

# FACULTY OF ECONOMICS AND BUSINESS

## SYLLABUS

FOR

### **B. SC. (HONS. SCHOOL) ECONOMICS** (Under Credit Based Continuous Evaluation Grading System)

**(SEMESTER: I-VI)**

**Examinations: 2013-14**



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## **GURU NANAK DEV UNIVERSITY**

### **AMRITSAR**

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- (ii) **Subject to change in the syllabi at any time.**  
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B.Sc. (Honours School) Economics (Semester System)  
(Under Credit Based Continuous Evaluation Grading System)

**SCHEME**

**Semester-I**

		<b>Credits</b>
* ENL191	Communicative Skills in English-I	2
EOL102	Microeconomics-I	5
EOL103	Macroeconomics-I	5
EOL104	Mathematics for Economists-I	5
EOL105	Statistics-I	5
EOL106	Computer Fundamentals	5

**Semester-II**

		<b>Credits</b>
* ENL192	Communicative Skills in English-II	2
EOL108	Microeconomics-II	5
EOL109	Macroeconomics-II	5
EOL110	Mathematics for Economists-II	5
EOL111	Statistics-II	5
EOL112	Operating Systems	5

**Semester-III**

		<b>Credits</b>
* PBA-103/HSL101	Punjabi-I/Pb. Hist. & Culture-I	2
EOL202	Microeconomics-III	5
EOL203	Macroeconomics-III	5
EOL204	Mathematics for Economists-III	5
EOL205	Agricultural Economics	5
EOL206	Introduction to GUI Packages	5
** ESL220	Environmental Studies (Cumpulsory)	3

\* The Syllabi of Papers are distributed (Minor-I, Minor-II and Major at central level)

\*\* Credits will not be included.

B.Sc. (Honours School) Economics (Semester System)  
(Under Credit Based Continuous Evaluation Grading System)

**Semester–IV**

		<b>Credits</b>
PBA-104/HSL102	Punjabi-II/Pb. Hist. & Culture-II	2
EOL209	Statistics-III	5
EOL210	Money and Banking	5
EOL211	Industrial Economics	5
EOL212	Labour Economics	5
EOL213	Relational Data Base & Management Systems	5

**Semester–V**

		<b>Credits</b>
EOL301	Public Finance	5
EOL302	Indian Economy	5
EOL303	Economic History of India	5
EOL304	International Economics	5
EOL305	Econometrics	5
EOL306	SAD and Structure Programme	5

**Semester–VI**

		<b>Credits</b>
EOL307	Regional Economics with Special Reference to Punjab Economy	5
EOL308	Entrepreneurial Development	5
EOL309	Development Economics	5
EOL310	Comparative Economic Systems	5
EOL311	Accounting and Financial Management	5
EOL312	Computer Networks and Internet Applications	5

**ENL191**

**Communicative Skills in English-I**

**Credits : 2-0-0**

**Objectives:** To Introduce students in a graded manner to the communication skills of Reading and Writing in English. At the end of semester I, the students should be able to demonstrate adequate competence in comprehending the prescribed text and performing the given writing tasks.

**Reading:**

**a) Developing habits of independent and fast reading.**

Students will be required to read a prescribed prose anthology titled Selections from Modern English Prose (Ed. Haladhar Panda published by University Press). The essays in the anthology will be read by students at home with the help of glossary given in the book. Progressing from one lesson to another, they should learn to read fast. Students are supposed to keep a record of their reading in the form of notes, difficulties, summaries, outlines and reading time for each essay. Class teacher may use this record for award of internal assessment (if any).

**b) Developing Comprehension Skills**

Teacher will provide guided comprehension of the prescribed texts in the class and help students in answering the questions given at the end of each lesson. Teacher can construct more questions of factual and inferential nature to enhance the comprehension skills of the students. The teacher shall also guide students to do the grammar exercises given at the end of each lesson.

**Writing:**

**a) Developing skills in personal writing**

Students will be required to learn short personal write-ups involving skills of description and narration. The types of composition task may include personal letter writing, telegram writing, notice writing, diary writing etc. Teacher shall instruct the students about the appropriate format and usual conventions followed in such writings. The teacher may also prescribe composition/writing book if so required.

**b) Developing writing skills based on guided composition**

The students will be required to write a longish composition on a question from the essays on Selections from Modern English Prose. The composition will require presentation of ideas beyond the prescribed essays. Sample composition topics are given at the end of each lesson.

**EOL102**

**Microeconomics – I**

**Credits : 5-0-0**

**Minor-I**

Basic problems of an economy; economic theory formulation; economics as a social science; tools of Theoretical analysis. Demand and Supply functions – an introductory view of price formation.

Price, income and cross elasticities of demand; Elasticity of substitution or elasticity of supply.

**Minor-II**

Theories of demand; The classical utility approach, indifference curves approach, the revealed preference approach consumer's surplus.

**Theory of production:** Production function, isoquants, returns to facts and returns to scale and their compatibility.

**Major (including Minor-I and Minor-II)**

Elasticity of substitution; economies of scale; Cobb–Douglass production function; production function of a multi product firm.

Theory of Costs; Short and long period costs, traditional and modern theories of costs, derivation of cost function from production function.

**Revenue analysis:** Revenue curves and their relationship.

**Suggested Readings:**

1. Koutsoyiannis, A. : Modern Microeconomics.
2. Lipsey, G. : An Introduction to Positive Economics.
3. Stonier & Haque : A text book of Economic Theory.

**EOL103****Macroeconomics – I**

**Credits : 5-0-0**

**Minor-I**

**Basic Concepts:** Micro Vs. Macroeconomics

**Variables:** Real and nominal; Induced and autonomous; Lagged and unlagged; ex-ante and ex-post; Model and Equations; Equality & identity; stock and flow; Static, Comparative Static and dynamic analysis; Equilibrium and disequilibrium.

**National Income:** Definition: Productive Vs. Non-productive intermediate and final output; concepts of national income.

**Minor-II**

**Measurement of National Income:** Income, Output and Expenditure, Circular flow of income in two, three and four sectors economics.

**National Accounts:** Meaning, objectives and importance. Different methods of preparing national income accounts.

National income accounts in a four sector economy (double entry).

GNP and Welfare; Inter temporal and international comparisons of National income; National income estimation in India.

**Major (including Minor-I and Minor-II)**

Determination of Income and Employment.

**Classical View:** Labour Market; Product Market and Money Market.

Say's Law of Markets (Barter and a monetized economy).

Integrated classical model. Classical theory of income and output determination.

**Suggested Readings:**

1. Backerman, W. An Introduction to National Income Analysis, E.L.B.S., London, 1976. (Chapters 1 – 5).
2. Studenski, P.A. The Income of Nations, Part – 2, Theory and Methodology: Ch. 11, 16, Sections.
3. Rao, V.K.R.V. India's National Income, 1950 – 80, An Analysis of Economic Growth and change; Sage Publications, New Delhi, 1983, Chapters I and II.
4. C.S.O. National Accounts Statistics, Sources and Methods, April 1980.
5. Shapiro, E. Macroeconomic Analysis, Harcourt, New York (Second Edition) (Chapters, 1-6, 17).
6. Peterson, W.C. Income, Employment and Economic Growth Norton, New York, 1978.
7. Ackley, G. Macroeconomic Theory, Macmillan, New York, 1969 (Chapters 1, 2, 6)

**EOL104****Mathematics for Economists – I****Credits : 5-0-0****Minor-I**

Elements of Algebra; solutions of linear, quadratic simultaneous equations, partial fractions, logarithms A.P., G.P., H.P.

Permutations and combinations. Binomial theorem, positive integral index, any index.

**Minor-II**

Analytical Geometry: Coordinate of point, area of a triangle: locus, its equation; the straight line equation of a straight line, intersection of two straight lines.

Trigonometry: Trigonometric ratios, T ratios of  $30^\circ$ ,  $45^\circ$ ,  $60^\circ$  and  $90^\circ$  T ratios of allied angles, multiple angles, submultiple angles, addition and subtraction formulae.

**Major (including Minor-I and Minor-II)**

Functions, limits and continuity Differentiation, general theorems on differentiation functions of functions rule parametric equations, Logarithmic and exponential functions, successive differentiations.

Economic application of simple differentiation.

**Suggested Readings:**

Monga, G.S. : Mathematics and Statistics for Economists.

Allen, R.G.D. : Mathematical Analysis for Economics.

Yamane, Taro : Mathematics for Economists.

**EOL105**

**Statistics – I**

**Credits : 5-0-0**

**Minor-I**

**Definition:** Scope and limitation of statistics. Tabulation and classification of data: discrete and continuous one – way and two – way frequency distribution.

Diagrammatic and graphic presentation of data.

Measures of Central Tendency; definition, measure, properties merits and demerits.

**Minor-II**

**Dispersion:** Meaning, importance, absolute and relative measures of dispersion.

**Correlation:** meaning, measures, Karl Pearson's product moment and spearman's rank correlation.

**Regression:** Meaning, simple regression, least squares principle properties of correlation and regression, coefficients.

**Major (including Minor-I and Minor-II)**

**Index Numbers:** Meaning, scope and limitations, types, formulae, tests for the consistency of index numbers.

**Indian Statistical System:** A brief overview interpolation and Extraction, meaning, importance uses, assumption methods of interpolation: graphic and algebraic merits and demerits.

Parabolic curve fitting, finite differences, the binomial expansion and the divided differences.

**Suggested Readings:**

Gupta, S.C. : Fundamentals of Statistics, Himalya Publishing House, 1981, Delhi.

Gupta, S.P. : Statistical Methods, Sultan Chand and Sons, 1978, Delhi.

Gupta C.B. : An Introduction to Statistical Methods, Vikas Publishing House, Delhi, 1957.



