FACULTY OF ECONOMICS AND BUSINESS

SYLLABUS

FOR

(SEMESTER: I–IV)

B.Sc. (HONS. SCHOOL) ECONOMICS
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

(SEMESTER: V–VI)

B.Sc. (HONS. SCHOOL) ECONOMICS
(UNDER CREDIT BASED CONTINUOUS EVALUATION GRADING SYSTEM)

Examinations: 2019-20

GURUNANAKDEV 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)
(Credit Based Evaluation and Grading System)

## Scheme of Course

### Semester–I

<table>
<thead>
<tr>
<th>Code</th>
<th>Paper</th>
<th>Credits</th>
<th>Mid Sem. Marks</th>
<th>Pra. Marks</th>
<th>Theory</th>
<th>End Se. Marks</th>
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<tr>
<td>ENL101</td>
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<td>20</td>
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<td>80</td>
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<tr>
<td>PBL-121/PBL-122/HSL 101</td>
<td>Punjabi (Compulsory) -II OR ਪੰਜਾਬੀ ਧਨਾਣੀ OR *Punjab History &amp; Culture (Culture (1450-1716) (Special Paper in lieu of Punjabi Compulsory) (For those students who are not domicile of Punjab)</td>
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<td>**Drug Abuse: Problem, Management and Prevention (Compulsory)</td>
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Note:
1. * Special Paper in lieu of Punjabi Compulsory, for those students who are not domicile of Punjab
2. ** Credits will not be included in SGPA, Student can opt this paper whether in 1st or 2nd Semester.
3. 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.
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER SYSTEM)  
(CREDIT BASED EVALUATION AND GRADING SYSTEM)  

PAPERS OF THIS COURSE.  

**SEMESTER–III**

<table>
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<tr>
<th>Code</th>
<th>Paper</th>
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* Note:  Credits of Paper Environmental Studies will not be added in the Grand Total.  

**SEMESTER–IV**

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### B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER SYSTEM)
(UNDER CREDIT BASED CONTINUOUS EVALUATION GRADING SYSTEM)

#### SEMESTER–V

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<td>EOL302</td>
<td>Indian Economy</td>
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<td>EOL303</td>
<td>Economic History of India</td>
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<td>EOL304</td>
<td>International Economics</td>
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<td>EOL305</td>
<td>Econometrics</td>
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<td>EOL306</td>
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#### SEMESTER–VI

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<tr>
<td>EOL307</td>
<td>Regional Economics with Special Reference to Punjab Economy</td>
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<tr>
<td>EOL308</td>
<td>Entrepreneurial Development</td>
<td>4</td>
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<tr>
<td>EOL309</td>
<td>Development Economics</td>
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<td>EOL310</td>
<td>Comparative Economic Systems</td>
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<td>EOL311</td>
<td>Accounting and Financial Management</td>
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<tr>
<td>EOL312</td>
<td>Computer Networks and Internet Applications</td>
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COMMUNICATIVE ENGLISH–I

ENL-101   Credits: 02 (L=2, T=0, U=0)
Total Marks: 100
Mid Semester Marks:20
End Semester Marks:80
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Objective: To introduce students to the skills and strategies of reading and writing by identifying organizational patterns, spotting classification systems and understanding associations between ideas. This course will prepare students to read a variety of texts and also to communicate more effectively through writing. The course will also pay special attention to vocabulary building.

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.

Prescribed Text books:


SECTION–A


SECTION–B


SECTION–C


SECTION–D

PBL 121 धनायी खटनाही - I (Credit Based)

Credit: 2-0-0
Total Marks: 100
Mid Semester Marks:20
End Semester Marks:80

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

मैत्रमाळ-की

I. दे तेला (मंगल, उत्तरिस्रत मिथुन रिंधले, धूर्भ मिथुन नवलीसीमा)
वाउ तरल तेला पुलीकालमधील, अभिप्रुम्पत हिचे तेळ अन्ने बर्जी :
① जारी लोपुः मिथुन
② पधा राम घनसाळ
③ पुन: पुरुष मिथुन
(बर्जी रङ्ग नीलत, लहिडा-माट, रिमा-बसु, बाड़ि-वर्ण)

II. वातावरणी आवेगाच्याची डेखाव (पंढरी, भजल्ली, भंडारी, भंडी व्य भाव); रिसेव विनिमय,कर्मचार लोक (साप-भयर)

मैत्रमाळ-की

I. दे तेला (मंगल, उत्तरिस्रत मिथुन रिंधले, धूर्भ मिथुन नवलीसीमा)
वाउ तरल तेला पुलीकालमधील, अभिप्रुम्पत हिचे तेळ अन्ने बर्जी :
① हिटेंटील भाव
② पुन: पुरुष मिथुन
(बर्जी रङ्ग नीलत, लहिडा-माट, रिमा-बसु, बाड़ि-वर्ण)

II. विष्णु उपर (वीरती-वाज, महाभारत भावे कुठेउ विनिमय रुँदै) : 10 सेव रिउलिंगरी
(बलाम विन अने धन लती अभिनंद)

मैत्रमाळ-की

I. दे तेला (मंगल, उत्तरिस्रत मिथुन रिंधले, धूर्भ मिथुन नवलीसीमा)
वाउ तरल तेला पुलीकालमधील, अभिप्रुम्पत हिचे तेळ अन्ने बर्जी :
① टॅट साग तूरबुडी
② भूर्बुटा धूर्भ
③ ध. अनुपात मिथुन
(बर्जी रङ्ग नीलत, लहिडा-माट, रिमा-बसु, बाड़ि-वर्ण)

