

***SCHEME OF EXAMINATION
RULES & REGULATIONS
AND
SYLLABUS
(FOR ACADEMIC SESSION 2024-2025)***

M. A. ECONOMICS

FOUR SEMESTERS EXAMINATION

Faculty of Social Science



UNIVERSITY OF KOTA

MBS Marg, Near Kabir Circle, KOTA (Rajasthan)-324005

INDIA

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COURSE CODE- ECO 11300T

Semester wise Scheme of Examinations

Year / Semester	Course Type	Number, Code/ID and Nomenclature of Paper			Duration of Exam.	Teaching Hrs / Week & Credit Points			Distribution of Assessment Marks				Total Marks	
		Number of Paper	Code / ID of Paper	Nomenclature of Paper		Teaching Th.	Pra.	Credit Points	Continuous Assessment (33.33%)		Semester Assessment (66.67%)			
									Max. Marks	Min. Pass Marks	Max. Marks	Min. Pass Marks	Max. Marks	Min. Pass Marks
I Year I Sem.	Discipline Centric Core (DCC) Compulsory	Paper-1.1	ECO-511-T	Microeconomic Theory - I	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-1.2	ECO-512-T	Macroeconomic Theory – I	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-1.3	ECO-513-T	Mathematical Methods for Economics	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-1.4	ECO-514-T	Public Economics-I	3 Hrs	06	-	06	50	20	100	40	150	60
	Total (I Semester)				12 Hrs	24	-	24	200	80	400	160	600	240
I Year II Sem.	Discipline Centric Core (DCC) Compulsory	Paper-2.1	ECO-521-T	Microeconomic Theory- II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-2.2	ECO-522-T	Macroeconomic Theory – II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-2.3	ECO-523-T	Statistical Methods	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-2.4	ECO-524-T	Public Economics-II	3 Hrs	06	-	06	50	20	100	40	150	60
	Generic Elective (GEC)	Paper-2.5		A Course not related to specific discipline	-	02	-	02	50	20			50	20
Total (II Semester)				12 Hrs	26	-	26	250	100	400	160	650	260	
II Year III	Compulsory (DCC)	Paper-3.1	ECO-631-T	International Trade Theory	3 Hrs	06	-	06	50	20	100	40	150	60

Semester	Discipline Specific Elective (DSE)	Paper-3.2 ECO-632-T	Discipline Specific Elective - I-A	3Hrs	06	-	06	50	20	100	40	150	60
		Paper-3.3 ECO-633-T	Discipline Specific Elective - I-B	3 Hrs	06		06	50	20	100	40	150	60
		Paper-3.4 ECO-634-T	Discipline Specific Elective - I-C	3 Hrs	06	-	06	50	20	100	40	150	60
	Generic Elective (GEC)	Paper-3.5	A Course not related to specific discipline	-	02	-	02	50	20	-	-	50	20
	Total (III Semester)				12 Hrs	26	-	26	250	100	400	160	650

II Year IV Semester	Compulsory (DCC)	Paper-4.1	ECO-641-T	Trade Policy and International Monetary System	3 Hrs	06	-	06	50	20	100	40	150	60
	Discipline Specific Elective (DSE)	Paper-4.2	ECO-642-T	Discipline Specific Elective- II-A	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.3	ECO-643-T	Discipline Specific Elective - II-B	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.4	ECO-644-T	Discipline Specific Elective - II-C	3 Hrs	06	-	06	50	20	100	40	150	60
		Total (IV Semester)			12 Hrs	24	-	24	200	80	400	160	600	240
		Total (I + II + III + IV Semester)			48 Hrs	100	-	100	900	360	1600	640	2500	1000

Discipline Specific Elective for Semester's- III & IV

Year / Semester	Course type	Number, Code/ID and Nomenclature of Paper			Duration of Exam.	Teaching Hrs / Week & Credit Points		Distribution of Assessment Marks				Total Marks		
		Number of Paper	Code / ID of Paper	Nomenclature of Paper		Teaching Th.	Credit Points	Continuous Assessment (33.33%)		Semester Assessment (66.67%)				
								Max. Marks	Min. Pass Marks	Max. Marks	Min. Pass Marks	Max. Marks	Min. Pass Marks	
II Year III Sem.	Discipline Specific Elective-IA <i>(Select any one)</i>	Paper-3.2	ECO-632-T	(A-01) Indian Economic Development and Policy-I	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-3.2	ECO-632-T	(A-02) Demography – I	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-3.2	ECO-632-T	(A-03) Industrial Economics-I	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-3.2	ECO-632-T	(A-04) Indian Banking System	3 Hrs	06	-	06	50	20	100	40	150	60
		Discipline Specific Elective - 'I A' Total (III Semester)				03 Hrs	06	-	06	50	20	100	40	150
II Year III Sem.	Discipline Specific Elective I B <i>(Select any one)</i>	Paper-3.3	ECO-633-T	(B-01) Econometrics- I	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-3.3	ECO-633-T	(B-02) Health Economics-I	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-3.3	ECO-633-T	(B-03) Labour Economics-I	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-3.3	ECO-633-T	(B-04) History of Economic Thought	3 Hrs	06	-	06	50	20	100	40	150	60
		Discipline Specific Elective - 'I B' Total (III Semester)				03 Hrs	06	-	06	50	20	100	40	150
	Discipline Specific	Paper-3.4	ECO-634-T	(C-01) Economics of Development	03 Hrs.	06	-	06	50	20	100	40	150	60

II Year	Elective-IC		and Growth - I											
III Sem.	<i>(Select any one)</i>	Paper-3.4	ECO-634-T	(C-02) Mathematical Economics - I	03 Hrs.	06	-	06	50	20	100	40	150	60
		Paper-3.4	ECO-634-T	(C-03) Agricultural Economics-I	03 Hrs.	06	-	06	50	20	100	40	150	60
		Paper-3.4	ECO-634-T	(C-04) Environmental Economics-I	03 Hrs.	06	-	06	50	20	100	40	150	60
		Paper-3.4	ECO-634-T	(C-05) Survey method	03 Hrs.	06	-	06	50	20	100	40	150	60
		Discipline Specific Elective 'I' C (III Semester)			03 Hrs.	06	-	06	50	20	100	40	150	60
II Year	Discipline Specific Elective – IIA	Paper-4.2	ECO-642-T	(A-01) Indian Economic Development and Policy-II	3 Hrs	06	-	06	50	20	100	40	150	60
IV Semester	<i>(Select any one)</i>	Paper-4.2	ECO-642-T	(A-02) Demography – II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.2	ECO-642-T	(A-03) Industrial Economics-II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.2	ECO-642-T	(A-04) Indian Financial System	3 Hrs	06	-	06	50	20	100	40	150	60
		Discipline Specific Elective- 'II-A' Total (IV Semester)			03 Hrs	06	-	06	50	20	100	40	150	60

II Year IV Semester	Discipline Specific Elective –II- B <i>(Select any one)</i>	Paper-4.3	ECO-643-T	(B-01) Econometrics- II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.3	ECO-643-T	(B-02) Health Economics-II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.3	ECO-643-T	(B-03) Labour Economics-II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.3	ECO-643-T	(B-04) Indian Economic Thinkers	3 Hrs	06	-	06	50	20	100	40	150	60
		Discipline Specific Elective-‘II-B’ Total (IV Semester)				03 Hrs	06	-	06	50	20	100	40	150
II Year IV Semester	Discipline Specific Elective –II- C <i>(Select any one)</i>	Paper-4.4	ECO-644-T	(C-01) Economics of Development and Growth– II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.4	ECO-644-T	(C-02) Mathematical Economics - II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.4	ECO-644-T	(C-03) Agricultural Economics-II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.4	ECO-644-T	(C-04) Environmental Economics-II	3 Hrs	06	-	06	50	20	100	40	150	60
		Paper-4.4	ECO-644-T	(C-05) Dissertation	3 Hrs	06	-	06	50	20	100	40	150	60
		Discipline Specific Elective-‘II-C’ Total (IV Semester)				03 Hrs	06	-	06	50	20	100	40	150

NOTE:

1. Paper chosen from Elective Core I-A, I-B and I-C in Semester III should correspond with paper chosen from Elective Core II-A, II-B and II-C respectively in Semester IV
2. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for non-collegiate students.

Rules & Regulations

Objectives of the Course:

The major objectives of M. A. Economics course are:

- To impart the knowledge and develop understanding of the economy.
- To equip economics professionals with theories and provide necessary analytical tools and intellectual trainings in major areas of economics with its applications.
- To focus on the emerging area of Environmental Economics.
- To Impart Sound Theoretical knowledge and economic interpretation to the students
- To teach them the quantitative and qualitative applications of these interpretations
- To enable them to carry out theoretical, empirical, policy and inter-disciplinary research

Course Outcomes

- To inculcate in depth knowledge to students about economic theory regarding utilization and allocation of resources including labour, natural resources and capital.
- To develop students understanding about how market for goods and services function and how income is generated and distributed.
- To give students in depth knowledge into special fields of choice like agricultural economics, industrial economics, financial markets, development economics, international trade mathematical economics etc.
- To make students familiar with economic theories and their relevance, quantitative techniques and applied research in a variety of fields within economics.
- Students would understand how the economy is influenced by economic policy, technological advances and demographic conditions.

Scopes of the Course:

Coming from different backgrounds, the students who would complete this course have multi-dimensional scopes:

- Students may find their professional career in academic institutions particularly for teaching in Economics, Growth & Development and Agriculture, Banking, Industrial sector etc.
- Civil and allied administrative services.
- The corporate sector particularly in research and development field.
- In research consultancy firms.

Duration of the Course:

The course for the degree of Master of Arts in Economics shall consist of two academic years divided in to four equal semesters. Each semester consist of minimum 120 working days.

Eligibility for Admission in M. A. First Semester:

A candidate who has passed any one of the following degrees from any University recognized by the UGC shall be permitted to take admission in M. A. First Semester Economics to award M. A. degree in Economics from this University after completion of a course of study of two academic years divided in the four semester scheme of examination:

- Undergraduate Degree under 10+2+3 pattern with any discipline or
- Four year undergraduate (Hons. Course) degree in any discipline or

- Integrated undergraduate degree as B. A.-B. Ed. in any discipline.
- Four year undergraduate Degree in Engineering (B. Tech. /B. E.).

Eligibility for Admission in M. A. Third Semester:

A candidate may be promoted in the next academic session (odd semester *i.e.* III semester) if he/she has cleared collectively at least 50% of the papers of both semesters of previous academic session with 50% of the aggregate marks. The candidate who does not fulfill the above condition will remain as an ex-student and will re-appear in the due papers along with next odd/even semester examinations.

A candidate who has passed B. Ed. examination as a regular course of study after completing first and second semester examinations from this University shall be eligible to take admission in third semester examination as a regular candidate.

Structure of the Programme:

The Master of Arts in Economics programme will consist of core and advanced courses of theory which are compulsory for students.

Course Number, Course Code/ID and Nomenclature:

Number of the course has been given in the Arabic number as Paper-1.1, Paper-1.2, and Paper-1.3 and so on. In the Paper-1.2, 1 represents the semester number and 2 represent the paper number.

To give a code to a particular course, following sequence has been adopted:

“Abbreviation of the programme in upper case + n^{th} number of year of study + n^{th} number of semester of the programme + course number in Arabic number” +T/P

According to the above sequence, code of paper-IV of the first semester of postgraduate Economics shall be as “ECO-514”. It is noted that the 5 represents here the fifth year of study because it is considered that the student has completed four years of study during his / her undergraduate programme *e.g.* B. A. pass course with three or B. A. Hons course with three or four years B. A.-B. Ed. *etc.* with four years. Therefore, the figure 5 represents the fifth year of study. The T/P represents nature of paper *i.e.* theory paper / practical.

Nomenclature of the particular course has been given according to the nature or type of contents included in the Unit-I to Unit-V of course of study.

Maximum Marks:

Maximum marks of paper will be decided on the basis of their contact hours per week. One teaching hour per week will carry 25 maximum marks and therefore, six teaching hours per week will carry 150 maximum marks for each paper / course.

Attendance:

Every teaching faculty, handling a course, shall be responsible for the maintenance of Attendance Register for candidates who have registered for the course. The teacher of the course must intimate the Head of the Department at least seven calendar days before the last instruction day in the semester about the attendance particulars of all students. Each student should earn 75% attendance in the courses of the particular semester failing which he or she will not be permitted to sit in the End-Semester Examinations. However, it shall be open to the authorities to grant exemption to a candidate who has failed to obtain the prescribed 75% attendance for valid reasons and such exemptions should not under any circumstance be granted for attendance below 65%.

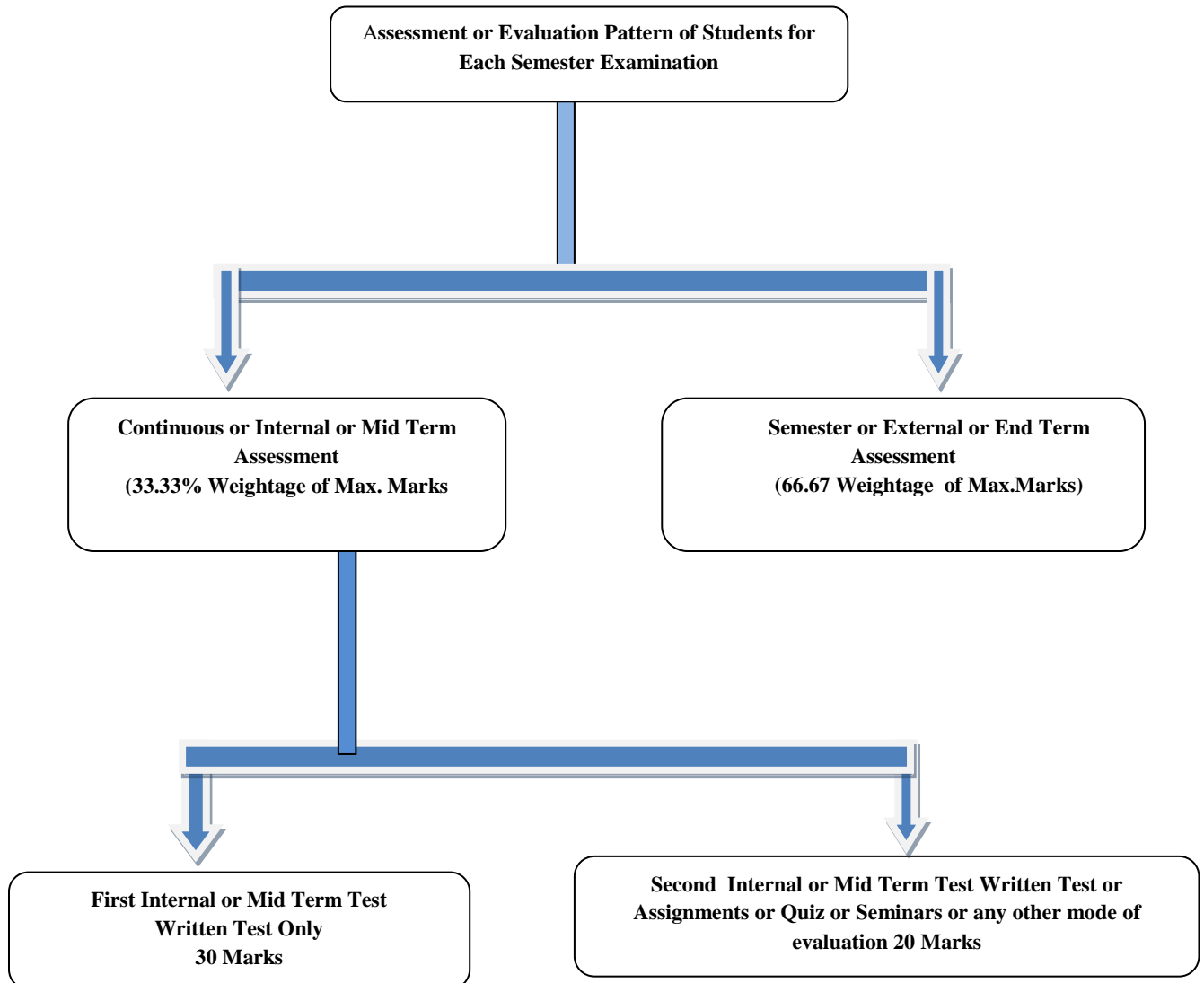
Teaching Methodologies:

The classroom teaching would be through conventional lectures or use of OHP or power point presentations (PPT). The lecture would be such that the student should participate actively in the discussion. Student seminars would be conducted and scientific discussions would be arranged to improve their

communicative skill. In the laboratory, instruction would be given for the experiments followed by demonstration and finally the students have to do the experiments individually. For the students of slow learners, special attention would be given.

