DEPARTMENT OF MATHEMATICS AND STATISTICS

MEETING OF BOARD OF STUDIES

MINUTES

The Board of Studies in Mathematics and Statistics of SIES College of Commerce & Economics (Autonomous) , Sion East , Mumbai 400 022 held on Monday, 10th and 11th November 2020 at 4.00 pm / 11.00 a.m by Online Mode on MS Teams.

Following members were present:

Sr.No.	Name	Designation
1	Chairperson (HOD)	Ms. Sangeeta Kore
2	Faculty Members	Mr. Amit Khatri (B.Com.) Ms. Reema Castelino (B.Com FM) CA Darshak Doshi (B.Com A&F) Mr. Ajay Gupta (B.Sc IT) Mr. Vinayak Krishnan (B.M.S.)
3	Subject Expert from Other University	Dr. Sanjeev Sabnis Professor , Department of Mathematics IIT , Mumbai. Dr. Rajendra Gurao Principal, SNDT college of Arts & SCB College of Commerce & Science for women , Mumbai.

4	One Expert selected by Vice-Chancellor from the six recommended by the College Principal	Dr. Annapurna Shankarnarayanan, Vice Prin.(Arts), St. Xavier's College (Autonomous)
5	One Representative Industry / Corporate Sector / Related Field	Mr. Moorthy Konar Associate Vice President , S.B.I. Life Insurance Co. Ltd.
6	P G Alumni	CA CS Divya Krishnan Naik Visiting Faculty
7	Outside Subject Expert	Dr. Dnyaneshwar Doke Principal , M.L.Dahanukar College of Commerce
8	Other Members of Faculty, if any.	Mrs Neha Palshetkar (B.M.S.) Ms. Josephine Mathew (B.Com B&I) Mr. Manish Mirgh (B.Com B&I)

The Chairman, Ms. Sangeeta Kore welcomed and introduced the members of BOS.

B.Com. (Accounting & Finance)

CA Darshak Doshi, Faculty from Department of Bachelors of Commerce (Accounting & Finance), presented the syllabus of Business Mathematics (Semester II) along with pattern of examination. Thereafter the same was discussed by the members.

Business Mathematics:

Following suggestions/observations were made:

Name of the member	Suggestions/observations
Dr. Sanjeev Sabnis	To reframe Module 5
Dr. Annapurna Shankarnarayanan	Concerned about the time involved in assignment and project related work at internal assessment

Mr. Moorthy Konar	To introduce Insurance Products
CA CS Divya Naik	To introduce Time value of money for 1st year as many students in B. Com (A&F) appear for CA Foundation Exam.

It was decided to incorporate the following changes in Proposed syllabus presented before the meeting.

Particulars as per proposed syllabus	Changes as approved in the meeting
Module-2: Profit and Loss, Discount, Commission and Brokerage (Renamed)	**Module-2: Profit and Loss, Discount, Commission and Brokerage (approved, without further changes)**
Module-5: Applications in Investment Management 1. Meaning, Measuring Expected Return (Using Probability) 2. Meaning, Measuring Total Risk (Using Standard Deviations) 3. Meaning, Measuring Systematic and Unsystematic Risk (Using Covariance) 4. Meaning, Measuring Risk of Portfolio (Using Correlation) 5. Meaning, Measuring Volatility (Using Beta)	**Module-5: Applications in Investment Management (Reframed)** Introduction to concepts of Probability, Standard deviation, Covariance, Correlation, Beta. (Simple Practical Problems involving application in Investment Management on the above Concepts) **(Newly included, approved with suggestions)**

Since the course is focusing on Accounting and Finance and we have a separate course on Banking and Insurance. Hence the suggestion by Mr. Moorthy Konar to introduce Insurance Products is not incorporated.

The Suggestion by CA Divya Naik to incorporate Time value of money could not be considered as the concept is taught in subject of Financial management in Sem I.

B.Com. (Financial Markets)

Ms. Reema Castelino, Faculty from B. Com Financial Markets, presented the syllabus of Business Mathematics (Sem I) & Business Statistics (Sem II) along with pattern of examination. Thereafter the same was discussed by the members.

