Part I

Units	Important topics
Algebra	
Arithmetic Progression	• Introduction to Sequence, • Arithmetic Progression (A.P.) and Geometric Progression (G.P.), • General term of an A.P. and G.P., • Sum of the first 'n' terms of an A.P. and G.P • Arithmetic mean and Geometry Mean
Quadratic Equations	• Introduction to quadratic equations, • Solutions of quadratic equations, • Nature of roots based on discriminant, • Relation between roots of the equation and coefficient of the terms in the equation • Equations reducible to a quadratic form
Linear equations in two variables	• System of linear equations in two variables, • Algebraic methods of solving linear equations in two variables, • Graphical representation of different possibilities of solutions/Inconsistency, • Cramer's rule • Consistency of pair of linear equations
Probability	• Introduction to probability and related terms, • Classical definition of probability, • Types of events, • Equally likely outcomes, • Probability of an event, • Properties of Probability
Statistics	• Brief revision of Tabulation of data, • inclusive and exclusive type of tables, • Mean, median and mode of grouped data, • Histograms, frequency polygon, frequency curve, pie diagram, • Ogives (Cumulative frequency graphs), • Applications of ogives in the determination of median, Relation between measures of central tendency

Part II

Geometry

Similarity	• Properties of ratios of areas of two triangles, • Basic proportionality theorem, • Introduction to similarity, • Similar triangles, • Areas of two similar triangles, • Similarity in right-angled triangles, • Pythagoras theorem and its converse, • 30o-60o-90o theorem and 45 o-45 o90 o theorem, • Application of Pythagoras theorem in Acute and obtuse angle. • Appolonius theorem
Circles	• Tangents and its properties, • Theorem - Tangent at any point to the circle is perpendicular to the radius and its converse, • Number of tangents from a point to a circle, • Theorem- The length of two tangent segments drawn from a point outside the circle are equal, • Touching circles • Introduction to an arc, • Angle subtended by the arc to the centre and to the point on the circle, • Cyclic quadrilateral • Tangent - Secant theorem
Co-ordinate Geometry	• Slope of a line, • Intercepts made by a line, • Standard forms of equation of a line, • General equation of a line.
Geometric Constructions	• Construction of tangent to the circle from the point on the circle and outside the circle, • Construction of tangent without using centre, • Construction of triangle If the base, angle apposite to it and either median altitude is given · • Construction of a triangle similar to a given triangle
Trigonometry	• Angles in standard position. • Trigonometric ratios in terms of • coordinates of point

	• Trigonometric Identities (with proof) • Use of basic identities and their • applications • Problems on height and distance
Menstruation	• Length of an arc • Area of the sector • Area of a Circular Segment • Euler's formula • Surface area and volume of cuboids • Spheres, hemispheres, right circular • cylinders cones, frustum of a cone. • Problems based on areas and perimeter/circumference of circle, sector and segment of a circle. • Problems on finding surface areas and volumes of combinations of any two of the following : cuboids, spheres, hemispheres and right circular cylinders/ cones • Problems involving converting one type of metallic solid into another.