Assessment Pattern:

The assessment of the student shall be divided into two parts in which first part is continuous assessment or internal assessment (33.33% weightage of the maximum marks) and second part is semester assessment or external assessment (66.67% weightage of the maximum marks). Assessment pattern and distribution of maximum marks is summarized as given below:



(i) Continuous Assessment or Internal or Mid Term Assessment:

- (a) The continuous or internal or mid-term assessment (33.33% weightage of the maximum marks) for each theory paper shall be taken by the faculty members in the Department during each semester. There will be two internal assessment tests (*i.e.* First Internal Assessment Test or First Mid Term Test and Second Internal Assessment Test or Second Mid Term Test). Each internal assessment test shall be of one hour duration for theory paper and shall be taken according to academic calendar which will be notified by the Department / University.
- (b) A student who remains absent (defaulter) or fails or wants to improve the marks in the internal assessment may be permitted to appear in the desired paper(s) (only one time) in the same semester with the permission of the concerned Head of the Department. A defaulter / improvement fee of Rupees 250/- per paper shall be taken from such candidates. Duly forwarded application of such candidates by the teacher concerned shall be submitted to HOD who may permit the candidate to appear in the internal assessment after production of satisfactory evidence about the reason of his/her absence in the test(s) and deposition of the defaulter / improvement fee. A record of such candidates shall be kept in the Department.
- (c) Regular attendance of the student shall be considered in the internal assessment. If the attendance / regularity factor is similar for all the students, then it may be merged with the weightage of second internal assessment test (class test / home assignment / quiz, seminar, *etc.*).
- (d) Paper wise consolidated marks for each theory paper and dissertation / seminar (*i.e.* total marks obtained during various modes of internal assessment) obtained by the students (out of the 33.33% weightage of the maximum marks of the paper) shall be forwarded by the Head of the Department (in two copies) to the Controller of Examination of the University within a week from the date of last internal assessment test for incorporation in the tabulation register.
- (e) The consolidated marks obtained by the students be also made known to them before being communicated by the Head of the Department concerned to the University for final incorporation in the tabulation register. If any discrepancies are discovered or pointed out by the students, the same shall be looked into by the concerned faculty member and corrections made wherever necessary. The decision of the Head of the Department before the communication of marks to the University shall be final. No corrections shall be made in the internal assessment marks after the declaration of the result by the University.
- (f) Consolidated marks communicated to the University shall be in whole number and not in fraction. Marks awarded for the various internal assessments in each paper shall be added up and then round off to the next whole to avoid any fraction.
- (g) All test copies and other material related to the internal assessment shall also be sent to the Controller of Examination of the University to keep in record as per the University guidelines.
- (h) The Head of the Department concerned shall be responsible for proper conduct of internal assessment tests and for communication of the consolidated marks to the University within the prescribed time.
- (i) The Head of the Department shall keep a record of the marks and also notify the same to the candidates immediately so that if any candidate is not satisfied with the award in any test or seasonal work, he should represent the matter to the Head of the Department.

For Private Students

Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

(ii) Semester Assessment or External or End Term Assessment:

- (a) The semester or external or end-term assessment (66.67% weight of the maximum marks) shall be three hours duration to each theory paper and twelve hours duration spread over two days (6 hours per day) for each practical paper and shall be taken by the University at the end of each semester.
- (b) *The syllabus is divided into five independent units and question paper will be divided into two sections: Section-A will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks. Section-B will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.*

Question Paper Pattern:

(A) Continuous or Internal or Mid Term Assessment:

33.33% weightage of Maximum Marks (50 Marks out of 150 Maximum Marks)

(For Regular Student)

(i) First Continuous or Internal or Mid Term Assessment:

Format

Department of Social Sciences

University of Kota

Kota (Rajasthan)-324 005

First Internal Assessment Test 20... - 20....

Class	:		Max. Marks	:	30
Semester	:		No. of Students	:	
Subject	:		Duration of Exam	:	
Paper	:		Name of Teacher	:	

Note: All questions are compulsory and marks are given at the end of the each question. Two or three sub-divisions may be given in the question.

Q. No. 1.

or

.....

10 Marks

Q. No. 2.

or

.....

10 Marks

Q. No. 3.

or

.....

10 Marks

(ii) Second Continuous or Internal or Mid Term Assessment:

(a) Attendance:

Marks shall be given by the faculty member in each paper according to its weightage 10 marks.

Note:

If the attendance / regularity factor is similar for all the students, then it may be merged with the weightage of second internal assessment test (class test / home assignment / quiz, seminar, etc.).

(b) Class Test:

20 Marks

Format

**Department of Social Sciences
University of Kota
Kota (Rajasthan)-324 005
Second Internal Assessment Test 20... - 20....**

Class	:	Max. Marks	: 20
Semester	:	No. of Students	:
Subject	:	Duration of Exam	:
Paper	:	Name of Teacher	:

Note: All questions are compulsory and marks are given at the end of the each question. Two or three sub-divisions may be given in the question.

Q. No. 1.

or

.....

05 Marks

Q. No. 2.

or

.....

05 Marks

Q. No. 3.

or

.....

10 Marks

or

(b) Assignment:

(May be divided in parts or questions or may not be. It will be depending on the nature of assignment).

20 Marks

or

(b) Quiz:

(May be divided in parts or questions or may not be. It will be depending on the nature of quiz).

20 Marks

or

(b) Any other tool may be adopted for internal Assessment

20 Marks

For Private Students (Continuous or Internal Assessment)

Report writing and Viva-voce: Each private student of PG program will prepare a report on any topic of each course in minimum 1000 words from the prescribed syllabus of concerned theory paper /course. The student need to report the concerned college at the time prescribed by the college/university to submit the report and the college will arrange a Viva-voce on the report. The various components of the report maybe:

- Name of course/ Class –
- Name of student: Father's /Husband Name:
- Examination form number:
- Enrollment number –
- Name of college/ Centre –
- Name of paper:
- Title of topic:
- Number of unit of topic (as per prescribed syllabus):
- Introduction about the topic:
- Details/ Analysis about the topic:
- Conclusion of the topic:
- References:

(B) Semester or External or End Term Assessment:

66.67% weightage of Max Marks (100 Marks out of 150 Max Marks)

Duration of Examination: 3 Hours

Max. Marks: 100

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

Section-A will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.

Section-B will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

SECTION-A

Q. 1.

Unit-I

- | | | |
|------|--|---------------|
| (i) | | 2 Mark |
| (ii) | | 2 Mark |

Unit-II

- | | | |
|-------|--|---------------|
| (iii) | | 2 Mark |
| (iv) | | 2 Mark |

Unit-III

- | | | |
|------|--|---------------|
| (v) | | 2 Mark |
| (vi) | | 2 Mark |

Unit-IV

- | | | |
|--------|--|---------------|
| (vii) | | 2 Mark |
| (viii) | | 2 Mark |

Unit-V

- | | | |
|------|--|---------------|
| (ix) | | 2 Mark |
| (x) | | 2 Mark |

SECTION-B

- | | | |
|--------------|----------------------|-----------------|
| Q. 2. | <u>Unit-I</u> | 16 Marks |
| | | |
| | or | |
| | | 16 Marks |

- | | | |
|--------------|-----------------------|-----------------|
| Q. 3. | <u>Unit-II</u> | 16 Marks |
| | | |
| | or | |
| | | 16 Marks |

- | | | |
|--------------|------------------------|-----------------|
| Q. 4. | <u>Unit-III</u> | 16 Marks |
| | | |
| | or | |
| | | 16 Marks |

- | | | |
|--------------|-----------------------|-----------------|
| Q. 5. | <u>Unit-IV</u> | 16 Marks |
| | | |
| | or | |
| | | 16 Marks |

- | | | |
|--------------|----------------------|-----------------|
| Q. 6. | <u>Unit-V</u> | 16 Marks |
| | | |
| | or | |
| | | 16 Marks |

Minimum Pass Marks and Rules regarding Determination of Results:

Each semester shall be regarded as a unit for working out the result of the candidates. The result of each semester examination shall be worked out separately (even if the candidate has appeared at the paper(s) of the lower semester examination along with the papers of higher semester examination) in accordance with the following conditions:

- (i) A candidate, for a semester examination, shall be offered all the papers prescribed for that semester examination and besides he/she also shall be offered paper(s) not cleared by him/her at any of the lower semester examination subject to the limitation that the number of un-cleared papers of the lower semester examinations shall not be exceed the total number of the papers prescribed for any one semester.
- (ii) The candidate shall be declared to have passed the examination, if the candidate secures at least 40% marks in each theory paper separately in continuous or internal or mid-term examination & semester or external or end-term examination and 50% marks in each practical / project / dissertation / seminar with 50% aggregate marks of the maximum marks prescribed for each semester examination. There is no minimum pass marks for the practical record / notebook. However, submission of a practical record / notebook is a mandatory during the practical examination. The candidate should compulsorily attend viva-voce / presentation examination to secure pass in practical / project / dissertation / seminar.
- (iii) A candidate, who has been declared as failed/absent in one or more theory paper(s) at any odd semester examination shall be permitted to join the courses of study for the next higher semester *i.e.* permitted to join the course of second semester after first semester examinations, permitted to join the course of fourth semester after third semester examination, permitted to join the course of sixth semester after fifth semester examinations and so on and eligible to re-appear in that paper(s) as due paper(s) along with next higher semester (next year) examinations provided that he/she must have cleared at least 50% of the papers (including practical / project / dissertation / seminar as one paper) collectively prescribed for the first and second semester examinations taken together for promotion to the third semester examination.
- (iv) A candidate may be promoted in the next semester (odd semester) if he/she has cleared collectively at least 50% of the papers of both semesters of previous academic session with 50% of the aggregate marks. The candidate who does not fulfill the this condition will remain in the same semester as an ex-student and will re-appear in the due papers examination along with next odd/even semester examinations.
- (v) If any student who is provisionally admitted in higher odd semester but could not secure prescribed minimum marks in previous semesters will be treated as ex-student and his/her admission fee will be carry forwarded to the next odd semester of forthcoming academic session.
- (vi) A candidate declared as failed in that particular paper he/she can re-appear for that paper in the next year examination as a due paper. However, the internal marks shall be carried forward for the total marks of the due examination.
- (vii) A candidate may be given only two additional chances for passing the semester thus maximum tenure for completing the two years' postgraduate course will be limited to four years, for three years postgraduate programme up to five years and so on.
- (viii) If the number of papers prescribed at the first and second or third and fourth semester examination is an odd number, it shall be increased by one for the purpose of reckoning 50% of the papers.
- (ix) A candidate who passes in 50% or more papers of the first and second semester examination, and thereby becomes eligible for admission to the third semester examination, but chooses not to do so and desires to appear in the remaining papers of first and second semester examination only or to re-appear in all the prescribed papers and practical/dissertation/seminar of the M. A. first and second semester examination will be permitted to do so on the condition that in the latter case his previous performance will be treated as cancelled.

- (x) If a candidate, who has been promoted to the next semester and wishes to improve his / her performance in the theory paper(s) of previous semester, can be permitted to do so in case of the theory papers only, not in practical / project / dissertation / seminar, belonging to the immediately preceding semester only for one time in these papers in next odd/even semester examinations. In such a case, he/she shall have to appear in these papers along with the papers of his/her own semester.
- (xi) A candidate shall be declared as passed after the result of the fourth semester examination, if he/she cleared all papers of the all the four semesters and secure minimum 40% of the aggregate marks of the maximum marks in theory papers and 50% of the aggregate marks of the maximum marks for practical / dissertation / presentation / seminar prescribed for four semesters Master's programme.
- (xii) In the case of an ex-student, the marks secured by him/her at his/her last examination as a regular candidate shall be taken into account except in cases where a candidate is re-appearing at the examination as a regular student and in that event he/she shall have to repeat the internal assessment test which will be finally accounted for working out his result.
- (xiii) A candidate who has failed at the M. A. third and fourth semester examination but has passed in at least 50% of the papers prescribed for the examination shall be exempted from re-appearing in a subsequent year in the papers in which he/she has passed.
- (xiv) If a candidate clears any paper(s) prescribed at the first and second semester (previous) and/or third and fourth semester (final) examination after a continuous period of three years, then for the purpose of working out his/her division, only the minimum pass marks shall be taken into account in respect of such paper(s) as are cleared after the aforesaid period provided that in case where a candidate requires more than 40% marks in order to reach the requisite minimum aggregate, as many marks out of those secured by him/her will be taken in to account as would enable him/her to make up the deficiency in the requisite minimum aggregate.
- (xv) In case the candidate is not able to clear his/her due paper(s) in the stipulated period as mentioned above (continuous period of three years), he/she may be given last one mercy attempt to clear due paper(s) subjected to approval of the Vice Chancellor or Board of Management.
- (xvi) The grace marks scheme shall be applicable as per University norms.

Classification of Successful Candidates:

The classification of successful candidates after last semester examination shall be as:

Description of Marks Obtained	Division / Result
• 80% and above marks in a paper.	Distinction in that paper.
• A candidate who has secured aggregate 60% and above marks	First Division
• A candidate who has secured aggregate 50% and above but less than 60% marks	Second Division

Candidates who pass all the examinations prescribed for the course in the first instance and within a period two academic years in four semesters from the year / semester of admission to the course only are eligible for University Ranking. A candidate is deemed to have secured first rank provided he/she

- (i) Should have passed all the papers in first attempt itself.
- (ii) Should have secured the highest marks in the whole examination of the programme / course, or should have secured the highest cumulative grade point average (CGPA).

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Semester – I

Discipline Centric core (Compulsory):-

Paper- 1.1: ECO-511: Microeconomic Theory –I

Course Objective:- This course aims at analysing the economic behavior of the consumers, firms and markets. It is mainly concerned with the objective of equipping the students in a comprehensive manner with various aspects of consumer behavior and demand analysis, Production theory and behavior of cost, equilibrium of firm and various forms of market. At the end of this course students are expected to be familiar microeconomic theory and acquire analytical skills to analyse problems of economic policy.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Consumer Behavior-I : **15-18 L**

Consumer choice: Utility function and indifference curve analysis- Bads, Neutrals, Optimal choice, Corner point solutions, Price, Income and Substitution effects, Engle curves, Slutsky theorem and Derivation of demand curves. Consumer equilibrium.

Unit-II: Consumer Behavior-II: **15-18 L**

Consumer surplus. Elasticity of demand- Network externalities– Bandwagon effect, Snob effect, Veblen effect, Revealed preference theory. Choice under risk and uncertainty.

Unit- III: Firms Behavior-I: **15-18 L**

Production function: Short and long run. Law of returns and Returns to scale, Ridge lines, Expansion path. Producer equilibrium. Forms of production function: Cobb- Douglas, Fixed coefficient and CES. Elasticity of technical substitution, Capital and labor deepening technical progress through Iso-quants.

Unit- IV: Firms Behavior-II: **15-18 L**

Concept of cost :Short and long run cost curves. Dynamic changes in costs – Learning curve. Modern theory of cost curves. Concept of revenue, Revenue curves under different market structures.

Unit- V: Price Determination: **15-18 L**

Pricing under different market structures: Perfect competition. The efficiency of a competitive market. Price supports. Monopoly. Social cost of monopoly; Power of monopoly; International price discrimination and Peak – load pricing. Two-part tariff. Monopolistic competition. Bilateral monopoly.