There were no changes suggested to Business Mathematics, however, following suggestions/observations were made for Business Statistics:

Business Statistics :

Name of the member	Suggestions/observations
Dr. Sanjeev Sabnis	**Module 4:** to represent the contents of

	regression topic - meaning of regression, two regression equations, Regression coefficients and properties as Simple Linear Regression
Dr. Sanjeev Sabnis Dr. Annapurna Shankarnarayanan Dr. Dnyaneshwar Doke	**Module 5:** To change the title of this module from Probability distribution to Introduction to Probability Theory To change some contents under this topic and to include Mutually Exclusive and Exhaustive events, Null and Universal events.

It was decided to incorporate the following changes in Proposed syllabus presented before the meeting.
Business Mathematics :

Particulars as per proposed syllabus	Changes as approved in the meeting
Module 2: **Profit and Loss**	**Module 2:** **Profit and Loss** **Holding Period Return Calculations and Annualized Returns (Newly included, approved without further changes)**

Business Statistics :

Particulars as per proposed syllabus	Changes as approved in the meeting
Module 4: **Correlation and regression** **(for ungrouped data)**	**Module 4:** **Correlation and regression** **(for ungrouped data)** Concept of correlation, positive and negative correlation, Karl Pearson's Coefficient of Correlation, **Simple Linear Regression (renamed)**
Module 5: **Probability Distribution Probability:**	**Module 5:** **Replaced Linear Programming Problems with Probability Theory (approved and suggestions have been incorporated)** **Introduction to Probability Theory (renamed)** Random experiment, Sample space, Outcome and Event, **Mutually Exclusive, Exhaustive Events** and Equally likely Events, **Null and Universal Events** definition of probability , addition theorem of probability, multiplication theorem of probability, Independent Events,

	Conditional probability, Bayes' Theorem. **(suggested subtopics added)**

B.Com. (Banking & Insurance)

Miss Josephine Mathew, Faculty from B.com (Banking & Insurance), presented the syllabus of Quantitative Methods along with pattern of examination. Thereafter the same was discussed by the members.

Following suggestions/observations were made:

SEMESTER I - Quantitative Methods I

Name of the member	Suggestions/observations
Dr. Annapurna Shankarnarayanan	**Units 1 - Introduction, Organising Data, Frequency Distribution, Data Representation** To avoid duplication of contents in Unit 1 & Unit 2 **Unit 2 - Measures Of Central Tendencies** To include arithmetic mean, harmonic & geometric mean To rectify spelling errors - mediums
Dr. Dnyaneshwar Doke	**Units 1 - Introduction, Organising Data, Frequency Distribution, Data Representation** To change the title of the sub topic - graphical & diagrammatic representation of histogram to histogram. **Unit 3 - Measures Of Dispersion** To change the title of the sub topic - various measures of dispersion to absolute measures of dispersion. **Unit 5 - Probability, Probability Distribution & Decision Theory** To enlist the types of decision making criteria. **Unit 6 - Index Numbers** To enlist the specific aggregative Index numbers.
Dr. Sanjeev Sabnis	**Unit 1 - Introduction, Organising Data, Frequency Distribution, Data Representation** To rectify the spelling error - gives **Unit 1 - Introduction, Organising Data, Frequency Distribution, Data Representation** **Unit 2 - Measures Of Central Tendencies**

	To avoid duplication of contents & to include arithmetic mean, harmonic & geometric mean in unit 2, **Unit 3 - Measures Of Dispersion** To rectify the spelling error - geographical representation. **Unit 4 - Co-Variance, Correlation & Regression** To change the title of the sub -topic simple regressions to Simple Linear Regression & to enlist the assumptions. **Unit 4 - Co-Variance, Correlation & Regression & Unit 5 - Probability, Probability Distribution & Decision Theory** To interchange the order of the units as normal distribution will be covered before regression.

SEMESTER II - Quantitative Methods II

Name of the member	Suggestions/observations
Dr. Dnyaneshwar Doke	**Unit 1- Testing of Hypothesis** To include the power of the test. **Unit 2 - Linear Programming Techniques & Unit 3 - Matrices & Determinants (Application in Business & Economics)** To reallocate the number of lectures.
Dr. Sanjeev Sabnis	**Unit 3 - Matrices & Determinants (Application in Business & Economics)** To reallocate the number of lectures.

It was decided to incorporate the following changes in proposed syllabus presented before the meeting.

