Class – XI
DELETED SYLLABUS
(For the Session of 2020-21 Only)
MATHEMATICS
(THEORY)

UNIT-I: SETS AND FUNCTIONS

1. **Sets :**
   Difference of sets. Complement of a set.

2. **Relations & Functions:**
   (upto R x R x R). Sum, difference, product and quotients of functions.

3. **Trigonometric Functions:**
   General solution of trigonometric equations of the type $\sin\emptyset = \sin\alpha$, $\cos\emptyset = \cos\alpha$ and $\tan\emptyset = \tan\alpha$

.UNIT-II: ALGEBRA

1. **Principle of Mathematical Induction:**
   Processes of the proof by induction, motivating the application of the method by looking at natural numbers as the least inductive subset of real numbers. The principle of mathematical induction and simple applications.

2. **Complex Numbers and Quadratic Equations:**
   Polar representation of complex numbers.

4- **Permutations & Combinations:**
   derivation of formulae

5- **Binomial Theorem:**
   History, statement and proof of the binomial theorem for positive integral indices.
   Pascal's triangle, General and middle term in binomial expansion, simple applications.

6- **Sequence and Series:**
   Sum to *n* terms of the special series $\sum n$, $\sum n_2$ and $\sum n_3$.

UNIT-III: COORDINATE GEOMETRY

2- **Conic Sections:**
   a point, a straight line and pair of intersecting lines as a degenerated case of a conic section.

UNIT-V: MATHEMATICAL REASONING

1. **Mathematical Reasoning:**
    Mathematically acceptable statements. Connecting words/ phrases - consolidating the understanding of "if and only if (necessary and sufficient) condition", "implies", "and/or", "implied by", "and", "or", "there exists" and their use through variety of examples related to real life and Mathematics. Validating the statements involving the connecting words difference between contradiction, converse and contra positive.

UNIT-VI: STATISTICS & PROBABILITY

1. **Statistics:**
    Analysis of frequency distributions with equal means but different variances.

2. **Probability:**
    Axiomatic (set theoretic) probability, connections with the theories of earlier classes.