 lectures)**

#### **Course Objective:**

The course objective of "Basic Econometrics" is to provide students with the insight of the basic foundation concepts in econometrics used in empirical economics research.

#### **Course Learning Outcomes:**

After completing the course successfully, the students will get a fundamental knowledge to make use of econometric models in their academic work and further opt for advance econometrics courses for their career enrichment in research. Moreover, the knowledge of econometrics is essential for the job of data scientists and financial analysts.

**Course Content:**

**MODULE I: Introduction and Methodology of Econometrics**

**(15 lectures)**

- 1.1 Definition of Econometrics; Importance of Econometrics.
- 1.2 Relationship between Econometrics, Mathematical Economics and Statistics.
- 1.3 Limitations of Econometrics.
- 1.4 Specification of the Model; Collection of Data and Estimation of the model.
- 1.5 Evaluation of the Coefficients of the Model and Testing the Significance of Coefficients.

**MODULE II: Two Variable Regression Model**

**(20 lectures)**

- 2.1 Stochastic and Non- Stochastic Relations; Reasons for the inclusion of Random or Stochastic Variable.
- 2.2 The Classical Linear Regression Model; Assumptions; Ordinary Least Square Method of Estimation of parameters.
- 2.3 Properties of Least Square Estimates (BLUE); The Gauss Markov Theorem.
- 2.4 The Coefficient of Determination  $R^2$  – A Measure of Goodness of Fit.

**MODULE III: Problems of Regression Analysis**

**(25 lectures)**

- 4.1 Autocorrelation: Meaning, Consequences.
- 4.2 Heteroscedasticity: Meaning, Consequences.
- 4.3 Multicollinearity: Meaning, Consequences.

**Suggested Readings:**

1. Koutsoyiannis, A., (1977), Theory of Econometrics, 2nd Edition, the Mc-Milan Press Ltd, London.
  2. Gujarati, D.N; (1995) Basic Econometrics, 2nd Edition, Mc Graw Hill, New Delhi.
  3. Gujarati, D.N., C Porter and Sangeetha Gunasekar (2012) Basic Econometrics, 5th Edition, Tata Mc Graw Hill Education Pvt. Ltd, New Delhi.
  4. Maddala G.S. (Ed) 1993, Econometric Methods and Application, Aldershot, UK.
  5. Shyamala, Navdeep Kaur and T. Arul Pragasam (2008) A Textbook on Econometrics Theory and Application, 16th Edition, Vishal Publishing Co., New Delhi.
  6. Gupta, S.C., Fundamental of Statistics, Himalaya Publishing House.
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## SEMESTER VII

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### **MINOR FROM DISCIPLINE-1 (MN 1D)**

(4 Credits)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100

Pass Marks: 40

#### ***Instruction to Question Setter for***

##### **Semester Internal Examination (SIE 20+5=25 marks):**

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will **contain descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45 < Attd. < 55, 2 marks; 55 < Attd. < 65, 3 marks; 65 < Attd. < 75, 4 marks; 75 < Attd, 5 marks)

##### **End Semester Examination (ESE 75 marks):**

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will **contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **ECONOMICS OF PLATFORMS**

(60 Lectures)

#### **Course Objectives:**

1. The course aims to introduce the students to the understanding of the Economics of Platform that offer an online forum for conducting transactions, thus creating value for platform users.
2. To understand the importance of digital platforms and how networked markets are transforming the economy.
3. To provide insight to the students regarding the power of platform, principles for designing a successful platform and the basic strategies for launching a successful platform.

#### **Course Learning Outcomes:**

1. This course exposes the students to the basic understanding of the foundations of digital platforms, value creation on platforms and the market behaviour of digital platforms.
2. This will make the students to understand the existing digital platform business models, their strategies towards success and challenges faced by them.
3. Encourage students to design new platform business models

**Course Content:**

**MODULE I: Foundations of Digital Platforms**

**(10 lectures)**

- 1.1 The Platform Revolution and the shape of change
- 1.2 Definition of Digital Platforms
- 1.3 The importance of digital platforms

**MODULE II: Value Creation on Platforms**

**(30 lectures)**

- 2.1 Network Effects: The Power of the Platform
- 2.2 Principles for Designing a Successful Platform
- 2.3 How Platforms Conquer and Transform Traditional Industries?
- 2.4 Chicken or Egg? Eight ways to launch successful Platform – The follow-the rabbit strategy, the piggyback strategy, the seeding strategy, the marquee strategy, the single-side strategy, the producer evangelism strategy, the big-bang adoption strategy and the micromarket strategy.
- 2.5 Ongoing strategies boosting the speed of a platform's expansion.

**MODULE III: The Market Behavior of Digital Platforms**

**(20 lectures)**

- 3.1 How digital platforms change markets
- 3.2 Pricing strategies – The subsidy side and the money side, Monopolistic and competitive pricing and price discrimination
- 3.3 The importance of data – from data to information and antitrust concerns
- 3.4 Transparency – between users and between platform and user

**Suggested Readings:**

1. Parker, Geoffrey.G, Alstyne, Marshall W. Van, Choudary, Sangeet P. (2016): Platform Revolution, W. W. Norton & Company.
2. Evans, David S., Schlamansee, Richard (2016).: Matchmakers: The New Economics of Multisided Platforms Harvard Business Review Press.
3. Demary, Vera; Rusche, Christian (2018) : The Economics of Platforms, IW Analysen, No. 123, ISBN 978-3-602-45615-4, Institut der deutschen Wirtschaft (IW), Köln. (This Version is available at: <https://hdl.handle.net/10419/182531>)