SEMESTER I - Quantitative Methods I

Particulars as per proposed syllabus	Changes as approved in the meeting

Units 1 - Introduction, Organising Data, Frequency Distribution, Data Representation	**Units 1 - Introduction, Organising Data, Frequency Distribution, Data Representation** Organizing data, preparation of frequency distribution, cumulative frequencies, **histogram**, frequency polygon and **Ogives**. **(repetition of topics avoided)**
Unit 2 - Measures Of Central Tendencies .	**Unit 2 - Measures Of Central Tendencies** Definition of Averages and objective of Averages, Types of Averages. **Arithmetic mean, Geometric Mean, Harmonic Mean** and its advantages, Disadvantages and usages, mode, **median,** quartiles, deciles & percentiles for both grouped as well as ungrouped data. **(suggested subtopics added)**
Unit 3 - Measures Of Dispersion	**Unit 3 - Measures Of Dispersion** Concept and idea of dispersion. **Absolute** measures of dispersion: Range, quartile deviation, Mean Deviation, Standard Deviation & corresponding relative measures of dispersion, Graphical representation of Range and Deviations and utility of various measures of dispersion. **(Type - Absolute measures of dispersion specified , spelling error rectified)**
Unit 4- Co-Variance, Correlation & Regression	**Unit 5- Co-Variance, Correlation & Regression** Meaning, definition and application of covariance. Concept of correlation. Rank correlation, Coefficient of correlation. Simple Linear Regression concept, relationship with correlation, assumptions, Estimation: Fitting of straight line, method of least square, construction of characteristic line/estimation line.
Unit 5 - Probability, Probability Distribution & Decision Theory	**Unit 4 - Probability, Probability Distribution & Decision Theory** Concept of probability (Factorial, permutations & combinations, set theory & Venn diagrams), Theorems of Probability conditional & unconditional probability & **probability tree (Newly included, approved without further changes)** Probability distribution: Discrete and continuous variable. Expected value of the variable, variance of variable & normal distribution **Decision Theory: decision making under uncertainty, decision making under risk & decision tree. (Types of decision making criteria have been enlisted)**
Unit 6- Index Numbers	**Unit 6- Index Numbers** Concept and usage of index nos. Construction of index nos. Types

of index nos. **Aggregate - Laspeyres, Paasche, Dorbish Bowley, Fisher, Marshall-Edgeworth, Walsch & Kelly Price indices** and Relative method of constructing index nos. Chain base index nos. Test of consistency: Time reversal factor reversal and circular test. Quantity and Value index no's. for agricultural, industrial production, Retail Prices, Consumer price index nos. for security prices, etc.
(specific aggregative Index numbers are enlisted)

SEMESTER II - Quantitative Methods II

Particulars as per proposed syllabus	Changes as approved in the meeting
Unit 1-Testing of Hypothesis:	**Unit 1-Testing of Hypothesis:** Testing of hypotheses: Null Hypothesis, Alternative Hypothesis, Decision Criterion, Critical Region, Type I and Type II Error, **power of the test**, level of significance, Test based on large Sample for Means and Proportion/s **(suggested subtopic is added)**
Unit 2- Linear Programming Techniques:	**Unit 2- Linear Programming Techniques:** Meaning, Advantages, limitations, business applications, basic terminology, formulation of linear Programming Problems, Graphical Method of solving Linear Programming Problems, Simplex method (up to 3 variables) with Maximization & Minimization. Duality in Linear Programming (concept only) **No. of lectures reallocated from 10 to 12 , by reducing no. of lectures for Testing of Hypothesis , Ratio , Proportion and Percentage & Economic Indicators.**
Unit 3- Matrices & Determinants (Application In Business And Economics):	**Unit 3- Matrices & Determinants (Application In Business And Economics):** Matrices, Types of Matrices, Transpose, Addition, Multiplication, Subtraction of a Matrix, Determinants, Type of Determinants, inverse of a matrix by Pivotal Reduction Method, Adjoint Method and Row / Column Transformation. Application of Matrices and Determinants to Business and Economics. (Please concentrate on application of Matrices & Determinants to Business Economics) **No. of lectures reallocated from 10 to 12 , by reducing no. of lectures for Testing of Hypothesis , Ratio , Proportion and Percentage & Economic Indicators.**

Unit 5 : Statistical Applications In Investment Management & Insurance	Deleted Topic: To draw conclusions regarding share prices using hypothesis testing **(Omission Approved)** Insurance- Time value of Money (Present value, Future value & annuity calculations for immediate & deferred) **(Newly included, approved without further changes)**

<u>Bachelor of Management Studies (B.M.S)</u>

Ms. Neha Palshetkar, Visiting Faculty from BMS, and Mr. Vinayak Krishnan, Faculty from BMS, presented the syllabus of Business Statistics and Business Mathematics along with pattern of examination. Thereafter the same was discussed by the members.

