Guru Jambheshwar University of Science and Technology

Hisar-125001, Haryana

('A+' NAAC Accredited State Govt. University)

Scheme of Examination for Integrated Five Years Programme
[UG Four Years Programme (Single Major from First Semester) + PG One Year Programme)

Name of the Programme: Integrated B.Sc. (Hons/Hons with Research)-M.Sc. Economics
According to National Education Policy-2020

FIRST YEAR

SEMESTER-I

Type of Course	Course Code	Nomenclature of Paper/Course	Credits	Contact Hours	Internal Marks	External Marks	Total Marks	Duration of Exam (Hrs)
Discipline Specific Course	23ECO0101T	Introductory Microeconomics	4	5	30	70	100	3
	23ECO0102T	Introductory Macroeconomics	4	5	30	70	100	3
Minor Course/ Vocational Course	23ECO0103T	Introductory Mathematics for Economics	4	5	30	70	100	3
Multidisciplinary Course	23MDC0105T	Descriptive Statistics	3	4	25	50	75	2
Ability Enhancement Course	23AEC0101T	Hindi-I	2	2	15	35	50	1.5
Skill Enhancement Course	23SEC0114P	Basics of Excel Lab	3	6	25	50	75	2
Value Added Course	23VAC0107T	Teaching of Guru Jambheshwar Ji	2	2	15	35	50	1.5
			22	29	170	380	550	

SEMESTER-II

Type of Course	Course Code	Nomenclature of Paper/Course	Credits	Contact Hours	Internal Marks	External Marks	Total Marks	Duration of Exam (Hrs)
Discipline Specific Course	23ECO0201T	Intermediate Microeconomics	4	5	30	70	100	3
	23ECO0202T	Intermediate Macroeconomics	4	5	30	70	100	3
Minor Course/ Vocational Course	23ECO0203T	Intermediate Mathematics for Economics	4	5	30	70	100	3
Multidisciplinary Course	23MDC0114T	Statistical Methods	3	4	25	50	75	2
Ability Enhancement Course	23AEC0104T	English-II	2	2	15	35	50	1.5
Skill Enhancement Course	23SEC0115P	Data Visualization using Excel Lab	3	6	25	50	75	2
Value Added Course	23VAC0108T	Indian Polity and Economy	2	2	15	35	50	1.5
			22	29	170	380	550	

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GURU JAMBHESHWAR UNIVERSITY OF SCIENCE & TECHNOLOGY, HISAR

DEPARTMENT OF ECONOMICS

The Integrated B.Sc. (Hons./Hons. with Research in Economics) - M.Sc. Economics is an integrated undergraduate and post graduate course designed is accordance with the provisions of the NEP 2020 program. The course curriculum is structured to reflect the University's belief that multi-disciplinary thinking is the key to develop comprehensive understanding.

The course Integrated B.Sc. (Hons./ Hons. with Research in economics) - M.Sc. Economics under the NEP-2020 offers multiple entry and exist options for the students perusing in the course. The award of certificate, diploma and degree to the students pursuing B.Sc. (Hons./Hons. with Research in Economics) - M.Sc. Economics will be as mentioned below:

Year	Type of Certificate/Diploma/Degree	Qualification title/nomenclature and programme duration
1st Year	Undergraduate Certificate	Undergraduate Certificate in Economics
2nd Year	Undergraduate Diploma	Undergraduate Diploma in Economics in
3rd Year	Bachelor's degree	Bachelor of Science in Economics.
4th Year	Bachelor's degree (Honours/Honours with Research)	Bachelor of Science (Hons./ Honours with Research in Economics)
5th Year	Master's degree	Master of Science in Economics.

Note: In case of any confusion or conflict with the rules and regulation of the university, the rules and regulation of the university shall prevail and decision of he Vice Chancellor will be final.

The Integrated B.Sc: (Hons./ Hons. with Research in Economics)- M.Sc. Economics programme is divided into ten semesters (two semesters in first year, two semesters in the second year, two semesters in the third year, two semester in fourth year and two semester in fifth year). Every semester ordinarily shall be of 21 weeks of duration inclusive of teaching and examination. The Integrated B.Sc. (Hons./ Hons. with Research in Economics)- M.Sc. Economics Programme shall consist of total 232 credits and each paper shall consist of 04 **(five)** credits. The 04 credits shall be equivalent to 100 marks which shall be classified into the ratio of 70% external and 30% internal. The division of marks is as under:

Internal Assessment (Internal)
Distribution of weightage of 30 marks of Internal Assessment will be as per university Ordinance:

Minor Tests:	20 marks
Attendance & Co-curricular Activities (To be announced by the teacher):	10 marks
External Marks	70 marks
Max. Marks :	100 marks
Passing Marks :	40 marks

The Internal Assessment awarded to a student in any particular course will be based on performance of the students in two minor tests, Attendance and Co-curricular Activities (Assessment, Vivo-Voce, Presentation, Live assignment, Subject Quiz, Group Discussion, Case Study, etc.)