II. भूमी, भाग्य : हिचे भेटे दिचे भाग्य साबुन तुऱ भाग्य बतजळ
(15 वर्षानाम दे भूमी भाग्य अभिनंदण केलपूर्ण)

मैत्रमाळ-की

I. दे तेला (मंगल, उत्तरिस्रत मिथुन रिंधले, धूर्भ मिथुन नवलीसीमा)
वाउ तरल तेला पुलीकालमधील, अभिप्रुम्पत हिचे तेळ अन्ने बर्जी :
① मिठ वृन्ध घटसाळी
② मल्टील भाव
(बर्जी रङ्ग नीलत, लहिडा-माट, रिमा-बसु, बाड़ि-वर्ण)

II. अध्याच्य रिमिटिओज : पंढरी, रहड़ली व्य समाधान राजारसीम्यासू तास मोडेक्ट
Bo-eda आठे धार्मिकवृत चट्टी उत्पादित

1. धूम्र पेँटू ते चन जाना चेटनो। तव राजा हिंच्चे ते धूम्र पौड़े चटनो।
2. विश्वासही ते दंड भेंस धूम्र चलते उठ। तव राजा हिंच्चे हिंच धूम्र समाही ते। भेंसें धूम्र किमे ही राजा हिंचे दिवध मा संबंध ठी।
3. उजेद साने दे घड़णे आंद उठ।
4. येथे पैंट चल दल नेवत चले उं पृथ्वी सी बैंड अंबु बैंग ते बैंग चन धुधासमां हिंच लग संबंध ठी।
PBL-122: Punjabi Bhanshee
(In lieu of Punjabi Compulsory)

Credits: 2-0-0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks: 80
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

B.Sc. (Hons) Economics (Semester-I)
(Credit Based Evaluation and Grading System)

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

1. ਪੁਸਤਕ ਪੁੱਛਣਾ ਦੇ ਕਰਨ ਵਾਲਾ ਦੇਖਾਓ। ਉਹ ਕਰਨਾ ਦੀਰਿਣ ਦੇ ਪੁਸਤਕ ਪੁੱਛਣ ਲਗਦਾ ਹੈ।
2. ਹਿੰਦੀ ਅਧਿਆਪਕ ਦੀ ਸ਼ੁਰੂਆਤ ਦੀ ਪੁਸਤਕ ਪੁੱਛਣ ਲਗਦਾ ਹੈ। ਉਹ ਕਰਨਾ ਦੀਰਿਣ ਦੀ ਪੁਸਤਕ ਲਿਖਣ ਲਗਦਾ ਹੈ।
3. ਕੀ ਦੀਰਿਣ ਦੇ ਪੁਸਤਕ ਦੇ ਪੁਰਾਣ ਲਗਦਾ ਹੈ।
4. ਕੀ ਦੀਰਿਣ ਦੇ ਪੁਰਾਣ ਲਗਦਾ ਹੈ।

ਚੋਲੀ ਸ਼ੈਲੀ

1. ਪੁਸਤਕ ਪੁੱਛਣ ਦੇ ਕਰਨ ਵਾਲਾ ਦੇਖਾਓ। ਉਹ ਕਰਨਾ ਦੀਰਿਣ ਦੇ ਪੁਸਤਕ ਪੁੱਛ ਲਗਦਾ ਹੈ।
2. ਹਿੰਦੀ ਅਧਿਆਪਕ ਦੀ ਸ਼ੁਰੂਆਤ ਦੀ ਪੁਸਤਕ ਪੁੱਛਣ ਲਗਦਾ ਹੈ। ਉਹ ਕਰਨਾ ਦੀਰਿਣ ਦੀ ਪੁਸਤਕ ਲਿਖਣ ਲਗਦਾ ਹੈ।
3. ਕੀ ਦੀਰਿਣ ਦੇ ਪੁਸਤਕ ਦੇ ਪੁਰਾਣ ਲਗਦਾ ਹੈ।
4. ਕੀ ਦੀਰਿਣ ਦੇ ਪੁਰਾਣ ਦੇ ਕਰਨ ਵਾਲਾ ਹੈ।
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–I)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

HSL:101 Punjab History & Culture (1450-1716)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)

Credits: 2-0-0
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
1. Land and the People.
2. Bhakti Movement

SECTION-B
3. Life and Teaching of Guru Nanak Dev.

SECTION-C
5. Guru Hargobind.
6. Martyrdom of Guru Teg Bahadur

SECTION-D

Suggested Reading
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
Basic problems of an economy. Demand and Supply functions – an introductory view of price formation. Role of time element in price formation. Price, income and cross elasticities of demand; Elasticity of substitution and the relationship between price elasticity, income elasticity and elasticity of substitution, elasticity of supply.

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

SECTION C
Theory of production: Production function, isoquants, returns to a factor and returns to scale and their compatibility. Elasticity of substitution; economies of scale.

SECTION D
Cobb–Douglas 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 mutual relationship.

Suggested Readings:
EOL103: MACROECONOMICS–I

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

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, Equilibrium and disequilibrium.

SECTION B

Concepts of national income.
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.

SECTION C


SECTION D


Suggested Readings:

2. Studenski, P.A The Income of Nations, Part – 2, Theory and Methodology: Ch. 11, 16, Sections.
7. Ackley, G. Macroeconomic Theory, Macmillan, New York, 1969 (Chapters 1, 2, 6)
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–I)  
(CREDIT BASED EVALUATION AND GRADING SYSTEM)  

EOL104 : MATHEMATICS FOR ECONOMISTS– I  

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 fourSections (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  
Elements of Algebra; Simultaneous linear and quadratic equations and their economic applications, Sequence and series – A.P., G.P., H.P. and applications involving their use.  

SECTION B  
Permutations and combinations – Meaning, difference and practical problems involving permutations and combinations, Binomial theorem : Positive integral index, when the power is not a positive integer, binomial theorem for any index.  