**EOL106 Computer Fundamentals**

**Credits : 4-0-1**

**Minor-I**

**Elements of a Computer System.**

What is a Computer?

Evolution of computers, their classification and limitations.

Uses of Computers in modern society (e.g. Weather Forecasting, Census, Oil Exploration, Speech Recognition, Banking, Publishing, Accounting, Research etc.)

Characteristics of Desktop.

Characteristics of Portables / Laptops.

Introduction to Hardware, Software: System S/W, Operating System, Translators, Utilities and Service Programme, Data base, DBMS.

Application Software (user and standard packages.)

Introduction to Programming Languages (C, Pascal, Fortran).

**Input Output Devices.**

**Input Devices and Functions.**

Keyboard and teletypewriter terminals.

Joystick

Mouse

Light Pen

Magnetic Tapes and Cassettes.

Magnetic Disks.

Floppy and Winchester Disks

Optical Mark Reader (OMR)

Optical Character Reader (OCR)

Magnetic Ink Character Reader (MICR)

Punched Cards

**Minor-II**

**Output Devices and Functions**

Visual Display Units (Monitor)

Plotters

Printers

CTD

### **H/W Organisation of Desktop Computer.**

Introduction to Hardware components.

CPU (Control Unit, ALU).

#### **3.4 Memory**

- a) RAM – Dynamic RAM, Static RAM.
- b) ROM – PROM, EPROM, EEPROM.
- c) Cache, Virtual, Extended and Expanded Memories.

#### **3.5 Secondary Memory (Storage Devices) with Details of FD, Cluster, FAT, Tracks.**

Floppy Disk  
Hard Disk  
DAT  
Video or Optical Disk (CD ROM)  
CTD

#### **Major (including Minor-I and Minor-II)**

#### **Standardization of PC – Hardware Devices.**

4.1 Disk Drives (1.2 MB, 1.44 MB, CTD, DAT, CD – ROM drives).

4.2 Power Supply and Distribution.

4.3 Monitors (VDU) – Pixels, Monitor Sizes, Mono, color, VGA, SVGA.

4.4 Printers – Impact and Non – Impact (Character, Line, Page).

4.5 Modems and its types.

5. Data Representation.
6. Introduction to Number Systems and Character Codes.
7. Flow Charts.
8. Introduction and Development of programs in QBASIC (Using File Handling).

#### **Recommended Texts:**

Introduction to Computer Science by Francis Scheid.

PC Complete by Sybex

Computer Fundamental by S. Jain

Introduction to Computer: Fundamentals of Computer Science by N. Subramaniam.

Understanding Computers by Dinesh Kumar.

**ENL-192**

**Communicative Skills in English-II**

**Credits : 2-0-0**

**Objectives:** To Introduce students in a graded manner to the communication skills of Reading and Writing in English. At the end of semester II, the students should be able to demonstrate adequate competence in comprehending an unseen passage and performing the prescribed communication/writing tasks.

**Prescribed Reading:** Vandana R.Singh. The Written Word, Oxford University Press, New Delhi (Selected Chapters)

**Reading:**

**a) Developing Comprehension Skills**

Students will be required to read sample comprehension passage as given in Chapter Critical Reading and Comprehension of the prescribed book. Teacher will help students in handling text and answering questions given at the end of each passage. Teacher can bring in more texts and construct questions of factual and inferential nature to enhance the comprehension skills of the students.

**Developing habits of additional reading**

The students will be required to show evidence of additional independent reading. They will maintain a scrapbook consisting of such readings as clippings from newspapers and magazines, short articles, stories etc. The minimum quantum of such additional reading will be decided by the class teacher, who will also test students individually on their additional reading (and appropriately award internal assessment, if required).

**Writing:**

**a) Developing vocabulary and using it in the right context**

Students will be required to pay special attention to build up their vocabulary. They should master the contents of the chapter on Vocabulary in the prescribed book. Teacher will help the students learn the correct and appropriate use of the given set of words/phrases/expressions.

**b) Developing skills in formal**

Students will be required to do write-ups involving skills of making formal complaints, requests, orders etc., reporting, note taking, summarising and transcoding. The types of composition task may include business and public interest letters, new/feature writing, speeches, minutes, instructions, summary reports etc. Teacher shall instruct the students about the appropriate format and usual conventions followed in such writings. The following chapters in the prescribed book may be consulted for exercise materials on these tasks:

Paragraph and essay writing

Report Writing

Letter Writing

Note Making and Summerising

Transcoding

**Books Recommended:**

1. A Course in Grammar and Composition by Geetha Nagaraj, Foundation Books, 2006.
2. Oxford Guide to Effective Writing and Speaking by Jhon Seely.

**EOL108**

**Microeconomics – II**

**Credits : 5-0-0**

**Minor-I**

Equilibrium of the firm and industry. Perfect competition: assumption, equilibrium of firm and industry, price determination supply curve of industry, dynamic changes and equilibrium of industry; workable competition.

**Monopoly:** Assumptions, equilibrium, monopoly power supply curve price discrimination, monopoly control and regulation. Monopolistic competition: assumptions, equilibrium, product differentiation, selling costs, excess capacity, difference between monopolistic competition and imperfect competition.

**Minor-II**

Price determination under monoposony and bilateral monopoly oligopoly; collusive and non-collusive models.

Critical evaluation of marginal analysis; average cost pricing; elementary treatment of limit pricing; Baumol's sales revenue maximization models.

**Major (including Minor-I and Minor-II)**

Marris and Williamson Models.

Behavioural theory of the firm; game theory; linear programming model of the firm – elementary view. Biological theories of the firm.

**Suggested Readings:**

1. Kaoutsoyiannis, A. : Modern Microeconomics.
2. Curven, P.J. : The Theory of the firm.
3. Cohen and Cyert : The Theory of the firm.

**EOL109****Macroeconomics – II****Credits : 5-0-0****Minor-I**

**Basic Concepts:** Phases of business cycles. Full employment and various types of unemployment. Aggregate demand and aggregate supply functions. Effective demand.

**Keynesian Economics:** Keynes consumption function; saving and investment functions. Determination of income, employment and output in Keynesian frame work in a two sector, three sector and four sector economy. Paradox of thrift; automatic or built in stabilizers crowding – out effect (Basic idea).

**Minor-II**

**Multiplier:** Static and Dynamic analysis. Balanced – budget multiplier. Foreign trade multiplier.

**Theories of Consumption and Investment:** Absolute Income Hypothesis; Relative Income Hypothesis; Permanent Income Hypothesis and Life Cycle Hypothesis. Classical theory of investment; Keynesian theory of investment; Accelerator theory of investment; Neo-Keynesian theory of investment.

**Major (including Minor-I and Minor-II)**

**Money:** Concept and functions of money; Supply of money; Theories of Demand for Money: Classical, Cambridge, keynes and Friedman. Theories of Rate of Interest: Classical, Loanable and liquidity preference.

Keynes Vs. Classicals with special reference to wage – price flexibility and full employment. Real Balance Effect; Keynes and under-developed economies.

**Suggested Readings:**

1. Shapiro, E. : Macroeconomic Analysis.
2. Peterson, W.C. : Income, Employment and Economic Growth
3. McConnell, O. & Brue, S.L. : Economics (12th edition).
4. Edgmond, M.R. : Macroeconomic Theory and Policy.

**EOL110 Mathematics for Economists – II**

**Credits : 5-0-0**

**Minor-I**

**Differentiation:** Trigonometric function, implicit functions, partial derivatives, Euler's theorem, total derivatives, Taylor's and Maclaurin's series, Maxima and Minima, economic applications.

**Minor-II**

Integrations; Methods of integration, definite integrals, integration by parts, integration of rational fractions, multiple integrals and economic applications.

**Linear Algebra:** Matrices, types, products of matrices, inverse of matrix, rank of a matrix and determinants, simultaneous linear equations (Cramer's rule).

**Major (including Minor-I and Minor-II)**

**Set theory:** Union, intersection difference and symmetric differences, Elementary treatment of groups, rings and fields.

**Circle:** Different forms of the equations of a circle, intersection of a line and a circle, parabola, rectangular hyperbola.

**Suggested Readings:**

- Yamane, Taro : Mathematics for Economists.  
Allen, R.G.D. : Mathematical Analysis for Economists.  
Monga, G.S. : Mathematics and Statistics for Economists.  
Chaing, A. : Fundamental Methods of Mathematical Economics.

**EOL111**

**Statistics – II**

**Credits : 5-0-0**

**Minor-I**

**Correlation and Regression Analysis:** Partial and multiple correlation coefficients: Derivations, application and properties. Fitting of multiple regression by least squares technique stress on numerical examples.

**Growth Curves:** Properties, methods of estimation and applications of linear parabolic, geometric. Exponential, modified exponential, Gompertz and logistic growth curves.

**Minor-II**

**Time Series Analysis:** Meaning, Components: Models, economic significance of time series, methods of estimating trend and seasonal variations concepts of stationary and de-seasonalised time series.

**Major (including Minor-I and Minor-II)**

**Probability:** Definition (classical and empirical only), laws of probability, conditional probability and independence of events (applications only) concept of random variables, probability density and mass function, expectation, moments, moment generating function and characteristic function, derivation of moment generating function for binomial, poisson and normal distributions, numerical examples based upon these distributions, and their fitting.

**Suggested Readings:**

1. Spiegal M.R. : Theory and Problems of Statistics.
2. Gupta, S.C. and V.K. Kapoor : Fundamental of Applied Statistics.
3. Mood, A.M. and F.A. Graybill : Introduction to the Theory of Statistics.
4. Karmel, P.H. and Polar K.M. : Applied Statistics and Economists.
5. Croxton E.E., Cowden, D.J. : Applied General Statistics.





**External:** chkdsk, scandisk, mem, attrib, xcopy, diskcopy, diskcomp, backup, restore.

Features and Benefits of Unix.