The students who fail in internal assessment as well as in aggregate will have the option to improve their score in the internal assessment giving a special chance to such students. However, no student will be allowed to improve his/her score of internal assessment, if he/she has already scored 40% marks in aggregate as well in external examination. A student who could not secure 40% marks in external will have to reappear in the external examination of the respective paper as per university rules.

Instructions to the examiners and students for the Major Test of 70 marks:4
The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus. In addition, eight more questions will be set comprising

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two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to the compulsory Question No. 1. All questions shall carry equal marks. The maximum time allotted for the major test is 03 (three) hours.
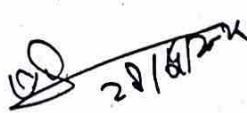
Integrated B.Sc. (Hons./ Hons. with Research)- M.Sc. Economics programme is a five year full time programme. The course structure of the programme is given us under:

SEMESTER-I								
Type of Course	Course Code	Nomenclature of Paper/Course	Credits	Contact Hours	Internal Marks	External Marks	Total Marks	Duration of Exam (Hrs)
Discipline Specific Course	23ECO0101T	Introductory Microeconomics	4	5	30	70	100	3
	23ECO0102T	Introductory Macroeconomics	4	5	30	70	100	3
Minor Course/ Vocational Course	23ECO0103T	Introductory Mathematics for Economics	4	5	30	70	100	3
Multidisciplinary Course	23MDC0105T	Descriptive Statistics	3	4	25	50	75	2
Ability Enhancement Course	23AEC0101T	Hindi-I	2	2	15	35	50	2
Skill Enhancement Course	23SEC0114P	Basics of Excel Lab	3@	6	25	50	75	3
Value Added Course	23VAC0107T	Teaching of Guru Jambheshwar (OR)#	2	2	15	35	50	2
			22	29	170	380	550	

* The students will be divided into two groups for tutorial class and each group will include around 20 students.
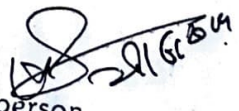@The practical exam will be taken by outside examiner.
The course prescribed by the university.

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SEMESTER-II

Type of Course	Course Code	Nomenclature of Paper/Course	Credits	Contact Hours	Internal Marks	External Marks	Total Marks	Duration of Exam (Hrs)
Discipline Specific Course	23ECO0201T	Intermediate Microeconomics	4*	5	30	70	100	3
	23ECO0202T	Intermediate Macroeconomics	4*	5	30	70	100	3
Minor Course/ Vocational Course	23ECO0203T	Intermediate Mathematics for Economics	4*	5	30	70	100	3
Multidisciplinary Course	23MDC0114T	Statistical Methods	3	4	25	50	75	2
Ability Enhancement Course	23AEC0104T	English-II	2	2	15	35	50	2
Skill Enhancement Course	23SEC0115P	Data Visualization using Excel Lab	3@	6	25	50	75	3
Value Added Course	23VAC0108T	Indian Polity and Economy (OR)#	2	2	15	35	50	2
			22	29	170	380	550	

* The students will be divided into two groups for tutorial class and each group will include around 20 students.

@The practical exam will be taken by outside examiner.

The course prescribed by the university.

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Detailed Syllabus follows...

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Integrated B.Sc. (Hons. / Hons. With Research) - M.Sc. Economics

Semester-I

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DSCA1

Course Code: 23ECO0101T

Introductory Microeconomics

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70
Time Allowed: 3 Hours

(Total Credits: 4)
(Theory)

Unit-I

Introduction to microeconomics, Demand and Supply functions, Market equilibrium and price determination, real and nominal prices, changes in market equilibrium, Elasticity of demand and supply and their applications.

Unit-II

Theory of consumer behaviour- I: The cardinal theory, the indifference theory, the consumer's surplus, some application of indifference.

Unit-III

Theory of consumer behaviour-II: The revealed preference theory, cost of living indices, recent developments in the theory of market demand.

Unit-VI

Choice under uncertainty: - Concept of certainty, risk and uncertainty, measurement of risk, attitude towards risk, reducing risk and uncertainty, insurance and gambling.