SECTION C  
Trigonometry: Trigonometric ratios, t-ratios of 30°, 45°, 60° and 90° t-ratio of allied angles, addition and subtraction formula. Functions, Limits and Continuity.  

SECTION D  
Differentiation: Method for finding derivative from first principle, general theorems on differentiation, functions of functions rules, parametric equations, logarithmic and exponential functions, successive differentiations. Economic applications of simple differentiation.  

Suggested Readings:  
1. Monga, G.S. : Mathematics and Statistics for Economists  
EOL105 : STATISTICS – I

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

Diagramatic and graphic presentation of data.

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

Dispersion: Meaning, importance, absolute and relative measures of dispersion. Skewness, Moments and Kurtosis.

SECTION C
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.

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

Interpolation and Extraction, meaning, importance uses, assumption, methods of interpolation: graphic and algebraic merits and demerits.

Suggested Readings:

EOL106 : COMPUTER FUNDAMENTALS

Credits: 3–0–2
Total Marks: 100
Mid Semester Marks: 20
Practical Marks: 20
End Semester Marks: 60
Mid Semester Examination: 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

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, Features, Data types and operators in C.

Input Output Devices.

Input Devices and Functions.
Keyboard and teletypewriter terminals.
Joystick
Mouse
Track Ball and Touch Panels.
Magnetic Tapes and Cassettes.
Magnetic Disks.
Floppy and Winchester Disks
Optical Mark Reader (OMR)
Optical Character Reader (OCR)
Magnetic Ink Character Reader (MICR)

SECTION B

Output Devices and Functions
Visual Display Units (Monitor), CRT, LCD, LED and Plasma.
Plotters
Printers

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.

SECTION C

3.5 Secondary Memory (Storage Devices) with Details of FD, Cluster, FAT, Tracks.
Floppy Disk
Hard Disk
DAT
CD, DVD, Memory Card, Pen Drive.

Standardization of PC – Hardware Devices.
4.1 Concept of Motherboard, Microprocessor, Bus, Adaptor Cards.
4.2 Power Supply and Distribution.
4.3 Physical and Logical Security of Data at PC Level.

SECTION D

4.4 Modems and its types.
5. Data Representation.
6. Introduction to Number Systems and Character Codes.
7. Flow Charts.
8. Introduction to Program Development Life Cycle.

Recommended Texts:
1. Introduction to Computer Science by Francis Scheid.
2. PC Complete by Sybex
3. Computer Fundamental by S. Jain
5. Understanding Computers by Dinesh Kumar.
7. Windows based Computer System by Dr. Gurvinder Singh and Rachhpal Singh.
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–I)  
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION  
(Student can opt this Paper in 1st or 2nd Semester)

SOA : 101 - PROBLEM OF DRUG ABUSE

Time: 3 Hours  
Credit 3-0-0  
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

Meaning of Drug Abuse:
2) Consequences of Drug Abuse for:  
   Individual : Education, Employment, Income.  
   Family : Violence.  
   Society : Crime.  
   Nation : Law and Order problem.

SECTION – B

Management of Drug Abuse:
(i) Medical Management: Medication for treatment and to reduce withdrawal effects.  
(ii) Psychiatric Management: Counselling, Behavioural and Cognitive therapy.  
(iii) Social Management: Family, Group therapy and Environmental Intervention.

SECTION – C

Prevention of Drug abuse:
(i) Role of family: Parent child relationship, Family support, Supervision, Shaping values, Active Scrutiny.  
(ii) School: Counselling, Teacher as role-model. Parent-teacher-Health Professional Coordination, Random testing on students.

SECTION – D

Controlling Drug Abuse:
(i) Media: Restraint on advertisements of drugs, advertisements on bad effects of drugs, Publicity and media, Campaigns against drug abuse, Educational and awareness program  
References:

Objective: To introduce students to the skills and strategies of reading and writing by identifying organizational patterns, spotting classification systems and understanding associations between ideas. This course will prepare students to read a variety of texts and also to communicate more effectively through writing. The course will also pay special attention to vocabulary building.

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.

Prescribed Textbooks:

SECTION – A

Practical question on Note Making, Summarizing and Abstracting as given in The Written Word by Vandana R. Singh

SECTION – B

Practical question on Paragraph writing as prescribed in The Written Word by Vandana R. Singh

SECTION – C

Theoretical questions based on ABC of Good Notes as prescribed in The Written Word by Vandana R. Singh.


SECTION – D

Practical question on Essay writing from The Written Word by Vandana R. Singh

PBL 131: भौतिक विज्ञानी - II (Credit Based)

Credit : 2-0-0
Total Marks: 100
Mid Semester Marks: 20
End Semester Marks: 80
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

मैथमेटिक्स-

I. डे टेन (मैथ. उत्तराधिकार पिक्चर दिए, ध्वनी मिश्र मलालोगी)
बतू तत्त्व टेस्ट जीतीस्विनीटी. अभिवृद्धि दिए शेख शिखे बवालीवाल !
(१) समस्या का संख्या : ५
(२) वापसी मिश्र भाषा : स्वाभाविक का बाली
(३) मेंदो मिश्र मैथ. : जेठी दे भिड़ाने
    (बवालीवाल से नीलट, बवाली मात्र, दिप्त-समुद्र, बवाली वाला)

II. भौतिक विज्ञानी घटकात : पान/भुल, बेल्ट (भोजन, भिंडुब, बिंडिउट रेके कृकूँली)।यहां।

मैथमेटिक्स-णी

I. डे टेन (मैथ. उत्तराधिकार पिक्चर दिए, ध्वनी मिश्र मलालोगी)
बतू तत्त्व टेस्ट जीतीस्विनीटी. अभिवृद्धि दिए शेख शिखे बवालीवाल !
(१) मैथ. संख्या : बाली चा ग्राम
(२) बीवर मिश्र भाषा : द्वी प्यार रा अधिक्षण
    (बवालीवाल से नीलट, बवाली मात्र, दिप्त-समुद्र, बवाली वाला)
(३) भेदु तत्त्व : बलम दिश १० दिशमा (अभिभावक, यत्नवाल राउ दफ्तरि)
     जे द्विते उपलब्ध एव अधिकाम बतापूर्वेकाँ।

