Second Term	Marks : 80
UNITS	**MARKS**
II. ALGEBRA (Contd.)	20
III. GEOMETRY (Contd.)	16
IV. TRIGONOMETRY (Contd.)	08
V. PROBABILITY	06
VI. COORDINATE GEOMETRY	10
VII. MENSU RATION	20
TOTAL	**80**

UNIT II : ALGEBRA (Contd.)

3.   QUADRATIC EQUATIONS   (15) Periods

Standard form of a quadratic equation $ax^2 + bx + c = 0$, $(a \neq 0)$. Solution of the quadratic equations (only real roots) by factorization, by completing the square and by using quadratic formula. Relationship between discriminant and nature of roots.

Problems related to day to day activities to be incorporated.

4.   ARITHMETIC PROGRESSIONS   (8) Periods

 Motivation for studying AP. Derivation of standard results of finding the nth term and sum of first n terms.

UNIT III : GEOMETRY (Contd.)

2.   CIRCLES   (8) Periods

Tangents to a circle motivated by chords drawn from points coming closer and closer to the point.

1.   (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact.

2.   (Prove) The lengths of tangents drawn from an external point to circle are equal.

3.   CONSTRUCTIONS   **(8) Periods**

    1.   Division of a line segment in a given ratio (internally)

    2.   Tangent to a circle from a point outside it.

    3.   Construction of a triangle similar to a given triangle.

UNIT IV : TRIGONOMETRY

3.   HEIGHTS AND DISTANCES   **(8) Periods**

Simple and believable problems on heights and distances. Problems should not involve more than two right triangles. Angles of elevation / depression should be only 30°, 45°, 60°.

UNIT V : STATISTICS AND PROBABILITY

2.   PROBABILITY   **(10) Periods**

Classical definition of probability. Connection with probability as given in Class IX. Simple problems on single events, not using set notation.

UNIT VI : COORDINATE GEOMETRY

1.   LINES (In two-dimensions)   **(14) Periods**

Review the concepts of coordinate geometry done earlier including graphs of linear equations. Awareness of geometrical representation of quadratic polynomials. Distance between two points and section formula (internal). Area of a triangle.

UNIT VII : MENSURATION

1.   AREAS RELATED TO CIRCLES   **(12) Periods**

Motivate the area of a circle; area of sectors and segments of a circle. Problems based on areas and perimeter / circumference of the above said plane figures. (In calculating area of segment of a circle, problems should be restricted to central angle of 60°, 90° & 120° only. Plane figures involving triangles, simple quadrilaterals and circle should be taken.)

2.   SURFACE AREAS AND VOLUMES   **(12) Periods**

    (i)   Problems on finding surface areas and volumes of combinations of any two of the following: cubes, cuboids, spheres, hemispheres and right circular cylinders/cones. Frustum of a cone.

    (ii)   Problems involving converting one type of metallic solid into another and other mixed problems. (Problems with combination of not more than two different solids be taken.)