FOCUSED KEY CONCEPTS AND SUBJECT SPECIFIC TIPS IN MATHEMATICS

CLASS XI

1. **Understand the contents and weightage of the syllabus.**

2. **Preparation from NCERT textbooks is the most important part.**

Keep marking the important and difficult questions while doing so, and make sure to keep a reference book (NCERT) textbooks, for immediate clarification on complex topics.

3. Strategize and THEN prepare!

Section I contains 16 objective based questions of one mark each

Practice case study based questions given in two parts each part contain five parts out of which four needs to be attempted caries 8 marks.

The long form questions (5 marks), which are the most feared aspect of a paper, usually come from Chapter Sets and functions, Algebra , Coordinate Geometry so plan accordingly.

4. Say goodbye to rote learning!

Mathematics is all about understanding the concepts. So mugging up is not going to be of much help on the day of the examination. Try to understand the fundamentals of the formulas.

5. Self-evaluation

As a step toward feeling less anxious, start by acknowledging your grey areas and your weaknesses.

Devote more time to improving them instead of making yourself feel bad about it. Maintaining a peaceful frame of mind is more significant than any preparation.

6. Presentation is very important

Neat work is a non-negotiable perk that always benefits a student. Make sure to label the graphs and figures properly.

Avoid overwriting and scribbling.

7. Time management

The reading time is the most crucial and must be used judiciously. This involves reading the paper thoroughly, especially the ones involving statements, underlining keywords and then choosing the most scoring questions based on your understanding.

If you're stuck on a question, leave some space and keep moving forward. You can revisit it later with a fresh mind.

Always keep 15-20 minutes buffer time for revising and rectifying your answers at the end.

Focused Topics from Each Chapter

Cover the important topics from each chapter and learn thoroughly.

Chapter Name	Important topics to focus
UNIT I **SETS & FUNCTIONS** Sets	• Concept of Subset, Superset and Power Set • Union and Intersection of Set • Word Problems.
Relations and Functions	• Cartesian Product of Sets of real with itself (RXR) only. • Graphs • Concept of Relations • Real-Valued Functions domain and range of these functions
Trigonometric Functions	• Signs of Trigonometric Functions • Domain and range of Trigonometric Functions and their Graphs • Simple applications of sine and cosine • Trigonometric Identities related to sin2x,cos2x ,tan2x, sin3x ,cos3x, tan3x
UNIT II ALGEBRA Complex Numbers and Quadratic Equations	• Modulus and Conjugate of a Complex Number • Algebraic properties of complex number • Fundamental theorem of algebra • Solution of quadratic equations in the complex number system
Linear Inequalities	• Linear Equations in one variable • Problems on a system of linear equations in two variable
Permutations and Combinations	• Permutations when objects are distinct • Permutations when objects are not distinct • Problems on Combination • Formula for n_{P_r} n_{C_r} Simple applications
Sequences and Series	• Sum of n terms of an Arithmetic progression • Properties of Arithmetic Progressions and Arithmetic Mean • Geometric Progressions(Sum of n terms of GP) nth term • Relation between AM &GM

UNIT III **COORDINATE GEOMETRY** Straight Lines	• Point Slope and 2 Point form of the straight line • Slope Intercept form of the straight line • Angle between 2 lines • Intercept form of straight lines • The distance of a point from a line and distance between 2 parallel lines • Normal form of straight lines
Conic Sections	• Parabola • Hyperbola • Ellipse • Circle
Introduction to 3-D Geometry	• Distance between 2 points in 3-D Space • Section formula
Limits and Derivatives	• Limit of a Polynomial and a Rational function • Limit of a trigonometric function • Derivative of a function • First Principle • Derivative of Trigonometric and Polynomial Functions
Statistics	• Mean deviation for CFD(Continuous Frequency Distribution) • Variance and standard deviation of CFD(continuous frequency distribution)
Probability	• Finding probability using complement of a known event • Probability of an event • Algebra of events and mutually exclusive and exhaustive events