मैथमेटिक्स-णी

I. डे टेन (मैथ. उत्तराधिकार पिक्चर दिए, ध्वनी मिश्र मलालोगी)
बतू तत्त्व टेस्ट जीतीस्विनीटी. अभिवृद्धि दिए शेख शिखे बवालीवाल !
(१) उद्देश्य मिश्र हिदाय : बली देखाय बेठक
(२) उद्देश्य मिश्र : बुधी हुड्ड नैघ बेटी लागी
(३) पृथक सूत्र : खड्डभी
    (बवालीवाल से नीलट, बवाली मात्र, दिप्त-समुद्र, बवाली वाला)

II. भूगर्भ दे आश्वात (आश्वात दे भूगर्भ देव हिदिं) २०० भूगर्भियिया छै रो १०० अश्वात दे धर्म दिश दुलव दे अभिभाव बतापूर्वेकाँ (बलम दिश दे धर लागी)।
I. 

(१) भागीधर वेंट : झूंठ मिलाल

(२) वर्तमान वेंट टिकाओ : मृण बैंडबटत

(बाह्यीविद्या एवं सीटिल, वर्तकी मात्र, हिंदु-समूह, वर्तकी बाल)

II. मशहूर मूलिकों : ठंड, पकड़न्त, हिसेमेट, विशिष्ट, विशिष्ट हिसेमेट, मंजीपत

अंब-दून अन्दे पहलिभिख खडी उठायियाँ

1. पौध फूंट दे चाच ब्रजा रखीज। उद ब्रजा हिचैं दे पौध फूंटे नाटो।
2. विशिष्टकों दे बूँद पौध पूरा लाते उठ। उद ब्रजा हिचैं हिच पौध समभी दै। 
3. रात्रेव पौध दे खत्मत अंब उठ।
4. पौध मैंट चतुर राजा सेवक चटने उं ब्रजमत की दंड भौंगे दंप। उं दंप चतुर्वोज-पौध दिना उठ खर्रवा दै।
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER-II)  
(CREDIT BASED EVALUATION AND GRADING SYSTEM)  

PBL-132: ਭਾਸ਼ਾਵਾਦੀ ਪ੍ਰੀਤਾਤਮ
(In lieu of Punjabi Compulsory)  

Credits: 2-0-0 Total  
Marks: 100  
Mid Semester Marks: 20  
End Semester Marks: 80  
Mid Semester Examination: 20% weightage  
End Semester Examination: 80% weightage  

ਘਰ-ਚਾਰ  
ਵੇਵਰਾਂ  

ਮੱਧਨ ਮੁੱਖਾਂ: ਭਾਸ਼ਾ ਭਾਜ਼ ਦਰਿਆ  
(ਰੁਂਗਾ, ਭਾਸ਼ਾਵਾਦ, ਵਿਦੇਸ਼ਕ, ਹਿੰਦੀਆਂ ਨਾਲ ਦਰਿਆ)  

ਵੇਵਰਾਂ  
ਦਰਿਆ ਦਰਿਆ ਦਰਿਆ ਦਰਿਆ : ਘਰਾਣ, ਘਰਾਣ, ਦਰਿਆ ਦਰਿਆ, ਘੋਰੀ ਭਾਵੇ ਵੇਵਰਾਂਵਾਲਾ ਲਾਸ ਦਰਿਆ ।  

ਵੇਵਰਾਂ  
ਪੁਰਾਣੀ ਦਰਿਆ-ਗੁਣਵਾ  
ਮੱਧਨ ਦਰਿਆ (ਪੁਰਾਣੀ ਦਰਿਆ)  
ਮੰਧਰਾਵਾਲਕੋ (ਪੁਰਾਣੀ ਦਰਿਆ)  
ਮੰਧਰਾਵਾਲਕੋ (ਪੁਰਾਣੀ ਦਰਿਆ)  

 ਵੇਵਰਾਂ  
ਮੱਧ ਦਰਿਆ  

ਪ੍ਰੀਤਾਤਮ ਸੇਵਾਵਾਦਰ ਰੋਸੀਨ ਉਤਾਰਿਆਂ  
1. ਪੁਰਾਣੀ ਪ੍ਰੀਤਾਤਮ ਦੇ ਛਾਤ ਘੋਂ ਤਕਾਤੀ। ਉਹ ਘੋਂ ਦਿਛੈੜ ਦੇ ਪੁਰਾਣੀ ਪ੍ਰੀਤਾਤਮ ਸਵਾਲ ਕਰਣ ਲਗਦਾ।  
2. ਪੁਰਾਣੀ ਦੇ ਛਾਤ ਪੁਰਾਣੀ ਪ੍ਰੀਤਾਤਮ ਦੇ ਛਾਤ ਦੀ ਆਦਰਨੀ ਜਾਂ ਦਾ ਭੂਮਿ ਦੀ ਭਾਵ ਤੇ ਸਮਰਥਨ ਹੋਣ ਹੋਵੇ।  
3. ਪੁਰਾਣੀ ਦੇ ਛਾਤ ਪ੍ਰੀਤਾਤਮ ਦੇ ਛਾਤ ਭਾਵ ਹੋਵੇ।  
4. ਪ੍ਰੀਤਾਤਮ ਦੇ ਛਾਤ ਦੀ ਆਦਰਨੀ ਜਾਂ ਦਾ ਭੂਮਿ ਦੀ ਭਾਵ ਤੇ ਸਮਰਥਨ ਹੋਵੇ।
HSL:102 Punjab History & Culture (1717-1947)
(Special paper in lieu of Punjabi Compulsory)
(For those students who are not domicile of Punjab)

Credits: 2-0-0
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
1. Sikh Struggle for Sovereignty.
2. Ranjit Singh : Conquests, Administration and the Anglo-Sikh Relations.