Suggested Readings

1. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw-Hill.
2. Mankiw, N. (2007). Economics: Principles and applications, 4th ed. Cengage Learning.
3. A.Koutsoyiannis, Microeconomics, 2nd Edition.
4. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw- Hill.
5. Snyder, C., Nicholson, W. (2010). Fundamentals of microeconomics. Cengage Learning.
6. Varian, H. (2010). Intermediate microeconomics: A modern approach, 8th ed. W. W. Norton.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

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DSCA2

Course Code: 23ECO0102T

Introductory Macroeconomics

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70
Time Allowed: 3 Hours

(Total Credits: 4)
(Theory)

Unit-I

Introductions to Macro Economics, Measuring the Value of Economic Activity: Variants of National Income and Product, Estimation of National Income and Product, National Accounts for a Two-Sector Economy, National Accounts for a Three-Sector Economy, National Accounts for a Four-Sector Economy, Price Indices and Real Economic Magnitudes.

Unit-II

Aggregate Supply and Demand: The Aggregate Supply Curve in short run (SRAS) and Long Run, The Aggregate Supply Curve and the Price Adjustment Mechanism, The Aggregate Demand Curve, Aggregate Demand Policy Under Alternative Supply Assumptions.

Unit-III

Inflation: Tracking Inflation, Inflation and cost of living, Inflation and Indexation, Cost and causes of hyperinflation, The cost of anticipated and unanticipated Inflation, Monetary and Fiscal Counter inflationary Policies.

Unit-IV

The Anatomy of Unemployment: The types and causes of unemployment, Full Employment, The Costs of Unemployment, Unemployment and Okun's Law, Evolution of the Natural Rate, Determinants of the Natural Rate of Unemployment.

Suggested Readings

1. Abel, A., Bernanke, B. (2016). Macroeconomics, 9th ed. Pearson Education.
2. Blanchard, O. (2018). Macroeconomics, 7th ed. Pearson Education.
3. Dornbusch, R., Fischer, S., Startz, R. (2018). Macroeconomics, 12th ed. McGraw-Hill.
4. Jones, C. (2016). Macroeconomics, 4th ed. W. W. Norton.
5. Mankiw, N. (2016). Macroeconomics, 9th ed. Worth Publishers

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

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MIC1
Course Code: 23ECO0103T

<u>Introductory Mathematics for Economics</u>

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70
Time Allowed: 3 Hours

(Total Credits: 4)
(Theory)

Objective: The objective of this paper is to develop an understanding of the subject of economics through the fundamentals of mathematics.

Course Contents

Unit 1: Elements of logic and proof – converse and contrapositive, necessary and sufficient conditions – proof by contradiction – mathematical induction.

Unit 2: Set theory: Concepts of sets subset and bounded set, ordered pairs, set operations, convex set, identification of convex set in budget line statement, production possibility frontier, indifference and isoquant curves, Cartesian product, – relations functions – the actual numbers, natural numbers, integers, rational and irrational numbers – absolute value and intervals –inequalities.

Unit 3: Functions- idea of polynomial, exponential, logarithmic, and trigonometric functions; Solution of linear and quadratic equations; limit and continuity of functions (single variable), understanding of difference equations, homogeneous functions.

Unit 4: Understanding of Graphs by function's equation and their uses in Economics.

Suggested Reading List:

Knut Sydsaeter and Peter J. Hammond (Latest Edition), Mathematics for Economic Analysis. Pearson Educational Asia: Delhi (reprint of 1st 1995 edition).

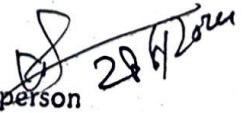Alpha C. Chiang (Latest Edition), Fundamental Methods of Mathematical Economics. McGraw Hill (3rd edition).
Hadley, G. (Latest Edition), Linear Algebra, Addison-Wesley.

Michael Hoy, John Livernois, Chris McKenna, Ray Rees and Thanasis Stengos,(Latest Edition) Mathematics for Economics, The MIT Press, Cambridege Massachusetts, England.

Taro Yamane (Latest Edition or Last Edition), Mathematics for Economists An Elementary Survey. Prentice-Hall of India Pvt. Limited, New Delhi.

Metha B.C. and Madnani. GMK (Latest Edition), Mathematics for Economists, Sultan chand & Sons, New Delhi.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

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MDC-1
Course Code: 23MDC0105T

Descriptive Statistics

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50
Time Allowed: 2 Hours

(Total Credits: 3)
(Theory)

Objective: The objective of this paper is to train the students to use the techniques of statistical analysis, which are commonly applied to understand and analyze economic problems. The paper also deals with simple tools and techniques, which will help a student in data collection, presentation, analysis and drawing inferences.