Unix System (multi-programming, time sharing, multi-tasking).

Components of Unix (Kernel, Shell).

Unix file system (data blocks, ilist, super block, boot block.)

**Major (including Minor-I and Minor-II)**

Types of files (Ordinary, directory and Special Files).

Types of users in Unix –levels of users (0 – 2).

Login and Logout from Unix Session.

Types of Shells (Bourne, c – shell, r – shell).

Shell as a Command Interpreter – Functions.

Simple Directory and File Commands

cat, ls, ln, chmod, mail, who, whoami, cal, pwd, date, ps, mkdir, ed, rmdir, rm, tput, clear.

Piping, filters, batch processing, shell programming (echo, read, case constructs).

Editors (vi): Commands for opening, inserting, modifying, deleting and saving a file.

**PBL103: ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ - I**

**ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਪਾਠ-ਪੁਸਤਕਾਂ**

**Credit: 2-0-0**

(I) 1. ਆਤਮ ਅਨਾਤਮ (ਸੰਪ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਅਤੇ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ) ਵਿੱਚੋਂ ਹੇਠ ਲਿਖੇ ਕਹਾਣੀਕਾਰ

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|-------------------------|---|------------------------|
| (ੳ) ਗੁਰਮੁਖ ਸਿੰਘ ਮੁਸਾਫਿਰ | : | ਗਟਾਰ                   |
| (ਅ) ਸੁਜਾਨ ਸਿੰਘ          | : | ਪਠਾਣ ਦੀ ਧੀ             |
| (ੲ) ਕਰਤਾਰ ਸਿੰਘ ਦੁਗਲ     | : | ਉੱਚੀ ਅੱਡੀ ਵਾਲੀ ਗੁਰਗਾਬੀ |
- (ਕਹਾਣੀ-ਸਾਰ, ਵਿਸ਼ਾ-ਵਸਤੂ, ਕਹਾਣੀ-ਕਲਾ, ਕਹਾਣੀਕਾਰ)

2. ਗੁਰਮੁਖੀ ਔਰਥੋਗਰਾਫੀ ਦੀ ਜੁਗਤ, (ਪੈਂਤੀ; ਮੁਹਾਰਨੀ; ਬਿੰਦੀ, ਟਿੱਪੀ ਤੇ ਅੱਧਕ); ਵਿਰਾਮ ਚਿੰਨ੍ਹ, ਸ਼ਬਦ ਜੋੜ (ਸੁਧ-ਅਸੁਧ)

(II) 1. ਆਤਮ ਅਨਾਤਮ (ਸੰਪ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਅਤੇ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ) ਵਿੱਚੋਂ ਹੇਠ ਲਿਖੇ ਕਹਾਣੀਕਾਰ

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|----------------------|---|-------------------|
| (ੳ) ਸੰਤੋਖ ਸਿੰਘ ਧੀਰ   | : | ਸਾਂਝੀ ਕੰਧ         |
| (ਅ) ਕੁਲਵੰਤ ਸਿੰਘ ਵਿਰਕ | : | ਉਜਾੜ              |
| (ੲ) ਮਹਿੰਦਰ ਸਿੰਘ ਸਰਨਾ | : | ਜਥੇਦਾਰ ਮੁਕੰਦ ਸਿੰਘ |
- (ਕਹਾਣੀ-ਸਾਰ, ਵਿਸ਼ਾ-ਵਸਤੂ, ਕਹਾਣੀ-ਕਲਾ, ਕਹਾਣੀਕਾਰ)

2. ਲੇਖ ਰਚਨਾ (ਜੀਵਨੀ-ਪਰਕ, ਸਮਾਜਕ ਅਤੇ ਚਲੰਤ ਵਿਸ਼ਿਆਂ ਉੱਤੇ):  
10 ਲੇਖ ਲਿਖਵਾਉਣੇ (ਕਲਾਸ ਵਿਚ ਅਤੇ ਘਰ ਲਈ ਅਭਿਆਸ)

(III) 1. ਆਤਮ ਅਨਾਤਮ (ਸੰਪ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਅਤੇ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ) ਵਿੱਚੋਂ ਹੇਠ ਲਿਖੇ ਕਹਾਣੀਕਾਰ

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|-----------------------|---|-----------|
| (ੳ) ਪ੍ਰੇਮ ਪ੍ਰਕਾਸ਼     | : | ਮਾੜਾ ਬੰਦਾ |
| (ਅ) ਗੁਲਜ਼ਾਰ ਸਿੰਘ ਸੰਧੂ | : | ਕੁਲੱਛਣੇ   |
| (ੲ) ਮੋਹਨ ਭੰਡਾਰੀ       | : | ਘੋਟਣਾ     |
| (ਸ) ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ   | : | ਦਲਦਲ      |
- (ਕਹਾਣੀ-ਸਾਰ, ਵਿਸ਼ਾ-ਵਸਤੂ, ਕਹਾਣੀ-ਕਲਾ, ਕਹਾਣੀਕਾਰ)

2. ਪੈਰਾ ਪੜ੍ਹ ਕੇ ਪ੍ਰਸ਼ਨਾਂ ਦੇ ਉੱਤਰ ਦੇਣਾ  
(ਆਤਮ ਅਨਾਤਮ ਪੁਸਤਕ ਦੇ ਕਹਾਣੀ ਭਾਗ ਵਿੱਚੋਂ 15 ਪੈਰਿਆਂ ਦੇ ਅਭਿਆਸ ਕਰਵਾਉਣੇ)

**HISTORY & CULTURE OF THE PUNJAB (1450-1716)**  
**(Special paper in lieu of Punjabi Compulsory)**  
**HSL: 101**

**Credits: 2-0-0**

**Instructions for the Paper Setters/Examiners:**

**Examination Minor–I shall cover Theme No. 1-3, Minor–II shall cover Theme No. 4-6.  
The Major shall cover the entire syllabus.**

1. Land and the People
2. Bhakti Movement
3. Life and Teachings of Guru Nanak Dev.
4. Contribution of Guru Angad Dev, Guru Amar Das and Guru Ram Das.
5. Guru Arjun Dev.
6. Guru Hargobind
7. Martyrdom of Guru Tegh Bahadur
8. Guru Gobind Singh and the Khalsa
9. Banda Singh Bahadur: Conquests and Execution.

**Suggested Readings:**

1. Kirpal Singh (ed.): *History and Culture of the Punjab*, Part-II, Punjabi University, Patiala, 1990.
2. Fauja Singh (ed.): *History of Punjab*, Vol. III, Punjabi University, Patiala, 1987.
3. J.S. Grewal: *The Sikhs of the Punjab*, CUP, Cambridge, 1991.
4. Sukhwant Singh. *Agriculture Growth under Colonial Constraints: The Punjab 1849-1947*, Manpreet Publication, Delhi, 2000.
5. Khushwant Singh, *A History of the Sikhs*, Vol. I, OUP, New Delhi, 1990.

**EOL-202**

**Microeconomics – III**

**Credits : 5-0-0**

**Minor-I**

**Pricing of factors:** Marginal productivity theory of distribution; Euler's Theorem and its application to distribution; Modern theory of distribution; Macro – Theories of distribution (An Introductory Approach).

Determination of rent, wages, interest (classical view only) and profit.

**Minor-II**

Equilibrium and its stability: existence, uniqueness and stability of equilibrium; the Walrasian and Marshallian stability conditions; Cob – web theorem.

**Welfare Economics:** Concept and meaning. Value Judgements and inter personal comparisons; Pigovian concept of welfare. Criteria of social welfare; Pareto Optimality Criteria for consumption and production.

**Major (including Minor-I and Minor-II)**

Deviations from pareto optimality and externalities, compensation criteria; Bergson – Samuelson criteria. Theory of second best; Arrow possibility theorem, Pricing strategies – Average cost and Marginal Pricing and its implications.

**Suggested Readings:**

1. Koutsoyiannis, A. : Modern Microeconomics.
2. Henderson and Quandt : Microeconomics Theory–A Mathematical Approach.
3. Layard and Walter : Microeconomics Theory.
4. Bruce N. and L. Rooding : Welfare Economics.
5. Weintraub, E.R. : General Equilibrium Theory.

**EOL203****Macroeconomics – III****Credits : 5-0-0****Minor-I**

**Equilibrium in the product and money markets:** IS and LM functions, changes in IS and LM functions, General equilibrium – changes in general equilibrium, elasticity of IS and LM functions and monetary and fiscal policies ; Wage – price flexibility and general equilibrium.

**Minor-II**

Overall equilibrium in the basic static model (goods, labour and money markets).

**Trade Cycles:** Features, Keynes' view on trade cycle, Schumpeter, Kaldor Samuelsons Hicks models, control of trade cycle.

**Economic Growth:** Meaning and Measurement, Harrod and Domar and Neo – classical growth models- Solow & Meade, economic growth and technical progress.

**Major (including Minor-I and Minor-II)**

**Inflation:** Causes, consequences and cures, Inflation – unemployment trade off. Natural rate of unemployment.

**Macroeconomic Policy:** Monetary policy – instruments, objectives and effectiveness in recession and boom.

**Fiscal Policy:** Instruments and full employment; budget surplus; problems of stabilization policy.

**Suggested Readings:**

1. Ackley, G : Macroeconomics: Theory and Policy, Macmillan Publishing Company, New York.
2. Dorabusch & Fischer : Macroeconomics, McGraw Hill, New Delhi.
3. Heijdra, B.J. and F.V.Ploeg: Foundations of Modern Macroeconomics, Oxford University Press, Oxford.
4. Levacic, R. : Macroeconomics, MacMillan, London, 1976.
5. Shapiro, E. : Macroeconomic Analysis, Galgotia Publications, New Delhi, 1996.

