SYLLABUS BREAKUP (2022-23)
SUBJECT: MATHEMATICS
CLASS XI

AUGUST

TOTAL NUMBER OF WORKING DAYS:	**14 Days (app.)**
TOTAL NUMBER OF PERIODS INVOLVED IN TEACHING:	**16 periods (app.)**
CHAPTER	**NO. OF PERIODS**
1. SETS	**[7]**
[a] Sets and their Representations	1
[b] Empty Set, Finite and Infinite Sets, Equal Sets	1
[c] Subsets, Power Sets, Universal Set	2
[d] Venn Diagram, Operation on Sets	1
[e] Complements of a set, Problems on Union and Intersection of Two Sets	2
2. RELATIONS AND FUNCTIONS	**[9]**
[a] Cartesian product of Sets	1
[b] Relations	2
[c] Functions	2
[d] Domain & Range	2
[e] Types of functions	2

SEPTEMBER

TOTAL NUMBER OF WORKING DAYS:	**12 Days (app.)**
TOTAL NUMBER OF PERIODS INVOLVED IN TEACHING:	**16 periods (app.)**
3. TRIGONOMETRIC FUNCTIONS	**[9]**
[a] Measuring Angles in Radians and Degrees	1
[b] Signs of Trigonometric Functions	1
[c] Addition and Subtraction Formulae	1
[d] Conversion of sum & difference into product	2
[e] Conversion of product into sum and difference	2
[f] Identities related to Multiple and Sub-multiple angles.	2
4. COMPLEX NUMBERS AND QUADRATIC EQUATIONS	**[7]**
[a] Definition of Complex Numbers	1
[b] Algebra of Complex Numbers and Problems	2
[c] Geometrical Representation of Complex Numbers	2
[d] Argand plane and Problems	2

OCTOBER & NOVEMBER

TOTAL NUMBER OF WORKING DAYS:	**35 Days (app.)**
TOTAL NUMBER OF PERIODS INVOLVED IN TEACHING:	**49 periods (app.)**
5. LINEAR INEQUALITIES	**[3]**
[a] Algebraic Solutions of Linear Inequalities in one variable and their representation on number line.	2
[b] Problems	1
6. PERMUTATION AND COMBINATION	**[9]**
[a] Fundamental Principle of Counting and Factorial Notation	1
[b] Permutations and Restricted Permutations	2
[c] Combination	3
[d] Problems involving Permutation & Combination both	3

7. BINOMIAL THEOREM [7]
[a] Binomial Theorem for Positive Integral Indices 2
[b] General and Middle Theorem 2
[c] Problem Discussions 3

8. SEQUENCES AND SERIES [10]
[a] Arithmetic Progression 3
[b] Geometric Progression 4
[c] Relationship between A.M. and G.M. 2
[d] Sum of infinite G.P. 1

9. STRAIGHT LINE [12]
[a] Introduction 1
[b] Slope of Line 2
[c] Various forms of equation of a line parallel to axis, point -slope form,
 Slope-intercept form, two-point form, intercept form, Distance of a point from a 3
line.
[d] General Equation of a line and angle between two lines 3
[e] Distance of a point from a line and Distance between parallel lines 2
[f] Problems 1

10. CONIC SECTION [8]
[a] Section of a Cone 1
[b] Circle 2
[c] Parabola 2
[d] Ellipse 2
[e] Hyperbola & Problems 1

DECEMBER & JANUARY

TOTAL NUMBER OF WORKING DAYS: **23 Days (app.)**
TOTAL NUMBER OF PERIODS INVOLVED IN TEACHING: **30 periods (app.)**

11. LIMITS & DERIVATIVES [10]
[a] Introduction 1
[b] Limits 1
[c] Limits of Trigonometric Functions 2
[d] Problems 2
[e] Derivatives 2
[f] Problems 2

12. STATISTICS [8]
[a] Measures of Dispersion 2
[b] Range Mean Deviation 2
[c] Variance and Standard Deviation 4

13. PROBABILITY [12]
[a] Random Experiments **2**
[b] Events and Types of Events 3
[c] Axiomatic Approach to Probability 3
[d] Problem Discussion 4

FEBRUARY

TOTAL NUMBER OF WORKING DAYS:	**10 Days (app.)**
TOTAL NUMBER OF PERIODS INVOLVED IN TEACHING:	**14 periods (app.)**

14. INTRODUCTION TO THREE DIMENSIONAL GEOMETRY   **[5]**

[a] Co-ordinate Geometry and Planes in 3-D Space	2
[b] Co-ordinate of a point in Space	1
[c] Distance Formula	1
[d] Section Formula & Problems	1

REVISION   **[9]**