Course Contents

Unit 1: Measures of Central Tendency and Partition Values
Meaning of average - types of average: arithmetic mean, median, mode, geometric mean, harmonic mean- quartiles (individual series, discrete series and continuous series - deciles (for individual series, discrete series and continuous series) - percentiles (individual series, discrete series and continuous series.

Unit 2: Measures of Dispersion
Meaning of dispersion - types of dispersion: range, quartile deviation, mean deviation, standard deviation and variance (along with absolute measure, the relative measure or coefficient of each type of dispersion) - coefficient of variation - combined standard deviation - Lorenz curve (application in income distribution).

Unit 3: Skewness and Kurtosis
Skewness - meaning of skewness and symmetry in a distribution - symmetrical distribution - asymmetrical or skewed distribution - negatively skewed and positively skewed, measures of skewness: absolute measure - Karl Pearson's coefficient of skewness - Bowley's coefficient of skewness - definition, types and measures of kurtosis - Karl Pearson's coefficient of kurtosis.

Suggested Readings:

1. A.L. Nagar and R.K. Das (2006), Basic Statistics, Second Edition Oxford University Press, New Delhi.
2. S.P. Gupta (2000), Statistical Methods, Sultan Chand and Sons, New Delhi.

Note: The course contents of the courses having 03 credits will be distributed among 3 units and maximum marks will be assigned 75 (50 external: 25 internal). The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more question will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

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AEC1

पेपर/कोर्स का नाम:

हिंदी।
Course Code: 23AEC0101T

Maximum Marks: 50
Internal Assessment: 15
External Assessment: 35
Time Allowed: 1.5 Hours

(Total Credits: 2)
(Theory)

Programme Outcomes:

कार्यक्रम प्रतिफल: हिंदी भाषा को गहराई से तथा तर्कसंगत तथ्यों के साथ समझने के लिए क्रिटिकल रीडिंग महत्वपूर्ण और मददगार होती है। इस कोर्स के माध्यम से विद्यार्थी साहित्यिक पाठ्य सामग्री को विश्लेषणात्मक और व्याख्यात्मक तरीके से समझने का प्रयास करेंगे। यह पाठ्यक्रम हिंदी से इतर अन्य सभी विभिन्न विषयों में अध्ययनरत विद्यार्थियों को हिंदी साहित्य को व्यापक तरीके से पढ़ने, समझने एवं विद्यार्थियों में आलोचनात्मक दृष्टि विकसित करने का अवसर प्रदान करेगा।

पाठ्यक्रम विषय वस्तु:

पद्य भाग:
1 कबीर के दोहे (1 से 10)
2 तुलसी की कवितावली (1 से 10 पद्यांश)
3 मैथिलीशरण गुप्त की कविता- (भारत-भारती)
4 रामधारी सिंह दिनकर की कविता- (कलम आज उनकी जय बोल)
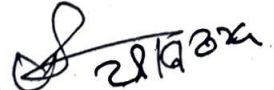5 महादेवी वर्मा की कविता- (मैं नीर भरी दुख की बदली)

गद्य भाग-
1 चंद्रधर शर्मा गुलेरी की कहानी- "उसने कहा था"
2 सियारामशरण गुप्त की कहानी- "काकी"
3 भीष्म साहनी की कहानी- "चीफ की दावत"
4 उषा प्रियंवदा की कहानी- "वापसी"
5 किसी प्रसिद्ध हिंदी कहानीकार की कहानी अथवा हिंदी उपन्यासकार के उपन्यास का आलोचनात्मक विश्लेषण।

निर्देश-

निर्धारित पाठ्यक्रम विषय वस्तु के दोनों भागों से प्रश्न पूछे जाएंगे। प्रत्येक खंड से 5-5 अंकों के 10 आलोचनात्मक प्रश्न व्याख्या संबंधी एवं समीक्षात्मक प्रश्न पूछे जाएंगे। और विद्यार्थी को 07 प्रशन के उतर देने है।

संदर्भ ग्रन्थ:
1 मध्यकालीन काव्य कुंज - सं. रामसजन पांडेय
2 हिंदी की प्रसिद्ध कहानियां- सं. अमरकांत
4 कथाभूमि- सं. चितरंजन मिश्र
5 तुलसीदास की आलोचनात्मक दृष्टि- डॉ रामविलास शर्मा
6 कबीर चिंतन- डॉ रमेश मिश्र
7 कबीर का सामाजिक दर्शन- डॉ प्रह्लाद मौर्य
8 दीपगति- महादेवी वर्मा

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SEC-1

Course Code: 23SEC0114P

Basics of Excel Lab

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50

(Total Credits: 3)
(Practical)

UNIT 1: GETTING ACQUAINTED WITH EXCEL

About Excel, Creating and working with Workbooks, using ranges and ranged data entry, editing rows and columns, Cell formatting, moving between Worksheets, Using Excel Help.