**EOL204**

**Mathematics for Economists – III**

**Credits : 5-0-0**

**Minor-I**

**Linear Algebra:** Linear dependence and independence of vectors; Characteristics roots and vectors; Quadratic forms; Solution of simultaneous linear equations homogenous and Non-homogenous.

**Minor-II**

**Input – Output Analysis:** Assumptions; Transaction matrix; Technical coefficients, Hawkin – Simon Conditions, Metzler condition, open and close input-output systems; Dynamic input output analysis (an introduction).

**Differential and Difference Equations:** Linear difference and differential equations of first and second order each.

**Major (including Minor-I and Minor-II)**

**Linear Programming:** Formulation of linear programming problem. Graphical method, Simplex method, Two-phase simplex method, unbounded solution, infeasible solution, degeneracy and cycling problem. Duality theorem, Solution of primal and dual by simplex method. Dual simplex method, Assignment and Transportation problems.

**Suggested Readings:**

1. Yamane, Taro : Mathematics for Economists.
2. Chiang A. : Fundamental Methods of Mathematical Economics.
3. Chang Yan Chion : Introduction to Input – Output Economics.
4. Taha, H.A. : Operations Research: An Introduction. (2nd Edition).
5. Monga, G.S. : Mathematics for Management & Economics.

**EOL205**

**Agricultural Economics**

**Credits : 5-0-0**

**Minor-I**

**Economics of Agriculture:** Nature, scope and its importance in the economy. Role of agriculture in economic development. Reasons for backwardness of Indian agriculture. Transforming traditional agriculture.

**Farming Systems :** Family farming, co-operative farming, collective farming and state farming.

**Agricultural credit:** Need, role of co-operative and commercial banks.

**Minor-II**

**Institutional changes and agricultural development :** Land reforms - consolidation of holdings, abolition of intermediaries, ceiling on land holdings and tenurial reforms - need, nature and evaluation with special reference to India.

**New agricultural technology** – Its impact on production, income distribution and labour absorption. Negative consequences of new agricultural technology in the context of Punjab.

**Major (including Minor-I and Minor-II)**

**Crop diversification** – Need, progress and problems.

**Agricultural Marketing in India:** Structure, types, defects, marketing functions, marketing margins, marketed surplus and marketable surplus. Factors affecting marketed surplus.

**Agricultural Price Policy:** Need and objectives. Mobilisation of agricultural surpluses, Terms of trade between agriculture and industry, Agricultural taxation in India.

**Suggested Readings:**

1. Mellor, J.W. (1968)                      The Economics of Agricultural Development, Cornell University Press, New York.
2. Schultz, T.W. (1964)                      Transforming Traditional Agriculture, Lyall Book Depot, 1970.
3. Soni, R.N. (2003)                              Leading Issues in Agricultural Economics, Shoban Lal Nagin Chand & Co., Jalandhar.
4. Sadhu, A.N. and Amarjit Singh (1997)                      Fundamentals of Agricultural Economics, Himalaya Publishing House.
5. Dorner Peter (1972)                              Land Reforms and Agricultural Development.
6. Kahlon, A.S. (1982)                              Agricultural Price Policy in India.
7. Mamoria, C.B. (1985)                              Agricultural Problems in India.
8. Acharya, S.S. & M.L. Aggarwal (2002)                      Marketing of Farm Products in India, Oxford, IBH Publications.



**EOL206**

**Introduction to GUI Packages**

**Credits : 4-0-1**

**Minor-I**

**Introduction to Windows – 3.1 / 3.11 / Windows '95**

**Origin of Windows**

Parts of Windows Screen (Definition)

The Desk Top

The Windows

Icons

Types of Windows

Application Windows

Document Windows

Anatomy of a Window

The Title Bar

Minimize & Maximize Button

The Control Box

Scroll Bars, Scroll Buttons and Scroll Boxes.

**Using the Program Manager**

What is Program Manager?

Six ways to run programs

From Icons

From Start Up Group

With Run Command

From File Manager

From DOS Prompt

**Creating and Using Groups**

Creating Program Groups.

Creating Program Icons

Adding Applications to a Group:

Moving a Program Icon into a new window.

Creating own program Icon

Creating Icons for Individual Documents

Deleting program Icon

Deleting Groups

### **Using File Manager**

#### Starting File Manager

- Displaying Directory and File Views.
- Expanding and collapsing directory levels.
- Creating a Directory.
- Deleting a Directory
- Searching for a specific File.
- Selecting Files in a Directory.
- Opening Documents from the File Manager.
- Printing from the File Manager.
- Moving Files.
- Moving Files and Directories to another disk drives.
- Copying Files.
- Deleting Files.
- Renaming Files and Directories.

### **Minor-II**

#### **Basics of Windows '95**

- The Desktop, the Taskbar.
- Start menu.
- Program, Documents, Settings, Find, Help, Run, Shutdown.
- About the My Computer Icon.
- About Networking Neighbourhood Icon.
- Recycle Bin.
- Folders – Creation and Definition.
- New Rules for File Names.
- Windows Explorer (Definition)
- Shortcut Icons with creation and definition.

#### **Difference between Windows 3.1 and Windows '95.**

#### **Introduction to MS-Office.**

##### **Introduction to Word (Word for Windows).**

- Introduction to Word.
- Introduction to parts of a Word Window (Title Bar, Menu Bar, Tool Bar, the Ruler, Status area.)
- Creating New Documents.
- Opening an Existing Document.
- To insert a second Document into an open document.
- Editing a document.
- Deleting text, replacing text, moving and copying text.
- Page setup.
- Margins and Gutters.
- Changing Fonts and Font Size.
- To make text bold, italic or underline.
- Line Spacing.
- Centering, Right Alignment and Left Alignment.
- Page Breaks.

Headers and Footers.  
 Putting Page Numbers in Headers and Footers.  
 Saving Documents  
     Naming Word Document.  
     Saving in different Formats.  
     Saving on different disks.  
 Spell Checking.  
 Printing.  
 Creating a Table Using: the Table Menu.  
     Entering and editing text in tables.  
     Selecting in tables.  
     Adding Rows.  
     Changing Row Heights.  
     Deleting Rows.  
     Inserting Columns.  
     Changing Columns and Cell Width.  
 Borders and Shading.  
 Templates and Wizards.  
 Working with Graphics.  
 Drawing Objects.  
 Using Frames to Position Objects.  
 Mail Merge.  
 Using Word and Word Documents with other Applications.

### **Major (including Minor-I and Minor-II)**

#### **Introduction to MS – Power Point**

Introduction to MS Power Point.  
 Power Point Elements.  
     Templates.  
     Wizards.  
     Views  
     Color Schemes  
 Exploring Power Point Menu.  
     Opening and Closing Menus.  
     Working with Dialog Boxes.  
 Adding text, Adding Title, Moving text area, Resizing text boxes, Adding art.  
 Starting a new slide.  
 Starting a Slide Show.  
 Saving Presentation.  
 Printing Slides.  
 Views  
     Slide view, Slide sorter view, notes view, outline view.  
 Formatting and enhancing text formatting.  
     Formatting  
         Changing format with a new layout.  
         Using a pick look wizard to change format.  
         Alignment of Text.  
         Working with text spacing.

#### Enhancing

Using Bullets.

Changing Text Font and Size.

Selecting Text Style, Effect and Color.

Picking up and applying styles.

Creating Graphs.

Displaying slide show and adding multi-media.

#### Adding Slide Transitions

Choosing the transition.

Choosing the transition period.

Timing Slide Display.

Building Slides.

Adding Movies and Sounds.

**ESL 220 Environmental Studies (Compulsory Paper)**  
**(Under Credit Based Continuous Evaluation Grading System)**

**Credit 3-0-0**

1. **The multidisciplinary nature of environmental studies:** Definition, scope & its importance, Need for public awareness.
2. **Natural resources:** Natural resources and associated problems.
  - a) **Forest resources:** Use of over exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forests and tribal people.
  - b) **Water resources:** Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems.
  - c) **Mineral resources:** Use and exploitation, environmental effects of extracting and using mineral resources, case studies.
  - d) **Food resources:** World food problems, change caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problem, salinity, case studies.
  - e) **Energy resources:** Growing of energy needs, renewable and non-renewable energy resources, use of alternate energy sources, case studies.
  - f) **Land resources:** Land as a resource, land degradation, soil erosion and desertification.
  - g) Role of an individual in conservation of natural resources, Equitable use of resources for sustainable lifestyles.
3. **Ecosystem:**  
 Concept of an ecosystem, Structure and function of an ecosystem, Producers, consumers and decomposers, Energy flow in the ecosystem, Ecological succession, Food chains, food webs and ecological pyramids.  
 Introduction, types, characteristic features, structure and function of the following ecosystems:
  - a. Forest ecosystem
  - b. Grassland ecosystem
  - c. Desert ecosystem
  - d. Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).
4. **Biodiversity and its Conservation:**  
**Definition:** Genetic, species and ecosystem diversity, Biogeographical classification of India.  
**Value of Biodiversity:** Consumptive use; productive use, social, ethical, aesthetic and option values.  
 Biodiversity of global, National and local levels, India as mega-diversity nation "Hot-spots of biodiversity."  
**Threats to Biodiversity:** Habitat loss, poaching of wild life, man wildlife conflicts  
 Endangered and endemic species of India.  
**Conservation of Biodiversity:** In situ and Ex-situ conservation of biodiversity.

### 5. Environmental Pollution:

Definition, Causes, effects and control measures of:

- a) Air Pollution
- b) Water Pollution
- c) Soil Pollution
- d) Marine Pollution
- e) Noise Pollution
- f) Thermal Pollution
- g) Nuclear Hazards

**Solid Waste Management:** Causes, effects and control measures of urban and industrial wastes.

Role of an individual in prevention of pollution.