**Additional Readings:**

- Lafuente, E., Ács, Z. J., & Szerb, L. (2022). Analysis of the digital platform economy around the world: A network DEA model for identifying policy priorities. *Journal of Small Business Management*, 62(2), 847–891. <https://doi.org/10.1080/00472778.2022.2100895>
  - Baye, Michael & Prince, Jeffrey. (2020). The Economics of Digital Platforms: A Guide for Regulators. [SSRN Electronic Journal](https://ssrn.com/abstract=3733754) DOI:[10.2139/ssrn.3733754](https://doi.org/10.2139/ssrn.3733754)
  - Bruno Jullien, Wilfried Sand-Zantman. The Economics of Platforms: A Theory Guide for Competition Policy. *Information Economics and Policy*, 2021, 54, pp.100880. [ff10.1016/j.infoecopol.2020.100880ff. fhalshs-03476144f](https://hal.science/halshs-03476144/file/platforms_july_2020.pdf) ([https://shs.hal.science/halshs-03476144/file/platforms\\_july\\_2020.pdf](https://shs.hal.science/halshs-03476144/file/platforms_july_2020.pdf))
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## SEMESTER VIII

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### **MAJOR COURSE-MJ 20**

( 4 Credits)

Marks:25 (5 Attd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100

Pass Marks: 40

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will **contain descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

#### ***End Semester Examination (ESE 75 marks):***

There will be **two** groups of questions. **Group A** is **compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will **contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

## CLIMATE CHANGE AND THE ECONOMY

(60 Lectures)

### **Course Objectives:**

Climate change perhaps is the biggest challenge that humanity faces today. The United Nations declared that climate change is a global emergency that goes beyond national borders. Climate change affects the national economies throughout the world and governments are challenged by its consequences. This course looks at the nature of the problem, its impact on economies, the economic modeling of the problem, policy measures to address the problems and promote sustainability, and the design of mitigation and adaptation plans.

### **Course Learning Outcomes:**

Upon completing this course, each student will be able to:

1. Understand the basic concepts of environmental and climate change
2. Examine the key issues of climate change and policy
3. Analyse the impacts of Climate change
4. Evaluate importance of sustainable development and mitigation policies for climate change.
5. Build an environmental economic policy toolkit and know when to apply which tool to real-world problems and issues.

**Course Content:**

**Module I: The Nature of the Climate Problem**

**(15 lectures)**

- 1.1 The science of climate change.
- 1.2 Global Climate Change.
- 1.3 Climate Change in Asia and India.
- 1.4 Externalities and social costs of energy production and use
- 1.5 Renewable and Non-Renewable Resources
- 1.6 Impacts of Climate Change- Mitigation and Adaptation

**Module-II: Economics of Climate Change: Cost-benefit Analysis**

**(15 lectures)**

- 2.1 Economic and Social Dimensions of Climate Change.
- 2.2 Cost of Climate Change
- 2.3 Valuation/Estimation of Benefits/Costs
- 2.4 Applicability of techniques of cost-benefit analysis to climate change.
- 2.5 Social Cost of Carbon

**Module-III: Sustainable Development and Climate Policy**

**(15 lectures)**

- 3.1 Climate and development
- 3.2 Policy instruments for greenhouse gas emission reduction
- 3.3 Climate policy in India
- 3.4 International Climate Policy
- 3.5 Consensus on Climate Change: United Nations Framework Convention (UNFCCC), Kyoto Protocol, Brundtland Commission, Intergovernmental Panel on Climate Change (IPCC), and other international agreements

**Module IV: Policy Instruments**

**(15 lectures)**

- 4.1 Market-based policies
- 4.2 Command and control policies
- 4.3 Standards, subsidies, and tariffs
- 4.4 Resilience Investments: Sustainability, green accounting, technology progress

**Suggested Readings:**

1. William Cunningham, Mary Cunningham, and Catherine O'Reilly, 2021, Principles of Environmental Science: Inquiry & Applications, McGraw-Hill Education
2. Hussain, M, Ahmed. 2000. Principles of Environmental Economics, Routledge, London and New York
3. Mahesh Rangarajan, 2009, Environmental Issues In India: A Reader, Pearson Education India
4. Charles Kolstad, Intermediate Environmental Economics, Oxford University Press, 2nd edition
5. Rabindra N Bhattacharya (ed) 2002, Environmental Economics: An Indian Perspective, Oxford University Press.
6. "Global Warming's Terrifying New Math." Bill McKibben, Rolling Stone, July 19th, 2012
7. Pindyck, R.S. (2013). "Climate Change Policy: What Do the Models Tell Us?" Journal of Economic Literature 51(3): 860-872.
8. Weitzman, M.L. (1974). "Prices vs. Quantities." Review of Economic Studies 41(4):477-491.

**Additional Readings:**

1. Jonathan M Harris, 2006, Environmental and Natural Resource Economics: A Contemporary approach, Houghton Mifflin
  2. Joy A. Palmer, 1998, Environmental Education in 21st century, Routledge, London.
  3. Ramprasad Sengupta, 2002, Ecology And Economics (OIP): An Approach To Sustainable Development, OUP India
  4. Introduction and Section II.D in Stavins, R.N. (2011). "The Problem of the Commons: Still Unsettled after 100 Years" American Economic Review 101(1):81-82, 96-103.
  5. Climate Change – An Indian Perspective, Sushil Kumar Dash, Cambridge University Press India Pvt. Ltd, 2007
  6. Coase, R.H. (1960). "The Problem of Social Cost." Journal of Law & Economics 3:1-19.  
William Nordhaus, 2015, The Climate Casino: Risk, Uncertainty, and Economics for a Warming World, Yale University Press. ISBN: 978-0300212648
  7. Encyclopedia of Global Warming and Climate Change By George Philander, SAGE Publications Inc; First edition, 2008.
  8. Global Warming: The Complete Briefing By John Houghton, Cambridge University Press; 4th edition 2009.
  9. Gupta Anil K, Sreeja S. Nair. 2011 Environmental Knowledge for Disaster Risk Management, NIDM, New Delhi
  10. Kapur, Anu & others, 2005: Disasters in India Studies of grim reality, Rawat Publishers, Jaipur
  11. Greenstone, M., E. Kopits, and A. Wolverton (2011). "Estimating the Social Cost of Carbon for Use in Federal U.S. Rulemakings: A Summary and Interpretation." NBER Working Paper 16913.
  12. Heinzerling, L. and F. Ackerman (2007). "Law and Economics for a Warming World." Harvard Law & Policy Review 1(2):331-362.
  13. Schmalensee, R. (2012). "Evaluating Policies to Increase Electricity Generation from Renewable Energy." Review of Environmental Economics and Policy 6(1):45-64.
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## SEMESTER VIII