Course Outcomes:-

1. This course develops understanding of fundamentals of Micro Economics and market mechanism.
2. It enhances the ability of students to discuss economic concepts in an articulate manner in a classroom.
3. It develops the reasoning ability of the students to understand the consumer behaviour and producers' behaviour in real market situation market.

Books & References:

- A. Koutsoyiannis : Modern Microeconomics, Macmillan, London.
- Robert S. Pindyck and Daniel L. Rubinfeld: Microeconomics. Pearson Education Inc., New Delhi.
- D. Salvatore: Microeconomic Theory, Oxford University Press, New Delhi.
- Hal R. Varian: Microeconomic Analysis, W.W. Norton & Company Inc., New York.
- H.L. Ahuja: Advanced Microeconomic Theory, S. Chand Publication, New Delhi.

Paper- 1.2: ECO-512: Macroeconomic Theory –I

Course Objective:- Macroeconomics deals with the movement, fluctuations and growth in economic aggregates like income, employment interest rates and the price level. This paper is designed to provide in-depth knowledge on development of Macroeconomics and varied concepts of Macroeconomics. The contents of the paper throws light on a range of issues like national income, social accounting, consumption expenditure, investment analysis as well as money supply and demand for money.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit-I: Introduction:

15-18 L

The origin and development of macroeconomics – Classical, Keynes, New classical and Modern views; Macroeconomic variables (e.g., national income, employment, saving, investment, price level, wages, interest rate), Real and nominal quantities, Stock and flow variables and their inter-relationship, Difference between micro and macroeconomics.

Unit-II: National Income:

15-18 L

National income- Concepts, Components, Measurement, Inter- relationship between three measures of national income; Measurement of economic welfare. Circular flow of income in two, three and four sector economy social accounting and green accounting.

Unit-III: Consumption & Investment Function:

15-18 L

Consumption function – Determinants, Consumption function hypotheses: Absolute, Relative, Permanent income hypotheses and Life cycle hypothesis; Investment function- Neo-classical theory of investment , Stock market and Tobin's Q-ratio and Neo – Keynesian theory of investment ; Theories of accelerator.

Unit- IV: Theory of Money Demand:

15-18 L

Classical , Keynesian, and Post Keynesian theories of demand for money- Inventory theory of Baumol and Portfolio balance theory of Tobin; Restatement of quantity theory of money by Milton Friedman and Patinkin's Theory for money demand.

Unit-V: Theory of Money Supply:

15-18 L

Supply of money- Measurement in view of India, Components, Determinants, High-powered money & money multiplier and Theories of money- supply.

Course Outcomes:

1. This course enables the students to learn about the development of various theories and approaches of macroeconomics like classical, Keynesian, Monetarist, New classical theories and New Keynesian theory. It analyses Macroeconomic variables and National Income in greater detail.
2. It educates students various theories related to consumption and investment.
3. Students acquire knowledge on issues like money supply and demand. This course is to help the learners in proper understanding of the economic aggregates.

Books & References:

- Errol D' Souza, Macroeconomics, Person Education.
- Richard. T. Froyen, Macro Economics: Theories and Policies, Pearson Education.
- P. Edgmond, Macroeconomics, PHI, New Delhi.
- Gregory Minkiw, Macroeconomics, CBS Publishers, New Delhi.
- Robert J Gordon, Macroeconomics, Harper Collins.
- Dasgupta, A. K., Macroeconomics Analysis, New Delhi.
- Ahuja, H. L., Advanced Macroeconomic Theory (Hindi), S. Chand Publication, New Delhi.
- Rana, K. C. & Verma, K. N., Macro Economic Analysis (Hindi), Vishal Publishing Company, Jalandhar.

Paper- 1.3: ECO-513: Mathematical Methods for Economics

Course Objective:- The aim of this course is to train students in the use of mathematical tools to understand concepts in economics presented in the form of mathematical models and express economic ideas in the same form. The course is intended to enable the students to utilize these tools in subsequent courses.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.

- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Simple Differentiation: 15-18 L

Concept and Types of Functions; Concave and Convex functions. Simple differentiation; Maxima, Minima and Point of inflexion. Applications of simple differentiation in economics.

Unit- II: Partial Differentiation: 15-18 L

Partial differentiation; Unconstrained and Constrained optimization (Two independent variable case). Applications partial differentiation in economics.

Unit- III: Integration and Differential Equations: 15-18 L

Integration: Indefinite and Definite; Applications of integration in economics, First order difference equations and their application in economics.

Unit- IV: Matrices and Determinants: 15-18 L

Matrices: Various types of matrices, Inverse of a matrix, Vectors. Determinants: Important properties and their applications in economics, Cramer's rule.

Unit- V: I-O, LPP & Game Theory: 15-18 L

Input-output model, Linear programming (graphical and simplex methods) and Game theory.

Course Outcomes:

1. This course imparts the knowledge of various mathematical techniques used for economic analysis.
2. It train the students to apply these techniques to economic theory in general like, explaining the relationship among economics variables, calculating maxima and minima, explaining the time path of variables etc.
3. It also develops the skill of students to use matrix algebra in solution of economic models.
4. Students gain knowledge of linear programming and game Theory to resolve economic issues.

Books & References:

- R. G. D. Allen: Mathematical Analysis for Economics McMillan, London.
- Edward T. Dowling: Mathematics for Economics, Schaum's Outline Series Mc Graw- Hill Book Co., New Delhi.
- Laxmi Narain Nathuramka: Arthshastra Mein Ganit ke Prayog (Hindi) Ramesh Book Deopt., Jaipur.
- B. C. Mehta and G. M. K. Madnani: Mathematics for Economists, Sultan Chand & Sons, New Delhi.
- Alpha C. Chiang: Fundamental Methods of Mathematical Economics, McGraw- Hill, Tokyo.
- Balwant Kandoi: Mathematics for Business and Economics with Application, Volum –I & II , Himalaya Publishing House.

Paper- 1.4 : ECO-514: Public Economics- I

Course Objective:- This course is designed to provide in-depth knowledge of Public Economics and role of government in economic activities. The subject encompasses a host of topics including public goods, public budgets, theories of public expenditure and public revenue, tax burden, Incidence and effects of taxation and tax system.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction to Public Finance: 15-18 L

Nature and Scope of Public Finance and Private Finance, Economic. Analysis of Public policy, Role of Government in the Economic Activity- Allocation, Distribution and Stabilization Functions, Private, Public and Merit Goods. Principle of Maximum Social Advantage.

Unit-II: Budgeting 15-18 L

Public Budgets – Kinds of Budgets, Optimal Budgeting, Balanced and Unbalanced Budgets – Deficit Financing, Performance and Programming Budgeting, Zero Base Budgeting.

Unit-III: Public Expenditure: 15-18 L

Public Expenditure – Hypothesis and evaluation, Effects of Public Expenditure on Production and Distribution, Bowen, Lindhal and Samuelson's Models, Wagner's Law of Increasing State Activities, Weisman Peacock Hypothesis.

Unit-IV: Public Revenue : 15-18 L

Public Revenue – Canons of Taxation, Different Approaches to the Division of Tax Burden, Incidence and Effects of Taxation, Taxable Capacity, Justice in Taxation, Benefit & Ability to Pay Approaches. Theory of Optimal Taxation – Equal Absolute, Equal- Proportional, Equal-Marginal and least Aggregate Sacrifice Principles. Buoyancy and Elasticity of Tax.

Unit-V: Tax System: 15-18 L

Direct and Indirect taxes – Effects of Direct Tax on Production (viz. Labour Supply and Saving Rate) and Distribution, Effects of Indirect Tax on Production, Progressiveness of a Tax System and its Measurement. Shifting and Incidence under Monopoly and Perfect Competition.

Course Outcomes:

1. Have conceptual clarity on the theories of public goods, public budgets, public expenditure, public revenue and tax system.
2. Apply the principles of public economics in analyse various government policies.

Books & References:

- R.A. Musgrave and P.B. Musgrave Public Finance in Theory and practice, New York: McGraw-Hill.
- R.A. Musgrave: Theory of Public Finance, McGraw-Hill.
- S. Ganguli: Public Jones, Public Finance and Public Choice, Oxford University Press.
- Harvey Rosen, Public Finance, McGraw Hill Publications.
- David N. Hyman, Public Finance – A Contemporary Applications of Theory to Policy, Thomason South Western.
- R.K. Lekhi, Public Finance, Kalyani Publishers.

Semester –II

Discipline Centric core (Compulsory)

Paper- 2.1: ECO-521: Microeconomic Theory –II

Course Objective:- This course will impart theoretical knowledge on decisions making under market Imperfections, game theory, factor pricing and also introduce students to various theories of distribution, welfare economics, general equilibrium as well as new developments in the theory of markets and economics of information.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Oligopoly Market & Its Models: 15-18 L

Oligopoly market: Non-collusive models of Cournot, Bertrand, Edgeworth, Chamberlin and Stackelberg. Cartels and Price leadership, Baumol's model, Marris's and Williamson's managerial theory. Full cost pricing, Bain's limit pricing theory.

Unit- II: Game Theory & Theory of Distribution: 15-18 L

Game theory; Theory of distribution: Neo-classical approach, Marginal productivity theory, Euler's theorem. Technical progress and Factor shares.

Unit- III: Factor Pricing: 15-18 L

Factor pricing under perfect and imperfect competition: Determination of wages, rent, interest and profit, Macro theories of distribution- Ricardo, Marx, Kalecki and Kaldor's models.

Unit- IV: Welfare Economics: 15-18 L

Welfare economics: Pigouvian welfare economics, Pareto optimality. Kaldor – Hicks compensation principle. Theory of second best, Scitovsky paradox; Little's welfare criterion.

Unit- V: Social Welfare Function: 15-18 L

Social welfare function and theory of social choice- Rawls, Bergson- Samuelson and Arrow's theorem. externalities, Public goods and market failures. Asymmetric information – Market Signaling Moral hazard, The principal – agent problem.

Course Outcomes:

1. After completing the course the students are expected to have deeper knowledge on decisions making in imperfect market conditions and enable them to apply in real market situations.
2. This paper enhance the understanding of various concepts and theories of welfare economics.

3. The students will be able to demonstrate the theories related to factor market and its equilibrium. Students will have knowledge of new developments in the theory markets and economics of information.

Books & References:

- A. Koutsoyiannis : Modern Microeconomics, Macmillan, London.
- Robert S. Pindyck and Daniel L. Rubinfeld: Microeconomics. Pearson Education Inc., New Delhi.
- D. Salvatore: Microeconomic Theory, Oxford University Press, New Delhi.
- Hal R. Varian: Microeconomic Analysis, W.W. Norton & Company Inc., New York.
- H.L. Ahuja: Advanced Microeconomic Theory, S. Chand Publication, New Delhi.

Paper- 2.2: ECO-522: Macroeconomic Theory –II

Course Objective:- This is a sequel to Macroeconomics-1 in semester-1. It imparts deeper knowledge of determination of Output and Employment, Multiplier, IS-LM Model in detail. It also introduces students to concept of inflation, its control and its relationship with unemployment. Course also aims to expose the students to open economy Macroeconomics and the dynamics there in and New classical Macroeconomics.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit-I: Determination of Output and Employment: 15-18 L

Determination of Output and Employment – The Classical and Keynesian Models; Multiplier-Concept, Working, Static and Dynamic Multiplier; Aggregate Supply and Aggregate Demand Model- Neo-Classical Three Sector Model and Keynesian Three Sector Model.

Unit-II: IS-LM Model: 15-18 L

IS-LM Model- The Interaction of Real and Monetary Sectors of the Economy, Keynesian Version of the IS-LM Model, Neo Classical Version of the IS-LM Model, Fiscal Policy and Crowding Out Effect; Role and Relative Effectiveness of Fiscal and Monetary Policies.

Unit-III: Open Economy Model: 15-18 L

Open Economy Macroeconomics- Trade Balance, Exchange Rates and International Monetary System: Mundell- Fleming Model: Analysis of Fiscal , Monetary and Trade Policies under Imperfect Capital Mobility and Perfect Capital Mobility with Fixed and Flexible Exchange Rate Systems.

Unit-IV: Inflation, Meaning, Types and Its Control: 15-18 L

Classical, Keynesian and Monetarist Approaches to Inflation and Policies to Control Inflation; Phillips Curve Analysis; Expectation Augmented Phillips Curve Analysis; Natural Rate of Unemployment Hypothesis. Role of RBI in Inflation Control, Credit Control and Economic Stability.

Unit-V: Determination of Output and Employment: 15-18 L

New Classical Macroeconomics – The New Classical Critique of Keynesian Micro Foundations. The Real Business Cycle Theory; Rational Expectations- Solution of a Simple Macroeconomic Model with Rational Expectations and Economic Interpretation.

Course Outcomes:

1. Have deeper knowledge of classical, Keynesian, Neo-classical and post Keynesian Macroeconomic views.
2. Apply the subject knowledge in understanding the Macroeconomic dynamics both in a closed and open economy.

Books & References:

- Errol D' Souza, Macroeconomics, Person Education.
- Richard. T. Froyen, Macro Economics: Theories and Policies, Pearson Education.
- P. Edgmond, Macroeconomics, PHI, New Delhi.
- Gregory Minkiw, Macroeconomics, CBS Publishers, New Delhi.
- Robert J Gordon, Macroeconomics, Harper Collins.
- Dasgupta, A. K., Macroeconomics Analysis, New Delhi.
- Ahuja, H. L., Advanced Macroeconomic Theory (Hindi), S. Chand Publication, New Delhi.
- Rana, K. C. & Verma, K. N., Macro Economic Analysis (Hindi), Vishal Publishing Company, Jalandhar.

Paper- 2.3: ECO-523: Statistical Methods

Course Objective:- This paper specifically designed with the goal of equipping students with the skills to use statistical techniques in varied disciplines. The paper also aims to acquaint the students with the techniques of elementary research.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Central Tendency, Dispersion and Skewness: 15-18 L

Measures of central tendency, Dispersion, Skewness, Measurement of Inequality Lorenz Curve and Gini Coefficient.

Unit- II: Kurtosis, Correlation & Regression: **15-18 L**

Kurtosis, Correlation, Simple Regression and Interpretation of Multiple linear Regression Equation.

Unit- III: Time Series, Index Number & Probability: **15-18 L**

Analysis of Time Series and Curve Fitting, Index Numbers Probability, Mathematical Expectation.

Unit- IV: Probability Distribution, Sampling & Hypothesis Testing: **15-18 L**

Probability Distributions (Binomial, Poisson, and Normal); Sample, Sampling and Survey Methods, Testing of Hypothesis.

Unit- V: Different types of Test: **15-18 L**

Application of Z, t F & X^2 tests, Association of Attributes, Analysis of Variance.

Course Outcomes:

1. Understand statistical tools which are frequently used in social sciences research such as statistical averages, estimation, hypothesis testing, Regression & correlation, concept and use of probability theory.
2. Understand theoretical distribution and their significance and sampling techniques.
3. Students will be able to analyse primary and secondary data and draw inferences from the datasets.

Books & References:

- S.P. Gupta: Statistical Methods, Sultan Chand & Sons, New Delhi.
- Kailas Nath Nagar: Sankhyiki ke Mool Tatva (Hindi), Meenakshi Prakashan, Meerut.
- A. L. Nagar & R. K. Das: Basic Statistics, Oxford University Press, New Delhi.
- D. R. Agarwal: Quantitative Methods, Vrinda Publication.

Paper- 2.4: ECO-524: Public Economics –II

Course Objective:- To provide the students with thorough analytical understanding to analyse Public Debt, Indian Tax System and Budget, Fiscal Federalism, Public Enterprises and Tax Reforms in India and critically analyse fiscal policy/finance and its implications in Indian Economy.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Public Debt: **15-18 L**

Theory of public debt– sources, effects, burden and its management, loans and saving as sources of finance for development. Internal and external public debt of India.

Unit- II: Fiscal Policy: **15-18 L**

Fiscal policy – neutral and compensatory fiscal policy; Functional finance; Fiscal policy in developing countries; Fiscal policy for stabilization– automatic and discretionary stabilizers. Built in flexibility, Interdependence of fiscal and monetary policies, Balanced budget multiplier, Anti-inflationary policy.