UNIT 2: FORMULAS

Creating formulas, Basic formulas, Relative References and Absolute References, Naming Ranges, Creating Names from Headings, moving to a Named Range, Using Named Ranges in Formulas, Managing Named Ranges, Conditional Formatting and Sorting data, Finding Cells with Conditional Formatting.

UNIT 3: WORKBOOKS AND WORKSHEETS

Sharing Workbooks, Highlighting Changes, Reviewing Changes, Using Comments, Compare and Merge Workbooks, Auditing Worksheets, Tracing Precedent and Dependent Cells, Tracing Errors, Error Checking, Using the Watch Window, Cell Validation, Using Outlines, Applying and Removing Outlines.

Suggested Readings:
1. Succeeding in Business with Microsoft® Excel 2013: A Problem-Solving Approach by Debra gross, Frank Akaiwa and Karleen Nordquist, Cengage learning publication.

2. Excel® 2016 Formulas and Functions by Paul Mc Fedries, Mr Excel Librarty

Note: The practical exam will be taken by outside examiner.

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VAC1

Course Code: 23VAC0107T

गुरू जम्भेश्वर जी की शिक्षाएं

Maximum Marks: 50
Internal Assessment: 15
External Assessment: 35
Time Allowed: 1.5 Hour

(Total Credits: 2)
(Theory)

(क) गुरू जम्भेश्वर जी का जीवन परिचय एवं उनके प्रमुख सिद्धान्त।

(ख) जम्भवाणी और जाम्भाणी साहित्य के प्रमुख ग्रंथ।

(ग) गुरू जम्भेश्वर जी के उन्नत्तीस धर्म–नियम।

(घ) गुरू जम्भेश्वर जी का पर्यावरण संरक्षण में योगदान।

(ड.) वर्तमान युग में गुरू जम्भेश्वर जी के सिद्धान्तों की प्रासंगिकता।

अनुशासित ग्रन्थः–

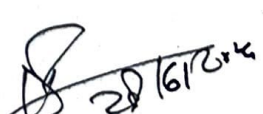| ग्रन्थ का नाम	लेखक का नाम
1. जम्भसार भाग 1–2	स्वामी श्री कृष्णाचन्द्र आचार्य
2. जाम्भोजी बिशनोई सम्प्रदाय और साहित्य भाग1–2	डॉ0 हीरालाल माहेश्वरी
3. शब्दवाणी–मूल और टीका	डॉ0 हीरालाल माहेश्वरी
4. जाम्भोजी की वाणी	डॉ0 सूर्य शंकर पारीक
5. जाम्भवाणी मूल संजीवनी व्याख्या	डॉ0 किशानाराम बिशनोई
6. गुरू जम्भेश्वर – विविध आयाम	डॉ0 किशानाराम बिशनोई
7. जाम्भा पुराण	स्वामी कृष्णानन्द
8. पर्यावरण संरक्षण और खेजड़ली बलिदान	डॉ0 बनवारी लाल सहू

गुरू जम्भेश्वर जीवन और साधना   डॉ0 किशानाराम बिशनोई

Note: The course contents of the courses having 02 credits will be distributed among 2 units and maximum marks will be assigned 50 (35 external: 15 internal). The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No. 1.

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Semester-II

DSCA3

Course Code: 23ECO0201T

Intermediate Microeconomics

Maximum Marks: 100   (Total Credits: 4)
Internal Assessment: 30   (Theory)
External Assessment: 70
Time Allowed: 3 Hours

Unit-I

Theory of production, the production function for single product, laws of production, the law of variable proportions, laws of returns to scale, the economies of scale, technical progress and production function.

Unit-II

Choice of optimal combination of factors of production: - Single decision of the firm, choice of optimal expansion path, the production function of multi product firm.

Unit-III

Theory of cost: cost function under traditional and modern cost theory, derivation of cost function from production function.
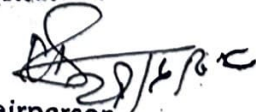
Unit-VI

Theory of revenue and equilibrium: Revenues- Average and marginal revenue, relation between AR and MR curves, AR, MR and elasticity, interactions of cost and revenue- condition of equilibrium of firm.

Suggested Readings

1. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw-Hill.
2. Mankiw, N. (2007). Economics: Principles and applications, 4th ed. Cengage Learning.
3. A.Koutsoyiannis, Microeconomics, 2nd Edition.
4. Bernheim, B., Whinston, M. (2009). Microeconomics. Tata McGraw- Hill.
5. Snyder, C., Nicholson, W. (2010). Fundamentals of microeconomics. Cengage Learning.
6. Varian, H. (2010). Intermediate microeconomics: A modern approach, 8th ed. W. W. Norton.

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

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DSCA4

Course Code: 23ECO0202T

Intermediate Macroeconomics

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70
Time Allowed: 3 Hours

(Total Credits: 4)
(Theory)

Unit-I

Consumption Function: Empirical Evidence on the Consumption Function, The Relative Income Hypothesis, The Permanent Income Hypothesis, The Life-Cycle Hypothesis.

Unit-II

Investment Function: Determinants of Business fixed investment; residential investment and inventory investment, The Marginal-Efficiency-of-Capital Approach, The Simple Accelerator, The Capital-Stock Adjustment Principle

Unit-III

The Money Supply: Measures of the Money Supply, the Loanable Funds Market, Changes in Interest Rate and Money Supply

Unit-IV

The Demand for Money, deriving the demand for money, Determining Interest rate, The Nominal and Real Interest Rates.

Suggested Readings

1. Abel, A., Bernanke, B. (2016). Macroeconomics, 9th ed. Pearson Education.
2. Blanchard, O. (2018). Macroeconomics, 7th ed. Pearson Education.
3. Branson, W. (2013). Macroeconomics: Theory and policy, 3rd ed, East West Press
4. Dornbusch, R., Fischer, S., Startz, R. (2018). Macroeconomics, 12th ed. McGraw-Hill.
5. Jones, C. (2016). Macroeconomics, 4th ed. W. W. Norton.
6. Mankiw, N. (2016). Macroeconomics, 9th ed. Worth Publishers

Note: The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

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Course Code: 23ECO0203T
<u>Intermediate Mathematics for Economics</u>

Maximum Marks: 100
Internal Assessment: 30
External Assessment: 70
Time Allowed: 3 Hours

(Total Credits: 4)
(Theory)

Objective: The objective of this paper is to train the students regarding the uses of derivatives for analysis of the subject.

Unit 1: Introduction of derivatives: monotonicity, concavity, and convexity of functions of a single variable; necessary and sufficient conditions for a maximum and minimum, simple use of derivatives.

Unit 2: Partial derivative: definition, rules of partial differentiation, Euler's theorem of homogenous functions; formation, order, and degree of partial differential equations.

Unit 3: Higher order of derivatives: Second order and partial derivatives, the relation between second order derivatives of homogeneous functions; linear partial differential equations of second and higher orders.

Unit 4: Economic applications of derivatives:total to marginal magnitudes, optimization of functions,slopes of curves, and their elasticity.

Suggested Reading List:

Knut Sydsaeter and Peter J. Hammond (Latest Edition), Mathematics for Economic Analysis. Pearson Educational Asia: Delhi (reprint of 1st 1995 edition).

Alpha C. Chiang (Latest Edition), Fundamental Methods of Mathematical Economics. McGraw Hill (3rd edition).
Hadley, G. (Latest Edition), Linear Algebra, Addison-Wesley.

Michael Hoy, John Livernois, Chris McKenna, Ray Rees and Thanasis Stengos,(Latest Edition) Mathematics for Economics, The MIT Press, Cambridege Massachusetts, England.

Taro Yamane (Latest Edition or Last Edition), Mathematics for Economists An Elementary Survey. Prentice-Hall of India Pvt. Limited, New Delhi.

Metha B.C. and Madnani. GMK (Latest Edition), Mathematics for Economists, Sultan chand & Sons, New Delhi.

> **Note:** The course contents of the courses having 04 credits will be distributed among 4 units and maximum marks will be assigned 100 (70 external: 30 internal). The maximum time duration for attempting the paper will be of 3 hours. The examiner is required to set nine questions in all. The first question will be compulsory consisting of seven short questions covering the entire syllabus consisting of 02 marks each. In addition to that eight more question will be set, two questions from each unit. The students shall be required to attempt five questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks.

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Course Code: 23MDC0114T
Statistical Methods

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50
Time Allowed: 2 Hours

(Total Credits: 3)
(Theory)

Objective: The emphasis of this paper is on understanding economic concepts with the help of statistical methods rather than learning statistics itself. Hence in this paper a student will be initiated into various economic concepts, which are amenable to statistical treatment. The paper also deals with simple tools and techniques and drawing inferences about various statistical hypotheses.

Course Contents

Unit 1: Sampling & Correlation

Population and sample, Principal steps in a sample survey; methods of sampling; the role of sampling theory; properties of random samples, sampling procedure of NSSO
Karl Person's correlation coefficient; Spearman's rank correlation coefficient

Unit 2: Analysis of Time Series

Definition and components of a time series - mathematical models - additive model and multiplicative model of a time series - seasonal variations - measuring through -a) simple average method- and ratio to trend method - cyclical variations - measuring through residual method - trend and its measurement through a) method of moving averages and method of least squares (annual production, sales, profit. etc.) - fitting a second degree trend (population growth) - growth curves, logistic curve and Gompertz curve - interpolation and extrapolation
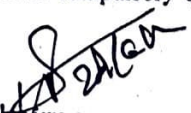
Unit 3: Index Numbers

Definition of index number - types of index number - price index - quantity index -value index - simple index number - weighted index number - construction of index number - problems in construction - methods in construction - simple and weighted - Laspeyre's price index (CPI in India)-Paasche's price index - Fisher's ideal index - splicing of index number - deflating (real wages).

Suggested Readings:

1. A.L. Nagar and R.K. Das (2006), Basic Statistics, Second Edition Oxford University Press, New Delhi.
2. S.P. Gupta (2000), Statistical Methods, Sultan Chand and Sons, New Delhi.

Note: The course contents of the courses having 03 credits will be distributed among 3 units and maximum marks will be assigned 75 (50 external: 25 internal). The maximum time duration for attempting the paper will be of 2 hours. The examiner is required to set seven questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 2.5 marks each. In addition to that six more question will be set, two questions from each unit. The students shall be required to attempt four questions in all selecting one question from each unit in addition to compulsory question No. 1. All questions shall carry equal marks i.e. 12.5 marks.

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AEC2

Course Code: 23AEC0104T

English-II

Maximum Marks: 50
Internal Assessment: 15
External Assessment: 35
Time Allowed: 1.5 Hour

(Total Credits: 2)
(Theory)

Objectives To enable the students to learn various types of the reading skills

To improve the understating of the students beyond the text

Outcomes The students will be able to read the text from different perspectives. The students will able to visualize scenes and characters, creating connections to personal experiences, evaluating language and literary methods, and asking questions about the text are all examples of creative reading techniques. It may also entail investigating various interpretations and views, as well as taking into account the social, historical, and cultural context in which the text is created.

Unit-I

Introduction to Critical Reading; Basic Types of Critical Reading

Unit – II

Literary Text Reading:

Short stories: Oscar Wilde's Happy Prince

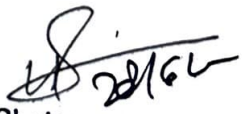Poem: Rabindranath Tagore's Where The Mind is Without Fear

Unit – III

Non-Fiction Reading:

Francis Bacon's 'Of Studies'

Charles Lamb's 'The Poor Relations'

Note: The course contents of the courses having 02 credits will be distributed among 2 units and maximum marks will be assigned 50 (35 external: 15 internal). The maximum time duration for attempting the paper will be of 1.5 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set

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Suggested Readings:

Bacon, Francis. "Of studies." 1601. *Quotidiana*. Ed. Patrick Madden. 18 Jan 2007. 20 Jul 2023 <http://essays.quotidiana.org/bacon/studies/>.

Bacon, Francis. *Of Seeming Wise; and, of Studies*. Ampersand Press for W. Irving Way, 1930.

Koda, Keika. *Insights into Second Language Reading: A Cross-Linguistic Approach*. New York: Cambridge University.

Littleifair, Alison Barbara. *Reading All Types of Writing: The Importance of Genre and Register for Reading Development*. Virginia: Oxford University Press, 1991. Print.

Roy, Arundhati. 'Azadi: The Only Thing Kashmiri Wants'. Edited by Roy, Arundhati etal. *Kashmir: The Kashmir for Freedom*. E-Book ISBN: 9781844678266. Web.