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### **RESEARCH COURSE (RC-I)**

(4 Credits)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100
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Pass Marks: 40
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#### ***Instruction to Question Setter for***

***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

### **RESEARCH METHODOLOGY**

(60 Lectures)

#### **Course Objectives:**

This course offers an overview of the foundations, objectives, and need for research and enables students to understand and identify the correct research methods applicable to a specific identified problem and to apply them in seeking a solution to their research question.

#### **Course Learning Outcomes:**

Upon completing this course, each student will be able to:

1. Demonstrate knowledge of research processes (reading, evaluating, and developing)
2. Perform literature reviews using print and online databases
3. Employ formats for citations of print and electronic materials
4. Identify and explain the key elements of a research proposal/report
5. Define and develop a possible research interest area using specific research designs
6. Compare and contrast quantitative and qualitative research paradigms
7. Describe, compare, and contrast descriptive and inferential statistics, and provide examples of their use in research
8. Describe sampling methods, measurement scales, and instruments, and appropriate uses of each.
9. Analyze data to obtain answers to research questions

10. Explain the rationale for research ethics

**Course Content:**

**MODULE I –Research Formulation and Design**

**(17 Lectures)**

- 1.1 Foundations of Research: Meaning, Objectives, Motivation and Utility.
- 1.2 Motivation and objectives – Research methods vs. Methodology. Types of research – Descriptive vs. Analytical, Applied vs. Fundamental, Quantitative vs. Qualitative, Conceptual vs. Empirical, applied and basic research process; criteria of good research.
- 1.3 Defining and formulating the research problem, importance of literature review in defining a problem, literature review-primary and secondary sources, research databases, searching the web, identifying gap areas from literature and research database, development of working hypothesis.
- 1.4 Research Design: Concept and Importance in Research, Features of a good research design, Research Designs - concept, types and uses. Concept of Independent & Dependent variables.

**MODULE II: Concept of Measurement**

**(8 Lectures)**

- 2.1 Problems of measurement in research- Validity and Reliability.
- 2.2 Scales of measurement: Nominal, Ordinal, Interval, Ratio.

**MODULE III: Data Collection and Sampling**

**(15 lectures)**

- 3.1 Concepts of Statistical Population, Sample, Sampling Frame and Sampling Error; Characteristics of a good sample.
- 3.2 Types of Sample: Probability Sample- Simple Random Sample, Systematic Sample, Stratified Random Sample & Multi-stage sampling. Non probability sampling
- 3.3 Determining size of the sample; Practical considerations in sampling and sample size.

**MODULE IV: Data Analysis**

**(12 Lectures)**

- 4.1 Descriptive and Inferential Statistics: Methods and Application
- 4.2 Parametric and non-parametric tests: Characteristics and applications

**MODULE V: Research Ethics**

**(8 Lectures)**

- 5.1 Ethics- copyright and its infringement; scholarly publishing of research paper
- 5.2 Citation and acknowledgement
- 5.3 Plagiarism, reproducibility and accountability.

**Suggested Readings:**

1. Garg, B.L., Karadia, R., Agarwal, F. and Agarwal, U.K., (2002). An introduction to Research Methodology, RBSA Publishers.
2. Kothari, C.R., (1990). Research Methodology: Methods and Techniques. New Age International. 418p.
3. Sinha, S.C. and Dhiman, A.K., (2002). Research Methodology, ESS Publications. 2 volumes.
4. Sriwastava, S. C.(1990): Foundation of Social Research and Economics Techniques, Himalaya Publishing House.
5. Chou, Ya-Lun (1974): Statistical Analysis with Business and Economics Applications, 2nd Eds., New York, Hold Rinchart and Wrintston.
6. Krishnaswami O.R (1993):. Methodology of Research in Social Sciences, Himalaya Publishing House.
7. Sharma H.D. and Mukherji S. P. (1992): Research Methods in Economics and Business, New York, The Macmillan Company.

## SEMESTER VIII

### **RESEARCH COURSE (RC-II)**

(8 Credits)

#### **Course Title – Research Proposal/Synopsis and Dissertation Writing**

Credits	Hours	Mid-Sem	End-Sem	Total
08	120	00	200	200

#### **Course Objectives:**

1. To enable students to evaluate existing research for methodological soundness and relevance.
2. Understanding various research designs and their appropriate applications.
3. Evaluating the validity and reliability of research findings.
4. Understanding of the ethical considerations in research, including informed consent and plagiarism.
5. To learn to prepare a comprehensive research proposal and dissertation report

#### **Course Outcomes:**

At the end of the Research Course II students will be able to:

1. Students learn the technique of defining a research problem.
2. Carry out a literature search, review it, and develop theoretical and conceptual frameworks based on the review.
3. Find, scale, analyze, evaluate and use data for research.
4. Use the art of interpretation and writing to prepare a research report.
5. Demonstrate an understanding of and sensitivity to Plagiarism.
6. Develop and write a structured research proposal.

#### **Course Description:**

The course is aimed at providing instructions and guidance to the students to prepare a Research Proposal/Synopsis and write a Dissertation based on their Research Proposal/Synopsis.

The course is an applied extension of the Research Methodology course which provides students theoretical grounding on the fundamental concepts related to conducting research and writing dissertation/Thesis.