Unit- III: Indian Tax System & Budget: 15-18 L

Indian tax system – salient features, major taxes, main trends in the revenue of the central and state governments in India, Non – tax revenue, Union budget of India, Major trends in public expenditure in India (growth and composition), Problem of budget deficit and FRBM Act.

Unit- IV: Fiscal Federalism & Public enterprises in India: 15-18 L

Fiscal federalism – theory and problems, Problems of centre state financial rotations in India, Criteria for resource transfer from the centre to states, Finance commissions and devolution of resources to states, Pricing policy in public enterprises, disinvestment and privatization of Public enterprises in India.

Unit- V: Recent Tax Reforms in India: 15-18 L

Salient features of the Indian Tax System, major taxes, main trends in the revenues of the Central and State Governments in India. Major Changes in the tax structure with special reference to India - GST: meaning, concepts, slabs; Opportunities and challenge; GST Council - structure and major functions, Non-tax revenues.

Course Outcomes:

1. Provides in-depth knowledge on range of issues related to public finance and public choice.
2. The students would learn of the feature the federal structure and financial relationship among them.
3. This enables the students to analyse the budgets of government of India.
4. It will help students to critically analyse the fiscal reforms and policy choices of the government in developed and developing countries.

Books Recommended:-

- R.A. Musgrave and P.B. Public Finance in Theory and practice, New York McGraw-Hill.
- R.A. Musgrave: Theory of Public Finance McGraw-Hill.
- S. Ganguli: Public Finance, The World Press Private Limited.
- John Callis and Phillip Jones, Public Finance and Public Choice, Oxford University Press.
- Harvey Rosen, Public Finance, McGraw Hill Publications.
- David N. Hyman, Public Finance – A Contemporary Applications of Theory to Policy, Thomson South Western.
- R.K. Lekhi, Public Finance, Kalyani Publishers.
- Chelliah and Kelkar Committee Reports.
- Prem Prakash Sharma : Principle of Public Finance, Hindi Granth- Academy, Jaipur (Hindi).

Semester- III

Discipline Centric Core (Compulsory)

Paper- 3.1: ECO-631: International Trade Theory

Course Objective:- The objectives of this course are to provide the students with thorough analytical understanding of theories of international trade, gains from trade international trade barriers and International factor movements.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction to International Trade & Classical Trade Theory **15-18 L**

Early Trade Theories: Mercantilism, Classical Theory of Trade, Absolute Advantage and Comparative Advantage – Views of Adam Smith, Ricardo, Mill, Haberler, Empirical Testing of Classical Theory.

Unit- II: Standard Trade Theory: **15-18 L**

Standard Theory of Trade – Production Possibility Frontier, Community Indifference Curves, Offer Curves, Trade Indifference Curves, Terms of Trade and Gains from Trade.

Unit- III: Modern Trade Theory: **15-18 L**

Factor Endowments and Heckscher Ohlin Model- Factor Price Equalization Theorem, Stolper – Samuelson theorem, Metzler Paradox and Rybczynski Theorem, Empirical Verification of H-O Theory, Leontief Paradox, Meade's General Equilibrium in trade.

Unit- IV: Economic Growth and International Trade:

15-18 L

Economic Growth and International Trade – Growth of Factors of Production, Technical Progress, Immiserizing Growth, International Factor Movements – Labour and Capital Movements and their Effects, Brain, Drain, Multinational Corporations and their Role.

Unit- V: Barriers and International Trade: **15-18 L**

Free Trade versus Protection, Instruments of Protection and their Effects, Tariffs (Partial and General Equilibrium), Quota, and other Non-Tariff Barriers.

Course Outcomes :

1. To analyse and apply the trade theory and theories of tariff.
2. To comment critically on and participate in current debates on international trade related issues.
3. To develop understanding and analytical skill about international trade in real and complex situation.
4. Understand how restrictions to international trade would be used for nation's development and how it limits the same.

Books & References:

- J. Bhagwati: International Trade, Cambridge University Press, London.
- R.J. Carbough: International Economics, Cengage Learning B Edition.
- D. Salvatore: International Economics, PHI, New York.
- Rana and Verma International Economics, Vishal Publishing House Ludhiana (Hindi and English).

Discipline Specific Elective I-A

NOTE: Paper chosen from DSE I-A, I-B and I-C in Semester III should correspond with paper chosen from DSE II-A, II-B and II-C respectively in Semester IV.

The candidate is required to select any one elective course from the following:

Paper- 3.2: ECO-632 (A-01): Indian Economic Development and Policy-I

Course Objective:- The Indian economy is a unique amalgam of alternative competing and often conflicting theories and a proper understanding of its working is imperative if the student is to comprehend the ramification that underline most of the observed phenomena in Indian economic set-up. The objective of the course is to sharpen the analytical understanding and skill of student by highlighting on broad overview of Indian economy. The emphasis of this course is on resources of Indian economy, major economic problems and Agricultural and Industrial Development in India.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Resources of India:

15-18 L

Natural resource in India – Land, Water, Forest and Minerals, Population – Size, Composition; Quality and Growth trends characteristics of Indian population through recent census, Population policy and Economic effects of population pressure.

Unit- II: Major Problem of India: 15-18 L

Poverty, unemployment and Human Development Index; Its measure, Latest HDI report. Human development during plan period – Appraisal of government measures, India's Human Development Record in global perspective.

Unit- III: Agricultural Development in India: 15-18 L

Agricultural development in India; Institutional aspects- Land reforms, Green revolution, Technological aspects – Agricultural inputs and Shifts in production function, Agricultural cost and Price policy.

Unit- IV: Agricultural Marketing and Credit in India: 15-18 L

Agricultural marketing and credit, Food policy and security, Subsidy and Public distribution system, Capital formation in Indian agriculture, Problems in agriculture – A need for second green revolution.

Unit- V: Industrial Development in India: 15-18 L

Industry – Strategy of industrial development and industrial policy; Reforms, Small scale and cottage industries, Reservation policy relating to small scale industries, Sources of industrial finance-Banks, Share Market, Insurance companies, Pension fund, Non-banking sources and FDI, Role of foreign capital for direct investment and portfolio investment, Public sector reforms, privatization and disinvestment.

Course outcomes:

1. Students have deeper knowledge of Indian natural and human resources.
2. To develop understanding and analytical skill about major economic problems and agriculture & industrial development of India.
3. They will have ability of analysing public policy.

Books & References:

- Dutt and Sundram: Indian Economy, S. Chand (Latest Ed) (Hindi and English), New Delhi.
- A.N. Agrawal: Indian Economy, New Age International Pub. (P) Letd, (Latest Ed) (Hindi and English), New Delhi.
- Laxmi Narayan Nathurmka: Bhartiya Arthshastra, College Book House, (Latest Ed), Jaipur.
- Mishra & Puri: Indian Economy, Himalaya Publishing House (Latest Ed (Hindi and English), Mumbai.
- Economic Survey (Latest), MOF, GOI, New Delhi. & Download PDF from (<https://www.finmin.nic.in/>)
- Monthly Bulletins RBI, Mumbai. & Download PDF from <https://www.rbi.org.in/>
- 12th Five Year Plan, Planning Commission & Download PDF from <http://planningcommission.gov.in/>

Paper- 3.2: ECO-632 (A-02): Demography – I

Course Objective:- The size and growth of population has been viewed as an important factor underlying the development of any country. The course covers the fundamentals of population studies. It aims to exposed the student to different demographic terms, sources of demographic data, Census of India and demographic techniques of analysis.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular

student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction to Demography and Population Theories: 15-18 L

Introduction to population study and demography; Its nature and scope; Relationship with other disciplines; Basic demographic concepts; Components of population change; Demographic transition and Optimum theory of population; Historical population trend in developed and developing regions.

Unit- II: Demographic Data and Census: 15-18L

Sources of demographic data (with details of items on which it collects data): Census of India. Vital registration system, Sample registration system, National sample survey organization, National family health survey and District level household survey.

Unit- III: Different Demographic Terms: 15-18L

Determinants and consequences of Age- Sex structure of population; Demographic dividend; Basic fertility terms, Concepts and data, Concept of morbidity, Measures of morbidity: Incidence and prevalence rates.

Unit- IV: Diseases, Migration and Fertility: 15-18L

Meaning and measure of burden of diseases; Epidemiological transition. Concept of migration and mobility, Types of migration, Census definition of migrants. Measurement of fertility- Total fertility rate, Analysis of total fertility rate, Gross reproductive rate, Net reproductive rate; Fertility transition in India.

Unit- V: Demographic Techniques of Analysis: 15-18L

Techniques of analysis: Crude birth and death rates, Age specific birth and death rates, Infant mortality, Child mortality, Maternal mortality, Standardized birth and death rates.

Course Outcomes:

1. The students will be able to comprehend the basic concepts in demography like-- fertility, mortality, migration in population in detail.
2. To analyse and apply the theories of population.
3. This enables the students to analysed the various sources of demographic data.

Books & References:

- Bhende, Asha A. and Tara Kanitkar (2004): Principles of Population Studies, Chapter-08, Himalaya Publishing House, Mumbai.
- Jacob S. Siegel and David A. Swanson (2004): The Methods and Materials of Demography. 2nd Edt. Chapters 1,2,3,7,9,10, Elsevier Science, USA.
- J. Weeks (2005): Population: An Introduction to Concepts and Issues, Wordsworth Learning, (9th Edt), Singapore.
- Pathak, K. B. and F. Ram (1998): Techniques of Demographic Analysis, Chapter 4 & 8, Himalaya Publishing House, Mumbai.
- Srinivasan K. (1998): Basic Demographic Techniques and Applications, Chapter 4, Sage Publications, New Delhi.

- National Family Health Surveys.
- United Nations, (1973): The Determinants and Consequences of Populations Trends, Vol.- I, Page No 50. Chapter 7, Population Studies, New York.
- United Nations, World Population Ageing, 1950-2050.

Paper- 3.2: ECO-632 (A-03): Industrial Economics -I

Course Objective:- The basic objective of the course is to enable students to understand the structure of markets. The focus of the course is split equally between economic theory and practical perspective. The emphasis will be on understanding how the theoretical tools can be used to analyze real world issues with respect to industrial development.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction of Industrial Economics: 15-18 L

Industrialization and development. Interdependence of industrial sectors; Backward and Forward linkages: Location of industries, theories and measures of industrial localization (Sargent F. & A. Weber) Localization of industries in India. Industrial project selection criteria.

Unit- II: Industrial Enterprise and Profit Maximization Models: 15-18 L

Modern corporation enterprise. Size and ownership Structure of industrial enterprise. Dominant position of corporate and its characteristics issue of separation of ownership from management and control models alternative to profit maximization. Bamol, Williamson, Marries, Cyert and March.

Unit- III: Different Market Structures and Sellers Concentration: 15-18L

Monopoly power and oligopolistic market structure; Measures of sellers concentration. Determination of sellers concentration: Economies of scale. Barriers to entry, Mergers, Size and Growth of markets.

Unit- IV: Market Conduct Under Oligopoly: 15-18L

Market conducts under oligopoly: Rivalry and Collusive conduct. Dominant firm behavior and potential competition. Limit price and Contestable markets. Non- price competition with reference to adverting.

Unit- V: Market Performance: 15-18 L

Market performance: Allocative efficiency. Market structure and profitability. Productive efficiency and Sub-optimal capacity. Allocative V/s Productive efficiency.

Course Outcomes:

1. The course outcome of Industrial Economics typically encompasses several key objectives and skills that students are expected to achieve upon completion of the course.

2. Students will gain knowledge of essential economic theories and models that explain firm behavior, market outcomes, and the overall functioning of industrial markets.
3. Students will be able to identify and differentiate between various market structures such as perfect competition, monopoly, and oligopoly.
4. Students will understand the strategic behavior of firms, including pricing strategies, product differentiation, and innovation, and how these strategies affect competition and market outcomes.

Books & References:

- Barthwal R. R.: Industrial Economics: An Introductory Textbook, Wiley Eastern Limited, New Delhi.
- Cohen K. L. & Cyert R. M.: Theory of the Firm, Prentice Hall

Paper- 3.2: ECO-632 (A-04): Indian Banking System

Course Objective:- The objective of this course is to provide students with thorough understanding of evolution and structure of Indian Banking System, Financial Sector Reforms and Rural Banking. This course also provides knowledge of Human Resource Development in Bank, RBI and its Monetary Policy.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction of Indian Banking System: 15-18 L

Indian banking system as on the eve of bank nationalization, structure and development of commercial banks in India since 199. Branch expansion programme and policy. Deposit mobilization and Sectoral allocation of bank credit.

Unit- II: Social, Mass Banking and Financial Sector Reforms: 15-18 L

Concept of social and Mass banking. Priority sector advances and Advance to the neglected sections of the society. Financial sector reforms- Context, need and objectives. Implementations of the Narsimham Committee recommendations, Issues in financial reforms.

Unit- III: Rural Banking and NABARD: 15-18 L

Rural banking – Overall structure and review of the contribution of major credit cooperatives, Commercial banks and Regional rural banks including NABARD.

Unit- IV: Human Resource Development: 15-18 L

Human resource development – Present and future HRD needs for bank employees in India. Recruitment, training and appraisal of bank employees, Khandelwal Committee recommendations on human resource in public sectors banks.

Unit- V: Reserve Bank of India: 15-18 L

The reserve bank of India – Functions and role. Autonomy of the RBI. Liquidity management, Monetary policy- Goals, Targets and Indicators. RBI's Monetary Policy- Objectives and Techniques. Impact of RBI'S monetary policy on economic growth and Price stability.

Course outcomes:

1. The students will be able to appreciate the functioning and importance of different banking institutions and their role in a developing economy.
2. They will be able to explain the role of RBI and its Monetary Policy measures.

Books & References:

- S.B. Gupta : Monetary Planning for India (latest Ed.)
- K. Rao: Management of Commercial Banks.
- L.M. Bhole : Impacts of Monetary Policy.
- Harendra Badhav (ed.): Challenges to Indian Banking Competition. Globalization and Financial Markets Macmillan.
- N.S. Yher: Non-Performing Advances in Banks, Skylark, New Delhi.
- Report of the Committee (Narsimhan) on the Financial System, Nov., 1991.
- Raghuram Rajan Committee Report on Financial Sector Reforms, Planning Commission, New Delhi.
- R.B.I. Report on trend and Progress of Banking in India (Latest Edition).
- Hanson and Kathuria (ed.): A financial Sector for the 21st Century, Oxford. University Press.
- Y.V. Reddy, Monetary and Financial Sector Reforms in India, UBSPD. New Delhi.

Discipline Specific Elective I-B

NOTE: Paper chosen from Elective Core I-A, I-B and I-C in Semester III should correspond with paper chosen from Elective Core II-A, II-B and II-C respectively in Semester IV.

The candidate is required to select any one elective course from the following:

Paper- 3.3: ECO-633 (B-01): Econometrics- I

Course Objective:- To learn the nature and scope of Econometrics..The course is developed to define econometrics So as to define hypothesis and process of hypothesis testing, to define the implications of the assumptions of OLS, to discuss the violations of assumptions and to discuss specification bias and errors in variables.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

- Unit- I: Basic Econometrics:** **15-18 L**
Nature, meaning, definition, scope and goals of econometrics, Random variables, Statistical inference. Simple linear regression model (2 Variables), Estimation of regression parameters using ordinary least square (OLS) method and maximum likelihood method. Basic assumptions and Properties of estimators, Test of significance, confidence interval and analysis of variance.
- Unit- II: Regression Model:** **15-18 L**
Various functional forms of regression models. General linear model (n variables, matrix notation)- Estimation of regression parameters by least square methods; Derivation of Least square Parameters; Properties of Estimators, Test of significance; Aitken Estimator.
- Unit- III: Violation of Basic Assumptions:** **15-18 L**
Autocorrelation, Multicollinearity, Heteroscedasticity; and Specification error, D-W statistics.
- Unit- IV: Dummy Variable:** **15-18 L**
Dummy as Independent Variable(s): Dummy variables and uses of dummy as independent variables. Dummy as Dependent Variable: Description, Assumption and Estimation of Linear Probability Model. Logit [both Binomial and Multinomial] and Probit Model, Limited Dependent Variables: Tobit Model
- Unit- V: Dynamic Econometric Model:** **15-18 L**
Auto-regressive and Distributed Lag Models – Koyck Model, Parital Adjustment Model, Adaptive Expectations, Almon Approach to Distributed Lag models Methods of Instrument Variables.

(Note – Use of non-programmable calculator is permitted.)

Course Outcomes:

1. Use basic econometric estimation techniques such as Ordinary Least Squares to estimate bivariate and multivariate regression models.
2. Formulation and estimation of a multiple regression model.
3. Impacts for the violation of one of the important assumptions for application of OLS regression.
4. Concepts of Heteroscedasticity, Multicollinearity and Autocorrelation. Possible reasons behind the presence of Heteroscedasticity & Multicollinearity.
5. Use of Dummy Variables and understanding of Auto Regressive and Distributed Lag Models.

Books & References:

- J. Kmenta: Elements of Economics, University of Michigan Press.
- Damodar N. Gujarati: Basic Econometrics, McGraw-Hill Higher Education.
- J. Johnston: Econometrics Methods, McGraw-Hill College.
- G.S. Maddala: Econometrics, John Wiley & Sons.
- R.S. Pindyck and D.Z. Rubinfeld: Econometrics Methods and Econometrics Forecasts, McGraw-Hill Publishing Co.
- Rao and Millar: Applied Econometrics, Wadsworth Publishing Company.

Paper- 3.3: ECO-633 (B-02): Health Economics- I

Course Objective:- The main objective of the course is to have an Economic perspective in the definition of Health Medical Care and Production of Good health and to gain an insight into the need of allocation of Resources and Insurance in Health Markets keeping in View the inequalities and specific needs in Health Care Systems.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular

student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction to Health Economics: 15-18 L

Concepts; The four basic questions; Relation between system structure and performance. Health and medical care: An economic perspective: Definition of health; Utility analysis; Medical care; Production of good health.

Unit- II: Efficiency in Health Sector: 15-18 L

Efficiency in health sector and its elements; Pareto efficiency; Economic evolution of efficiency; Cost and Benefit analysis: Cost identification analysis; Cost-Benefit analysis (Discounting, Value of life, application of cost-benefit analysis); Cost effectiveness and cost utility analysis; An application of cost effectiveness analysis.

Unit- III: Health Care System and Institutions: 15-18 L

Health care system and institutions: Elements of health care system; Role and financing method of third party payer(s); Risk management; Reimbursement and consumer cost sharing; The production of medical services. Demand for medical care; Law of demand; Relationship between health insurance and demand for medical care; Moral hazard; Elasticities.

Unit- IV: Medical Care Production, Cost and Insurance: 15-18 L

Medical care production and Cost: Short run production function and cost theory of representative medical firm; Long run cost of production; Neo-Classical cost theory. Demand for medical insurance: The conventional theory of demand for private health insurance; Nyman's access theory of demand for private health insurance; Traditional V/s Managed care insurance product.

Unit- V: Structure, Conduct, Performance and Market Analysis: 15-18 L

Structure, Conduct, Performance and Market analysis: Relevance of perfectly competitive market to medical care; Monopoly model of market behavior and performance; Monopolistic competition; Oligopoly; Measuring concentration and identifying market power.

Course Outcomes:

1. Competence to apply economic concepts and models to the fields of demand for health, demand for health services, demand for health insurance.
2. Knowledge in Provision of health insurance and provision of health care.
3. Competence to describe, analyze and critically address economic aspects of health care organizations.

Books & References:

- Redford E. Snterre and Stephen P. Neun, Health Economics: Theories Insights and Industry Studies, Thompson South – Western, 3rd Edition (614, San/Hea, (073226)
- Zweifel and Breyer, 1997, Health Economics, Oxford University Press.
- Drummond MF, Sculpher MJ, Torrance GW, O'Brien B, Stoddart GL, eds, Methods for economic evaluation of health care programmes, Third Edition, Oxford University Press, 2005.
- Health economics 3rd Edition by Phelps.
- The economics of health and health care, 2nd edition by Folland, Goodman and Stono (FGS).

- Gold Marthe R Joanna F Siegel, Lousie B russel. And Milton C Weinstein, 1996, Cost effectiveness in health and medicine, New York Oxford University Press.
- Handbook of Health Economics (Anthony J. Culyer and Joseph P New house eds, Elsevier Science 2000L Available online at: <http://www.sciencedirect.com/science/handbooks/15740064>.
- David Wonderling, Reinhold Gruen & Nick Black, 2005 Introduction to Health economics, Chapters 10-11. 127 -152.
- Gold Marthe R. Joanna E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, New York Oxford University Press, Ch 6 pp. 176-213.

Paper- 3.3: ECO-633 (B-03): LABOR ECONOMICS - I

Course Objective:- The Main Objectives of this course is to focus on understanding the dynamics and interactions within labour markets, to understand the mechanism and factors influencing wage determination. To develop accurate methods to measure labour productivity and to investigate patterns and trends in employment issues across different sectors, regions and demographic groups.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

UNIT – I **15-18 L**

Nature and characteristics of labour market with special reference to India Paradigms of labour market analysis markets - Classical neo-classical and dualistic economy Demand and Supply of Labour.

UNIT – II **15-18 L**

Productivity of Labour – Factors affecting productivity of Labour, Productivity and wage relationship, Migration, Absenteeism and Turnover in labour market, Labour and Rationalization

UNIT – III **15-18 L**

Employment and development relationship; Unemployment – Concept, types and Principles, Automation and its impacts on Employment, Exit Policy and Need For Safety Nets,

UNIT – IV **15-18 L**

The Concept of Evaluation of Personal Management, Manpower planning, Methods of Recruitment and placement, Employment service organization in India.

UNIT – V **15-18 L**

Wages – Meaning and Methods of wage payment, Theories of wage determination, Classical, neo-classical and Hicks. pen bargaining shakhil theories of wage determination, Concept of minimum wage, living wage and fair wage, wage differentiations, Wage Standardisation, Non- wage component of labour remuneration.

Course Outcomes:

1. The students will be able to grasp the fundamentals of labour supply and demand, wage determination, and the functioning of labour markets in different economic systems.
2. They will be equipped with the knowledge and skills to contribute to policy discussions, address contemporary labour market challenges, and pursue careers in academia, government, international organizations, or the private sector.

Books & References:

- Datta, G. (1996) – Bargaining Power, Wages and Employment: Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
- Papola, T.S. and Rodgers, (Eds.) (1992) – Labour Institutions and Economic Development in India, International Institute for Labour Studies, Geneva.
- Sen, A. K. (1975) – Employment, Technology and Development, Oxford University Press, New Delhi.
- Solow, R. M. (1990) – Labour Market as an Institution, Blackwell, London.
- Hicks, J. R. (1932) – The Theory of Wages, Clarendon Press, Oxford.
- Misra, L. (2000) – Child Labour in India, Oxford University Press, New Delh.
- Lester, R. A. (1964) – Economics of Labour (2nd Edition), Macmillan, New York.
- McConnell, C. R. and S. L. Bruce (1986) – Contemporary Labour Economics, McGraw Hill, New York.
- Sinha, V.C. Audhyogik Arthshastra.

Paper- 3.3: ECO-633 (B-04): History of Economic Thought

Course Objective:- The course objective of the History of Economic Thought typically involves studying the development of economic ideas, theories, and thinkers throughout history. This includes understanding how economic thought has evolved, analyzing key contributions from different periods and cultures, and critically examining the impact of various economic philosophies on policy and society.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction & Classical School: 15-18 L

Mercantilism Physiocrates, Quesnay's table economic concept of surplus growth, theory of taxation and role of government. Classical school: Adam Smith the invisible hand doctrine wealth of nation, laissez faire, profits and wages modern revival of Adam Smith; critiques of Adam Smith.

Unit- II: Theories of Malthus & Ricardo: 15-18 L

Malthus's theory of population and theory of under competition; Ricardo – principal of political economy and taxation distribution theory – different roots differences with say on determination of value modern revival and interpretation (Sraffa).

Unit- III: Critics of the Classical School & Other Thoughts: 15-18 L

Critics of the classical school – Sismondi socialist and the nationalist school position senior and the four postulates, J.S. Mill – four prepositions and capital demand and supply bifurcation wage fund. rehabilitation by coarseness stationary state version non – competing groups evaluation of socialist thought – Utopian socialism Saint – Simon, Own blane, Fourier proudhob scientific socialist.

Unit- IV: Karl- Marx & Neo Classical School: 15-18 L

Karl - Marx efforts at scientific socialism organic composition of capital break down of capitalism, reserve army labour critiques of Marx, Revival Marx in economics. The German historical school and development of marginalize the neo classical school Marshall.

Unit- V: 20th Century Economic Thinker: 15-18 L

20th century economic thought main Critical evaluation of the development of economic thought; Indian economic thought Kautilya, Vinoba Bhave, Dr. B.R. Ambedkar and Mahatma Gandhi. Keynesian Economics & supply side Economist (Robert Lukas & Arthor laffer).

Course Outcomes:

1. Understanding the evolution of economic ideas from ancient times to the present day.
2. Analyzing the contributions of key economists and schools of thought to economic theory.
3. Critically evaluating the influence of historical economic thinking on contemporary economic policy and practice.
4. Developing the ability to articulate and defend one's own economic viewpoints based on historical perspectives.
5. Enhancing critical thinking and analytical skills through the examination of complex economic theories and debates.

Books & References:

- H. Haney: A History of Economic Thought.
- Eric Roll: A History of Economic Thought.
- Lionel Robbins: A History of Economic Thought.
- S.K. Srivastava: A History of Economic Thought.
- H.L. Bhatia: A History of Economic Thought.
- V. C. Sinha: आर्थिक विचारों का इतिहास

Discipline Specific Electives I-C

NOTE: Paper chosen from Elective Core I-A, I-B and I-C in Semester III should correspond with paper chosen from Elective Core II-A, II-B and II-C respectively in Semester IV.

The candidate is required to select any one elective course from the following

Paper- 3.4: ECO-634(C-01): Economics of Developments and Growth – I

Course Objective:- This course is design to learn the concept measurement and factors of economic development various issues in economic development and sustainable development. Students learn and understand theories of economic development, domestic and external resources of development, Indian planning and project evaluation techniques.

Contact Hours/Week : 06 Hours Maximum Marks : 150 Marks

Duration of Examination : 03 Hours Continuous Assessment : 50 Marks
Semester Assessment : 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: The Concept of Development **15-18 L**

Understanding development: Dividing the world and levels of development (Development as an evolving concept i.e. development, growth and change, Goulet's core values of development; Sen's conception of development; Income/Output based measures and their inadequacies; PQLI and HDI as indicators of Development). concept measures and problems of growth.

Unit- II: Issues in Economic Development: **15-18 L**

Ingredients of Development – Land, Labour, Physical and Human capital, Technological change, Scale and organization, Sustainable development -conceptualization, concern, indicators and remedial measures. Poverty and inequalities in LDCs and their impact on development.

Unit- III: Theories of Economic Development: **15-18 L**

Agriculture – Industry interface – Interdependence between Agriculture and industry; Industrialization and urbanization (The models of Lewis Fei and Ranis and Todaro); The balanced growth doctrine (review of Rosenstein, Nurkse and Lewis); Strategy of unbalanced (Hirschman's version), and the reconciliation of the two.

Unit- IV: Project Evaluation Criteria: **15-18 L**

Internal rate of return (IRR), Net present value (NPV) and Cost – benefit analysis discount rate, Shadow prices of capital, Unskilled labour and foreign exchange, Choice of techniques, Capital-output ratio, Applications of input-output analysis in planning.

Unit- V: Finance of Economic Development: **15-18 L**

Domestic and external resources, Two-gap model, International trade and development, Types and approaches of planning. Plan models of India, Past performance and current issues of Indian planning.

Course Outcomes:

1. The student will be able to understand key concepts issues and theories of economic growth and development.
2. They will understand social and institutional aspects of development, domestic importance of agriculture and the rational and pattern of industrialisation for development in developing countries.
3. They will also be able to analyse investment decisions and cost benefit of projects.

Books & References:

- Meier, Gerald M. and James E. Rauch Leading issues in economic Developments, Eighth Edition, Oxford University Press, New York
- Ray, Debraj, Development Economic, Seventh Impression, Oxford University Press, New Delhi.
- Thirwall, A.P. Growth and Development, Eighth Edition, Palgrave Macmillan, New York.

- Todaro, Michal P. And Stephen Smith C: Economic Development Eighth Edition, Second Impression, Pearson Education, (Singapore) Pvt. Ltd. Indian Branch, Delhi.
- Yotopoulos, Pan A. and Nugent Jeffery B: Economics of Development: Empirical Investigations, Harper and Row Publishers, New York.
- Lewis W.A. Development Planning.
- Meir, G.L.: Leading Issues in Economic Development
- Kuznets, S.: Modern, Economic Growth in U.S. Economy.
- P. Bardhan and T.N. Srinivasan: Poverty and Income Distribution in India
- Todaro, M.P. Economic for a Developing World.
- Thirlwall, A.P. Growth and Development.
- एम.एल. झिंगन – विकास एवं नियोजन का अर्थशास्त्र

Paper- 3.4: ECO-634 (C-02): Mathematical Economics- I

Course Objective:- The objectives of this course are to impart skills in using mathematics as a language of communication and expression for economic analysis. This course is designed to equip students to apply mathematical tools and techniques to understand and elaborate the concepts and theories related to Microeconomics.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Theory of Consumer Behavior-I: 15-18 L

Theory of consumer behavior-Nature of a utility function; Properties of an indifference curve; Maximization of utility; Demand functions: Ordinary and Compensated; Price and Income elasticity. Elasticity relations in demand analysis and restrictions on demand functions; Slutsky equation – n-Commodity case, Elasticity form and Important results.

Unit- II: Theory of Consumer Behavior-II: 15-18 L

Income and Leisure – Derivation of labour supply function and its properties; Linear expenditure system- Properties and derivation of linear demand function; Homogeneous and homothetic utility functions; Indirect utility functions- Properties, Derivation, Roy's identity and derivation of direct and inverse demand functions; Consumer's surplus.

Unit- III: Theory of Firm: 15-18 L

Theory of firm- Production function, Properties of a well behaved and homogeneous production function: Cobb Douglas and CES production functions, Product curves, Output elasticity of factor input, Isoquant, Elasticity of substitution of a homogeneous production function- Linearly

homogeneous. Cobb- Douglas, CES production function and special cases of CES production function. Expansion path optimization behavior of a firm- Constrained cost minimization, Constrained output maximization and Profit maximization.

Unit- IV: Input Demand and Cost Functions: 15-18 L

Input demand functions– Properties and derivation of producer’s input demand functions (through profit maximization); Cost functions – Properties and derivation of short run and long run cost functions (through profit maximization).

Unit- V: Perfect Competition: 15-18 L

Determination of optimum plant size; Perfect competition- Market demand, Producer demand, Supply functions (short run and long run), External economies and diseconomies, Commodity market equilibrium under perfect competition (short run and long run), Differential cost conditions and rent, Effects of taxes on optimum output level, Supply function and price level.

Note: Use of non- programmable calculator is permitted.

Course Outcomes:-

1. The students will be able to elaborate Microeconomic theories and models with mathematical derivation.
2. The course develops the quantitative reasoning among the students regarding behaviour of consumer & producers in market and market equilibrium.

Books & References:

- J.M. Henderson and R.L. Quandt: Micro Economic Theory: A Mathematical Approach, McGraw-Hill, London.
- R. G. D. Allen: Mathematical Economics, Macmillan
- B. C. Mehta: Mathematical Economics: Micro Economic Models, Sultan Chand & Sons, New Delhi.
- Alpha C. Chiang: Fundamental Methods of Mathematical Economics, McGraw- Hill, Kagakusha, Tokyo.

Paper- 3.4: ECO-634 (C-03): Agricultural Economics - I

Course Objective:- This course intends to make understand the nature and scope of Economics of Agriculture. To explore historical economics trends, policies and events globally to understand the process of economic growth, industrialization and structural transformation over time. To study how both price and non-price factors play a crucial role in shaping decisions and outcomes and to comprehend how to build resilience in agricultural system to cope with risks and uncertainties and learn how to develop adaptive strategies.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction of Agricultural Economics: 15-18 L

Introduction: Nature and Scope of Economics of Agriculture : Specificities of Farm Organization and Agricultural Production and Markets; Inter-sector Linkages of Agriculture [Backward and Forward Linkages and Feedback Effects].

Unit- II: Agriculture and Economic Development: 15-18 L

Role of Agriculture in Economic Development: Contribution of Agriculture to Economic Development; Historical Perspective [Experience of England, United States, Australia, Latin America, Soviet Russia, Japan and India]; Declining Role of Agriculture and Dilemmas of Development.

Unit- III: Agricultural Production Function: 15-18 L

Agricultural Production: Uniqueness of Agricultural Production; Various Types of Factor- Product, Factor- Factor and Product- Product Relations; Cobb- Douglas and CES Production Functions. Role of Farm Size and Structure in Equilibrium, Productivity, and Return to Scale. Sources and Barriers to Agricultural Development.

Unit- IV: Agricultural Transformation, Products and Supply: 15-18 L

Agricultural Transformation: Schultz Theory of Transformation of Traditional Agriculture, Agricultural Transformation: Indian Experience. Products, Characteristics of Supply of farm Products, Supply Response of Farm Products; Role of Price and Non- Price Factors in Inducing Aggregate Supply, Empirical Supply Response Functions and Evidence.

Unit- V: Risk and Uncertainty in Agriculture: 15-18 L

Risk and Uncertainty in Agriculture: Nature and Types of Risks and Uncertainties in Agriculture, Public Policies and Farm Level Measures to Reduce Risk and Uncertainties. Demand for and Supply of Farm Products; Characteristics of Demand For Farm Products; Quantity and Quality Components of Demand for Food, Forecasting of Demand for Food.

Course Outcomes:

1. Demonstrate a solid understanding of the economic principles and theories and apply them to agricultural contexts
2. Acquire knowledge and skills to optimize farm productivity, profitability and sustainability
3. Develop skills in assessing and managing risks and learn about risk mitigation strategies and insurance mechanism
4. Contribute to informed decision making, policy development and sustainable agricultural development efforts.

Books & References:

- Bruce L. Gardener and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics, Vol.- IA , Agricultural Production, Amersterdam, Elsevier Sciences B.V., 2002.
- Bruce L. Gardener and Gordon C. Rausser (Eds): Handbook of Agricultural Economics, Vol.-IB, Marketing, Distribution and Consumption, Amersterdam, Elsevier Sciences B.V., 2002.
- Bruce L Gardener and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics, Vol.- 2A, Agricultural and Its External Linkages, Amersterdam, Elsevier Sciences B.V., 2002.
- Bruce L. Gardener and Gordon C.,Rasser (Eds.): Handbook of Agricultural Economics, Vol.- 2B, Agricultural and Policy, Amersterdam, Elsevier Sciences B.V., 2002.
- Eicher Karl and Lawrence Witt (Eds.): Agriculture and Economic Development, New York McGraw Hill Co., 1964.

- Ghatak Subrata and Ken Ingersent : Agriculture and Economic Development, Harvester Press Ltd., London, 1984.
- Southworth Herman and Bruce Johnston (eds): Agricultural Development and Economic Growth , Cornell University Press, New York , 2011.
- Tsakok, Isabelle (2011): Success in Agricultural Transformation: What It means and What Makes It Happen, Cambridge University Press, New York, 2011.

Paper- 3.4: ECO-634 (C-04): Environmental Economics- I

Course Objectives: - There is common notion that economic activities are behind all the environmental evils but nowadays the environmental factors have started affecting economic variables. The objective of the course is to introduce students to the key fundamentals in Environmental Economics. The course provides the students with thorough analytical understanding in sustainable development and risk management, environmental pollutions, measurement of environmental benefits and environmental valuation methods.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction of Environmental Economics and Resources: 15-18 L

Environmental economics: meaning, scope, positive versus normative perspective. Relation of environmental economics with economics, Ecological economics and resource economics. Classification of resources: Renewable and non- renewable. Biotic and abiotic, Exhaustible and non-exhaustible resources.

Unit- II: Sustainable Development and Disaster Risk Management: 15-18 L

Sustainable development: concept, objectives, indicators, strong and weak sustainability. Development and environment: Environmental Kuznets curve, Trade and environment. Disaster risk management and Development: Risk identification, Risk reduction and transfer. Adverse event management and recovery.

Unit- III: Environmental Pollutions: 15-18 L

Air pollution: Types of pollutants and their impact; Water pollution: Concepts of BOD and COD, pH values, Fluoride, Fertilizer use; Land degradation: Problem of solid waste disposal and contamination; Problem of salinity and Water logging; A forestation and deforestation, Significance of social forestry.

Unit- IV: Depletion of Ozone Layer and Environmental Benefits: 15-18 L

Depletion of ozone layer: Greenhouse effect, Global warming and climate change- Acid rain, Urban pollution and urban health. Economic theory and measurement of environmental benefits. Demand for environmental service – Willingness to pay and willingness to accept.

Unit- V: Methods of Environmental Valuation: 15-18 L

Alternative approaches and methods of environmental valuation – Revealed preference and stated preference method – Hedonic pricing. Household production function, Travel cost method, Defensive cost and contingent Valuation method. Green accounting; Flaws in conventional system of national income accounts, Requisite modifications to national income account.

Course Outcomes:

1. The students will be able to understand the conceptual framework of environmental economics.
2. The course enhances their understanding of environmental issues with its economic implications.
3. They will be able to select appropriate economic techniques to solve environmental problems and major value of environmental goods.

Books & References:

- Bhattacharya, R. N. (2001), Environmental Economics- An Indian Perspective, Oxford University Press, Delhi
- Hanley, N., J. F. Shogren, and B. White (2006), Environmental Economics: In Theory and Practice, Oxford University Press.
- Kolstad, C. D. (2003), Environmental Economics, Oxford University Press.
- Sengupta, Ramparsad (2003), Ecology and Economics: An Approach to Sustainable Development, Oxford University Press, Delhi.
- Singh, K. and A. Shishodia (2007), Environmental Economics: Theory and Applications, Sage Publications, New Delhi.
- Ramparsad Sengupta (2012), Ecological Limits and Economic Development, Oxford University Press, Delhi.

Paper- 3.4: ECO-634 (C-05): Survey Methods

Course Objective:- This course is designed to help students appreciate, learn and practice data-based research skills that will help them in using and analyzing data for research purposes. This course gives an outline as to how to identify approaches to research and research strategy, research ethics, using secondary data, how to use primary data, how to use sample selection methods, analysis of data with the aim of doing research studies.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction to Sample Survey:

15-18 L

Sample Methods: Principle of sample surveys, Stages of survey, Practical problems in planning execution and analysis of surveys, Random Number Tables and their uses in drawing samples with equal probability (Simple Random Sampling) and Probability proportional size.

Unit- II: Sampling: **15-18 L**
Sampling theory and sampling distribution; Sampling and Non – sampling errors. Critical study of sample design employed by NSSO and in Rural credit surveys.

Unit- III: Sample Designs: **15-18 L**
Sample Designs: Simple random sampling with and without replacement ; Relative Efficiency of WR and WOR stratified sampling proportional optimum and Neyman allocation. Gain in precision, Cluster Sampling. Two Stage Sampling. Systematic Sampling.

Unit- IV: Regression Analysis: **15-18 L**
Regression Analysis with one and two explanatory variables. Multiplicative and additive models. Growth equations. Estimation of regression parameters and their standard errors.

Unit- V: The Problem of Curve Fitting: **15-18 L**
The problem of curve fitting; fitting of linear, exponential and parabolic curves. Application in the estimation of elasticities and growth rates.

Course Outcomes:

1. Demonstrate the ability to choose methods appropriate to research aims and objectives.
2. Understand the limitations of particular research methods.
3. Develop skills in qualitative and quantitative data analysis and presentation.
4. Develop advanced critical thinking skills in the fields of research.

Books & References:

- M.N. Mutby, Sampling Methods,
- Sukhatma P.V. Sukhatme B.V. and C. Ashok, Sampling Theory of Surveys with applications, Asia Publishing House, New Delhi.
- Gujarati D. Basic Econometric McGraw Hill Higher Education.
- Intriligator M.D., Econometric Models, Techniques, and applications, Prentice Hall of India.

Semester –IV

Discipline Centric Core (Compulsory)

Paper- 4.1: ECO-641: Trade Policy and International Monetary System

Course Objective:- The objective of this course is to develop understanding and analytical skill of trade policy and International Monetary System. The course in parts deep knowledge on balance of payment and its adjustment Foreign exchange markets and international economic institutions.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Trade Policies: **15-18 L**

Political economy of protectionism: Trade policy in developing nations, Import substitution V/s Export promotion, Strategic trade policy in developed nations. Trade and economic development, Deteriorating terms of trade of developing Nations- Prebisch-Singer hypothesis, Current trade problems of developing nations.

Unit- II: International capital movement and monetary system: **15-18 L**

International capital movement and factors affecting it, various forms of foreign capital and its role in economic development. Rise and falls of Bretton – woods system and present international monetary system, IMF, World Bank their achievements and failures.

Unit- III: Economic integration and WTO: **15-18 L**

Economic integration – stages and forms. Theory of customs union: static and dynamic effects, Regional trade blocks – bilateral and multi-lateral international negotiations, Preferential trade areas (PTA's) and Free Trade Areas (FTA's.) WTO issues and its impact on trade.

Unit- IV: Foreign Exchange and Euro Currency Market: **15-18 L**

Foreign exchange market – functions and exchange rate determination, Exchange rate theories– Mint parity, Purchasing power parity (PPP), Monetary approach and Portfolio balance approach, Fixed and flexible exchange rates, Exchange controls and multiple exchange rates, Current exchange rate regime. Euro currency market.

Unit- V: Balance of payments: **15-18 L**

Balance of payments – accounting, components, causes of disequilibrium and Mechanism of adjustments – devaluation and Marshall - Lerner conditions, Elasticity and absorption approaches, External and internal balance, Foreign trade multiplier, Swan model.

Course Outcomes:-

1. The students will be able to analyse and apply the trade policies, different policies for balance of payment adjustment of developing countries like India.
2. Students will be able to understand foreign exchange market and the role of International Monetary Institutions in present global scenario.

Books & References:

- J. Bhagwati: International Trade, Cambridge University Press, London.
- R.J. Carbough; International Economics, Cengage Learning 13 edition.
- D. Salvatore: International Economics, PHI, New York.
- Rana and Verma: International Economics, Vishal Publishing House, Ludhiana (Hindi and English).
- Soderston and Reed: International Economics, Palgrave Macmillan: 3Rev Ed., Edition.

Discipline Specific Elective-II-A

NOTE: Paper chosen from DSE I-A, I-B and I-C in Semester III should correspond with paper chosen from DSE II-A, II-B and I-C respectively in Semester IV.

The candidate is required to select any one elective course from the following:

Paper- 4.2: ECO-642 (A-01): Indian Economic Development and Policy-II

Course Objective:- This course is sequel to Indian Economic Development and policy-1 in 3rd semester. It impart deeper knowledge of Indian Foreign Trade, MNCs, WTO, Planning in India and major economic problems in Indian economy in detail. Course also introduces students to Infrastructure Development, National Income and Economic Reforms in India.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Foreign Trade: 15-18 L

Foreign Trade: Salient features, Trends, Composition, Direction and Organization, Trade reforms, liberalization and Recent trade policy.

Unit- II: MNCs, W.T.O. & B.O.P.: 15-18 L

MNCs and their impact on Indian economy, WTO – issues and its impact on Indian economy, India's balance of payment position in recent years.

Unit- III: Planning In India: 15-18 L

Economic planning: Goals, Achievements and Shortcomings of planned development, Planning and the market. Planning commission and NITI Ayog; Decentralized planning: Constitutional obligations and Panchayati Raj Institutions. Balwant Rai Mehta Committee and Ashok Mehta Committee, Financial aspects of 73rd and 74th constitutional amendments.

Unit- IV: National Income & Major Problems of Indian Economy: 15-18 L

National and Per Capita Income – Growth pattern and trends, Aggregate and Sectoral composition and change therein, Regional distribution, Income inequalities in – India. Problem of subsidy. Black money/ parallel economy, poverty, unemployment & governmental efforts for their solution.

Unit- V: Infrastructure & Reforms of Indian Economy: 15-18 L

Infrastructure development in India- Physical infrastructure [Power, Transport, Communication and Irrigation] and Social infrastructure [Health and Education]; New economic policy- LPG and Second phase of economic reforms, SEZs.

Course Outcomes:

1. The students will be able to have an in depth analysis of Foreign Trade, economic policies, economic reforms and Infrastructure development.
2. They will be able to apply subject knowledge in understanding Indian economy and analyse various government policies.

Books & References:

- Dutt and Sundram: Indian Economy, S. Chand (Latest Ed) (Hindi and English), New Delhi.
- A.N. Agrawal: Indian Economy, New Age International Pub. (P) Letd, (Latest Ed) (Hindi and English), New Delhi.
- Laxmi Narayan Nathurmka: Bhartiya Arthshastra, College Book House, (Latest Ed), Jaipur.
- Mishra & Puri: Indian Economy, Himalaya Publishing House (Latest Ed (Hindi and English), Mumbai.
- Economic Survey (Latest), MOF, GOI, New Delhi. & Download PDF from (<https://www.finmin.nic.in/>)
- Planning Commission & Download PDF from <http://planningcommission.gov.in/>
- Uma Kapila: Indian Economy, Academic Foundation.

Paper- 4.2: ECO-642 (A-02): Demography- II

Course objective:- This course is sequel of demography -1 in 3rd semester. The course covers demographic theories life table analysis and population projections. The course also highlights gender issues and population policy of India.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.

- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Demographic Theories: **15-18 L**
Malthusian theory of population, Population as 'Limits to growth' and as 'Ultimate source'.
Characteristics of Indian population through recent census.

Unit- II: Life Table: **15-18 L**
Life table: basic concepts of life table; types and forms of life table; Construction of life tables based on Age- specific death rates. Conventional approach of life table construction; Concept and Need for life tables.

Unit- III: Poverty, Population Policy and Child Survival: **15-18 L**
Poverty in India- Absolute and relative; analysis of poverty in India; population policy of India.
Mosley and Chen's Framework for Child Survival: Bogart's proximate determinants of fertility

Unit- IV: Population Projection: **15-18 L**
Concept and uses of population projection, Methods of interpolation, extrapolation using Gompertz curves; concepts and Measures of population ageing ; Implications of population ageing on labour force retirement and work participation among Elderly , Implication for government expenditure for pension.

Unit- V: Gender Issues and Population Policy of India: **15-18 L**
Gender issues: Understanding gender, Gender inequalities, Gender differentials in nutrition and health, Employment and Property inheritance and Female headship; Modern theories of population and development: Pessimistic and Neutralist view; National population policy, 2000; National rural health mission.

Course Outcomes:

1. The students will have deep understanding of population theories, demographic characteristics, trends and issues in India.
2. They will also be acquainted with various methods related to population projections and implications of changing composition of population on labour force.
3. Students will be able to use subject knowledge to analyse gender issues and population policy.

Books & References:

- Bhende, Asha A. and Tara Kanitkar (2004): Principles of Population Studies, Chapter-08, Himalaya Publishing House, Mumbai.
- Jacob S. Siegel and David A. Swanson (2004): The Methods and Materials of Demography. 2nd Edt. Chapters 1,2,3,7,9,10, Elsevier Science, USA.
- J. Weeks (2005): Population: An Introduction to Concepts and Issues, Wordsworth Learning, (9th Edt), Singapore.
- Pathak, K. B. and F. Ram (1998): Techniques of Demographic Analysis, Chapter 4 & 8, Himalaya Publishing House, Mumbai.
- Srinivasan K. (1998): Basic Demographic Techniques and Applications, Chapter 4, Sage Publications, New Delhi.
- National Family Health Surveys.
- United Nations, (1973): The Determinants and Consequences of Populations Trends, Vol.- I, Page No 50. Chapter 7, Population Studies, New York.

- United Nations , World Population Ageing, 1950-2050.
- F. Ram and K.B Pathak (1998): Techniques of Demographic Analysis, (Chapters 2 & 3), Himalya Publishing House , Mumbai.
- Preston, S.H., Patrick Heuveline and Michel Guillot (2001): Demography: Measuring and Modeling Population Process, (Chapters 2,3 &4), Blackwell Publishers, Oxford UK.
- Shryock, Henry S. Jacob Siegel and Associates (1980): The Methods and Materials of Demography, Vol.2, Fourth printing (revised), US Department of Commerce, Washington DC, pp. 389-393, Chapter 14.
- Jacob S. Siegel and David a. Swanson (2004): The Methods and Materials of Demography, Second Edition, Chapters 1,2,3,7,9 & 10, Elsevier Science USA.
- John Weeks (2005): Population: An Introduction to Concepts and Issues, Wordsworth Learning, 9th Edition, Singapore.
- Basu. Alaka M., (1992): Culture , the Status of Women and Demographic Behaviour, Oxford University, New York.
- Dyson, Tim and Mick Moore, (1983): “On Kinship Structure, Female Autonomy and Demographic Behavior in India” Population and Development Review Vol.- 9(1). pp. 35-60.
- Birdsall, Nancy, Kelley. Allen C. and Sanding, Striven W.(2001): Population Matters: Demographic Change, Economic Growth and Poverty in the Developing World, Chapters 2,4 and 5, Oxford University Press.

Paper- 4.2: ECO-642 (A-03): Industrial Economics – II

Course Objective:- The course objectives of Industrial Economics in India typically aim to provide students with a comprehensive understanding of the industrial sector's economic principles, structure, and performance. Analyze the structure and organization of industries in India. Examine the impact of globalization on the industrial sector in India. Study the trends in international trade and their implications for domestic industries. By covering these objectives, the course aims to prepare students for careers in academia, industry analysis, policy-making, and consultancy, where they can contribute to the economic development and industrial growth of India.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Industrialization in India: **15-18 L**

Policy goal of industrialization in India. Nature of industrial data for organized industry. Major classification of the organized industry: Employment size and Ownership structure.

Unit- II: Industrial Growth and Development in India: **15-18 L**

Pattern of industrial growth and changes in industrial structure in India since 1951. Factors affecting industrial location. Regional imbalances in industrial development in India and government policy for balanced regional development of industry.

Unit- III: Market Structure: 15-18 L

Market structure and R & D. Allocative efficiency and capacity utilization Indian industry; Productivity growth, FDI and Acquisition of technology in India.

Unit- IV: Industrial Reforms: 15-18 L

MRTTP and nature of concentration of Indian industry. Liberalization and Privatization in Indian industry.

Unit- V: Merger, Takeovers and Industrial Development in Rajasthan: 15-18 L

Mergers and Takeovers. Competition Policy and Consumer protection in India. Industrial development in Rajasthan.

Course Outcomes:

1. The course objective of Industrial Economics in India typically includes the following key points.
2. Provide insights into India's industrial policies, their historical development, and current trends, and how they impact business operations and economic growth.
3. Understand the role of government regulation and policy in shaping industrial performance, including antitrust laws, competition policy, and regulation of natural monopolies.
4. By covering these objectives, the course aims to prepare students for careers in academia, industry analysis, policy-making, and consultancy, where they can contribute to the economic development and industrial growth of India.

Books & References:

- Barthwal R. R.: Industrial Economics an Introductory Textbook, Wiley Easton Limited, New Delhi.
- Cohen K.L. & Cyert R. M: Theory of the Firm. Prentice Hall.
- Scherer, F. M. & Ross David: Industrial Market Structure and Economic Performance, Boston Houghton, Mifflin, Company.
- Hay. D. A. and Morris D. J.: Industrial Economics: Theory and Evidence, Oxford University Press.
- Shepherd W. J.: The Economics of Industrial Organization (3rd Ed.), Princeton Hall, Englewood Cliffs, New Jersey.
- Martin Stephen: Advanced Industrial Economics, Blackwell Publishers Limited, UK.
- Bain J. S.: Industrial Organization (2nd ed.), University of California.
- Caves, R. : American Industry: Structure, Conduct Performance, Princeton Hall.
- Wildsmith, S.: Managerial Theories of The firm.
- Devine P. J. & Others: Introduction to Industrial Economics, George Allen and Unwin.
- Nayyar, Deepak (ed.): Industrial Growth and Stagnation, Oxford University Press.

Paper- 4.2: ECO-642 (A-04): Indian Financial System

Course Objective:- The objective of this course is to enhance the understanding of the students about organization operation and growth of Financial System in India. It provide the knowledge of Money Market, Government Security Market and Industrial Security Market.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular

student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Introduction to Indian Financial System: 15-18 L

Financial system –Meaning, Structure and Functions of financial system. Financial system and Economic development. Financial intermediaries and Financial markets.

Unit-II: Money Markets: 15-18 L

Money market – Designation, Nature and Role of money market in the economy. Indian money market – Call money market, Treasury bills market, Commercial bill market, Markets for commercial paper and Certificate of deposits.

Unit-III: Government Security Markets: 15-18 L

Government security market – Nature and Organization of government security market, Volume and Composition of issues. Secondary market transactions, Prices and Yield. implications of monetary policy, Recent development in government security market.

Unit-IV: Industrial Security Market: 15-18 L

Industrial security market- Organization and Structure. Listing, Trading and Settlement. Primary and Secondary market. Drawbacks of Indian stock market . Recent development in industrial security market.

Unit-V: Market for Future , Option and Discount : 15-18 L

The discount market. Discount and Finance house of India and Securities trading corporation of India. Market for futures, Options and Other financial derivatives.

Course Outcomes:

1. This course enables students to know the operation of Indian Financial System and activity in Financial Markets.
2. They will be able to understand derivative market and Capital Market's functions using Futures, Options and Discounts.
3. The student will understand how the theoretical concepts learn in the class apply to the real world through interpretation of real world events.

Books & References:

- S.B. Gupta : Monetary Planning for India (latest Ed.)
- K. Rao: Management of Commercial Banks.
- L.M. Bhole : Impacts of Monetary Policy.
- Harendra Badhav (ed.): Challenges to Indian Banking Competition. Globalization and Financial Markets Macmillan.
- N.S. Yher: Non-Performing Advances in Banks, Skylark, New Delhi.
- Report of the Committee (Narsimhan) on the Financial System, Nov., 1991.
- Raghuram Rajan Committee Report on Financial Sector Reforms, Planning Commission, New Delhi.
- R.B.I. Report on trend and Progress of Banking in India (Latest Edition).
- Hanson and Kathuria (ed.): A financial Sector for the 21st Century, Oxford. University Press.
- Y.V. Reddy, Monetary and Financial Sector Reforms in India, UBSPD. New Delhi.

Discipline Specific Elective - II-B

NOTE: Paper chosen from DSE I-A, I-B and I-C in Semester III should correspond with paper chosen from DSE II-A, II-B and II-C respectively in Semester IV.

The candidate is required to select any one elective course from the following:

Paper- 4.3: ECO-643 (B-01): Econometrics- II

Course Objective:- The objective of this course is to provide knowledge on Econometric applications of Economic theory. And to provide students with a knowledge of the core techniques of econometric analysis which forms the basis for the understanding and critical assessment of published work in empirical econometrics. To develop the analytical skills required to demonstrate theoretical asymptotic properties of different econometric estimation and testing procedures under weakened modelling assumptions.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Simultaneous Equation Models: **15-18 L**

Simultaneous equation models: The simultaneous equation bias and Inconsistency of OLS estimators, The identification problem; Rules of identification – order and rank conditions.

Unit- II: Methods of Estimating Simultaneous Equation System: **15-18 L**

Recursive methods and OLS; Indirect least squares (ILS); 2SLS, K Class estimators, 3SLS and ML Methods – application.

Unit- III: Time Series Econometrics: **15-18 L**

Time series econometrics: Key concepts, Spurious regression, Stationary stochastic processes, Non stationary processes, Unit root tests – Dickey- Fuller Test, Augmented Dickey Fuller Test, Phillips-Perron Test.

Unit- IV: Statistical Process and Software: **15-18 L**

Properties of AR, MA and ARMA Processes. Cointegration and Error Correction Mechanism (ECM). Introduction to E-Views and SPSS software.

Unit- V: Panel Data: **15-18 L**

Introduction to Panel Data: Panel Data with Fixed and Random Effects. Fixed Effects: Within and between group effects, Unbalanced panel and Fixed effects. Random effects: GLS, Testing for random effects, Estimation of dynamic panel model.

(Note – Use of non-programmable calculator is permitted.)

Course Outcomes:

1. Apply modern econometric methods covering time series analysis, financial econometrics, micro-econometrics, macro-econometrics and structural econometric modelling.

2. Interpret and critically evaluate applied economics research literature; demonstrate programming skills and numerical methods.
3. Apply methods learned to address policy and business decision questions.

Books Recommended: -

- J. Kmenta: Elements of Economics, University of Michigan Press.
- Damodar N. Gujarati: Basic Econometrics, McGraw-Hill Higher Education.
- J. Johnston: Econometrics Methods, McGraw-Hill College.
- G.S. Maddala: Econometrics, John Wiley & Sons: 4th edition.
- R.S. Pindyck and D.Z. Rubinfeld: Econometrics Methods and Econometrics Forecasts, McGraw-Hill Publishing Co.
- Rao and Millar: Applied Econometrics, Wadsworth Publishing Company.

Paper- 4.3: ECO-643 (B-02): Health Economics- II

Course Objective:- This course aims to equip students with a comprehensive understanding of how economic principles and methodologies are applied to health care systems, Finance and Insurance, Govt. policies, and practices.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Health Financing:

15-18 L

Health financing: concept; National health accounting sources and uses of funds; Health budgeting. Health care financing system, Sources of health care spending. Three principles; Relationship of health spending with health transition, Demographic change and Epidemiological transition; its indicators; Out of pocket and catastrophic health care expenditure.

Unit- II: Health Inequalities, Health Risk & Insurance:

15-18 L

Health inequalities and its measurement; Determinants of health. Risk pooling: concept; Ways to pool revenues; level of risk pooling; General revenue-based systems; Social health insurance; Community health insurance; Re-insurance; Private health insurance.

Unit- III: Resource Allocation:

15-18 L

Resource allocation: concept; Dimensions; Organization; Provider payment methods: Fees, Capitation, Salary and Plus bonus; Hospital payment method: Per admission; Diagnostic related grouping; Per-diem; Line-item budget; Global budget; Contracting: Effect of payment system on patients.

Unit- IV: Quality & Disability adjusted life years and Medical Tourism in India:

15-18 L

Quality adjusted life years and Disability adjusted life years: concept, computation, limitation and problems, Relationship between the two. Medical tourism in India; performance of India and Rajasthan on infant mortality rate (IMR), Under-five mortality rate, maternal mortality ratio, Life expectancy.

Unit- V: Structure, Conduct, Performance and Market Analysis: 15-18 L

Instrumental activities of Daily Living and Activities of Daily Living: Concept and scale; Government, health and medical care: Economic reasons and type of government intervention; Market failure in health sector: Concept, Reason and role of Government; National rural health mission; National urban health mission;

Course Outcomes:

1. Economic Principles in Health Care
2. Analyze Health Care Allocations in terms of health care finance and insurance
3. Conduct Economic Evaluations: Performing cost-benefit, cost-effectiveness, and cost-utility analyses of health care interventions.
4. Using tools like QALYs and DALYs to measure and compare health outcomes.
5. Evaluating medical tourism and health programmes and policies at state and National level.

Books & References:

- Redford E. Snterre and Stephen P. Neun, Health Economics: Theories Insights and Industry Studies, Thompson South – Western, 3rd Edition (614, San/Hea, (073226)
- Zweifel and Breyer, 1997, Health Economics, Oxford University Press.
- Drummond MF, Sculpher MJ, Torrance GW, O'Brien B, Stoddart GL, eds, Methods for economic evaluation of health care programmes, Third Edition, Oxford University Press, 2005.
- Health economics 3rd Edition by Phelps.
- The economics of health and health care, 2nd edition by Folland, Goodman and Stono (FGS).
- Gold Marthe R Joanna F Siegel. Lousie B russel. And Milton C Weinstein, 1996, Cost effectiveness in health and medicine, New York Oxford University Press.
- Handbook of Health Economics (Anthony J. Culyer and Joseph P New house eds, Elsevier Science 2000L Available online at: <http://www.sciencedirect.com/science/handbooks/15740064>.
- David Wonderling, Reinhold Gruen & Nick Black, 2005 Introduction to Health economics, Chapters 10-11. 127 -152.
- Gold Marthe R. Joanna E Siegel, Lousie B russel, and Milton C Weinstein, 1996, Cost effectiveness in health and medicine, New York Oxford University Press, Ch 6 pp. 176-213.
- Policy document of National Health Mission.

Paper- 4.3: ECO-643 (B-03): LABOUR ECONOMICS - II

Course Objective:- To examine various aspects of the workforce within the industrial sector and to analyze the structure, functions and operations of trade unions. To understand the concept of industrial peace and learn about the mechanisms for the prevention and resolution of conflicts and disputes and also to investigate the underlying causes and determinants of labour problems in India.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular

student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

UNIT – I **15-18 L**

Industrial Labour in India- Composition and Characteristics, Fair wages, Wage Boards in India, Bonus system and Profit Sharing, Wage Policy in India, The Problem of Bonus In India

UNIT – II **15-18 L**

Trade Unions - Types and Functions, Growth of Trade Union Movement in India, Trade Unions Act, Evaluation of Trade Unions, Emerging Trends in Trade Union Movement, Trade Unions and Economic Development, Social Responsibilities of Trade Unions.

UNIT – III **15-18 L**

Concept of Industrial Peace – Causes of Industrial Disputes and Present Mechanism of Dispute Settlement in India, Role of Tripartism, Collecting Bargaining, Workers Participation in Management, ILO and India.

UNIT – IV **15-18 L**

Social Security – Concept of Social Security and its evolution, Social Assistance and Social Insurance, Review and Appraisal of State Policies with respect to Social Security and Labour Welfare in India, Social Security Measures in India, Workmen's Compensation Act and ESI Act (in Brief).

UNIT – V **15-18 L**

Specific Labour Problems in India – Child Labour, Labour Problems of Unorganized Sector, Gender Bias in Labour Market, Report of Second National Commission on Labour, Impact of Globalization on Indian Labour Market.

Course Outcomes:

1. Students will be equipped with the knowledge of the status of worker rights and welfare measures in Indian industries, including provisions for social security, health and safety standards.
2. They will gain the knowledge and skills to contribute to research, policy formulation, and advocacy efforts aimed at improving the working conditions, rights, and well-being of industrial workers in the country.

Books & References:

- Datta, G. (1996) – Bargaining Power, Wages and Employment: Analysis of Agricultural Labour Markets in India, Sage Publications, New Delhi.
- Papola, T.S. and Rodgers, (Eds.) (1992) – Labour Institutions and Economic Development in India, International Institute for Labour Studies, Geneva.
- Sen, A. K. (1975) – Employment, Technology and Development, Oxford University Press, New Delhi.
- Solow, R. M. (1990) – Labour Market as an Institution, Blackwell, London.
- Hicks, J. R. (1932) – The Theory of Wages, Clarendon Press, Oxford.
- Misra, L. (2000) – Child Labour in India, Oxford University Press, New Delhi.
- Lester, R. A. (1964) – Economics of Labour (2nd Edition), Macmillan, New York.

- McConnell, C. R. and S. L. Bruce (1986) – Contemporary Labour Economics, McGraw Hill, New York.
- Sinha, V.C. Audhyogik Arthshastra

Paper- 4.3: ECO-643 (B-04): Indian Economic Thinkers

Course Objective:- The course objectives would typically aim to provide a comprehensive understanding of the contributions and impact of key Indian economists and thinkers. These are potential course objectives. To understand the historical and socio-economic context in which Indian economic thinkers developed their ideas. To study the impact of Indian economic thinkers on India's economic development and growth. To integrate insights from history, politics, and sociology to better understand the ideas of Indian economic thinkers.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit-I	Economic Philosophy of Ancient Indian Thinkers- Manu And Kautaliya	15-18 L
Unit-II	Economic Thoughts of - Dada Bhai Naoroji, M.G.Ranade and G.K.Gokhale	15-18 L
Unit-III	Economic Ideas of R.C.Dutt, Vinoba Bhave and Mahatma Gandhi.	15-18 L
Unit-IV	Economic Philosophy of V.K.R.V. Rao and B.R. Ambedkar.	15-18 L
Unit-V	Major Economic Contributions of Prof. Raj Krishna, Amartya Sen and P. R. Brahamananda, Rao-Man Mohan Model.	15-18 L

Course Outcomes:

1. Completing the course on Indian Economic Thinkers, students should achieve the These outcomes.
2. Understand the economic philosophies of pre-modern and classical Indian thinkers.
3. Describe the economic thoughts of Indian thinkers during the colonial period.
4. Evaluate the effectiveness of economic policies inspired by Indian economic thinkers.
5. Compare the ideas of Indian economic thinkers with contemporary global economic theories. By achieving these outcomes, students will be well-equipped to appreciate the rich heritage of Indian economic thought and its relevance to contemporary economic challenges, as well as to contribute meaningfully to academic and policy-oriented discussions.

Books & References:

- B.L. Gupta: Value and Distribution System in Ancient India.
- B.N. Ganguli - Indian Economic Thought-A 19th Century Perspective.
- Kautilya - Arthashastra.
- S.S. Kulkarni: Ekadma Arthniti.
- R.C. Dutt.: Economic History of India Vol. I & II.
- Narhariji Pareekh: Mahav Arthshashtra.
- Amartya Sen: Inequality Re-examined.
- Ramkrishna Arya: Swami Dayanand Ka Arth Chintan.
- Vijay Krishna: Writings of Rajkrishna.
- Indian Economic Journal: Conference Volume 1995.

Discipline Specific Elective II-C

NOTE: Paper chosen from DSE I-A, I-B and I-C in Semester III should correspond with paper chosen from DSE II-A, II-B and II-C respectively in Semester IV.

The candidate is required to select any one elective course from the following:

Paper- 4.4: ECO-644 (C-01) : Economics of Development and Growth – II

Course Objective:- To learn classical and Neo- classical theories of growth. To discuss about Cambridge Criticism of Neo- classical growth analysis To understand endogenous growth theories. To analyse economic growth and structural changes technological progress and functions and role of market and state in economic development.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Economic growth and Structural change: 15-18 L

Economic growth and Structural change: Structural changes in the composition of gross domestic product, Occupational structure, Structure of capital accumulation and accumulation of human capital: Exploring the relationship between economic development and Income distribution (Kuznets inverted U - shaped curve and augmented Kuznets curve, Denison & Chenry empirical studies).

Unit- II: Theories of growth- I: 15-18 L

Theories of growth– Classical approach: Adam Smith, Marx and Schumpeter, Neo – Classical Approach: Robinson, Solow, Kaldor and Harrod – Domar model, Cambridge criticism of neo-classical analysis of growth, the capital controversy.

Unit- III: Theories of growth- II: 15-18 L

Technological progress – embodied and disembodied technical progress, Hicks, Harrod learning by doing, Production function approach to the economic growth, Growth models of Kaldor and Pasinetti, Optimal saving and Ramsay’s rule of accumulation. Romar model of technological change.

Unit- IV: Endogenous Growth: 15-18 L

Endogenous growth; Intellectual capital, A-K model, Uzawa – Lucas model – Explanation of cross-country differentials in economic growth. Economic isolation and integration with the global market. Living in a heterogeneous world, World-islands of prosperity and how the other three quarters live.

Unit- V: Functions of Market and State: 15-18 L

An overview of the economic functions of the market and state, Efficiency of the competitive market, Market failure, Government failure, On the choice of economic system, Market failure in a dynamic economy.

Course Outcomes:

1. The student will be able to understand the models of economic growth and their application for under develop and developing countries and gain knowledge about recent development in growth and development theories.
2. They will be able to discuss important issues related to market failure and government role in dynamic economy.

Books & References:

- Chenery, Hollis and Moises Syrquin: Patterns of Developments: 1950-70, Oxford University Press.
- Kuznets, S.: Modern Economic Growth, Rate Structure and Spread, Vakils, Feiffer and Simons Private Limited, Bombay.
- Mejer, Edition, Oxford University Economics, Oxford University Press, Delhi.
- Ray, Debraj: Development Economics, Oxford University Press, Delhi.
- Robert J.Barrow and Xavier Sala-i-Martin: Economic Growth, Prentice-Hall of India Pvt. Ltd, New Delhi.
- Thirwall, A.P. Growth and Development, Eighth Edition, Palgrave Macmillan, New York.
- Thorvaldur Gylfason: Principles of Economic Growth, Oxford University Press.

Paper- 4.4: ECO-644(C-02): Mathematical Economics- II

Course Objective:- This course is to develop understanding of economic concepts and theories using mathematical tools and techniques in important aspect of Microeconomics, Macroeconomics and Development Theory to elaborate with mathematical explanation. This course also aims to build capacity of students for applying different mathematical tools such as Game Theory input- Output Analysis and Linear Programming Problems in economic research.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Equilibrium: **15-18 L**

The existence and uniqueness of equilibrium – The stability of equilibrium, Static stability- Marshallian and Walrasian stability conditions and Dynamic stability- Lagged adjustment- the cobweb model.

Unit-II: Price and Output Equilibrium Under Different Market Structure: **15-18 L**

Monopoly- Maximization of profit and sales revenue, Price discrimination: Market discrimination and perfect discrimination, Multi- plant monopolist, Effect of various taxes on output and price of a monopoly firm, Bilateral monopoly; Monopolistic competition equilibrium: Short run and Long run; Duopoly and oligopoly market models: The quasi- competitive solution, the collusion solution, the Cournot solution, Stakelberg solution, the market share solution and the Kinked demand curve solution models.

Unit- III: Macroeconomic Models: **15-18 L**

Macroeconomic models- Keynesian theory of income determination and Derivation of different multipliers, employment and output determination with fixed and flexible prices: IS-LM and AD-AS models. Fleming- Mundell open economy model, Trade cycles: Multiplier-Accelerator interaction models of Samuelson and Hicks.

Unit- IV: Growth Models and Linear Programming: **15-18 L**

Growth models : Harrod – Domar model, Neoclassical models of Solow & Meade; Kaldor's model. Linear programming- Simplex method: Problem of degeneracy and Mixed constraints, Duality theorems, Complementary slackness conditions. application of linear programming in economics.

Unit- V: Input-Output Models and Game Theory: **15-18 L**

Input-output analysis-Concepts of static, dynamic closed and open input- output models, Hawkins-Simon Conditions of Viability, Determination of Gross Output , Price and Value Added in Open Input- Output Model, Determination of Gross Output in Closed Input-Output Model; Theory of Games- Two-Person, Constant Sum Games, Zero-Sum Game, Maximin and Minimax, Dominant Strategies, Pure and Mixed Strategies Saddle Point Solution. Linear- Programming Formulation of a Matrix Game and Conversion of Game Theory into Linear Programming.

(Note: Use of Non- Programmable Calculator is permitted.)

Course Outcomes-

1. The students will be able to increased use of quantitative and mathematical tools in research activities.
2. The course will increase employability of student in organizations engaged in economic research.

Books & References:

- J.M. Henderson and R.L. Quandt: Micro Economic Theory: A Mathematical Approach, McGraw-Hill, London.
- R. G. D. Allen: Mathematical Economics, Macmillan
- B. C. Mehta: Mathematical Economics: Micro Economic Models, Sultan Chand & Sons, New Delhi.
- Alpha C. Chiang: Fundamental Methods of Mathematical Economics, McGraw- Hill, Kagakusha, Tokyo.
- R. G. D. Allen: Macroeconomic Theory: A Mathematical Treatment, McGraw- Hill, London.
- Michael K. Evans: Macroeconomic Activity: Theory, forecasting and Control.
- David Romer : Advanced Macroeconomics, McGraw- Hill, Singapore.

Paper- 4.4: ECO-644 (C-03): Agricultural Economics - II

Course Objective:- To understand the nature, types, structure and problems of Agricultural markets, to study the intersection of food security and international trade by analysing the complex dynamics between food production, distribution and trade on a global scale. To learn the principles, rules and institutions governing international trade.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Agricultural Finance: 15-18 L

Agricultural finance: Financial characteristics of agriculture, Imperfect information [Agency relationship, Adverse selection, and Moral hazard] and Enforcement problems in Credit markets: Segmented rural credit markets, resolving information and Incentive problems; Managing borrowers' Credit risks; Agribusiness and Trade financing; and rationale for government intervention in rural credit markets. Structure and functioning of rural credit market in India.

Unit-II: Agricultural Market-I: 15-18 L

Agricultural markets: Nature, Types and Problems of agricultural commodity markets; Marketing margins. Determinants; and Evaluation of marketing efficiency. Institutional and Organizations in agricultural markets [Farmers cooperatives, marketing orders, Marketing boards and trading enterprises].

Unit-III: Agricultural Market-II: 15-18 L

Horizontal structure of agricultural marketing, Vertical market relationships, Instability in agricultural markets, Price stabilization and social benefits, Storage and market stabilization, Role of commodity futures and options in stabilization.

Unit-IV: Food Securities and International Trade: 15-18 L

Food security and international trade: Concept, Threat, Indicators and Mechanism to food security: Food assistance programmes [both Domestic and International]. Main features of international trade in agricultural commodities, Domestic agricultural and Trade policies of developed countries and their impact on world trade.

Unit-V: GATT, World Trade Organization and Indian Agricultural Development: 15-18 L

Agriculture in GATT negotiations and WTO. Recent developments in Indian agriculture; Indian agricultural development strategy since independence. Opportunities and Challenges [Expectations, Performance, and Emerging constraints and potentials] for Indian agriculture in the post reform period. National Agricultural Policy (Latest) and the agricultural development strategy in the latest five-year plan.

Course Outcomes:

1. Develop skills in conducting market analysis and will be able to make informed decisions in agricultural marketing and management.
2. They will be able to analyze issues related to complex interactions between food security and international trade.
3. It will deepen their understanding of the functioning and impacts of GATT/WTO system.

Books & References:

- Besley, Timothy: “How Do Market Failures Justify Interventions in Rural Credit Markets?” The World Bank Research Observer, Vol. 9 No. 12. Bruce L. Gardner and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics Vol. 1- A: Agricultural Production. Amsterdam, Elsevier Science B. V., 2002.
- Bruce L., Gardner and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics, Vol. 1-B: Marketing, Distribution and Consumption. Amsterdam. Elsevier Science, B.V., 2002.
- Bruce L. Gardner and Gordon C. Rausser (Eds.): Handbook of Agricultural Economics Vol. 2-A: Agricultural and Its External Linkages, Amsterdam, Elsevier Science, B. V., 2002.
- Bruce L. Gardner and Gordon C. Rausser (Eds): Handbook of Agricultural Economics Vol.2-B: Agricultural and Policy, Amsterdam, Elsevier Science B.V., 2002.
- Ghatak Subrata and Ken Ingersent: Agriculture and Economic Development, Harvester Press Ltd., London, 1984.
- Government of India: Five Year Plan (Latest), Planning Commission, Government of India, New Delhi.
- Government of India: National Agricultural Policy, Ministry of Agriculture, Government of India, New Delhi (Latest).
- Hoff Karla and Joseph E. Stiglitz: “Introduction: Imperfect Information and Rural Credit Markets – Puzzles and Policy Perspective” The World Bank Economic Review, Vol. 4, No.3 (1990).
- World Bank: Rejuvenating Indian Agriculture, Washington, World Bank.

Paper- 4.4: ECO-644 (C-04): Environmental Economics- II

Course Objective:- This course is sequel to Environmental Economics-1 in 3rd semester. It provides deep knowledge of methods and policies in managing the environment using tools of economic analysis. The course covers environmental protection and welfare economics, theories of environmental regulation, property rights, environmental risk and uncertainty.

Contact Hours/Week	: 06 Hours	Maximum Marks	: 150 Marks
Duration of Examination	: 03 Hours	Continuous Assessment	: 50 Marks
		Semester Assessment	: 100 Marks

Each paper contains 150 marks for regular and Non-Collegiate students. Continuous assessment of marks 50 are divided into 30 marks for midterm test and 20 marks for Seminars/project report/presentation for regular student. While Continuous assessment of marks 50 are divided into 30 marks for report writing and 20 marks for Viva-voce for Non-Collegiate students.

Note: The syllabus is divided into five independent units and question paper will be divided into two sections:

- **Section-A** will carry 20 marks with 01 compulsory question comprising 10 short answer type questions taking two questions from each unit. Each question shall be of two marks.
- **Section-B** will carry 80 marks with equally divided into five long answer type questions. Paper setter shall be advised to set two questions from each unit and students are instructed to attempt five questions by selecting one question from each unit.

Note: Contents of each unit may be completed into 15-18 lectures or contact hours which also include revisions, seminars, internal assessments, etc.

Unit- I: Environmental Protection & Welfare Economics: 15-18 L

Social choice of optimum environmental protection: Individual preferences regarding Environment protection- Biocentrism. Sustainability, Anthropocentrism; Social choice from individual values. Welfare economics: efficiency and competitive markets. Problems of market failure: Public bads and externalities- Optimal provision of public goods and bads. Pricing public goods and bads.

Unit- II: Environmental Regulations: 15-18 L

Theory of environment regulation: Rationale for regulation, Price rationing, Pigovian taxes single and multiple Polluters, Subsidies for abatement of pollution in short and long run.

Unit- III: Property Rights: 15-18 L

Property rights: Coase theorem, Problems of public bads and bargaining, Policy significance of Coase Theorem, Common Property Resources and Tragedy of Commons. Command and Control, Economic Incentives; Tradable Pollution Permits.

Unit- IV: Regulation with unknown Control Cost: 15-18 L

Regulation with unknown control cost: Unknown polluter Characteristics [adverse selection problem], Unobserved control cost- emission fees or quantity regulation, Hybrid price- Quantity regulation, Obtaining Private control cost information, Enforcement, Dynamics and Commitment.

Unit- IV: Environmental Risk and uncertainty: 15-18 L

Environmental risk and uncertainty: Regulating risk with liability, Liability versus Direct regulation; Environmental risk and insurance; Moral hazard.

Course Outcomes:

1. The students are equipped with tools and methodology that are applied to analyse environmental problems and policies.
2. They will be able to apply economic principles for applied environmental issues.
3. The course empowers students to handle environment sustainability projects.

Books & References:

- Hanely, Nick, Jason F. Shorgen, and Ben White (1999): Environmental Economics: In Theory and Practice, MacMillian.
- Kadekodi, Gopal K. (2004): Environmental Economics in Practice, Oxford University Press.
- Kolstand, C. D. (2003): Intermediate Environmental Economics, Oxford University Press

Paper- 4.4: ECO-644 (C-05): Dissertation

Course Objective:- The objective of this course is to provide an adequate and proper exposure to the students with the external environment so as to ascertain what he / she has learned at the post graduate level in Economics. It also aims to make student familiar with economic issues and to study in depth with practical application on any economic phenomenon or contribution of any economic thinker.

Course Description:

Students may write a dissertation on any economic problem/topic based on primary and/or secondary data, using proper statistical techniques. The student may also choose any topic relating to the contribution of any Economic thinker. The supervisor should ensure the originality of the dissertation work. Students are required to submit 3 copies dissertation at least a week before the commencement of the IV Semester Examination.

Course Outcomes:

1. The understanding of practical problem one has to face during research and how to overcome it.
2. It will enhance the ability of student to conduct survey, analysing the data collected and report writing skill.