COMMERCIAL MATHEMATICS AND STATISTICS

SYLLABUS FOR HIGHER SECONDARY FINAL YEAR COURSE

One Paper **Three Hours** **Marks 100**

Unitwise Distribution of Marks and Periods :

Unit No	Title	Marks	Periods
	GROUP-A : COMMERCIAL MATHEMATICS (60 Marks)		
Unit - 1	Simple and Compound Interest	15	30
Unit - 2	Linear inequalities	25	50
Unit - 3	(a) Set Theory (b) Determinants (c) Matrices	20	40
	GROUP - B : STATISTICS (40 Marks)		
Unit - 4	Statistical Average Positional measures }	12	25
Unit - 5	Measures of Dispersion (Variation)	12	25
Unit - 6	(a) Probability (b) Correlation }	16	30
	Total	**100**	**200**

Unitwise Distribution of Course contents :

GROUP-A : COMMERCIAL MATHEMATICS (60 Marks)

Unit-1 : **Simple and Compound Interest :** Simple and Compound Interest, Annuity

Unit-2 : **Linear inequalities :** Linear inequalities and their graphical representation, Permutation & Combination (Elementary ideas and simple problems), Mathematical Induction (Simple problems), Binomial Theorem for positive Integral Index (Omit Binomial Co-efficient)

Unit-3 :

(a) **Set Theory :** (Elementary Ideas), Elements, Types of Sets, Subsets (Proper and improper), Union, Intersection and Difference of Set, Complement of Set, Venn Diagram, Application of Sets (Simple Problems)

(b) **Determinants :** (Up to 3rd order), Meaning, Properties and Simple problems, Solution of equation by Cramer's Rule

(c) **Matrices :** Definition and type of Matrices, Equality of Matrices, Addition, Subtraction, Scalar Multiplication and Matrix Multiplication, (Adjoint and Inverse matrices should be excluded)

GROUP - B : STATISTICS (40 Marks)

Unit-4 : Statistical Average :

Meaning, Purpose, Measures, Mean (A.M. G.M. H.M.), Median, Mode (For all series), their uses, merits and demerits, essential qualities of a good average.

Positional measures :

Quartiles, Deciles, Percentiles, Graphic method olocation of median, of quartiles and mode

Unit-5 : Measures of Dispersion (Variation) :

Meaning, objects and function – Measures : Range, Quartile deviation, Mean deviation, Standard deviation (all series), Lorenz curve, Their uses, merits and demerits, Essential qualities of a good measure of dispersion, Co-efficient of variation.

Unit-6 :

(a) Probability : Meaning, Definition (Mathematical or Classical approach), Event, Trial, Random experiment, Equally likely events, Mutually exclusive events, Favourable cases to an event.

[Numerical problems on definition of probability only. Addition and multiplication theorem on probability should be excluded]

(b) Correlation : Meaning, types, Karl Pearson's Correlation Co-efficient and its significance.

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