1. The students will select a topic of their interest in consultation with their supervisor to be assigned by their department.
2. The research supervisors would explain the fundamentals and mechanics of drafting a Research Proposal/Synopsis.
3. The students will prepare a Research Proposal/Synopsis on a topic of their interest under the guidance of their research supervisor.
4. The students will present and defend their Research Proposal/Synopsis before the departmental committee/faculties. On successful presentation and approval of their Research proposal/Synopsis the students will pursue their research work and write their Dissertation based on their findings.

5. The students, after having completed writing their Thesis/Dissertations will submit the same along with their Research Proposal/Synopsis to the department. The Research Proposal/Synopsis and Dissertations will be evaluated by an external examiner who would also conduct a viva voce examination to assess the student's comprehension and clarity of his/her dissertation.

**Evaluation and Examination:**

The Research Proposal/Synopsis and Dissertation prepared by the students will be evaluated by an external examiner who will also conduct a viva-voce examination to assess and verify students' understanding of their Research Proposal/Synopsis and Dissertation.

<b>Research Proposal/Synopsis and Dissertation Writing</b>	<b>150 Marks (6 Credits)</b>
<b>Viva voce</b>	<b>50 Marks (2 Credits)</b>
<b>Total</b>	<b>200 Marks (8 Credits)</b>

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## SEMESTER VIII

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### **MAJOR COURSE-AMJ-1 (A):**

(4 Credits)

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100

Pass Marks: 40

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

#### ***End Semester Examination (ESE 75 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

### **APPLIED ECONOMETRICS**

(60 Lectures)

#### **Course Objective:**

MODULE I is devoted to the examination of the assumptions of multiple linear regression model, their economic meaning, implications for the values of the parameters of the economic relations, their tests and matrix approach to regression analysis.

MODULE II is about the method of analysis of variance and its use in connection with regression analysis.

MODULE III explains dummy variables, its uses, dummy explanatory variables and dummy dependent variable model, dummy variable model alternative to chow test.

MODULE IV includes simultaneous dependence of economic variables. The system of simultaneous relations requires the application of more elaborate econometric techniques for their measurement.

#### **Course Learning Outcome:**

After completing the course successfully, the students will be able to understand and apply various statistical techniques to analyze the data and interpret the results.

**MODULE I: Multiple Linear Regression Model**

**(15 lectures)**

- 1.1 Multiple Linear Regression Model with two Explanatory Variables.
- 1.2 Statistical Properties of the Estimates  $\beta_0$ ,  $\beta_1$  and  $\beta_2$ .
- 1.3 Tests of Significance of Parameters; Testing the Hypothesis; Confidence Interval.
- 1.4 Goodness of Fit  $R^2$ ; Adjusted Coefficients of Determination  $R^2$ .
- 1.5 Matrix Approach to Regression Analysis.

**MODULE II: Analysis of Variance and Regression**

**(15 lectures)**

- 2.1 Meaning
- 2.2 The Method of Analysis of Variance as a Statistical Method.
- 2.3 Regression Analysis and Analysis of Variance.
- 2.4 Comparison between Regression Analysis and Analysis of Variance.
- 2.5 Tests based on ANOVA.

**MODULE III: Dummy Variables**

**(15 lectures)**

- 3.1 Meaning and Uses of Dummy Variables.
- 3.2 Interaction Effect using Dummy Variables.
- 3.3 Features of Dummy Variable Models.
- 3.4 The Dummy Variable Model alternative to Chow Test.
- 3.5 Dummy Dependent Variable Models.

**MODULE IV: Simultaneous Equation Models**

**(15 lectures)**

- 4.1 Simultaneous Dependence of Economic Variables.
- 4.2 Consequences of Simultaneous Relations.
- 4.3 Solution to the Simultaneous Equation Bias.
- 4.4 Structural Versus Reduced Form.
- 4.5 The Method of Instrumental Variables.

**Suggested Readings:**

1. Koutsoyiannis A (1977) Theory of Econometrics, 2nd Edition, the Mc Milan Press Ltd, London.
  2. Gujarati, D.N; (1995) Basic Econometrics, 2nd Edition, Mc Graw Hill, New Delhi.
  3. Gujarati, D.N., C Porter and Sangeetha Gunasekar (2012) Basic Econometrics, 5th Edition, Tata Mc Graw Hill Education Pvt. Ltd, New Delhi.
  4. Maddala G.S. (Ed) 1993, Econometric Methods and Application, Aldershot, UK.
  5. Shyamala, Navdeep Kaur and T.Arul Pragasam (2008) A Textbook on Econometrics Theory and Application, 16th Edition, Vishal Publishing Co., New Delhi.
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## SEMESTER VIII

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Or

**MAJOR COURSE-AMJ-1 (B):**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100**

**Pass Marks: 40**

***Instruction to Question Setter for***

***Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

## AGRICULTURAL ECONOMICS

**(60 Lectures)**

**Course Objectives:**

1. This course is intended to familiarize students with the nature, scope, and principles of agricultural economics.
2. The course highlights key concepts and introduces different analytical tools necessary for studying agricultural economics.
3. Specifically, the course seeks to enhance students' comprehension of how economic theories can be applied to evaluate policy issues in the agricultural sector.
4. It also centers on analyzing the principles related to agricultural production, along with costs and pricing.

**Course Learning Outcomes:**

1. Upon finishing the course, students will grasp the importance of agriculture in economic growth and development, assess the advancements and evolving characteristics of the agricultural sector, and its overall impact on the economy.
2. Students will gain insights into economic theories relevant for analyzing issues related to agricultural production, along with costs and pricing.

**Course Content:**

**MODULE I: Overview of Agricultural Economics** (15 lectures)

- 1.1 Nature and scope of agriculture: Traditional agriculture and its modernization;
- 1.2 Role of Agriculture in economic development; Interdependence of Agriculture and Industry.
- 1.3 Mellor's approach and Lewis Model; Linkages between agriculture and industry; Sustainable agricultural development.
- 1.4 Ranis – Fei Model of Agricultural Growth.