Section-B
3. Anglo-Sikh Wars and the Annexation.

Section-C
5. Economic Changes: Agricultural

Section-D
8. Fairs and Festivals.

Suggested Reading
EOL108: MICROECONOMICS – II

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

SECTION B
Monopoly: Assumptions, equilibrium, monopoly power, supply curve, price discrimination, monopoly control and regulation. Monopolistic competition: assumptions, equilibrium, product differentiation, selling costs, excess capacity.

SECTION C
Price determination under monopsony and bilateral monopoly. Oligopoly; collusive and non-collusive models.

Critical evaluation of marginal analysis; average cost pricing; elementary treatment of limit pricing.

SECTION D
Baumol’s sales revenue maximization models. Marris and Williamson Models.

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

Suggested Readings:
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–II)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL109 : MACROECONOMICS– II

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

SECTION B
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.


SECTION C
Theories of Consumption and Investment: Absolute Income Hypothesis; Relative Income Hypothesis; Permanent Income Hypothesis. Classical theory of investment; Keynesian theory of investment; Accelerator theory of investment.

SECTION D
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.


Suggested Readings:

1. Shapiro, E. : Macroeconomic Analysis.
EOL110 : MATHEMATICS FOR ECONOMISTS – II

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
Differentiation: Implicit functions, partial derivatives, Euler’s theorem, total derivatives, Maxima and Minima, economic applications.

SECTION B
Integrations; Methods of integration, definite integrals, integration by parts, integration of rational fractions, economic applications of integration.

SECTION C
Linear Algebra: Matrices, types, products of matrices, inverse of matrix, rank of a matrix, determinants, simultaneous linear equations (Cramer’s rule).

Set theory: Union, intersection difference and symmetric differences.

SECTION D
Analytical Geometry: Coordinante of point, area of triangle: locus, the straight line, equation of a straight line, intersection of two straight lines.

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

Suggested Readings:
EOL111 : STATISTICS-II

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

SECTION B
Growth Curves: Properties, methods of estimation and applications of parabolic, geometric, exponential, modified exponential curves.

SECTION C

SECTION D
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, properties (without proof) of binomial, poisson and normal distributions, numerical examples based upon these distributions and their fitting.

Suggested Readings:

B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–II)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL112 : OPERATING SYSTEMS

Credits: 3–0–2
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

What is an Operating System – Evolution of OS.
Machine Language, Assembly, Compiler, Interpreter.

Types of Operating Systems with Examples.
MS DOS, Windows, Macintosh, Unix, Linux, Android.

Functions of Operating System.
Memory Management (Fixed Sized Partition, variable sized partition, Dynamic.
Memory Management with Reallocation technique, Paging, Demand Paging Techniques).
CPU Management (First Come First Served, Shortest job First, Round Robin Policy).
File Management.
I/O Device Management.
Command Interpreter.
Data Management.
Programme Development Tools.
Time Sharing.
Security.
Communication.
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–II)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

SECTION B

Brief History of MS – DOS.
Terminology for MS – DOS.
   File.
      Types of File (Data, Programme).
      Wild Cards (*, ?).

   Directory (Root, Single, Multi, Current)
Relative and Absolute Path.
Booting a System (ROM BIOS, self test, Port, IO.SYS, MSBIOS. SYS,

SECTION C

Internal and External Commands with Syntax (Arguments & Parameters)
Internal: cls, date, time, md, cd, copy con, dir,, type, ren, delete, rd, copy.
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.)

SECTION D

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, who am I, 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.
B. SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–II)  
(CREDIT BASED EVALUATION AND GRADING SYSTEM)  

DRUG ABUSE: PROBLEM, MANAGEMENT AND PREVENTION  
(Student can opt this Paper in 1st or 2nd Semester)  

SOA : 101 - PROBLEM OF DRUG ABUSE  

Time: 3 Hours  
Credit 3-0-0  
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  

Meaning of Drug Abuse:  
2) Consequences of Drug Abuse for:  
   Individual : Education, Employment, Income.  
   Family : Violence.  
   Society : Crime.  
   Nation : Law and Order problem.  

SECTION – B  

Management of Drug Abuse:  
(i) Medical Management: Medication for treatment and to reduce withdrawal effects.  
(ii) Psychiatric Management: Counselling, Behavioural and Cognitive therapy.  
(iii) Social Management: Family, Group therapy and Environmental Intervention.  

SECTION – C  

Prevention of Drug abuse:  
(i) Role of family: Parent child relationship, Family support, Supervision, Shaping values,  
    Active Scrutiny.  
(ii) School: Counselling, Teacher as role-model. Parent-teacher-Health Professional  
    Coordination, Random testing on students.  

SECTION – D  

Controlling Drug Abuse:  
(i) Media: Restraint on advertisements of drugs, advertisements on bad effects of drugs,  
    Publicity and media, Campaigns against drug abuse, Educational and awareness program  
(ii) Legislation: NDPs act, Statutory warnings, Policing of Borders, Checking  
    Supply/Smuggling of Drugs, Strict enforcement of laws, Time bound trials.  


References:

B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–III)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL201 : MICROECONOMICS-III

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
Pricing of factors: Meaning and concept; Marginal productivity theory of distribution; Euler’s
Theorem and its application to distribution; Modern theory of distribution; Macro theories of
distribution and their relevance to economic theory.