Pollution case studies Disaster Management: Floods, Earthquake, Cyclone and Landslides

### 6. Social Issues and Environment:

- \* From unsustainable to sustainable development
- \* Urban problems related to energy
- \* Water conservation, rain water harvesting, watershed management
- \* Resettlement and rehabilitation of people; its problems and concerns. Case studies
- \* Environmental ethics: Issues and possible solutions.
- \* Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents and holocaust. Case studies.
- \* Wasteland reclamation
- \* Consumerism and waste products
- \* Environmental Protection Act
- \* Air (prevention and Control of Pollution) Act
- \* Water (prevention and Control of Pollution) Act
- \* Wildlife Protection Act
- \* Forest Conservation Act
- \* Issues involved in enforcement of environmental legislation
- \* Public awareness

### 7. Human population and the environment

- \* Population growth, variation among nations
- \* Population explosion-Family welfare programme
- \* Environment and human health
- \* Human rights
- \* Value education
- \* HIV / AIDS
- \* Women and child welfare
- \* Role of information technology in environment and human health
- \* Case studies
- \* **Road Safety Rules & Regulations:** Use of Safety Devices while Driving, Do's and Don'ts while Driving, Role of Citizens or Public Participation, Responsibilities of Public under Motor Vehicle Act, 1988, General Traffic Signs
- \* **Accident & First Aid:** First Aid to Road Accident Victims, Calling Patrolling Police & Ambulance

- 8. Field Work:** Visit to a local area to document environmental assets—river / forest / grassland / hill / mountain. Visit to a local polluted site—Urban / Rural / Industrial / Agricultural. Study of common plants, insects, birds. Study of simple ecosystems—pond, river, hill slopes, etc. (Field work equal to 5 lecture hours)

**References:**

1. Agarwal, K. C. 2001. Environmental Biology, Nidhi Publications Ltd. Bikaner.
2. Bharucha, E. 2005. Textbook of Environmental Studies, Universities Press, Hyderabad.
3. Bharucha, E. 2004. The Biodiversity of India, Mapin Publishing Pvt. Ltd. Ahmedabad.
4. Brunner, R. C. 1989. Hazardous Waste Incineration, McGraw Hill Inc. New York.
5. Clark, R. S. 2000. Marine Pollution, Clanderson Press Oxford.
6. Cunningham, W. P., Cooper, T. H., Gorhani, E. & Hepworth, M. T. 2001. Environmental Encyclopedia, Jaico Publications House, Mumbai.
7. De, A. K. 1989. Environmental Chemistry, Wiley Eastern Ltd.
8. Down to Earth, Centre for Science and Environment, New Delhi.
9. Hawkins, R. E. 2000. Encyclopedia of Indian Natural History, Bombay Natural History Society.
10. Heywood, V. H & Weston, R. T. 1995. Global Biodiversity Assessment, Cambridge House, Delhi.
11. Jadhav, H. & Bhosale, V. M. 1995. Environmental Protection and Laws. Himalaya Pub.
12. Joseph, K. and Nagendran, R. 2004. Essentials of Environmental Studies, Pearson Education (Singapore) Pte. Ltd., Delhi.
13. Kaushik, A. & Kaushik, C. P. 2004. Perspective in Environmental Studies, New Age International (P) Ltd, New Delhi.
14. Miller, T. G. Jr. 2000. Environmental Science, Wadsworth Publishing Co.
15. Odum, E. P. 1971. Fundamentals of Ecology. W.B. Saunders Co. USA.
16. Rajagopalan, R. 2005. Environmental Studies from Crisis to Cure. Oxford University Press, New Delhi.
17. Sharma, B. K. 2001. Environmental Chemistry. Geol Publishing House, Meerut.
18. Sharma, J. P. 2004. Comprehensive Environmental Studies, Laxmi Publications (P) Ltd, New Delhi.
19. Sharma, P. D. 2005. Ecology and Environment, Rastogi Publications, Meerut.
20. Subramanian, V. 2002. A Text Book in Environmental Sciences, Narosa Publishing House, New Delhi.
21. Survey of the Environment. 2005. The Hindu.
22. Tiwari, S. C. 2003. Concepts of Modern Ecology, Bishen Singh Mahendra Pal Singh, Dehra Dun.
23. Townsend, C., Harper, J. and Michael, B. 2001. Essentials of Ecology, Blackwell Science.
24. Booklet on Safe Driving. Sukhmani Society (Suvidha Centre), District Court Complex, Amritsar.

PBL-104

ਪੰਜਾਬੀ ਲਾਜ਼ਮੀ-II

ਪਾਠ-ਕ੍ਰਮ ਅਤੇ ਪਾਠ ਪੁਸਤਕਾਂ

Credits: 2-0-0

- (I) 1. ਆਤਮ ਅਨਾਤਮ (ਸੰਪ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਅਤੇ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ) ਵਿੱਚੋਂ ਹੇਠਾਂ ਲਿਖੇ ਕਵੀ
- (ੳ) ਭਾਈ ਵੀਰ ਸਿੰਘ  
(ਅ) ਪ੍ਰੋ: ਪੂਰਨ ਸਿੰਘ  
(ੲ) ਪ੍ਰੋ: ਮੋਹਨ ਸਿੰਘ  
(ਕਵਿਤਾ-ਸਾਰ, ਵਿਸ਼ਾ-ਵਸਤੂ, ਕਾਵਿ-ਕਲਾ, ਕਵੀ)
2. ਪੰਜਾਬੀ ਸ਼ਬਦ ਬਣਤਰ : ਧਾਤੂ/ਮੂਲ, ਵਧੇਤਰ (ਅਗੇਤਰ, ਪਿਛੇਤਰ, ਵਿਉਂਤਪਤ ਅਤੇ ਰੁਪਾਂਤਰੀ), ਸਮਾਸ ।
- (II) 1. ਆਤਮ ਅਨਾਤਮ (ਸੰਪ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਅਤੇ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ) ਵਿੱਚੋਂ ਹੇਠ ਲਿਖੇ ਕਵੀ
- (ੳ) ਅੰਮ੍ਰਿਤਾ ਪ੍ਰੀਤਮ  
(ਅ) ਡਾ. ਹਰਭਜਨ ਸਿੰਘ  
(ੲ) ਸ਼ਿਵ ਕੁਮਾਰ ਬਟਾਲਵੀ  
(ਕਵਿਤਾ-ਸਾਰ, ਵਿਸ਼ਾ-ਵਸਤੂ, ਕਾਵਿ-ਕਲਾ, ਕਵੀ)
2. ਪੈਰਾ ਰਚਨਾ : ਕਲੱਸ ਵਿੱਚ 10 ਵਿਸ਼ਿਆਂ (ਸਭਿਆਚਾਰਕ, ਧਾਰਮਿਕ ਅਤੇ ਰਾਜਨੀਤਕ) ਤੇ ਪੈਰਾ ਰਚਨਾ ਦੇ ਅਭਿਆਸ ਕਰਵਾਉਣੇ ।
- (III) 1. ਆਤਮ ਅਨਾਤਮ (ਸੰਪ. ਵਰਿਆਮ ਸਿੰਘ ਸੰਧੂ ਅਤੇ ਡਾ. ਸੁਹਿੰਦਰਬੀਰ ਸਿੰਘ, ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ) ਵਿੱਚੋਂ ਹੇਠ ਲਿਖੇ ਕਵੀ
- (ੳ) ਡਾ. ਜਸਵੰਤ ਸਿੰਘ ਨੇਕੀ  
(ਅ) ਡਾ. ਜਗਤਾਰ  
(ੲ) ਡਾ. ਸੁਰਜੀਤ ਪਾਤਰ  
(ਸ) ਪਾਸ਼  
(ਕਵਿਤਾ-ਸਾਰ, ਵਿਸ਼ਾ-ਵਸਤੂ, ਕਾਵਿ-ਕਲਾ, ਕਵੀ)
2. ਮੁਹਾਵਰੇ ਤੇ ਅਖਾਣ (ਅਖਾਣ ਤੇ ਮੁਹਾਵਰਾ ਕੋਸ਼ ਵਿੱਚ) 200 ਮੁਹਾਵਰਿਆਂ ਅਤੇ 100 ਅਖਾਣਾਂ ਨੂੰ ਵਾਕਾਂ ਵਿੱਚ ਵਰਤਣ ਦੇ ਅਭਿਆਸ ਕਰਵਾਉਣੇ (ਕਲਾਸ ਵਿੱਚ ਤੇ ਘਰ ਲਈ) ।



**HISTORY & CULTURE OF THE PUNJAB (1717-1947)**  
**(Special Paper in lieu of Punjabi Compulsory)**  
**HSL: 102**

**Credits: 2-0-0**

**Instructions for the Paper Setters/Examiners:**

**Examination Minor–I shall cover Theme no. 1-3, Minor–II shall cover Theme no. 4-6.**

**The Major shall cover the entire syllabus.**

1. Sikh Struggle for Sovereignty
2. Ranjit Singh: Conquests, Administration and the Anglo-Sikh Relations
3. Anglo-Sikh Wars and the Annexation
4. The Punjab under the British: New Administration, Education and Social Change
5. Economic Changes: Agricultural
6. Socio-Religious Reform Movements
7. Role of Punjab in the Freedom Struggle
8. Fairs and Festivals
9. Folk Dances and Legends

**Suggested Readings:**

1. Kirpal Singh (ed.): *History and Culture of the Punjab*, Part-II, Punjabi University, Patiala, 1990.
2. Fauja Singh (ed.): *History of Punjab*, Vol. III, Punjabi University, Patiala, 1987.
3. J.S. Grewal: *The Sikhs of the Punjab*, CUP, Cambridge, 1991.
4. Sukhwant Singh. *Agricultural Growth under Colonial Constraints: The Punjab 1849-1947*, Manpreet Publication, Delhi, 2000.
5. Khushwant Singh, *A History of the Sikhs*, Vol. I, OUP, New Delhi, 1990.