**MODULE II: Principles of Agricultural Economics** (12 lectures)

- 2.1 Farm Management; Features and Kinds of firm ownership.
- 2.2 Farm Size and Productivity.
- 2.3 Intensive and Extensive Cultivation.
- 2.4 Classification of Agricultural Products (Cash and Food Crops, Cereal and Non-Cereal Crops).

**MODULE III: Principles of Agricultural Production** (18 lectures)

- 3.1 Production and Production Functions: Short Run and Long Run Production Function.
- 3.2 Relationship between TPP, APP and MPP.
- 3.3 Factor-Product Relationship.
- 3.4 Factor-Factor Relationship: Isoquant, Iso Cost line, least cost combination.
- 3.5 Laws of Returns: Law of Increasing Returns, Law of Constant Returns and Law of Diminishing Returns.
- 3.6 Product-Product Relations: Production Possibility Curve, Iso Revenue line, Optimum Product combination.

**MODULE IV: Agricultural Marketing and Agricultural Prices**

- 4.1 Meaning and scope of Agricultural Marketing.
- 4.2 Significance of Agricultural Marketing.
- 4.3 Marketed and Marketable Surplus.
- 4.4 Agricultural Prices: Meaning and determination of agricultural Prices, Trends in Causes and impact of price fluctuations.

**Suggested Readings:**

1. Andrew Barkley, Principles of Agricultural Economics, Routledge Taylor and Francies, London and New York.
  2. Sadhu, A. N. and Singh Amarjeet: Fundamental of Agricultural Economics, Himalaya Publ. House, New delhi.
  3. Lekhi, R. K. & Singh, Joginder: Agricultural Economics-An Indian Perspective, Kalyani Publishers, New Delhi.
  4. S. Subba Reddy, P. Raghu Ram, T.V. Neelakanta Sastry, I. Bhavani Devi: Agricultural Economics, Oxford & IBH Publishing Co. Pvt. Ltd., New Delhi.
  5. Arun Katyan: Krishi Vigyan ke Sidhant, Kitab Mahal Publishers, New Delhi.
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## SEMESTER VIII

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### **MAJOR COURSE-AMJ-2 (A):**

**(4 Credits)**

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100**

**Pass Marks: 40**

#### ***Instruction to Question Setter for Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

#### ***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

**Note:** *There may be subdivisions in each question asked in Theory Examinations.*

## **MICRO FINANCE AND RURAL DEVELOPMENT**

**(60 Lectures)**

### **Course Objectives:**

The course examines the necessity of microfinance and its impact on rural progress. It lays the groundwork in the fundamentals and methods of microfinance, encompassing financial instruments, digital approaches, the significance of technology, and governmental efforts aimed at promoting rural development.

### **Course Learning Outcomes:**

After successfully finishing the course, students will acquire:

1. Knowledge of the agricultural economic landscape.
2. Familiarity with the practical elements of microfinance and rural banking.
3. Awareness of successful approaches for rural development and financial assistance for economically disadvantaged groups via self-help groups and microcredit.

**Course Content:**

**MODULE-I Development of Micro Finance Products**

**(15 Lectures)**

- 1.1 Concept of Micro Finance
- 1.2 Genesis and History of Micro Finance – Contributions of Md. Yunus
- 1.3 Growth of Micro in India
- 1.4 Micro Finance for poverty reduction in India
- 1.5 Micro Finance and the Millennium Development Goals
- 1.6 Pros and cons of Micro Credit Programme
- 1.7 Micro Finance Models in India

**MODULE II: Micro Finance an Instrument for Women Empowerment**

**(15 Lectures)**

- 2.1 Concept of empowerment of women
- 2.2 Components of women empowerment
- 2.3 Constraints faced by women for empowerment
- 2.4 Role of Micro Finance in economic development of women
- 2.5 Empowerment of women and Micro - business.

**MODULE III: Self Help Group and Rural Development Approach**

**(15 Lectures)**

- 3.1 The concept, Why Self Help Groups?
- 3.2 Objectives & Functions of SHGs Promotion
- 3.3 Formation of SHG & Constraints of Women SHGs
- 3.4 Important Steps for Sustainable Development of SHGs and Skills needed for Managing Successful SHGs
- 3.5 Linking of Self Help Group to Bank
- 3.6 Stepwise process of Operating of SHG–SHG Federation.

**MODULE IV: Progress Under the SHG Bank–Linkage Program**

**(15 Lectures)**

- 4.1 SHG - Banking programme - an introduction
- 4.2 NABARD as implementing agency in India and the strategy adopted
- 4.3 The demand and supply side of micro finance
- 4.4 The MFI or the Non-Government Micro finance sector (NGMS)
- 4.5 Achievements in SHGs through SHG –banking
- 4.6 Impact of the formal banking set – up – Why could SHG – banking achieve such good results
- 4.7 Risk in SHG– Banking as implemented by the formal banking system.

**Suggested Readings:**

1. Daniel Lazar (2008), Micro Finance and poverty eradication, New Century Publications, ND.
2. Desai, Vasant. (2005), Rural, Development in India, Himalaya Publishing House.
3. Rais Ahmad (2009) Micro Finance and Women Empowerment, Mittal Publication New Delhi.
4. Vijayakumar. A, (2009) Banking, Micro Finance and Self Help Group in India, New Century Publications, New Delhi
5. Thakur, A. K and Sharma, P. (2009), Micro-Credit and Rural Development, Indian Economic Association, Deep & Deep Publications, New Delhi.
6. Cernea, Michael M. (1988), NGOs and Local Development, The World Bank, Washington, Discussion Paper.

## SEMESTER VIII

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Or

### **MAJOR COURSE-AMJ-2 (B):**

(4 Credits)

Marks:25 (5 Attd. + 20 SIE:1Hr) +75 (ESE:3 Hrs) =100

Pass Marks: 40

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will **contain descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)

#### ***End Semester Examination (ESE 75 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will **contain descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

## **LABOUR AND INDUSTRIAL ECONOMICS**

(60 Lectures)

### **Course Objectives:**

1. To provide a foundational understanding of industrial economics and labor economics.
2. To familiarize students with the historical and current state of industry in India.
3. To educate students on the role of labor in the process of capitalist development.
4. To explore the connection between the current phase of globalization and labor, including the role of the Indian state.

### **Course Learning Outcomes:**

1. The course will provide students with a comprehensive understanding of various facets of Industrial and Labour Economics, particularly in the context of India.
2. It will also prepare students to understand fundamental concepts related to industry, firms, and the significance of access to finance.
3. Students will be able to evaluate historical industrial policies and their impact on national development.

**Course Content:**

**MODULE I: Industrial Economics: An Introductory Framework** (15 lectures)

- 1.1 Meaning and Definition of Industrial Economics; Subject Matter of Industrial Economics; Nature of Industrial Economics Importance of the study of Industrial Economics;
- 1.2 Industrial Revolution; Industrialization in India; Index of Industrial Production (IIP)
- 1.3 Need for rapid industrialization; Obstacles to industrialization
- 1.4 Business Organization: Definition; Types (Proprietorship, Partnership, Corporations and Limited Liability Companies); Firms: Meaning; Ownership; Objectives

**MODULE II: Industrial Production and Finance** (15 lectures)

- 2.1 Public and Private Sector- Meaning, Role and Performance
- 2.2 Industrial Productivity- Meaning, Measure and Factors affecting Industrial Productivity,
- 2.3 Industrial finance- Internal and External Sources of Debt versus Equity
- 2.4 Major funding agencies -IDBI, IFCI, SFCs, SIDBI and Commercial Banks.

**MODULE III: Labour Economics and Labour market** (15 lectures)

- 3.1 Meaning and Definition of Labour Economics; Scope and Importance of Labour Economics
- 3.2 Concept of Labour Market; Analysis of Demand and Supply of labour; Factors affecting demand and Supply of labour
- 3.3 Characteristics of labours Market in India.
- 3.4 Types of Wages in India; Wage Policies in India: Minimum Wages Act; Equal Remuneration Act 1976, Payment of Bonus Act 1965
- 3.5 Wage Board: Meaning and Objectives; Wage Board in India.

**MODULE IV: Labour in India and Social Security Measures** (15 lectures)

- 4.1 Working age population and labour force participation rate; Labour Force Participation Rate in India
- 4.2 Meaning of Industrial Disputes; Causes and effects of Industrial Disputes; Machinery of settling the Industrial Disputes in India
- 4.3 Social Security: Meaning; Scope; Objectives; Importance; Category of Social Security Measures; Social Security Schemes in India

**Suggested Readings:**

1. George, J. Borjas, (2013 6th edition) Labour Economics, McGraw Hill.
  2. Hay, D. and Morris, D J (1979) Industrial Economics: Theory and Evidences, Oxford Univ. Press, New Delhi.
  3. Barthwal, R.R. (1985), Industrial economics, Wiley Eastern Ltd., New Delhi.
  4. Singh, A. and Sadhu, A.N. (1988), Industrial Economics, Himalaya Publishing House.
  5. Tyagi, B.P. (2009), Economics and Social Welfare-Revised Edition, Sage Publication, New Delhi.
  6. Gupta, S.B., (2022), Audyogik Arthshastra, SBPD Publications.
  7. Sinha, V.C., Shram Arthashastra, SBPD Publications.
  8. Yadav, Ravi Prakash (2015) Social Security in India, Avishkar Publishers.
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## SEMESTER VIII

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### **MAJOR COURSE-AMJ-3 (A):**

(4 Credits)

**Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100**

**Pass Marks: Th (SIE+ESE) = 30**

***Instruction to Question Setter for  
Semester Internal Examination (SIE 20+5=25 marks):***

*There will be two group of questions. Question No.1 will be very short answer type in Group A consisting of five questions of 1 mark each. Question No.2 will be short answer type of 5 marks. Group B will contain descriptive type two questions of ten marks each, out of which any one to answer.*

*The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks)*

***End Semester Examination (ESE 75 marks):***

*There will be two groups of questions. Group A is compulsory which will contain three questions. Question No.1 will be very short answer type consisting of five questions of 1 mark each. Question No.2 & 3 will be short answer type of 5 marks each. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.*

***Note:*** *There may be subdivisions in each question asked in Theory Examinations.*

### **ADVANCED MATHEMATICAL ECONOMICS**

(60 Lectures)

#### **Course Objectives:**

1. This course focuses on optimizing functions with two or more variables using first and second order differentiation techniques in various explanatory variables.
2. The applications of total differentials and Hessians have been included.
3. Dynamic analysis is explained using difference and differential equations.
4. Lastly, it deals with the basic understanding of Input-Output analysis and its significance in economics.

#### **Course Learning Outcomes:**

1. This course will provide students with an understanding of economics through the application of mathematics.
2. The study of Mathematical Economics empowers students to create models, which are valuable for problem-solving and decision-making within organizations.

**Course Content:**

**MODULE I: Differentiation and Its Application for Unconstrained Optimisation of Functions** (10 lectures)

- 1.1 Functions of two or more Independent Variables; Production Function and Isoquants; Utility function and Indifference Curves
- 1.2 First and Second Order Partial Differentiation; Young's Theorem.

**MODULE II: Total Differentials and Applications of Partial and Total Derivatives in Economics** (15 lectures)

- 2.1 Total Differentials- Meaning and Technique; Maxima and Minima of functions using two or more independent variables (with the help of Total Differentials or Hessian determinants)
- 2.2 Homogeneous production function and properties; Properties of Cobb Douglas production function
- 2.3 Slope of demand curve; Income and Price elasticity of demand (when demand is function of price and income)
- 2.4 Marginal utility in case of consumption of more than one commodity

**MODULE III: Constrained Optimisation in Case of More Than One Independent Variable** (15 lectures)

- 3.1 Technique of Optimisation in case of two independent variables - Necessary Condition (using Lagrangian multiplier) and Sufficient Condition (Using Total differential or Bordered Hessian)
- 3.2 Consumer's Equilibrium- Maximisation of Utility Subject to Budget Constraint.
- 3.3 Producers Equilibrium - Maximisation of Output Subject to Cost Constraint; Minimisation of Cost subject to output constraint.