SECTION B
Factor pricing: Determination of rent, Ricardian theory of rent, Modern theory of rent, Quasi
rent, Wages and its determination, Interest : classical and lonable fund theory; Determination of
profit and theories of profit.

SECTION C
Equilibrium and its stability: Static and dynamic stability, existence, uniqueness and stability
of equilibrium; the Walrasian and Marshallian stability conditions; Application of dynamic
stability : Cob – web theorem.
Welfare Economics: Concept and meaning. Value Judgements, inter and intra-personal
comparisons; Pigovian concept of welfare.

SECTION D
Welfare Economics: Pareto Optimality Criteria of social welfare in consumption and
production. Deviations from pareto optimality and externalities, compensation criteria; Bergson
– Samuelson criteria. Theory of second best and Arrow possibility theorem.

Suggested Readings:
3. Layard and Walter : Microeconomics Theory.
EOL202 : MACROECONOMICS-III

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
Equilibrium in the product and money markets: IS and LM functions, changes in IS and LM functions, General equilibrium – changes in general equilibrium.

SECTION B
Elasticity of IS and LM functions and monetary and fiscal policies; Wage – price flexibility and general equilibrium; 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.

SECTION C

SECTION D
Macroeconomic Policy: Monetary policy – instruments, objectives and effectiveness in recession and boom.
Fiscal Policy: Objectives and Instruments, problems of stabilization policy.

Suggested Readings:
EOL203 : MATHEMATICS FOR ECONOMISTS – III

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

SECTION B

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

Linear Programming: Formulation of linear programming problem.

SECTION D

Suggested Readings:

EOL204 : AGRICULTURAL ECONOMICS

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
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.


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

SECTION D
Agricultural credit: Need, role of co–operative and commercial banks.


Suggested Readings:

EOL205 : INTRODUCTION TO GUI PACKAGES

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
Introduction to Windows – XP / Windows 7
Limitations of Non-GUI Systems
Advantages of GUI Systems
Evolution of Windows
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.

SECTION B
Composition of Desktop
Different ways to run programs
Using File Manager
Create files, Copy files, Move file, Rename files, Searching a file, Editing Files, Saving Files, Deleting Files, Printing Files

SECTION C
Basics of Windows XP
System requirement for installing windows.
The Desktop, the Taskbar, Start menu, Different options under All Programs, Documents, Settings, Find, Help, Run, Shutdown, About the My Computer Icon.

SECTION D
About My Networking Places Icon, Recycle Bin, Internet Explorer, Control Panel, Folders – Creation and Definition, Rules for File Names, Windows Explorer (Definition), Shortcut Icons with creation and definition, Service Pack 1, 2 and 3, Different options under All Programs.

References:
Alan Simpsons’ Windows Xp Bible.
Computer Fundamental by P.K.Sinha

NOTE: Credits has for 2 Practicals is equal to one (01) Lecture.
Teaching Methodologies
The Core Module Syllabus for Environmental Studies includes class room teaching and field work. The syllabus is divided into 8 Units [Unit-1 to Unit-VII] covering 45 lectures + 5 hours for field work [Unit-VIII]. The first 7 Units will cover 45 lectures which are class room based to enhance knowledge skills and attitude to environment. Unit-VIII comprises of 5 hours field work to be submitted by each candidate to the Teacher in-charge for evaluation latest by 15 December, 2019.

Exam Pattern:  
End Semester Examination- 75 marks  
Project Report/Field Study- 25 marks [based on submitted report]  
Total Marks- 100

The structure of the question paper being:

Part-A, Short answer pattern with inbuilt choice – 25 marks  
Attempt any five questions out of seven distributed equally from Unit-I to Unit-VII. Each question carries 5 marks. Answer to each question should not exceed 2 pages.

Part-B. Essay type with inbuilt choice – 50 marks  
Attempt any five questions out of eight distributed equally from Unit-I to Unit-VII. Each question carries 10 marks. Answer to each question should not exceed 5 pages.

Project Report / Internal Assessment:

Part-C. Field work – 25 marks [Field work equal to 5 lecture hours]  
The candidate will submit a hand written field work report showing photographs, sketches, observations, perspective of any topic related to Environment or Ecosystem. The exhaustive list for project report/area of study are given just for reference:

1. Visit to a local area to document environmental assets: River / Forest/ Grassland / Hill / Mountain / Water body / Pond / Lake / Solid Waste Disposal / Water Treatment Plant / Wastewater Treatment Facility etc.
2. Visit to a local polluted site – Urban / Rural / Industrial / Agricultural
3. Study of common plants, insects, birds
4. Study of tree in your areas with their botanical names and soil types
5. Study of birds and their nesting habits
6. Study of local pond in terms of wastewater inflow and water quality
7. Study of industrial units in your area. Name of industry, type of industry, Size (Large, Medium or small scale)
8. Study of common disease in the village and basic data from community health centre
9. Adopt any five young plants and photograph its growth
10. Analyze the Total dissolved solids of ground water samples in your area.
11. Study of Particulate Matter (PM$_{2.5}$ or PM$_{10}$) data from Sameer website. Download from Play store.
12. Perspective on any field on Environmental Studies with secondary data taken from Central Pollution Control Board, State Pollution Control Board, State Science & Technology Council etc.

Unit-I
The multidisciplinary nature of environmental studies
Definition, scope and importance, Need for public awareness (2 lectures)

Unit-II
Natural Resources: Renewable and non-renewable resources:
Natural resources and associated problems.
(a) Forest resources: Use and 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, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity, case studies.

(e) Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources, case studies.

(f) Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification.

- Role of an individual in conservation of natural resources.
- Equitable use of resources for sustainable lifestyles.