**EOL209**

**Statistics – III**

**Credits : 5-0-0**

**Minor-I**

**Axiomatic definition of probability:** Addition and multiplication laws; conditional probability; independence of events; Baye's Theorem.

**Probability distributions:** Uniform, binomial, poisson and normal distributions; derivation of their properties; numerical problems based on these distributions; fitting of these distributions.

**Minor-II**

**Sampling:** Concepts used in sampling: methods of sampling simple random, systematic and stratified. Point estimation: Concept of random sampling, meaning of an estimator; properties of a good estimator; methods of estimation – method of moments, methods of minimum chi – square, method of least squares and method of maximum likelihood (with more emphasis on the method of m.l.e.).

**Major (including Minor-I and Minor-II)**

Elementary ideas about sampling distribution of sample mean, Z, t, chi square of F: Testing of significance; concepts of null and alternative hypothesis; types of errors; some elementary tests based on above sampling distributions.

**Statistical quality control:** Scope and limitations, methods of construction (with stress on numericals) of mean chart, range chart and p – chart.

**Suggested Readings:**

- |   |   |
|---|---|
| 1.Mood, A.M. and F.M. Graybill            | Introduction to theory of statistics, McGraw Hill, New York, 1963.                      |
| 2.Goon, A.M., M.K. Gupta,<br>B. Das Gupta | An Outline of Statistical Theory, The World Press, Calcutta, 1977.                      |
| 3.Kapur, J.N. and Saxena, H.C.            | Mathematical Statistics, S. Chand and Company, New Delhi, 1995.                         |
| 4.Hogg, Robert, W. and Tanis, Elliot, A.  | Probability and Statistical Inference, MacMillan, New York, 1977.                       |
| 5.Sukhatme, P.V. and Sukhatme, B.V.       | Sampling Theory of Surveys with Applications IOWA State University Press, U.S.A., 1970. |
| 6.Gupta, S.C. and Kapoor, V.K.            | Fundamentals of Applied Statistics, Sultan Chand & Co., New Delhi, 1978.                |

**EOL210**

**Money and Banking**

**Credits : 5-0-0**

**Minor-I**

**Money:** Nature and functions; money and near money; supply of money: mechanics of money supply creation; measures of money supply in India. Demand for money: Fisher, Cambridge, Keynesian and Friedman theories.

**Rate of Interest:** Determination; factors affecting the level and structure of interest rates. Money and capital markets (introductory).

**Minor-II**

**Commercial Banking:** Functions, theories; credit creation. Commercial banking in India; Structure; nationalisation: objectives, performance and evaluation.

**Major (including Minor-I and Minor-II)**

**Central Banking:** Meaning and functions, techniques of credit control with special reference to India, credit policy in India.

**Monetary Policy:** Targets and indicators; macro economic objectives. Monetary policy in less developed countries. Inflation in India.

**Suggested Readings:**

- |                         |   |
|-------------------------|---|
| 1.Luckett, D.G.         | Money & Banking, McGraw Hill, New York, 1976.   |
| 2.Gupta, S.B.           | Monetary Planning for India, University Press, New Delhi.   |
| 3.Cargill, T.F.         | Money: The Financial system and monetary policy, Englio Wood Cliffs, Prentice Hall, 1979.                   |
| 4.Shekhar, K. G.        | Banking Theory and Practice law and Foreign Exchange, 6th edition, Vikas Publishing House, New Delhi, 1978. |
| 5.Misra, S. Puri        | Indian Economy, Himalya Publishing House, New Delhi (Latest Edition).                                       |
| 6.Reserve Bank of India | Report on Currency and Finance.   |
| 7.-----                 | Reserve Bank of India Bulletin, Economic Times, Financial Express.  |

**EOL211****Industrial Economics****Credits : 5-0-0****Minor-I**

**Definition:** Nature and scope of Industrial Economics. History and development of Industrial Economics.

**Basic Concepts:** Firm, industry, Market, Market structure, Market power, passive and active behaviour of the firm.

**Minor-II**

Conceptual framework for the study of Industrial Economics. Organizational form and alternative motives of the firm. Industrial efficiency and technical efficiency. Optimum size of the firm.

**Growth of the firm:** Acquisition, diversification, merger constraints on Growth: demand, managerial and financial.

**Major (including Minor-I and Minor-II)**

**Market Structure:** Seller's concentration; product differentiation; entry conditions and economics of scale.

**Theories of Industrial Location:** Factors affecting location; contributions of weber and Sargent Florance. Location policy in India since Independence. Industrial concentration and dispersal in India. Industrial growth under planning in India. Industrial policy and licensing policy, MRTPL Act and FERA Act in India.

**Suggested Readings:**

1. Barthwal, B.R. : Industrial Economics.
2. Devine, P.J.and others : An introduction to Industrial Economics.
3. Hay and Morris : Industrial Economics Theory and Evidence.

**EOL212****Labour Economics****Credits : 5-0-0****Minor-I**

Nature and characteristics of Labour Markets in developing countries like India ; Classical, neo-classical and dualistic theories of labour markets ; Analysis of demand and supply of labour ; Mobility and Productivity of labour ; Methods of recruitment and placement.

**Minor-II**

**Unemployment** : Concepts, Causes and Measurement ; Employment Policy in Five year Plans and its evaluation, Classical, neo-classical and bargaining theories of wage determination ; Concepts and causes of wage differentials ; Productivity and wage relationship.

**Major (including Minor-I and Minor-II)**

Growth, Structure and pattern of trade unionism ; Causes of Industrial disputes ; methods of settlement ; Collective bargaining, conciliation ; arbitration and labour participation in management ; Growth, pattern and structure of labour unions in India.

State and social security of labour in India ; Problem of child labour ; Labour market reforms : Exit policy and measures imparting flexibility in labour markets ; Globalisation and labour markets.

**Recommended Readings :**

1. Hajela, P.D. (1998), Labour Restructuring in India : A Critique of the New Economic Policies, Commonwealth Publisher, New Delhi.
2. Lester, R.A. (1964), Economics of Labour, (2nd Edition), Macmillan, New York
3. McConnell, C.R. and S.L.Brue (1986), Contemporary Labour Economics, McGraw-Hill, New York.
4. Papola, T.S., P.P.Ghosh and A.N.Sharma (Eds) (1993), Labour, Employment and Industrial Relations in India, B.R.Publishing Corporation, New Delhi.
5. Venkata Ratnam, C.S.(2001), Globalization and Labour-Management Relations : Dynamics of Change, Sage Publications / Response Books, New Delhi.
6. McCormick B. and Smith (Eds) (1968), The Labour Market, Penguin, Harmondsworth.
7. Das, N. (1960), Unemployment, Full Employment and India, Asia Publishing House, Bombay.
8. Deshpande L.K. and J.C.Sandesara, (Eds) (1970), Wage Policy and Wages Determination in India, Bombay University Press, Bombay.
9. Hicks J.R. (1932), The Theory of Wages, Clarendon Press, Oxford.
10. Mazumdar, D. (1989), Micro-economic Issues of Labour Markets in Developing Countries, EDI Services Paper No.40, World Bank, Washington D.C.
11. Memoria, C.B. (1966), Labour Problems and Social Welfare in India, Kitab Mahal, Allahabad.
12. Punekar, S.D.(1978), Labour Welfare, Trade Unionism and Industrial Relations, Himalaya Publishing House, Bombay.
13. Singh V.B. (Ed) (1970), Industrial Labour in India, Popular Parakashan, Bombay.
14. Misra, L. (2000), Child Labour in India, Oxford University Press, New Delhi.
15. Riveros, L. (1990), Labour Market Policies and Labour Market Reforms in Socialist Economies, World Bank, Washington D.C.

## **EOL213                      Relational Database Management System**

**Credits : 4-0-1**

### **Minor-I**

Definition of 3GL and 4GL Languages.

Definition of CODD's Rules.

Introduction to RDBMS and Oracle – Advantages and Limitations over DBMS.

Normalisation of Data: First, Second and Third Normal Form.

Database Models – Hierarchical, Network and Relational.

Features of SQL – Compatibility, Portability, Data Dictionary.

Introduction to SQL plus – Definition.

### **SQL Operators:**

=, != < > < > = <= (NOT) BETWEEN .....AND..... (NOT) IN (text), (NOT) like,  
IS (NOT) NULL, NOT, AND, OR.

### **Data Types:**

Char, numbers, date long, raw, long raw.

### **DDL Commands of SQL :**

Create tables.

Alter Table, view.

Drop Table.

Create View----- As select from, where.

Rename.

Create Index.

### **Data Manipulation Language:**

#### **Select**

Select distinct.

Select from where.

Select from where order by.

Select group by clause.

Select group by having clause.

#### **Insert Into**

#### **Update Statement.**

#### **Delete Statement.**

**Data Control Language:**

Rollback.

Revoke.

Grant.

Sub Query Definition with 2 Levels.

**Minor-II****Aggregate Functions:**

Sum, avg, max, min, count, stddev, variance.

**Character Functions:**

Lower, Upper, Length, Substr, RPAD, LPAS

**Arithmetic Functions:**

Round, Trunc, Sqrt, Mod, Abs, Sine.

**Date and Time Functions and other Miscellaneous Functions:**

(Add – months, months-between, NVL, translate, field concatenation. Decode).

Conversion Functions (to-char, to-number, to-date).

Substitution Variables (&amp;, &amp;, &amp;).

**Reporting Using SQL Plus:**

Specifying column heading.

Formatting columns.

Char formats.

Break.

Inserting space when the break value changes.

Inserting spaces after every row.

Break on multiple columns with different spacing.

Compute.

T Title.

B Title.