Following suggestions/observations were made:

Name of the member	Suggestions/observations
Dr. Annapurna Shankarnarayanan	**BUSINESS STATISTICS** 1.Name of the chapter graphs to be changed to graphs and diagrams 2.Name of the chapter regression to be changed to linear regression 3.The concept of independent events to be added to the chapter of probability **BUSINESS MATHEMATICS** 1. Permutation and Combination can be excluded as it is covered under Business Statistics
Dr Dnyaneshwar Doke	**BUSINESS MATHEMATICS** 1. Determinants are to be placed and taught prior to the concept of Matrices. The concept of Determinants upto order three are to be solved, prior to taking up determinants of a matrix.

It was decided to incorporate the following changes in Proposed syllabus presented before the meeting.:

Particulars as per proposed syllabus	Changes as approved in the meeting
BUSINESS STATISTICS	
Module 1: Introduction to statistics Graphs:	**Module 1: Introduction to statistics** **Graphs and Diagrams (renamed)**: Ogives, Histogram and frequency polygon, Diagrams - Simple bar, Multiple bar, Subdivided bar, Pie diagram.
Tabulation:	**Tabulation: various parts of a table and to prepare tables involving two to three attributes. (Newly included, approved without further changes)**
Module 3: Correlation and regression (for ungrouped data) **Regression**	**Module 3: Correlation and regression (for ungrouped data)** **Linear Regression (renamed):** Meaning of linear regression, two regression equations by the Least square method.
Module 5: Probability and decision theory Probability:	**Module 5: Probability and decision theory** Probability: Concept of sample space, Concept of event, definition of probability, addition and multiplication laws of probability, **Concept of independence of events (included as suggested)**, Conditional probability.
BUSINESS MATHEMATICS	
Module 2: Matrices and Determinants	**Module 2: Matrices and Determinants (subtopics reshuffled)** •Concept of Determinants, Determinants of order two or three: properties and results of Determinants, Determinants of a Matrix • Solving a system of linear equations using Cramer's rule • Some important definitions and some important results. Matrix operation (Addition, scalar multiplication, matrix multiplication, transpose of a matrix), Inverse of a Matrix (up to order three) using ad-joint of a matrix and matrix inversion method. **(Reduction Method Excluded-Omission Approved)** • Case study: Input Output Analysis
Module 5: Mathematics for Financial Instruments	**(Newly included, approved without further changes)**

Shares- Concept, face value, market value, dividend, Equity shares, preference shares, bonus shares, brokerage on shares, Return on Investments for Shares **Mutual Fund-** Simple problems on calculation of net income after considering entry load, exit load, dividend, change in net asset value, Return on Investment in Mutual Funds	

The reshuffling of the modules in Business Statistics has been approved by the Board of Studies.
The number of lectures for Module 1 and Module 2 in Business Statistics is approved as 8 and 16, respectively.
The number of lectures for Module 2 and Module 4 in Business Mathematics is approved as 14 and 10 respectively.
However, the suggestion of Dr. Annapurna Shankarnarayanan could not be included, as faculty is of the opinion that the topic 'Permutation and Combination' is scoring from students' point of view, and hence, need not be excluded from the proposed syllabus.

Bachelor of Commerce (B.Com)

Mr. Amit Khatri, Faculty from B.Com -Mathematics and Statistics Dept., presented the proposed syllabus of Mathematics (Section I) and Mrs. Sangeeta V. Kore presented that of Statistics (Section II) in Mathematical and Statistical Techniques and the proposed examination pattern . Thereafter the same was discussed by the members.

Following suggestions/observations were made:

Mathematical and Statistical Techniques
Semester I :

Name of the member	Suggestions/observations
Dr. Dnyaneshwar Doke	Suggested to reorder the subtopics at Matrices in Module 2 by starting with Introduction to Matrices and Determinants.
Dr. Dnyaneshwar Doke	Suggested to rename subtopic -Using Ogive locate median and Quartiles, Using Histogram locate mode as locating Median and Quartiles graphically, locating Mode using Histogram respectively in Module 3
Dr. Annapurna Shankarnarayanan	Suggested to rename topic as Discrete Random Variable at Module 4

Mathematical and Statistical Techniques
Semester II :

Name of the member	Suggestions/observations
Dr. Annapurna Shankarnarayanan	Suggested to use the term non-linear functions instead of x^n, a^x, e^x and log x at topics Functions and their Applications, Derivatives in Module 1.
Mr. Moorthy Konar	Suggested to introduce deferred annuity as a concept within the topic Annuity in Module 2
Dr. Dnyaneshwar Doke	Suggested to Specify the Calculation of Spearman's Rank Correlation Coefficient with repeated ranks
Dr. Annapurna Shankarnarayanan	Suggested to rename the title of Module 5 as topics as Standard Probability distributions

It was decided to incorporate the following changes in Proposed syllabus presented before the meeting.

Mathematical and Statistical Techniques
Semester I :

Particulars as per proposed syllabus	Changes as approved in the meeting
Module-2: **2. Matrices**	**Module-2:** **2. Matrices (Subtopics reshuffled)** Introduction to Matrices and Determinants, Elementary row/column operations, Inverse of matrix (adjoint method), Solution of system of linear equations by Cramer's rule (up to 3 variables) **(Newly included in place of Permutation & combination, approved with reshuffling of Subtopics)**
Module -3: Summarization Measures **1.Basic Concepts** 2. **Measures of Central Tendency**	**Module -3: Summarization Measures** **2. Basic Concepts** Meaning , Uses & Limitations of Statistics. Collection of data, Sampling Techniques , Steps in Sample Survey **(Newly included, approved without further changes)** **2. Measures of Central Tendency** Definition of Average, Types of Averages: Arithmetic Mean, Combined and Weighted mean Median, and Mode for grouped as well as ungrouped data. Quartiles, Deciles and

	Percentiles. **Locating median and Quartiles graphically , locating mode using Histogram. (renamed)**
Module -4: Elementary Probability Theory **2. Random Variable**	**Module -4: Elementary Probability Theory** **2. Discrete Random Variable (renamed)** Probability distribution of a discrete random variable; Expectation and Variance of discrete random variable, simple examples on probability distributions , calculation of Expectation and Variance.

Mathematical and Statistical Techniques
Semester II

Particulars as per proposed syllabus	Changes as approved in the meeting
Module-1: 1**. Functions and Their Applications** **2. Derivatives**	**Module-1:** 1**. Functions and Their Applications** Constant function, **linear function and non-linear functions.** Economic functions: Demand, Supply, Total Revenue, Average Revenue, Total cost, Average cost and Profit function. Equilibrium Point, Break-even point. **2. Derivatives** Derivative as rate of measure, Derivative of **linear and non- linear functions**. Rules of derivatives: Scalar multiplication, sum, difference, product, quotient (Statements only), Simple problems. Second order derivatives.
Module-2: **2. Annuity** **3. Perpetuity**	**Module-2:** **2. Annuity** Annuity Immediate and its Present value, Future value. Equated Monthly Installments (EMI) using reducing balance method & amortization of loans. **Deferred Annuity**. (**included as suggested)** **3. Perpetuity** **(Newly included, approved without further changes)**
Module-3: Bivariate Linear Correlation and Regression **1. Correlation Analysis**	**Module-3: Bivariate Linear Correlation and Regression** **1. Correlation Analysis** Meaning, Types of Correlation, Determination of Correlation , Scatter diagram, Karl Pearson's Correlation Coefficient (excluding

	Bivariate Frequency Distribution) and Spearman's Rank Correlation Coefficient **(with distinct ranks and repeated ranks)**
Module-5: Probability Distributions.	**Module-5: Standard Probability Distributions**. **1 Discrete Probability Distributions** Binomial, Poisson (Properties and applications only, no derivations are expected) , **2. Continuous Probability distribution** Normal Distribution. (Properties and applications only, no derivations are expected)

Bachelor of Science (IT)

Mr. Ajay R. Gupta, Faculty from BSc IT Department, presented the proposed syllabus of Discrete Mathematics and Numerical and Statistical Techniques (Theory and Practical) along with proposed pattern of examination. Thereafter the same was discussed by the members.