**Unit-III**

**Ecosystems**

- 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 ecosystem: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

**Unit-IV**

**Biodiversity and its conservation**

- Introduction – Definition: genetic, species and ecosystem diversity
- Biogeographical classification of India
- Value of biodiversity: consumptive use, productive use, social, ethical aesthetic and option values
- Biodiversity at global, national and local levels
- India as a mega-diversity nation
- Hot-spots of biodiversity
- Threats to biodiversity: habitat loss, poaching of wildlife, man wildlife conflicts
- Endangered and endemic species of India
- Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

**Unit-V**

**Environmental Pollution**

**Definition**

- Causes, effects and control measures of Air pollution, Water pollution, Soil pollution, Marine pollution, Noise pollution, Thermal pollution, Nuclear pollution
- 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

**Unit-VI**

**Social Issues and the Environment**

- From unsustainable to sustainable development
Urban problems and 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, 1986
Air (Prevention and Control of Pollution) Act, 1981
Water (Prevention and control of Pollution) Act, 1974
Wildlife Protection Act
Forest Conservation Act
Issues involved in enforcement of environmental legislation
Public awareness

Unit-VII
Human Population and the Environment
- Population growth, variation among nations
- Population explosion – Family Welfare Programmes
- 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

Unit-VIII
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

References:
2. Down to Earth, Centre for Science and Environment, New Delhi.
9. State of India’s Environment 2018 by Centre for Sciences and Environment, New Delhi
EOL209 : STATISTICS-III

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: Addition and multiplication laws; conditional probability; independence of events; Bayes’s Theorem.

Probability distributions: Binomial, Poisson and normal distributions; derivation of their properties; numerical problems based on these distributions; fitting of these distributions.

SECTION B

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, method of least squares and method of maximum likelihood (with more emphasis on the method of m.l.e.).

SECTION C

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.

SECTION D

Statistical Quality Control: Conceptual meaning; methods of construction (with stress on numericals) of mean chart and range chart.

Suggested Readings:
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–IV)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL210 : MONEY AND BANKING

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: 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.

SECTION B
Rate of Interest: Determination; factors affecting the level and structure of interest rates. Money
and capital markets: Role, constituents and functions.

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

SECTION D
Central Banking: Meaning and functions, techniques of credit control with special reference to
India, Recent monetary and credit policies in India.

Monetary Policy: Targets and indicators; macroeconomic objectives. Monetary policy in less
developed countries. Inflation: Types, causes and effects, measures to control inflation.

Suggested Readings:
   Hall, 1979.
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–IV)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL211 : INDUSTRIAL ECONOMICS

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
Definition: Nature and scope of Industrial Economics. History and development of Industrial Economics. Firm, industry, passive and active behaviour of the firm, Conceptual framework for the study of Industrial Economics. Organizational form and alternative motives of the firm.

SECTION B
Basic Concepts: Market, Market structure, Market power, Seller's concentration, entry conditions and economies of scale.

SECTION C
Growth of the firm: Acquisition, diversification, product differentiation, merger; constraints on Growth: demand, managerial and financial.

SECTION D
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.

Suggested Readings:
2. Devine, P.J.and others : An introduction to Industrial Economics.
B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–IV)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL212 : LABOUR ECONOMICS

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 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.

SECTION B

SECTION C
Growth, Structure and pattern of trade unions in India; 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.

SECTION D
State and social security of labour in India; Labour market reforms: Exit policy and measures imparting flexibility in labour markets; Globalisation and labour markets, International Labour Standard and its Impact.

Recommended Readings:

B.SC. (HONOURS SCHOOL) ECONOMICS (SEMESTER–IV)
(CREDIT BASED EVALUATION AND GRADING SYSTEM)

EOL213 : RELATIONAL DATABASE AND MANAGEMENT SYSTEM

Credits: 3–0–2
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: 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
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 Deictionary.
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.

SECTION B

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.

SECTION C

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).

Introduction to PL / SQL:
Relationship between SQL & PL / SQL.
Advantages of PL / SQL.
PL / SQL block structure.
Variable and Constant Declaration.
Declaration using attributes
% type attribute.
If else if ends if statement.

SECTION D

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.

NOTE: Credits for 2 Practicals is equal to one (01) Lecture.
EOL301 : PUBLIC FINANCE

Credits : 4-0-0

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.

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

Minor-II

Direct vs. Indirect Taxes: Proportional vs. Progressive taxes; Tax Structure in India; Tax Elasticity and Buoyancy of 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 Debt: Concept, Forms, Sources of Public Borrowings; public debt management, public debt sustainability. Fiscal policy and fiscal reforms in India.

Suggested Readings:
5. Om Parkash. Economics of Public Finance.
7. ------- Public Finance in Developing Countries.
8. Tyagi, B.P. Public Finance.
10. A.E.A. Readings in Economics of Taxation
11. Government of India
EOL302 : INDIAN ECONOMY

Credits : 4-0-0

Minor-I

Poverty, Unemployment and Human Development: Estimates of inequality and poverty, measures for eradication and their appraisal, HDI, India’s population policy and development.

Minor-II

Planning: From Central Planning to Indicative Planning, Relation between markets and planning for growth and decentralized planning.
Reforms: Liberalization, privatization and globalization; Rationale behind economic reforms.

Basic Issues in Agriculture: Trends in agricultural production and productivity; Factors determining productivity; New agricultural strategy and Green Revolution; Agricultural price policy and public distribution system, WTO and agriculture.

Major (including Minor-I and Minor-II)

Issues in Industrial Development: Industrial development, performance and prospects; Industry under liberalized regime; Public/Private/PPP sector in India.

External Sector: India's foreign trade- features, composition and direction; India's balance of payments; Recent Indian trade policy; Multinational Corporations (MNCs).

Recommended Readings:

EOL303  ECONOMIC HISTORY OF INDIA

Credits : 4-0-0

**Minor-I**
Indian Economy in 19th century: an overview of agriculture, industry, trade and British economic and commercial policies.