Page size, line size, pause.

**Introduction to PL / SQL:**

Relationship between SQL &amp; PL / SQL.

Advantages of PL / SQL.

PL / SQL block structure.

Valuable and Constant Declaration.

Declaration using attributes

% type attribute.

If else if ends if statement.

**Major (including Minor-I and Minor-II)**

**Iterative Controls.**

Simple Loops (Loop ----- end loop).

Numeric FOR Loops.

While Loops.

Intro and Advantages of procedures and functions with examples.

**Intro to Database Triggers.**

Creation of a database triggers with example.

Enable and disable of database trigger.

Drop a database trigger.

**Developer 2000**

Reports 2.5

Forms 4.5

**Utilities**

Export / Import.

SQL \* Loader.



**EOL301****Public Finance****Credits : 5-0-0****Minor-I**

**Nature and Scope of Public Finance:** Principle of Maximum Social Advantage; Sources of Public Revenue; Canons of taxation; Concept of Equity in taxation; Principles of taxation; Benefit Received and Ability to pay.

**Minor-II**

**Taxable Capacity:** Concept and its significance; Factors determining taxable capacity; Taxable Capacity in India.

**Direct vs. Indirect Taxes:** Advantages and disadvantages; A theoretical case against Indirect taxes; Proportional vs. Progressive taxes.

**Incidence of Taxation:** (Concept of impact, shifting and incidence): tax shifting: (Forward and Backward): tax capitalization theories of shifting of taxation; Effects of taxation on production and distribution.

**Major (including Minor-I and Minor-II)**

Public Expenditure; Concept, canons and Principles Budgetary classification of Public expenditure.

**Public Debt:** Concept, Distinction between internal and external debt; Sources of Public Borrowings; objects and significances of public debt.

**Suggested Readings:**

- |                         |   |
|-------------------------|---|
| 1. Bhargava, R.N.       | Theory and Working of Union Finance in India (Latest Edition) |
| 2. Chelliah, Raha J.    | Fiscal Policy in Underdeveloped Countries.                    |
| 3. Dalton, Hugh         | Principles of Public Finance                                  |
| 4. Misra, B.            | Economics of Public Finance                                   |
| 5. Prest, A.R.          | Public Finance in Theory and Practice                         |
| 6. -----                | Public Finance in Developing Countries                        |
| 7. Tyagi, B.P.          | Public Finance  |
| 8. Government of India  | Economic Surveys  |
| 9. A.E.A.               | Readings in Economics of Taxation                             |
| 10. Government of India | Economic Surveys  |

**EOL302****Indian Economy****Credits : 5-0-0****Minor-I**

**Structure of Indian Economy :** The population problem and economic development, occupational distribution of labour force ; Poverty and Income distribution in India, Problems of unemployment and Rising prices.

**Minor-II**

**Planning in India:** Objectives; Strategy ; Current Five Year Plan- Objectives, allocation and targets ; New economic reforms - Liberalization, privatization and globalization ; Rational behind economic reforms ; Progress of privatization and globalization.

**Basic Issues in Agriculture :** Role, nature and cropping pattern ; Trends in agricultural production and productivity ; Factors determining productivity ; New agricultural strategy and Green Revolution ; Agricultural price policy.

**Major (including Minor-I and Minor-II)**

**Issues in Industrial Development:** Industrial development during planning period ; Industrial policy of 1948, 1956,1977 and 1991 ; Cottage and small scale industries ; Public sector in India - its role, growth, performance, problems ; Issue of privatization.

**External Sector :** India's foreign trade- features, composition and direction ; India's balance of payments problem ; Indian trade policy ; foreign capital, foreign aid, multinational corporations (MNCs) ; FERA and FEMA.

**Recommended Readings:**

Datt, R. and K.P.M. Sundhram (2003), Indian Economy, S. Chand & Company Ltd., New Delhi.

Dhingra, I.C. (2003), The Indian Economy Environment and Policy, Sultan Chand & Sons, New Delhi.

**EOL303 Economic History in India**

**Credits : 5-0-0**

**Minor-I**

Indian Economy in 19<sup>th</sup> century an overview of agriculture, industry, trade and British economic and commercial policies.

Population; construction of population estimates. Characteristics of population; fertility, mortality, sex ratio.

**Minor-II**

Population growth, natural disasters and their relation with economic activity.

Agrarian Science; Land tenures, tenurial relations, pattern.

Commercialisation of agriculture.

**Major (including Minor-I and Minor-II)**

Industry and infrastructure; growth of railways and its impact, growth of modern Industries; tea, cotton, textiles, iron and steel.

**Impact of British rule:** Drain theory of Industrialization, Swadeshi movement, Effect of world depression and the second World War on Indian Economy, Post – War rehabilitation.

**Recommended Readings:**

- |                          |   |  |
|--------------------------|---|--|
| Dutt, R.P.               | : | India Today, Calcutta, Manisha, 1970.  |
| Kaushal, G.              | : | Economic History of India (1757 – 1966), Ludhiana, Kalyani Publishers, 1979. |
| Knowles, L.C.            | : | Economics Development of the British overseas Empire.                        |
| Rustey, V.               | : | Economic Development of India.   |
| Jathar, G.B. & S.S. Beri | : | Indian Economics, OUP, 1937.   |
| Singh, V.B.              | : | Economic History of India (1857 – 1956).                                     |
| Chakrabarti, S.C.        | : | Economic Development of India, 1965.   |

**EOL304****International Economics****Credits : 5-0-0****Minor-I**

**Trade Theories and Commercial Policy:** Theories of absolute advantage, comparative advantage and opportunity cost ; Heckscher-Ohlin theory of trade- its main features, assumptions and limitations : Terms of trade (concepts and secular deterioration in terms of trade) ; Doctrine of reciprocal demand ; Gains from trade-their measurement and distribution.

**Minor-II**

**Commercial Policy:** Rationale of protection; Tariff and non-tariff barriers to trade (quota, voluntary export restraints, export subsidies, dumping and international cartel ) ; Tariff and quota (partial equilibrium analysis).

**Balance of Trade and Balance of Payments :** Concepts and components of balance of trade and balance of payments ; Equilibrium and disequilibrium in balance of payments ; Various measures to correct deficit in the balance of payment ; Foreign trade multiplier.

**Major (including Minor-I and Minor-II)**

**Exchange Rate :** Meaning, concept of equilibrium exchange rate and determination ; Fixed versus flexible exchange rates ; Managed floating exchange rate.

**International Monetary System and International Institutions :** Brettonwood systems and its breakdown, International liquidity Special drawing rights, I.M.F.

**Recommended Readings:**

1. Green Away, D. (1983) : International Trade Policy, Macmillan Publishers Ltd., London.
2. Heller, Robert (1977) : International Trade Theory and Empirical Evidence, Prentice Hall, New Delhi.
3. Ingo Walter (1975) : International Economics, Ronald Press, New York, 1975.
4. Soderston, B. (1991) : International Economics, McMillan, New York.
5. Salvatore, D.L. (1991) : International Economics, Prentice Hall, Upper Saddle River, New Delhi.
6. Todaro, Michael (1991) : Economic Development, Longman, New York. 1994.
7. Yeagre (1976) : International Monetary Relations, Theory, History and Policy, Harper and Row, New York, 1976.

**EOL305****Econometrics****Credits : 5-0-0****Minor-I**

Nature and meaning of econometric; Difference between mathematical economics , statistics and econometrics ; Goals of econometrics.

Simple linear regression model (Two variables): Sources of disturbance terms, assumptions, least squares estimators and their properties; Gauss Markov's theorem.

**General linear regression model:** Definition, assumptions, least – squares estimation.

**Minor-II**

Gauss Markov's theorem; testing significance of regression coefficients, concepts of  $R^2$  and  $R^{-2}$ . Estimation of quadratic, semi – log and double log functions; simple and compound rates of growth (applications).

Concept of analysis of variance approach; One – way ANOVA (application only); Applications of ANOVA technique in regression analysis – testing significance of  $R^2$ , significance of improvement in  $R^2$  due to additional explanatory variables, chow's test.

**Major (including Minor-I and Minor-II)**

Problems of multicollinearity, autocorrelation and hetroscedasticity: Nature, consequences, tests and remedies (elementary treatment).

**Recommended Readings:**

- Chow, G. : Econometrics, (1983).  
 Ghosh, S.K. : Econometrics  
 Gujrati, D. : Basic Econometrics (1955, 3rd edition, McGraw Hill Inc.)  
 Kelejian and Oats : Introduction to the Theory of Econometrics.  
 Koutsoyiannis, A. : Theory of Econometrics (1978).

**EOL306**

**SAD and Structure Programme**

**Credits : 4-0-1**

**Minor-I**

**SAD**

System Design, Analysis Identification.

CAD – Context Analysis Diagram Algorithms.

DFD – Data Flow Diagrams.

Entity Relationship Charts, ER Diagrams.

**Minor-II**

**Data Structures Using C.**

Introduction to C.

Introduction to Data Structures.

Arrays.

**Major (including Minor-I and Minor-II)**

Functions.

Pointers.

Structures.

Files.

### **EOL307 Regional Economics with Special Reference to Punjab Economy**

**Credits : 5-0-0**

#### **Minor-I**

**Regional Economics:** Concept, Scope and framework; Regional economic problems; Location factors; Different Approaches to study Regional Economics ; Location of places & their problems ; Nature of Regions and relation of activities within a region ; Regional policy & objectives.

#### **Minor-II**

**Structural Changes in Punjab Economy:** Agricultural in Punjab, Growth & productivity Green Revolution ; role, performance & implications ; Agricultural diversification, rationale, constraints and prospectus ; agriculture credit & marketing ; W.T.O and Punjab agriculture.