Following suggestions/observations were made:

Discrete Mathematics:

Name of the member	Suggestions/observations
Dr. Annapurna Shankarnarayanan and Dr. Dnyaneshwar Doke	**Unit 5**: **Counting and Probability** To remove subtopics: Pigeonhole Principle, Probability Axioms and Expected Value from

Numerical and Statistical Methods:

Name of the member	**Suggestions/observations**
Dr. Annapurna Shankarnarayanan and Dr. Dnyaneshwar Doke	**Unit 5**: **Random Variables and Distributions** To change title of Distribution to Standard Distribution and change the order of subtopics
Dr. Dnyaneshwar Doke	To change order of practical 9 and 10 and to remove practical 10 (c)

It was decided to incorporate the following changes in Proposed syllabus presented before the meeting.

Discrete Mathematics:

Particulars as per proposed syllabus	Changes as approved in the meeting

Unit 4 **Relations, Graphs and Trees**	**Unit 4** **Relations, Graphs and Trees** Hasse Diagram, Lattice as Poset, Properties of Lattices **(Newly included, approved without further changes)**
Unit 5 **Counting and Probability**:	**Unit 5 Counting and Probability**: Introduction, Possibility Trees and the Multiplication Rule, Possibility Trees and the Multiplication Rule, Counting Elements of Disjoint Sets: The Addition Rule, Counting Subsets of a Set: Combinations, r-Combinations with Repetition Allowed, Conditional Probability, Independent Events, Bayes' Theorem. **Subtopics: Pigeonhole Principle, Probability Axioms and Expected Value are removed**

Numerical and Statistical Methods:

Unit 5: Random Variables and Distributions: . **Distributions**:	**Unit 5: Random Variables and Distributions**: **Standard Distributions (renamed)** : Discrete distributions: Uniform, Bernoulli, Binomial, Poisson, Continuous distributions: Uniform distributions, Exponential, (derivation of mean and variance only and state other properties and discuss their applications) Normal distribution state all the properties and its applications. **(Subtopics reshuffled)**
Practical No. 9 and 10	**Practical No. 9 and 10** **(Subtopics reshuffled)** **9. Random Variables and Distributions:** a. Program to generate random variables. b. Program for uniform distribution. c. Program for Bernoulli distribution **10. Distributions** a. Program to fit binomial distribution. b. Program to fit Poisson distribution.

General Suggestions:

1. Dr. Dnyaneshwar Doke suggested that at open book test the formula book /list of formulae should be provided to the students.
2. Dr. Sanjeev Sabnis suggested that the Year of publication should be mentioned with the name of the reference book.

Thereafter following Resolution was passed.

Resolved that the proposed syllabi in the subject of Business Mathematics (B.Com. Accounting and Finance) , Business Statistics and Business Mathematics (B.Com. Financial Markets) , Quantitative Methods –I & II (B.Com. Banking Insurance) , Business Statistics and Business Mathematics (Bachelor of Management Studies) , Mathematical and Statistical Techniques (B.com.) , Discrete Mathematics and Numerical and Statistical Methods (B.Sc (IT)) are hereby approved with modifications as stated above.

Further Resolved that the proposed examination pattern in the subject of Business Mathematics (B.Com. Accounting and Finance), Business Statistics and Business Mathematics (B.Com. Financial Markets) , Quantitative Methods –I & II (B.Com. Banking Insurance) , Business Statistics and Business Mathematics (Bachelor of Management Studies) , Mathematical and Statistical Techniques (B.com.) , Discrete Mathematics and Numerical and Statistical Methods (B.Sc (IT)) are hereby approved without modifications.

The internal examination through MCQ/Objective format will be conducted online.
Further in case of unforeseen and challenging circumstances all examinations/evaluation will be conducted through online or by any mode as determined by the Govt. and UGC.

Further Resolved that the Syllabi and Examination pattern in the subject of Business Mathematics (B.Com. Accounting and Finance) , Business Statistics and Business Mathematics (B.Com. Financial Markets) , Quantitative Methods –I & II (B.Com. Banking Insurance) , Business Statistics and Business Mathematics (Bachelor of Management Studies) , Mathematical and Statistical Techniques (B.com.) , Discrete Mathematics and Numerical and Statistical Methods (B.Sc (IT)) are approved and adopted in a progressive manner for the academic year 2020-2021.

The meeting was concluded with a vote of thanks extended by Mr Amit Khatri.

Name & signature
Chairman – BOS – Mathematics and Statistics
Place Mumbai
Date 11/11/2020