The agrarian science: Land revenue and Land tenure system; British land reform policy and after independence; commercialization of agriculture.

**Minor-II**
Famines: nature, causes and policy; rural indebtedness.

Population: estimates and growth; characteristics of population; fertility, mortality and sex ratio.

**Major (including Minor-I and Minor-II)**
Growth and evolution of industries; Growth of cotton textiles and iron and steel industry. Growth of railways and its impact.

Impact of British rule and the theory of economic drain.

**Recommended Readings:**

- Rustey, V. : Economic Development of India.
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).

Minor-II

**Commercial Policy:** 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; Various measures to correct deficit in the balance of payment.

Major (including Minor-I and Minor-II)

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

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

**Recommended Readings:**

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

Simple linear regression model (Two variables): Sources of disturbance terms, assumptions, least squares estimators and their properties.

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

**Minor-II**
Gauss-Markov’s theorem for a general linear regression model; testing significance of regression coefficients, concepts of R2 and R-2. Estimation of quadratic, semi-log and double-log functions; simple and compound rates of growth (with applications).

Concept of analysis of variance approach; One-way ANOVA (application only): Applications of ANOVA technique in regression analysis – testing significance of R2, significance of improvement in R2 due to additional explanatory variables, Chow’s test.

**Major (including Minor-I and Minor-II)**
Problems of multicollinearity, autocorrelation and heteroscedasticity: Nature, consequences, tests and remedies (elementary treatment).

**Recommended Readings:**

Ghosh, S.K. : Econometrics


Kelejian and Oats : Introduction to the Theory of Econometrics.

EOL306 : SAD AND STRUCTURE PROGRAMME
Credits: 3-0-2

MINOR-I

SAD
CAD – Context Analysis Diagram.
Entity Relationship Charts, ER Diagrams.

MINOR-II

Data Structures.
Introduction to Data Structures, Complexity of an algorithm, time space trade off.
Big O notation, Types of Data structures.
Queue, Stack, Array, Link List, Tree. Linear search and Binary search operations: Traversing,
Searching, Sorting, Merging, Deleting.

MAJOR (INCLUDING MINOR-I AND MINOR-II)

Introduction to C language, Features, Data types, Operators, Conditional statements, Iterative
controls, Array, Strings, Call by value and Call by reference functions, Structure and Union in C.
EOL307 REGIONAL ECONOMICS WITH SPECIAL REFERENCE TO PUNJAB ECONOMY

Credits: 4-0-0

Minor-I
Regional Economics: Concept, Scope and framework; Regional economic problems; Location factors; 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: Agriculture in Punjab, Growth & productivity. Green Revolution; role, performance & implications; Agricultural diversification, rationale, constraints and prospects; Agriculture credit & marketing; W.T.O and Punjab agriculture.

Major (including Minor-I and Minor-II)

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.
Govt. of Punjab : Statistical Abstracts.
Kaur, Paramjeet : Punjab Economy – Performance and Prospects
EOL308 ENTREPRENEURAL DEVELOPMENT

Credits: 4-0-0

Minor-I
Need, scope, importance and characteristics of entrepreneurship, special scheme for Technical Entrepreneurs (STED), importance and relevance. Identification of opportunities in the context of exposure to demand based, resource based, service based, import substitution and export promotion industries.

Minor-II


Major (including Minor-I and Minor-II)

Elements of marketing & sales management: Nature of Product and Market strategy, packaging and advertising, after sales service. Pollution Control; Social responsibility and business ethics.

References:


8. Department of Industrial Development  Incentives & Concessions for setting up industries in Backward Areas, Deptt of Industrial Development Govt of India, New Delhi.


11. Kahn, S. S  Entrepreneurship Development
EOL309 DEVELOPMENT ECONOMICS

Credits : 4-0-0

Minor-I


**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.

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:**

& Nugent J.
Minor-I
Economic Systems: Meaning, concept and features, Marxian classification of economic systems; pre-capitalist societies. Capitalism; Socialism and mixed economies. Mode of production as a classification criteria. Consumer’s sovereignty in private enterprise system and in planned socialist economies.

Minor-II
Capitalism as a theoretical concept; capitalism as an existing system; the reformulated capitalist economies of the world. Marxian philosophy and interpretation of Marxian theory of surplus value: crisis in capitalism, breakdown and socialism; pre-requisites, problems and processes of socialist transformation.

Major (including Minor-I and Minor-II)
Socialism: Transformation of production relations, institutions and ideas with special reference to USSR. Planning in socialist countries, balance approach, development priorities and resource allocation, employment and skill formation. International economic relations between socialist and third world developing countries.

Recommended Readings:

EOL 311 ACCOUNTING AND FINANCIAL MANAGEMENT

Credits : 4-0-0

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


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

Major (including Minor-I and Minor-II)

Objectives and functions of Financial Management.

**Capital Budgeting:** Introduction, Process, Traditional and Modern Methods of Capital Budgeting.

**Cost of Capital:** Cost of debt, Preference Shares and Cost of Equity, Weighted Average Cost of Capital.

**Sources of Raising Funds:** Internal and External Sources.

**Recommended Readings:**

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

MINOR-I


Networking Devices: Repeaters, Gateway, Bridge, Hub and Switch.


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 methods.

MAJOR (INCLUDING MINOR-I AND MINOR-II)

Internet Applications
Overview: Working of email, Advantages of email, Understanding of Internet email addresses. Telnet to access a remote machine, Telnet commands, Telnet sessions, Search Engine, World Wide Web, HTTP, SMTP, POP, PPP, SLIP and UDP.

FTP
Connection to an Anonymous FTP site using FTP to retrieve a file, common FTP commands. Web Browser: Internet Explorer, Google Chrome and Firefox.

Recommended Readings: