

DEPARTMENT OF MATHEMATICS

TEACHING PLAN

B.Com. (Honours/General) Course under CBCS Year I: Semester I

Subject Code	Topic/Papers	Marks
AECC 1.1Chg	Language: Communicative English - 50 Indian Language - 50	100
GE 1.1 Chg	Microeconomics I & Statistics (50+50)	100
CC 1.1 Chg	Business Laws	100
CC 1.2 Chg	Principles of Management	100
CC 1.1 Ch	Financial Accounting - I	100

►Important Note for the Students:----

1	Internal Assessment Examination : 10 Marks	►To be held in the college: 4 th week of November, 2019
2	Semester-end University Examination: 40 Marks	►To be held in other college under CU Exam. Centre : 1 st week of January, 2020
3	University/College Question Pattern	►Multiple Choice Question(MCQ) Pattern

GE 1.1 Chg: Microeconomics I & Statistics (50+50=100 Marks)		Internal Assessment: 20 Marks Semester-end Exam: 80 Marks Total :100 Marks	
Module II: Statistics(50 Marks)		Internal Assessment: 10 marks Semester-end Exam: 40 marks Total : 50 marks	
Unit	TOPIC: DETAILS	Teacher	No. of Lectures // Marks Allotted // Teaching Time
1	Fundamentals: Definition of Statistics, Scope and limitation of Statistics, Attribute and variable, Primary and secondary data, Method of data collection, Tabulation of data, Graphs and charts, Frequency distribution, Diagrammatic presentation of frequency distribution.	DM2	8 classes 8 marks July--
2	Measures of Central Tendency: Meaning of central tendency, Common measures – mean (A.M., G.M., H.M.) median and mode, Partition values- quartiles, deciles and percentiles, Applications of different measures.	DM2	8 classes 8 marks
3	Measures of Dispersion: a) Meaning of dispersion, Common measure– range, quartile deviation	DM2	4 classes 4 marks
	b) Mean deviation and standard deviation; Relative measures of dispersion, Combined standard deviation, Applications of different measures.	DM1	4 classes 4 marks
4	Moments, Skewness and Kurtosis: Different types of moments and their relationships, Meaning of skewness and kurtosis, Different measures of skewness, Measure of kurtosis, Applications of different measures.	DM1	8 classes 8 marks
5	Interpolation: Finite differences, Polynomial function, Newton's forward and backward interpolation formula, Lagrange's interpolation formula.	DM2	8 classes 8 marks

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B.Com. (Honours/General) Course under CBCS Year 2: Semester: III

Subject Code	Topic/Papers	Marks
SEC 3.1 Chg	Information Technology & Its Application in Business (Theory -50 + Practical- 50)	100
GE 3.3 Chg	Business Mathematics & Statistics	100
CC3.1 Ch	Financial Accounting II	100
CC3.2 Ch	Indian Financial System	100

► Important Note for the Students:----

1	Internal Assessment Examination : 20 Marks	►To be held in the college: 3 rd week of November, 2019
2	Semester-end University Examination: 80 Marks	►To be held in other college under CU Exam. Centre : 3 rd week of December. 2019
3	University/College Question Pattern	►Multiple Choice Question(MCQ Pattern)

GE 3.3 Chg: Business Mathematics & Statistics (Marks 50+50= 100)	Internal Assessment: 20 Marks Semester-end Exam: 80 Marks Total :100 Marks
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Module I: Business Mathematics(50 Marks)	Internal Assessment: 10 marks Semester-end Exam: 40 marks Total : 50 marks
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Unit	TOPIC: DETAILS	Teacher	No. of Lectures // Marks Allotted // Teaching Time
1	Permutations and Combinations: Definition, Factorial Notation, Theorems on Permutation, Permutations with repetitions, Restricted Permutations; Theorems on Combination, Basic identities, Restricted Combinations	DM2	8 classes 8 marks
2	Set Theory: Definition of set, Presentation of sets, Different types of sets- Null set, Finite and infinite Sets, Universal set, Subset, Power set etc.; Set Operations, Law of algebra of Sets.	DM1	8 classes 8 marks
3	Binomial Theorem: Statement of the theorem for positive integral index, General term, Middle term, Simple properties of binomial coefficients.	DM2	8 classes 8 marks
4	Logarithm: Definition, Base and Index of Logarithm, General properties of Logarithm, Common Problems.	DM2	8 classes 8 marks
5	Compound Interest and Annuities: Simple AP and GP Series, Different types of interest rates, Net present value, Types of annuities, Continuous compounding, Valuation of simple loans and debentures, Problems relating to Sinking Funds.	DM1	8 classes 8 marks

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Module II : Statistics(50 Marks)		Internal Assessment: 10 marks Semester-end Exam: 40 marks Total: 50 marks	
Unit	TOPIC : DETAILS	Teacher	No. of Lectures // Marks Allotted // Teaching Time
6	Correlation and Association: Bivariate data, Scatter diagram, Pearson's correlation coefficient, Spearman's rank correlation, Measures of association of attributes.	DM1	8 classes 8 marks
7	Regression Analysis: Least squares method, Simple regression lines, properties of regression, Identification of regression lines.	DM1	8 classes 8 marks
8	Index Numbers: Meaning and types of index numbers, Problems of constructing index numbers, Construction of price and quantity indices, Test of adequacy, errors in index numbers, Chain base index numbers; Base shifting, Splicing, Deflating, Consumer price index and its uses.	DM2	8 classes 8 marks
9	Time Series Analysis: Causes of variation in time series data, Components of time series, additive and multiplicative models, Determination of trend by semi-average, moving average and least squares(of linear, quadratic and exponential trend) methods; Computation of seasonal Indices by simple average, ratio-to-moving average, ratio-to-trend and link relative methods; Simple forecasting through time series data.	DM2	8 classes 8 marks
10	Probability Theory: Meaning of probability; Different definitions of probability; Conditional probability; Compound probability; Independent events, Simple problems	DM1	8 classes 8 marks

B.Com. (Honours/General) Course Structure under **CBCS Year 3: Semester: V**

Subject Code	Topic/Paper	Marks
CC 5.1Ch	Auditing & Assurance	100
CC 5.2 Ch	Taxation II	100
DSE 5.1 A*	Economics II and Advanced Business Mathematics	100
DSE 5.2 A*	Corporate Accounting	100

► Important Note for the Students:----

1	Internal Assessment Examination : 10 Marks	►To be held in the college: 4 th week of November, 2019
2	Semester-end University Examination: 40 Marks	►To be held in other college under CU Exam. Centre : 1 st week of January, 2020
3	University/College Question Pattern	►Multiple Choice Question(MCQ) Pattern

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Module II: Advanced Business Mathematics (50 Marks)		Internal Assessment: 10 Marks Semester-end Exam: 40 Marks Total : 50 Marks	
Unit	TOPIC: DETAILS	Teacher	No. of Lectures // Marks Allotted // Teaching Time
1	Functions, Limit and Continuity: Definition of functions, Classification of functions, Different types of functions(excluding trigonometrical functions), Elementary ideas of limit and continuity through the use of simple algebraic functions.	DM1	[L 08 / Marks:08]
2	Differentiation and Integration: Derivative and its meaning; Rules of differentiation; Geometrical interpretation; Significance of derivative as rate measure; Second order derivatives; Integration as anti-derivative process; Standard forms; Integration by substitution.	DM1	[L 08 / Marks:08]
3	Applications of Derivative and Integration: Maximum and minimum values ; Cost function ; Demand function ; Profit function; Increasing and decreasing functions ;	DM1	[L 04 / Marks:04]
	Rate measure, Applied problems on Average cost (AC), Average variable cost (AVC), Marginal cost (MC), Marginal revenue (MR), Simple area calculation by integration method.	DM2	[L 04 / Marks:04]
4	Determinants: Determinants upto third order, Elementary properties of determinants, Minors and co-factors, Solution of a system of linear equations by Cramer's Rule (up to three variables).	DM2	[L 08 / Marks:08]
5	Matrix: Definition of matrix, Types of matrices, Operations on matrices (addition, subtraction, multiplication), Adjoint of a matrix, Inverse of a matrix , Solution of a system of linear equations by matrix inversion method (up to three variables).	DM2	[L 08/ Marks:08]