FACULTY OF ECONOMICS & BUSINESS

SYLLABUS

FOR

M.SC. (HONS. SCHOOL) ECONOMICS
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

(SEMESTER: I –IV)
Session: 2019-20

GURUNANAKDEVUNIVERSITY
AMRITSAR

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(ii) Subject to change in the syllabi at any time.
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# M.SC. (HONS. SCHOOL) ECONOMICS  
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

## SEMESTER–I:

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Any two of the options under EOL 404 TO EOL 418 not already opted for in Semester-I

**Note.**

1. PSL-053 ID Course Human Rights & Constitutional Duties (Compulsory Paper) Students can opt. in any Semester except Semester 1st. This ID Paper is one of the total ID papers of this course.
## SEMESTER–III :

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**Any two/three of the following options under EOL404 to EOL414 and EOL418 to EOL421 (not already opted for) and from EOL504 to EOL509.**

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**Note:** From 2018-19, only those students of M.Sc. (H.S.) in Economics, Semester-IV will be allowed to write the Dissertation who score CGPA of 6.75 or more in M.Sc. (H.S.) in Economics, Semester I, II and III. The Dissertation will be opted in lieu of one of the options in M.Sc. (H.S.) in Economics, Semester-IV and will be evaluated on the basis of GPA (100 marks).
## M.Sc. (Hons. School) Economics
(Credit Based Evaluation and Grading System)

**SEMESTER–IV:**

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(Relating to any subject being taught in M.Sc. (Hons. School) in Economics)
EOL401: MICROECONOMICS–I

Time: 3 Hrs.

Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A


SECTION B

Production function—Isoquants, producer’s equilibrium, returns to factor and returns to scale, factor substitution, Euler’s theorem. Cobb–dougles, CES and Translog production functions. Technological progress and production functions.

SECTION C

Traditional and modern theories of costs—a comparison. Derivation of cost functions from production functions. Revenue analysis, price and output determination under perfect competition, monopoly, monopolistic competition.

SECTION D

Oligopoly—collusive and non–collusive models of oligopoly, Bilateral monopoly; workable competition – structure, conduct and performance norms.
Alternative theories of the firm—Baumol’s sales maximization hypothesis, Marris model, Williamson’s model, limit price model, full cost and behavioural models of the firm.

Suggested Readings:
3. Heathfield & Wibe : An Introduction to Cost and Production Functions.
4. Layard & Walters : Microeconomics Theory
EOL402: MACROECONOMICS–I

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
National income: Concept—Production vs. non–productive activities, final vs. intermediate activities, Measurement and difficulties. Domestic and national product and their components. National income at factor cost and at market prices. Real and nominal GNP, GNP and welfare.

SECTION B
Inter–temporal and international comparisons of national income. Social accounting and its significance.

SECTION C
Fiscal and monetary effects on demand.
The demand for and the supply of labour. Labour supply and money wages. Unemployment and wage rigidity. Overall equilibrium in the basic static model (goods, labour and money markets).

SECTION D
Consumption: Keynesian consumption function. The consumption puzzle; Absolute income hypothesis, Relative income Hypothesis, Permanent Income Hypothesis, Life Cycle Hypothesis.

Suggested Readings:
M.SC. (HONS. SCHOOL) ECONOMICS (SEMESTER–I)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL403: MATHEMATICS FOR ECONOMISTS–I

Time: 3 Hrs.  Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A


SECTION B

Differential and Difference Equations: Differential and difference equations of first and second order.
Integration: Simple integration, Integration by parts, partial fractions, Definite integral, Economic application of integration.

SECTION C

Linear Algebra: Matrix: Types, properties of determinants, inverse of matrix, Solution by Crammer’s rule and matrix inverse method.
Characteristic roots and vectors, quadratic forms: Application of matrix in input–output analysis.

SECTION D


Suggested Readings:

M.SC. (HONS. SCHOOL) ECONOMICS (SEMESTER–I)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL404: MONEY, BANKING AND FINANCIAL INSTITUTIONS

Time: 3 Hrs.  Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Money: Supply of money and its components. Determinants of money supply, high powered money, money multiplier.