**MODULE IV: Difference and Differential Equations and their application** (15 lectures)

- 4.1 Difference Equations - Concept; Solution of Linear Non-Homogeneous First Order Difference Equation - General and Particular Solutions
- 4.2 Application of First Order Difference Equations to Market - Simple Cobweb Model.
- 4.3 Differential Equations - Concept and Types; Solution of Linear Non-Homogeneous First Order Differential Equations - General and Particular Solutions; Stability of Market Equilibrium with Differential Equations.

**MODULE V: Input-Output Analysis and its application** (5 lectures)

- 5.1 Input-Output Analysis - Meaning and Assumptions
- 5.2 Transaction Matrix and Technology Matrix
- 5.3 Solution of Open- Static Input-Output model

**Suggested Readings:**

1. Allen, RGD, Mathematical Analysis for Economists, All India Publishers and Distributors
  2. Allen, RGD, Mathematical Economics, All India Publishers and Distributors
  3. Chiang, AC, Fundamental Methods of Mathematical Economics, McGraw Hill Publications
  4. Srivastava, R, A Textbook on Advanced Mathematical Economics, Disha International Publishing House
  5. Mehta, BC and Madnani GMK (Hindi) Mathematics for Economists, Sultan Chand and Sons
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## SEMESTER VIII

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Or

### **MAJOR COURSE-AMJ-3 (B):**

(4 Credits)

Marks: 25 (5 Attnd. + 20 SIE: 1Hr) + 75 (ESE: 3 Hrs) = 100

Pass Marks: 40

#### ***Instruction to Question Setter for***

#### ***Semester Internal Examination (SIE 20+5=25 marks):***

There will be **two** group of questions. **Question No.1** will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Question No.2** will be **short answer type** of 5 marks. **Group B** will contain **descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1 mark; 45 < Attnd. < 55, 2 marks; 55 < Attnd. < 65, 3 marks; 65 < Attnd. < 75, 4 marks; 75 < Attnd, 5 marks)

#### ***End Semester Examination (ESE 75 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1** will be **very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3** will be **short answer type** of 5 marks each. **Group B** will contain **descriptive type** six questions of fifteen marks each, out of which any four are to answer.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

## **DEMOGRAPHY & ENVIRONMENTAL ECONOMICS**

(60 Lectures)

### **Course Objectives:**

1. The course is designed to familiarise students with the beneficial aspects of population and its role in the country's economic growth.
2. It introduces students to key demographic theories.
3. The course also emphasizes the demographics of India and its Population Policy.
4. It helps students gain a comprehensive understanding of environmental economics, as well as issues related to Common Property Resources, Green GDP, and Carbon Footprint.
5. The course examines the relationship between Environment and Development and addresses significant environmental policies.

### **Course Learning Outcomes:**

1. By the conclusion of the course, students will be guided to understand the relationship between demographics, the environment, and economic development.

2. They will gain insight into both the quantitative and qualitative dimensions of population studies along with various demographic concepts and indicators.
3. The students will be capable of understanding issues concerning the economics of the environment, the challenges of environmental deterioration, and the distinctions between renewable and non-renewable resources.

**Course Content:**

**MODULE I: Population and Development** (5 Lectures)

- 1.1 Meaning of Demography; Scope of Demography.
- 1.2 Meaning of Population Growth; Components of Population growth; Measurement of Population growth.
- 1.3 Theories of Population-Malthus theory; Optimum theory; Theory of Demographic Transition.
- 1.4 Migration: Meaning; Types; Factors promoting migration

**MODULE II: Analysis of Population Data** (15 Lectures)

- 2.1 Fertility - Meaning; Importance of study of fertility; Meaning and formula of important Birth Rate Concepts: Crude Birth Rate, Age Specific Birth Rate; Total Fertility Rate, Gross Reproduction Rate and Net Reproduction Rate; Factors affecting fertility rate; Trend of fertility ratio India.
- 2.2 Mortality – Meaning; Concepts and measurements of important Death rates- Crude Death Rate, Age Specific Death Rate; Infant Mortality Rate; Neo-Natal Mortality Rate; Maternal Mortality Rate; Factors responsible for decline in mortality in recent past.
- 2.3 Nuptiality - Meaning; Concepts and formula of Total Marriage Rate; Total Marriage Rate; Total Divorce Rate; Gross Nuptiality Rate; Meaning and types of Marital status; Trends in age at marriage in India.

**MODULE III: Population Indices** (5 Lectures)

- 3.1 Meaning of Life table; Basic concepts of Life Table, Forms of Life Table; Preparation of life table.
- 3.2 Population Pyramid- Concept; Significance; Construction of Population Pyramid; Shapes of Population Pyramid and their implications.
- 3.3 Population Projection: stable and stationary population.
- 3.4 Concepts of population Cohort; Meaning and components of Vital Statistics, ‘defacto’ and ‘dejure’ Census of an area.

**MODULE IV: Environment and Development** (15 Lectures)

- 4.1 Meaning and Scope of Environmental Economics
- 4.2 Concepts of Common Property Resources, Green GDP; Carbon Footprint.
- 4.3 Environment and Economic Development – Two-way Linkage.
- 4.4 Sustainable Development – Concept and Indicators.
- 4.5 Sustainable Development goals of India.
- 4.6 Environmental Externalities: Concept & Types.
- 4.7 Pareto Optimality and market failure in the presence of externalities.
- 4.8 Pigouvian taxes and subsidies.
- 4.9 Environmental Kuznets Curve.

**MODULE V: Issues in Environmental Degradation** (10 Lectures)

- 5.1 Environmental Degradation – Land, Forest and Natural Resource
- 5.2 Causes, Effects and Solutions to Environmental Degradation



- 5.3 Problem of Air Pollution and Problem of Water Pollution
- 5.4 Renewable and Non-Renewable Resources.
- 5.5 Optimal use of Non-Renewable Resources – The Theory of Extraction.
- 5.6 Optimal use; Theory of Optimal Use.

**MODULE-VI Environmental Policy**

**(10 Lectures)**

- 6.1 National Environment Policy of India
- 6.2 National Water Polices in India
- 6.3 National Forest Polices of India
- 6.4 WTO & Environment
- 6.5 Climate Change and International Agreements.

**Suggested Readings:**

1. Desai, J. N. Jhingan M. L. and Bhatt B. K. (2003), Demography, Vrinda Publications.
  2. Mishra J, (2016), Demography, Sahitya Bhawan Publications.
  3. Preston, S, Heuveline, P, and Guillot, Michel (2000), Demography: Measuring and Modelling Population Processes, John Wiley and Sons Publications.
  4. Sinha, V. C. and Sinha, P, (2018) (English and Hindi), Demography, SBPD Publication.
  5. Weinstein, Jay and Pillai, Vijayan K. (2015), Demography: The Science of Population, Rowman and Littlefield Publications.
  6. Mishra, J. P., Jananki (Hindi), (Revised edition 2021) Sahitya Bhawan Publications.
  6. Bhattacharya, R.N. (2006): Environmental Economics, An Indian Perspective, Oxford University Press, New York.
  7. Divan Shyam and Armin Rosencranz (2008): Environmental Law and Policy in India, Cases, Material and Statutes, Oxford University Press, New York.
  8. Ganesamurthy, V.S. (2009): Environmental Economics in India, New Century Publications, New Delhi, India.
  9. Sankar, Ulaganthan (2006): Environmental Economics, Oxford University Press, New York.
  10. Eugene T. (2008): Environmental Economics, Vrinda Publications (P) Ltd.
  11. Tietenberg, Tom (2004): Environmental and Natural Resource Economics, Pearson Education.
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## SEMESTER VIII

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### **MINOR FROM VOCATIONAL STUDIES -2 (MN 2B)**

**[Credits: Theory (03) + Practical (01)]**

**Marks:**

**Theory: SIE (15) + ESE (60) = 75 (F.M)**

**Practical: Report Presentation (15) + viva (10) = 25 (F.M)**

**Pass Marks: 40 [Th (SIE + ESE) (30) + Practical (10)]**

#### ***Instruction to Question Setter for***

##### ***Semester Internal Examination (SIE 10+5=15 marks):***

There will be **two** group of questions. Question No.1 will be **very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks. Conversion of Attendance into score may be as follows: (Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks) and (c) practical examination consisting of Report presentation of 15 marks and Viva of 10 marks.

##### ***End Semester Examination (ESE 60 marks):***

There will be **two** groups of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks each. **Group B will contain descriptive type** five questions of fifteen marks each, out of which any three are to be answered.

**Note:** There may be subdivisions in each question asked in Theory Examinations.

## **FINANCIAL LITERACY**

**(45 lectures)**

### **Course Objectives:**

1. To enhance students' understanding of the essential importance of financial literacy education, this encompasses building knowledge in different areas of financial literacy, including saving, investing, and insurance.
2. Students will gain insight into the significance and procedures of financial planning, as well as its role in achieving financial wellness.
3. By advocating for financial literacy, students will be more prepared to make educated financial choices, leading to a more stable and successful future.

**Course Learning Outcomes:**

On completion of this course, learners will

1. Gain an understanding of the significance of financial literacy and the importance of financial plans and budgets.
2. They will be able to explain the role of insurance services as part of social security measures and will also explore different investment options, digital payment methods (both national and international), and financial services available through the post office.

**Course Content**

**MODULE I: Introduction**

**(7 lectures)**

Financial Literacy- Meaning and Importance - Components of Financial Literacy- Financial Institutions: Banking and Non-Banking Financial Institutions, Saving, Time value of money,

**MODULE II: Banking and payment system**

**(10 lectures)**

Bank products and services; Digitalization of financial transactions: Debit cards, credit cards, net banking, UPI and digital wallets; Security and precautions against Ponzi Schemes and online frauds.

**MODULE III: Financial Services from the Post Office and investment**

**(18 lectures)**

Post office Savings Schemes: Savings account - Recurring deposit - Term Deposit - Monthly Income Scheme - Kissan Vikas Pathra – NSC – PPF - Senior Citizen Savings Scheme - Sukanya Samriddhi Yojana/Account - Indian Post Payments Bank - Money Transfer - Money Order.

Investment options: Share, Bond, equity, debenture, treasury bills

**MODULE IV: Insurance Services**

**(10 lectures)**

Life Insurance – Life Insurance Policies - Term Insurance and Endowment Policies - Pension Policies - Health Insurance Plans – ULIP - Property Insurance - General Insurance - Types, Postal Life Insurance Schemes- Housing Loans - Institutions providing Housing Loans, Pradhanmantri Awas Yojana: Rural and Urban.

**Practical Component: Prepare a project report on any one of the following topics:**

**(1 credit)**

1. Visit the websites of various banks and conduct an in-depth analysis and comparison of financial products on offer.
2. Build a dummy portfolio of stocks and track their returns .
3. Conduct a financial literacy survey among at least 25 respondents to measure the level of financial literacy and awareness about financial products and report the findings.

**Suggested Readings:**

1. Introduction to Financial Planning (4th edition, 2017) – Indian Institute of Banking and Finance
  2. Sinha, Madhu. Financial Planning: A Ready Reckoner, July 2017, McGraw Hill
  3. Chandra, P. (2012), Investment Game: How to Win. New Delhi: Tata McGraw Hill Education.
  4. Kothari, R. (2010), Financial Services in India: Concept and application. New Delhi: Sage Publication India Pvt Ltd
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