< *http://prfjk.org/wp-content/uploads/2018/06/Tariq-Ali-Hilal-Bhatt-Arundhati-Roy-Kashmir-The-Case-for-Freedom-2011.pdf*>

Tagore, Rabindranath. *Where the Mind Is without Fear: Rabindranath Tagore: An Exhibition on Tagore and Theater, on the Occasion of the 14th Bharat Rang Mahotsav, 2012*. National School of Drama, 2012.

Wilde, Oscar, et al. *The Happy Prince*. Oxford University Press, 2008.

https://blog.janicefrancisco.com/en/reading-creativity

https://blog.lillypad.ai/types-of-reading-skills/

https://bloomsoup.com/creative-reading/

https://eprints.umm.ac.id/35712/3/jiptummpp-gdl-junaidin20-47994-3-chapter-i.pdf

https://eric.ed.gov/?id=ED020090

https://unifyhighschool.org/types-of-reading-skills/

https://www.englishbix.com/4-types-of-reading-skills/

https://www.jstor.org/stable/40038453

https://www.planetspark.in/blogs/types-of-reading-skills

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SEC-2

Course Code: 23SEC0115P

Data Visualization using Excel Lab

Maximum Marks: 75
Internal Assessment: 25
External Assessment: 50

(Total Credits: 3)
(Practical)

UNIT 1: WORKING WITH DATA
Consolidating Data, Using what-if analysis, The Hlookup and Vlookup Functions, the IF, AND, and OR Functions, Recording Macros, Running and Deleting Recorded Macros, The Personal Macro Workbook

UNIT 2 : CHARTS
Creating Charts, Changing the Chart Type, Changing the Data Range, Switching Column and Row Data, Choosing a Chart Layout, Formatting Chart, Inserting Objects into a Chart, Changing Chart Labels, Changing Axes Display, Applying Chart Analysis Lines

UNIT 3: PIVOT TABLES
Creating Pivot Tables and Pivot Charts, Manipulating a Pivot Table, Changing Calculated Value Fields, Sorting and Filtering Pivot Table Data

Suggested Readings:

1. Data Visualization in ExcelA Guide for Beginners, Intermediates, and Wonks by Jonathan Schwabish, Published May 26, 2023 by A K Peters/CRC Press.
2. Succeeding in Business with Microsoft® Excel 2013: A Problem-Solving Approach by Debra gross, Frank Akaiwa and Karleen Nordquist, Cengage learning publication.

3. Excel® 2016 Formulas and Functions by Paul McFedries, MrExcel Librarty

Note: The practical exam will be taken by outside examiner.

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VAC 2

Course Code: 23VAC0108T

Indian Polity and Economy

Maximum Marks: 50
Internal Assessment: 15
External Assessment: 35
Time Allowed: 1.30 Hours

(Total Credits: 2)
(Theory)

Unit I

Indian conception of well-organised Polity and flourishing Economy as expounded in the foundational texts. The notion of Bharartavarsha as a Chakravarti-Kshetra and important attributes of Chakravartin. King as the protector of Dharma. King as the strength and support of the weak.

Unit II

King as the protector of Varta. King as the protector of the times. Meaning of Varta: Krishi, Gopalana and Vanijya forming the basis of Varta and the core of economic activity in society. The importance of sharing. Grama as the centre of the polity.
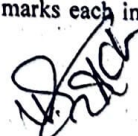
Suggested Readings:

Majumdar, R.C. "The Bharata War." In the Bharata War and Puranic Genealogies, edited by D.C. Sircar. University of Calcutta, 1969.p.11.

Sircar, D.C. 'Myth of the Great Bharata War." In The Bharata War and Puranic Genealogies, edited by D.C. Sircar. University of Calcutta, 1969.Ibid.,p.23.

Chakrabarti, Dilip K. Nationalism in the Study of Ancient Indian History. New Delhi: Aryan Books International, 2021.pp.25.27

Chattopadhyaya, Braja Dulal. Studying Early India: Archaeology, Texts, and Historical Issues. Delhi: Permanent Blac, 2003,pp. 34-36.8. Majumdar, R.C. The Age of Imperial Unity. Bombay: Bharatiya Vidya Bhavan, 1960.

Note: The course contents of the courses having 02 credits will be distributed among 2 units and maximum marks will be assigned 50 (35 external: 15 internal). The maximum time duration for attempting the paper will be of 1.5 hours. The examiner is required to set five questions in all. The first question will be compulsory consisting of five short questions covering the entire syllabus consisting of 3 marks each. In addition to that four more question will be set, two questions from each unit. The students shall be required to attempt three questions in all selecting one question from each unit in consisting of 10 marks each in addition to compulsory question No. 1.

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