Demand for money – Fisher and Cambridge versions, Approaches of Keynesian, Friedman, Patinkin, Baumol and Tobin.

SECTION B
Money and Capital Market: Role, constituents and functions.

SECTION C
Banking in India – Commercial banks, co-operative banks and regional rural banks.

SECTION D
RBI and its functions; Instruments of credit controls; Credit policy in India – recent developments.
Monetary policy : Objectives, targets and indicators. Monetary policy in India.

Suggested Readings:
M.SC. (HONS. SCHOOL) ECONOMICS (SEMESTER–I)  
(CREDIT BASED EVALUATION AND GRADING SYSTEM)  

EOL405: PUBLIC FINANCE  

Time: 3 Hrs.  
Credits: 4–0–0  
Total Marks: 100  
Mid Semester Marks: 20  
End Semester Marks 80  

Mid Semester Examination: 20% weightage  
End Semester Examination: 80% weightage  

Instructions for the Paper Setters:  
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four  
Sections (A–D). Questions may be subdivided into parts (not exceeding four). Candidates are  
required to attempt five questions, selecting at least one question from each Section. The fifth  
question may be attempted from any Section.  

SECTION A  
Equity in Taxation: Principles of taxation; Taxable capacity; Tax effort; Buoyancy and  
Elasticity of taxes; Distinction between tax design and tax reforms; characteristics of a well–designed tax structure.  

SECTION B  
Incidence of taxation: Different concepts, Theories of Tax Shifting, Effects of taxation on  
production and distribution.  
Direct vs. Indirect Taxes: Direct and Indirect taxes: Role and importance in developing  
countries; proportional vs. progressive taxes; specific vs. advalorem duties; Tax structure in  
India; Latest tax reforms in India: Implementation of GST.  

SECTION C  
Growth of Public Expenditure: Wagner’s Law of Increasing State Activities; Peacock–  
Wiseman Hypothesis of public expenditure. Effects of public expenditure on production and  
distribution; Structure of public expenditure in India. Criteria of public investment decisions.  
Public Debt: Forms, sources, effects, burden and its management, public debt sustainability.  
Different concepts of budgetary deficits.  

SECTION D  
Public Budget: Concept and types; Zero Base Budgeting.  
Fiscal Responsibility and Budgetary Management Act.  
Problems and Principles of Federal Finance: Union–state financial relations in India. Fiscal  
policy and Fiscal Reforms in India.
Suggested Readings:

2. Bird, Richard, M.and Oliver Oldman: Readings on Taxation in Developing Countries.
3. Cedric Sandford : Economics of Public Finance.(Chapter 2)
6. Om Parkash : Center–State Financial Relations in India.
7. Om Parkash: Economics of Public Finance
10. ______ : Public Finance in Underdeveloped Countries.
18. ______ : Central Budget Documents.
20. ______ : Reports of Finance Commissions.
EOL406: INTERNATIONAL ECONOMICS

Time: 3 Hrs.  
Credits: 4–0–0  
Total Marks: 100  
Mid Semester Marks: 20  
End Semester Marks 80  
Mid Semester Examination: 20% weightage  
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A–D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

SECTION B
Balance of payments: Meaning, concept, equilibrium and disequilibrium in balance of payments, Traditional, Absorption and Monetary approaches for adjustments in balance of payments. Foreign trade multiplier.

SECTION C
Forms of protection: Tariff and Quota.  

SECTION D
Suggested Readings:

M.SC. (HONS. SCHOOL) ECONOMICS (SEMESTER–I)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL407: INDUSTRIAL ECONOMICS

Time: 3 Hrs. Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four
Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are
required to attempt five questions, selecting at least one question from each Section. The fifth
question may be attempted from any Section.

SECTION A
Frame work and Problems of Industrial Economics; Concept, ownership, control and objectives
of the firm; active and passive behaviour of the firm.

SECTION B
Market Structure : Meaning and determinants. Sellers’ and Buyers’ concentration; Product
differentiation; entry conditions; economies of scale; market structure and innovation.

SECTION C
Market Conduct : Weber and Sargent Florence theories of location; Product pricing in practice;
Investment decisions and risk adjustment; Merger and diversification; Advertising expenditure
and decisions; Finance : Capital structure; pay–out and retention ratios.

SECTION D
Market Performance : Growth of the firm and constraints; Concepts and measurement of
industrial productivity and capacity of utilization; profitability.
Structural transformation of Indian industries; industrial competitiveness and recent industry
policy initiatives, Role of manufacturing industries in economic development.

Suggested Readings:
2. Devine, P.J. & R.M. Jones (et. al.) : An Introduction to Industrial Economics, George Allen
York, 1975.
9. Ramamurti, R. & R.Vernon(ed.) : Privatization and Control of Stateowned Enterprises,
M.S.C. (HONS. SCHOOL) ECONOMICS (SEMESTER-I)  
(CREDIT BASED EVALUATION AND GRADING SYSTEM)  

EOL408 : LABOUR ECONOMICS AND INDUSTRIAL RELATIONS  
Time: 3 Hrs.  
Credits: 4–0–0  
Total Marks: 100  
Mid Semester Marks: 20  
End Semester Marks 80  

Mid Semester Examination: 20% weightage  
End Semester Examination: 80% weightage  

Instructions for the Paper Setters:  
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.  

SECTION A  
Concept of labour, characteristics of labour, labour markets – definition and characteristics, theories of labour. Market – Classical, Neo-classical and Dualistic labour markets. Structured and unstructured market, Internal and external labour market.  

SECTION B  
Features and characteristics of Indian labour market.  
Industrial Relations: Trade Unions, objectives and functions. Indian Trade Unions. Growth and problems.  

SECTION C  
Industrial disputes, Industrial disputes in India, Dispute settlement machinery in India. Wages; Concepts of minimum, living and fair wage, Wage, productivity and inflation relationship, Wage policy in India – Minimum Wages Act and Payment of Wages Act.  

SECTION D  

Suggested Readings:  
1. Dobb, Maurice : Wages  
2. Dunlop, J. T.(ed.) : Industrial Relations System  
3. __________ : Wage Determination under Trade Unionism.  
12. __________ : Labour Investigation Reports (Main Reports)  
15. I.L.O. : Approaches to social society.
M.Sc. (Hons. School) Economics (Semester–I)
(Credit Based Evaluation and Grading System)

EOL409: Agricultural Economics

Time: 3 Hrs.
Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Agricultural Economics: Meaning, scope and role in economic development; changing importance of agriculture in the process of economic development; characteristics of subsistence agriculture. Schultz’s prescription of transforming traditional agriculture; Interface between agriculture and industry.

SECTION B
Institutional Structure: Land reforms – nature, progress and assessment, impact on agrarian structure; subdivision and fragmentation, consolidation of land holdings. Nature of emerging agrarian structure, farm size and Productivity in Indian agriculture; Agricultural finance and credit. Problem of rural indebtedness.

SECTION C
New agricultural technology and its impact on production, employment, labour absorption and income distribution; Growth and Productivity trends in Indian agriculture. Price Instability in Agriculture: Methods to stabilize income and prices in agriculture; Acreage and output response to prices in agriculture. Diversification of Indian agriculture: objectives, incentives and disincentives.

SECTION D
Agricultural marketing in India. Agricultural Taxation: Inter–sectoral terms of trade; Agricultural subsidies – nature, trends and distributional implications; WTO and Indian agriculture.
Suggested Readings:

8. Chaudhari, Pramit Readings in Indian Agriculture Development.
M.SC. (HONS. SCHOOL) ECONOMICS (SEMESTER–I)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL410: COMPUTER APPLICATIONS FOR ECONOMISTS–I

Time: 3 Hrs.

Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
Practical Marks: 20
End Semester Marks 60

Mid Semester Examination: 20% weightage
Practical: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A


Programming Paradigms and Development Tools: Problem Analysis, Program Constructs (Sequential, Decision, Loop), Algorithms, Flowcharts, Pseudocode, Decision table, Modular Programming, Top-down and Bottom-up Approaches, functional, Procedural object-oriented, and logic programming, Programming Languages – Syntax and Semantics.

Operating System Concepts: Role of an Operating System, Types of operating systems, Batch processing, Multiprogramming, timesharing, real time, mobile, portable etc., Booting procedure and its types, Components and functions of operating system.

SECTION B

Data Communication and Internet: Introduction to Data Communication, Types of Networks, Transmission Media, Internet and its applications, Working knowledge of Search engines and use of electronic mail, Virus, Information level threats, Network level threats, Classification of threats, Hacking Prevention Mechanism: Anti-Viruses, Firewalls, Biometrics Controls for security, cryptography and encryption.

SECTION C

Introduction to Program Development: Problem Analysis, Designing a solution.

Overview of C: Brief history of C, Introduction to different versions of C. General Structure of a C program, stages in the development of a C program.

Data Types, Operators and Expressions: Constants and variables, data types, declaring variables, storage classes, different types of expressions and their evaluation, conditional expression, assignment statement, enumerated data type, redefining/creating data types, types casting.

Console Input/Output: Standard input/output devices, unformatted input/output functions (character I/O functions and string I/O functions), formatted input/output functions (scanf() function and printf() function.

SECTION D

Control Statements: Decision making using if, if-else, elseif and switch statements, Looping using for, while and do – while statements, transferring program control using break and continue statements.

Arrays and Strings: Introduction to arrays, declaring arrays, initializing arrays, processing of arrays, introduction to strings.

Structures and Unions: Introduction to structures, declaring structures, initializing structures, accessing elements of structure, array of structures, nested structures, passing structures as arguments to a function, introduction to unions.

Suggested Readings:

5. Copper, Mallish : The spirit of C; An Introduction to Modern Programming.
7. Subramaniam, N. : Introduction to computer; Fundamentals of Computer Science.
12. E. Balagursamy : Programming in Ansi C.
EOL411 : ECONOMICS OF PUBLIC ENTERPRISES

Time: 3 Hrs.
Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Role of public sector in economic development; objectives scope and growth of public sector in India. Criteria for project selection, Cost–benefit analysis, shadow prices, social rate of discount.

SECTION B
Organizational pattern of public enterprises, Management of public enterprises, personnel management in public enterprises.

SECTION C
Financial and material management in public enterprises.
Pricing policy of public enterprises.
Accountability of public enterprises, Auditing of public enterprises, role of bureau of public enterprises.

SECTION D
Case study of public steel industry in India– growth, performance, pricing and management.
Public sector reforms and privatization strategies.

Suggested Readings:

1. Institute of Public Enterprises : Pricing and Investment in Public enterprises.
5. Govt. of India : Annual Reports on the Working of Industrial and Commercial Undertakings of The Central Govt.
EOL412: DEMOGRAPHY

Time: 3 Hrs.

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

SECTION B
Demography and related concepts: macro–micro dynamics of population.

Social structure its components and influence on demographic factors; migration, meaning, causes and consequences for economic development.

SECTION C

Mortality: Death rate, Infant Mortality Rate, Factors for decline in mortality in recent past, Methods of population projection. Pattern of mortality for different OECD countries, and South East Asia.

SECTION D
Suggested Readings:

6. Dutt Ruddra and Sundram K.P.M., Indian Economy
EOL413: RURAL ECONOMICS

Time: 3 Hrs. 
Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks: 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

Concept: Nature and Scope, Agriculture industry interaction: theories and empirical evidences.
Land: Utilisation, Land reform, supply and pricing of inputs.

SECTION B

Rural Labour and employment: Disguised unemployment, Extent, causes and estimates of rural poverty, Interstate labour migration: factors and implications.
Capital formation in rural sector: Savings and assets formation, credit–institutional and non–institutional special role of NABARD and RRBS.
Production: Agricultural growth in India; Production function, Farm budgeting, Technical changes: Green revolution.

SECTION C

Rural marketing: Traditional marketing, regulated markets, co–operative marketing and contract farming.
Agricultural prices: Price behaviour; cobweb cycle; public distribution system; terms of trade, agriculture price policy.

SECTION D

Rural Industrialisation: Concept and scope, Government policy, KVIC, Mini–industrial estates. Industrial cooperatives, TRYSEM.
Economic and social infrastructure: Transport & Communications, power, education, drinking water, health, Sanitation and rural housing, social forestry and environment. Strategies of rural development in plans. Poverty alleviation programmes.

Suggested Readings:
1. Aziz, Sartaj : Rural Development Learning from China.
EOL414: HISTORY OF ECONOMIC THOUGHT

Time: 3 Hrs.                                      Credits: 4–0–0
Total Marks: 100                                   Mid Semester Marks: 20
End Semester Marks 80                              Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

SECTION B

SECTION C
K.Marx– Theory of value; Theory of Capitalist Competition. The Historical School– Main Ideas; Subjectivism and Marginalism: Gossan and Jevaons; The Austrian school: Manger and Bohm–Bowerk; K. Wicksell and the Swedish School.

SECTION D
EOL418 : ECONOMICS OF INFRASTRUCTURE

Time: 3 Hrs.  
Credits: 4–0–0  
Total Marks: 100  
Mid Semester Marks: 20  
End Semester Marks 80

Mid Semester Examination: 20% weightage  
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specifyed in the syllabus) are to be set, two in each of the four 
Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are 
required to attempt five questions, selecting at least one question from each Section. The fifth 
question may be attempted from any Section.

SECTION A
Infrastructure and economic development; Social and physical infrastructure; Public utilities: 
meaning and characteristics; The peak load problem, off–peak load problem, Dual principle 
controversy.

SECTION B
Transport: Structure of transport cost. Demand for transport models of freight and passenger 
demand. Cost function in transport sector. 
Telephone: Rate making. Principle of decreasing costs in telephone industry.

SECTION C
Energy: Energy and economic development; Energy efficiency and conservation; energy pricing. 
Pricing of electricity; economics of thermal, hydrel and nuclear power plants. National power Grid.

SECTION D
Infrastructure in India: Structure, problems and policies. 
Public–private partnership (PPP) and infrastructure. BOT approach.
Recommended Readings

EOL419 : ECONOMICS OF GENDER AND DEVELOPMENT

Time: 3 Hrs.  
Credits: 4–0–0  
Total Marks: 100  
Mid Semester Marks: 20  
End Semester Marks: 80

Mid Semester Examination: 20% weightage  
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Importance and concepts of women studies, Demography of female population: Age structure, mortality rates, and sex ratio – Causes of declining sex ratios and fertility rates in LDCs particularly India – Theories and measurement of fertility and its control; Women and their access to nutrition, health, education, and social and community resources.

SECTION B
Factors affecting decision making by women: property rights, access to and control over economic resources, assets; Economic status of women and its effect on work–participation rate, income level, health, and education in developing countries and India.

SECTION C
Factors affecting female entry in labour market; Supply and demand for female labour in developed and developing countries, particularly India; Wage differentials in female activities; Determinants of wage differentials; gender, education, skill, productivity, efficiency, opportunity.

SECTION D
Social security of women: entitlements, ensuring economic independence and risk coverage, access to credit and insurance markets; Role of voluntary organizations self help groups in providing social security; Labour market biases and gender discrimination; Gender and development indices.

Recommended Readings
5. Desai, N. and M.K. Raj (Eds.) (1979), Women and Security in India, Research Centre for Women Studies, SNDT University, Bombay.

EOL420 : ECONOMICS OF SOCIAL SECTOR

Time: 3 Hrs.

Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks: 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Education as an instrument for economic growth; Human capital – components of human capital; Demand for education – private demand and social demand, Determinants of demand; Cost of Education – Expenditure on education, private costs and social costs and wastage and stagnation; Benefits of education – Direct and indirect benefits, private and social benefits.

SECTION B
Educational financing – Resource mobilization and utilization, pricing and subsidies and effects of educational financing on income distribution; Education and labour market – Effects of education, ability and family background on earnings, poverty and income distribution, education and employment.

SECTION C
Educational planning and economic growth – Cost–benefit analysis, production function models, growth accounting equations of Schultz and Denison, Economics of educational planning in developing countries with special emphasis on India.
Health dimensions of development; Determinants of health – poverty, malnutrition and environmental issues; Economic dimensions of health care – demand and supply of health care.

SECTION D
Financing of health care and resource constraints; The concept of human life value; Theory and empirical studies of production of health care; Inequalities in health – class and gender perspectives; Institutional issues in health care delivery. Manpower requirements approach, programming and input–output models.
Recommended Readings


EOL421 : FINANCIAL INSTITUTIONS AND MARKETS

Time: 3 Hrs. Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

SECTION B
Non–banking financial intermediaries: Definition and types of NBFIs. Mutual Funds: Growth of mutual funds in India, Types of mutual funds schemes, SEBI guidelines relating to mutual funds.

SECTION C
Insurance: Origin and development of insurance. LIC, GIC; Role and functions of Insurance Regulatory and Development Authority (IRDA).

SECTION D
Role and structure of money and capital markets: Call money market, commercial bill market, discount market – Government Securities Market, Primary and Secondary Market for Securities, SEBI – its impact on working of capital market in India.

Recommended Readings
EOL415: MICROECONOMICS-II

Time: 3 Hrs.  Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks: 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

SECTION B

SECTION C

SECTION D

Suggested Readings
5. Layard & Walters : Microeconomics Theory.
M.SC. (HONS. SCHOOL) ECONOMICS (SEMESTER–II)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL416: MACROECONOMICS-II

Time: 3 Hrs. Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION- A
Trade cycles: Samuelson, Hicks and Kaldor models.

SECTION B
Economic growth: Harrod and Domar conditions for equilibrium growth.
Neo–classical growth model (with or without technical progress) savings, Consumption and factors shares in neo–classical model. The golden rule of accumulation.

SECTION- C
Inflation – causes, consequences and cures.
Inflation–unemployment trade–off. The natural rate hypothesis.

SECTION- D
Macro–economics policy; meaning and objectives. Targets and Instruments – fixed and flexible Targets approaches.
Suggested Readings:

8. Rogendron, J.S.: Economic Development Ch.II.
11. Leveoice, R.: Macro Economics: The Static and dynamic Analysis of a Monetary Economy.
15. Thirlwall, A.P.: Growth and Development.
EOL417: STATISTICAL TECHNIQUES

Time: 3 Hrs.  Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Correlation and Regression: Meaning, assumptions and limitations of simple correlation and regression–analysis ; pearson’s product moment and spearman’s rank Correlation coefficients, and their properties; partial and multiple correlation. Simple regression – basic idea about least – squares principle, lines of regression and properties of regression co–efficients.

SECTION B
Multiple linear regression equation and co–efficient of multiple determination (application only). Method of estimation of second degree parabolic, exponential and modified exponential curves; Method of computing average annual rate of growth.

SECTION C
Elements of probability: Deterministic and non–deterministic experiments, various types of events.Classical and empirical definitions, laws of addition and multiplication of probability, conditional probability and the concept of independence of events, elementary concept of a random variable, probability mass and density functions.
Expectations, moments and moments generating function of a random variable.
Properties and applications of binomial, possion and normal distributions.

SECTION D
Sampling: Concepts uses in sampling, difference between random and non–random sampling, simple random sampling, stratified random sampling and p.p.s. sampling. Concept of a statistic and its sampling distribution.
Elementary tests based upon the distribution of Z, t, and F statistics.

Suggested Readings:
501: ECONOMICS OF DEVELOPMENT

Time: 3 Hrs.  Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Economic development – meaning, development and underdevelopment, development gap, measuring development, indices of development and quality of life, international comparisons of development.
Sources of economics growth, economic development and technological change. Redistribution with growth, measurement of inequality.

SECTION B
Theories and models of economics development– Rostow’s stage theory. Schumpeter, Harrod–Domar, Solow, Kaldor, Joan Robinson.

SECTION C

SECTION D
Capital formation: Two gap theory, domestic and external sources, foreign investment, foreign aid, trade vs. aid, inflation and economic growth. Role of human capital in economic development.
Trade and development, dependency theory, theory of unequal exchange, trade policy – import substitution vs. export promotion.

Suggested Readings
5. Ghatak, S. : An Introduction to Development Economics.
10. Dension, E.P. : Why Growth Rates Differ?
EOL502: ECONOMETRICS

Time: 3 Hrs. Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Nature, meaning and econometrics, Simple and general linear regression model: assumptions, estimation (OLS methods); Gauss–Markov theorem; concepts and analysis of variance approach and its application in regression analysis.

SECTION B

Problems in regression analysis: Nature, test, consequences and remedial steps of problems of heteroscedasicity, multicollinearity and auto–correlation; Problem of specification bias.

SECTION C
Dummy variables and their uses; Regression with dummy dependent variables; The LPM, Logit, Probit and Tobit models – Applications.

SECTION D
Simultaneous equations models: The simultaneous equation bias and inconsistency of OLS estimators; The identification problem; Rules of identification– order and rank conditions; Methods of estimating simultaneous equations system ; Recursive methods ; Indirect Least Squares (ILS), 2 SLS, 3 SLS and ML methods.

Suggested Readings
5. Madala, G.S : Econometrics
EOL504: THEORY OF STATISTICS

Time: 3 Hrs.

Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Axiomatic definition of probability, Properties of probability function, laws of addition and multiplication of probability, conditional probability, independence of events, Baye’s theorem.

SECTION B
Chebychev’s inequality, moments generating function of a random variable and its properties. Theoretical probability distribution; derivation of the properties of exponential, gamma, beta and log normal distribution.

SECTION C
Properties of good estimaters; methods of estimation with emphasis on maximum likelihood method.
Sampling distributions; Derivation of the properties of $z$, $\chi^2$, $t$ and $F$– distributions and their applications.

SECTION D
Basic concepts regarding testing of hypotheis: tests of hypotheses based upon $z$, $t$, $F$ and $\chi^2$ distributions: Analysis of variance with one–way and two–way classifications and their applications.

Suggested Readings

1. Fisz, Marek : Mathematical Statistics.
5. Yalun Ghou : Statistical analysis.
EOL505: OPERATIONS RESEARCH

Time: 3 Hrs.

Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Operations Research: Definition, scope and limitations; Transportation Models.

SECTION B

SECTION C
Game Theory: Competitive games, pure strategy by dominance, mixed strategy (2x2, 2xn, mx2).
Two persons zero sum game, ‘n’ persons zero sum game.
Project scheduling by PERT and CPM.

SECTION D
Queuing models: characteristics, single channel queuing models: (M/M/I) : (FCFS/ / ), (M/M/1):(FCFS/N/ ), (M/M/1): (FCFS/n/N) Multichannel queuing model: (M/M/C), (FCFS/ / ).
Inventory models with deterministic demand.

Suggested Readings
EOL506: INTERNATIONAL TRADE AND INVESTMENT

Time: 3 Hrs.  
Credits: 4-0-0  
Total Marks: 100  
Mid Semester Marks: 20  
End Semester Marks: 80

Mid Semester Examination: 20% weightage  
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Linder’s trade intensity thesis and its empirical testing, Product–cycle theory. Imperfect markets and Technology in international trade. Strategic Trade policy.

SECTION B
Terms of trade and economic growth; Terms of trade and offer curve.  
Rationale for protection: Infant industry argument; concept of effective protection; Political economy of Non–Trade Barriers (NTB).

SECTION C
Regionalism versus Multilateralism; import substitution and industrialisation.  
Foreign Investment: Portfolio and direct foreign investment; determination of direct foreign investment; benefits and cost issues in foreign direct investment; multinational corporations.

SECTION D
Exports and economic growth; Export instability; Trade liberalisation – meaning and its effects, WTO: TRIMS, TRIPS and Domestic measures.

Suggested Readings
5. K.Kojema : Direct Foreign Investment .  
EOL507: COMPUTER APPLICATIONS FOR ECONOMISTS-II

Time: 3 Hrs. Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
Practical: 20
End Semester Marks 60

Mid Semester Examination: 20% weightage
Practical: 20% weightage
End Semester Examination: 60% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Introduction: What are numerical methods? Numerical methods versus numerical analysis, software and hardware, Mathematical subroutine Libraries, Functions and subroutines, arrays as parameters in subroutines Algorithm Development.
Errors: Round off, Truncation, cancellation.

SECTION B
Linear Algebraic Equation: Gaussian elimination, LU factorisation, Iterative methods, Gauses–seidel methods, Successive overrelaxation, Gradient methods, Methods of steeper descent, comparison of direct and iterative methods.

SECTION C

SECTION D
Curve fitting: Methods of least squares, curve fitting, fitting of straight line, fitting of parabola of second degree, fitting of exponential curves, most plausible solution of system of linear equations.

Suggested Readings:
M.SC. (HONS. SCHOOL) ECONOMICS (SEMESTER–III)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL508: ENVIRONMENTAL ECONOMICS

Time: 3 Hrs. Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Environment : Basic concepts, Environment and economics, Distinction between Environmental economics and Ecological Economics. Externalities, common property resources, public goods. Environmental externalities – Piguvian taxes and subsidies, marketable pollution permits, Coase theorem, monitoring and enforcement of environmental regulation.

SECTION B
Environmental and development trade–off, concept of sustainable development, sustainability–neo–classical and ecological views. Integrated environmental and economic accounting and measurement of environmentally corrected GDP.

SECTION C

SECTION D

Suggested Readings
EOL509: ECONOMETRICS AND FORECASTING TECHNIQUES

Time: 3 Hrs.  
Credits: 4–0–0  
Total Marks: 100  
Mid Semester Marks: 20  
End Semester Marks: 80

Mid Semester Examination: 20% weightage  
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

SECTION B
Instrumental variables; Almon approach to distributed lag model: Error correlation mechanism, Granger’s causality test and applications.  
Generalized least-square method: Estimation; properties of GLS estimators; pooling of cross-sectional and time series data.

SECTION C
Time Series Analysis: Stationary time series and their properties; Time series forecasting methods: based on moving averages and exponential smoothing and applications.  
Unit root testing, co-integration–quérious regression, tests of stationarity; Random walk model, Forecasting with ARIMA modelling; Box–Jenkins methodology.

SECTION D
Vector autoregression: Problems with VAR modeling applications only.  

Suggested Readings

EOL510 : ECONOMICS OF PLANNING

Time: 3 Hrs. 
Credits: 4-0-0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Planning: Framework and concept; rationale and types of planning; features of planned economies; planning in third world countries in the context of Globalisation and Liberalisation. Time horizon in planning: Long term, medium term, short term and rolling plan, choice element in planning, techniques of planning; investment criteria: rationale, types and application in project planning.

SECTION B
Choice of technique: labour intensive vs. capital intensive controversy; choice of appropriate technology for agriculture and industrial sector in the context of third world countries. Capital output ratio: types and rationale; intermediate technology case for and against; international transfer of technology – channels and salient features in India.

SECTION C
Project evaluation: meaning, rationale; social cost benefit analysis – meaning and technique; shadow prices; social rate of discount; Little Mirrless and UNDIO approaches – a comparison. Plan models: Theoretical foundations and consistency in plan models, static and dynamic input–output analysis.

SECTION D
Indian plan models: Harrod–Domar, Mahalanobis, Frisch and Sandee, Manne and Rudra, CELP model and its application. Indian Planning: Strategy, objectives, priorities, financing and investment pattern, implementation and evaluation in the context of targets and achievements.

Recommended Readings:
4. Rudra, Ashok :Indian plan models.
5. Todaro, P. : Development Planning : Models & Methods
EOL511 : INDIAN ECONOMICS DEVELOPMENT

Time: 3 Hrs.
Credits: 4–0–0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks 80

Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:
Eight questions of equal marks (specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A
Agriculture sector: Production and productivity trends; regional variation in production; technological change and distribution of gains, agriculture price policy, New Economic Reforms and agriculture : Agriculture and WTO, Public expenditure and agricultural growth.

SECTION B

SECTION C

SECTION D
Foreign sector: New EXIM Policy: trends in foreign trade of India. Foreign collaborations and MNC’s, TRIPS, TRIMS and GATS.

RECOMMENDED READINGS:
6. Dholkia, B.H., Sources of Economic Growth.

Economic and Political Weekly.
Indian Economic Journal
Indian Journal of Agricultural Economics.
Economics Survey, Govt. of India.
Economic Times and Financial Express