#### **Major (including Minor-I and Minor-II)**

**Industry in Punjab:** Industrial development – Pattern, performance, constraints & challenges ; Small-scale industry role, problems & future prospects ; State & industrial development

Development of transport and banking in Punjab. Finances of Punjab State; Sources of revenue and heads of expenditure ;Problems of resource mobilization & fiscal crisis in Punjab.

#### **Recommended Readings:**

Hoover, F.M.	:	An Introduction to Regional Economics.
Richardson, H.W.	:	Regional Economics.
Johar, R.S.& J.S. Khanna	:	Studies in Punjab Economy.
Raikhy, P.S. & S.S. Gill	:	Resource Mobilisation and Economic Development: A Regional Perspective.
Govt. of Punjab	:	Statistical Abstracts.
Bawa R.S. & P.S.Raikhy	:	Punjab Economy : Emerging Issues

**EOL308**

**Entrepreneurial Development**

**Credits : 5-0-0**

**Minor-I**

Need, scope and characteristics of entrepreneurship, special scheme for Technical Entrepreneurs, STED.

Identification of opportunities.

Exposure to demand based resource based, service based import substitute and export promotion industries.

**Market survey techniques.**

Need, scope & approaches for project formulation.

**Minor-II**

Criteria for principles of product selection and development structure of project report, Choice of technology, plant and equipment.

Institution / financing procedures and financial incentives.

Resource Management men, machine and materials,

**Critical Path Method (CPM) & Project Evaluation Review Techniques (PERT) as Planning tools for establishing SST.**

Creativity and innovation.

Problem solving approach.

Strength weakness Opportunity and Threat (SWOT) Techniques.

**Major (including Minor-I and Minor-II)**

Techno-economic feasibility of the project.

Plant layout & Process Planning for the Product.

Quality control/quality assurance and testing of project.

**Elements of marketing & sales management.**

Nature of Product and Market strategy

Packaging and advertising.

After Sales Service.

Licensing registration

Municipal by-laws and insurance coverage.

Pollution Control

Social responsibility and business ethics.



B.Sc. (Honours School) Economics (Semester – VI)  
(Under Credit Based Continuous Evaluation Grading System)

**References:**

1. Deshpande. M. V. Entrepreneurship of small scale industries: Concept Growth & Management. Deep & Deep Publication D-1/24, Rajouri Garden, New Delhi- 110027 1984.
2. Mc Cleand D.C The Achieving Society, Princeton N.J.D. Van Nostrand Co N. Y. 1961.
3. Meredith G.G. Nelson Rcetal Practice of Entrepreneurship ILO, Geneva, 1982.
4. Pareek U & rao TV Personal Efficacy in Developing Entrepreneurship Learning Systems New Delhi 1978.
5. Rao TV & ParcoK U Developing Entrepreneurship- A hand book Learning Systems , New Delhi- 198.
6. Vyas, JN Planning an Industrial Unit I Neelkung Neelkanth Part, Opp. Navrangpura, Ahmedabad.
7. Welsh, JA & Jerry Entrepreneurs Master Planning Guide How To Launch a successful Business, Prentice Hall Englewood Cliffs, 1983.
8. Department of Industrial Development Incentives & Concessions for setting up industries in Backward Areas, Deptt of Industrial Development Govt of India, New Delhi.
9. India investment industrial Centre Guide for Entrepreneurs India investment Centre, Jeevan Vihar Building, Sansad Marg, New Delhi.
10. Entrepreneurship Development Institute of India A Hand book for New Entrepreneurs (with spcial reference to S & T Group) Entrepreneurship Development Institute of India.
11. Kahn, S. S Entrepreneurship Development

**EOL309****Development Economics****Credits : 5-0-0****Minor-I**

**Economic Development:** Meaning, measurement and international comparisons. Human Development index and other indices of development and quality of life. Economic and non-economic factors of development. Growth and distribution. Poverty and environment.

**Dualistic Development:** Social and technological dualism.

**Minor-II**

Lewis model of unlimited supply of labour; Ranis and Fei model. Measurement of surplus labour. Unemployment and disguised unemployment.

**Models of growth:** Classical model: the Marxian model; Schumpeter's model; Keynesian model; the Harrod – Domar model, Mrs. Joan Robinson's growth model ; Production function approach to the sources of growth.

**Major (including Minor-I and Minor-II)**

**Development Strategies:** Theory of balanced growth and big push; The unbalanced growth and critical minimum effort thesis; import replacing vs. export oriented industrialisation; investment allocation criteria choice of technique.

**Capital formation:** Meaning and sources; capital – output ratio. Human capital: concept and utilisation. Foreign aid – forms and sources. Trade vs. aid. Transfer of technology.

**Recommended Readings:**

1. Ghatak, S. : An Introduction to Development Economics, Allen and Unwin, London.
2. Higgins, B. : Economic Development: Theory and Policies,  
Central Book Depot, Allahabad, 1963.
3. Kuznets, S. : Population, Capital and Growth, Heina Mann Educational Books, 1974.
4. Meier, G.M. : Leading Issues in Economic Development, Oxford University Press,  
New Delhi, 1995.
5. Thirlwall, A.P. : Growth and Development, Macmillan, London, 1999.
6. Todaro, M.P. : Economic Development in Third World, Oxford University, London.
7. Yotopoulous, P.A. & Nugent J.: Economics of Development, Harper and Row, New York, 1976.

**EOL310****Comparative Economic Systems****Credits : 5-0-0****Minor-I**

**Economic Systems:** Meaning, concept and features, Marxian classification; pre-capitalist societies. Capitalism; Socialism; mixed economy.

**Capitalism:** Mode of production and classification criteria. Consumer's sovereignty in private enterprise system and in planned economies.

**Minor-II**

Capitalism as a theoretical concept and as an existing system; the Reformulated capitalist economics.

**Socialism :** Marxian philosophy and interpretation of Marxian Theory of surplus value: crisis, breakdown and socialism; pre-requisites, problems and processes of socialist transformation; transformation of production relations, institutions and ideas.

**Major (including Minor-I and Minor-II)**

Planning, development priorities and resources allocation, accumulation, employment and skill – formation, income distribution. The developing economies of the Third World International economic relations between socialist and third world countries.

**Recommended Readings:**

1. Halm, George, N. : Economic Systems: A Comparative Analysis.
2. Louks, V.N. & Whitney, W.C. : Comparative Economic Systems.
3. Dalton, G. : Economic Systems and Society.
4. Willezynski, J. : Economics of Socialism.
5. Kolov, G.A. : Political Economy of Socialism.
6. Lavigne, M. : Economics of East European Socialist Countries and USSR.

**EOL 311**

**Accounting and Financial Management**

**Credits : 5-0-0**

**Minor-I**

**Meaning and Scope of Accounting:** Accounting concepts and conventions. Double entry system of accounting, Preparation of Journal, Ledger and Trial Balance.

Distinction between capital and revenue items. Preparation of trading and profit and loss account and balance sheet.

**Minor-II**

Cost accounting – Meaning and scope. Distinction between cost accounting and financial accounting. Advantages of cost accounting and financial accounting. Elements of cost: material, labour overheads. Preparation of Cost Sheet.

Elementary knowledge regarding standard costing. Budgetary control and Break – even analysis.

**Major (including Minor-I and Minor-II)**

Objectives and functions of Financial Management.

Introduction to Capital Budgeting Methods. Sources of raising funds – internal and external sources.

**Recommended Readings:**

1. S.N. Maheshwari : An Introduction to Accounting., Vikas Publishing House Pvt. Ltd.
2. Pandey, I.M. : Financial Management.
3. Ghosh, P.K. : Cost Accounting. National Publishing House, Darya Ganj, New Delhi.
4. Prasad, N.K. : Principles and Practices of Cost Accounting, Book Syndicate, Calcutta.

**EOL312 Computer Networks and Internet Applications**

**Credits : 4-0-1**

**Objective :** To enable the students to have understanding of various network designs, topologies and services provided by Networks.

**Minor-I**

**Introduction :** Network definition, network hardware and software, Network topologies, uses of computer networks, Transmission media, OSI Reference models, TCP/IP reference model, Comparison of OSI and TCP Reference models.

Analog and Digital Transmission, Switching, ISDN Services, Transmission in ATM  
Networking Devices : Repeaters, Routers, Bridges and Gateway.

Network Security and Privacy : Data Representation, Fundamentals of Data Compression  
Techniques and Cryptography.

**Minor-II**

**Introducing the Internet**

**Overview :** Description of the Internet – working and development, Architecture, Internet, Intranet and Extranet, Internet Domain Names and IP addresses, connecting LAN to Internet : Protocols, DHCP concepts, DNS, Proxy Server.

**Internet Connectivity :** Connection concepts, FDDI, ISDN, ADSL, PPP and ATM, web servers and browsers.

**Major (including Minor-I and Minor-II)**

**Electronic Mail and Telnet**

**Overview :** Working of email, Advantages of email, Understanding of Internet email addresses using Telnet to access a remote machine, Telnet commands, Telnet sessions.

**FTP**

Connection to an Anonymous FTP site using FTP to retrieve a file, common FTP commands.

**WWW-World Wide Web**

Working of WWW, Hypertext and Hypermedia, URL, Search engines.

**Recommended Readings :**

1. Learning to use the internet by Ernest Ackermann, Franklin, Beedle Associates Inc., 2002.
2. Kris Jony and Ken Cope, Internet Programming, Galgotia Publications.
3. Tannanbaum, A.S. : Computer Networks, Prentice Hall, 1992, 3<sup>rd</sup> Edn.
4. Stallings, William : Local Networks : An Introduction to Macmillan Publishing Co.
5. Stallings, William : Data and Computer Communication Macmillan Publishing Co.
6. Black : Data Networks (PHI) 1988.
7. Forouzon Behrouz: Data Communications, Tata McGraw Hill, 2007.