

## Syllabus Indicator and Exam Portion

**Subject: Mathematics**

**CBSE – 2023-24**

**Grade: IX**

PHASE 1			
Ch. No.	Chapter Name	Subtopics	PT1 portion
			<b>Total Marks: 80</b> <b>Duration: 3 hours</b>
1	Number Systems	<ul style="list-style-type: none"> <li>▪ 1.1 Introduction</li> <li>▪ 1.2 Irrational Numbers</li> <li>▪ 1.3 Real Numbers and their Decimal Expansions</li> <li>▪ 1.4 Operations on Real Numbers</li> <li>▪ 1.5 Laws of Exponents for Real Numbers</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1.1 Introduction</li> <li>▪ 1.2 Irrational Numbers</li> <li>▪ 1.3 Real Numbers and their Decimal Expansions</li> <li>▪ 1.4 Operations on Real Numbers</li> <li>▪ 1.5 Laws of Exponents for Real Numbers</li> </ul>
2	Polynomials	<ul style="list-style-type: none"> <li>▪ 2.1 Introduction</li> <li>▪ 2.2 Polynomials in One Variable</li> <li>▪ 2.3 Zeroes of a Polynomial</li> <li>▪ 2.4 Factorisation of Polynomials</li> <li>▪ 2.5 Algebraic Identities</li> </ul>	<ul style="list-style-type: none"> <li>▪ 2.1 Introduction</li> <li>▪ 2.2 Polynomials in One Variable</li> <li>▪ 2.3 Zeroes of a Polynomial</li> <li>▪ 2.4 Factorisation of Polynomials</li> <li>▪ 2.5 Algebraic Identities</li> </ul>
3	Coordinate geometry	<ul style="list-style-type: none"> <li>▪ 3.1 Introduction</li> <li>▪ 3.2 Cartesian System</li> </ul>	<ul style="list-style-type: none"> <li>▪ 3.1 Introduction</li> <li>▪ 3.2 Cartesian System</li> </ul>

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PHASE 2			
Ch. No.	Chapter Name	Subtopics	PT2 portion
			<b>Total Marks: 80</b> <b>Duration: 3 hours</b>
			<b>PT1 portion is included</b>
4	Linear equations in two variables	<ul style="list-style-type: none"> <li>▪ 4.1 Introduction</li> <li>▪ 4.2 Linear Equations</li> <li>▪ 4.3 Solution of a Linear Equation</li> </ul>	<ul style="list-style-type: none"> <li>▪ 4.1 Introduction</li> <li>▪ 4.2 Linear Equations</li> <li>▪ 4.3 Solution of a Linear Equation</li> </ul>
6	Lines and Angles	<ul style="list-style-type: none"> <li>▪ 6.1 Introduction</li> <li>▪ 6.2 Basic Terms and Definitions</li> <li>▪ 6.3 Intersecting Lines and Non-Intersecting Lines</li> <li>▪ 6.4 Pairs of Angles</li> <li>▪ 6.5 Lines Parallel to the same Line</li> </ul>	<ul style="list-style-type: none"> <li>▪ 6.1 Introduction</li> <li>▪ 6.2 Basic Terms and Definitions</li> <li>▪ 6.3 Intersecting Lines and Non-Intersecting Lines</li> <li>▪ 6.4 Pairs of Angles</li> <li>▪ 6.5 Lines Parallel to the same Line</li> </ul>
7	Triangles	<ul style="list-style-type: none"> <li>▪ 7.1 Introduction</li> <li>▪ 7.2 Congruence of Triangles</li> <li>▪ 7.3 Criteria for Congruence of Triangles</li> <li>▪ 7.4 Some Properties of a Triangle</li> <li>▪ 7.5 Some More Criteria for Congruence of Triangles</li> </ul>	<ul style="list-style-type: none"> <li>▪ 7.1 Introduction</li> <li>▪ 7.2 Congruence of Triangles</li> <li>▪ 7.3 Criteria for Congruence of Triangles</li> <li>▪ 7.4 Some Properties of a Triangle</li> <li>▪ 7.5 Some More Criteria for Congruence of Triangles</li> </ul>

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PHASE 3			
Ch. No.	Chapter Name	Subtopics	PT3 portion
			<b>Total Marks: 80</b> <b>Duration: 3 hours</b>
			<b>PT1 and PT2 portions are included</b>
5	Introduction to Euclid's Geometry	<ul style="list-style-type: none"> <li>▪ 5.1 Introduction</li> <li>▪ 5.2 Euclid's Definitions, Axioms and Postulates</li> </ul>	<ul style="list-style-type: none"> <li>▪ 5.1 Introduction</li> <li>▪ 5.2 Euclid's Definitions, Axioms and Postulates</li> </ul>
8	Quadrilaterals	<ul style="list-style-type: none"> <li>▪ 8.1 Properties of a Parallelogram</li> <li>▪ 8.2 The Mid-point Theorem</li> </ul>	<ul style="list-style-type: none"> <li>▪ 8.1 Properties of a Parallelogram</li> <li>▪ 8.2 The Mid-point Theorem</li> </ul>
9	Circles	<ul style="list-style-type: none"> <li>▪ 9.1 Angle Subtended by a Chord at a Point</li> <li>▪ 9.2 Perpendicular from the Centre to a Chord</li> <li>▪ 9.3 Equal Chords and their Distances from the Centre</li> <li>▪ 9.4 Angle Subtended by an Arc of a Circle</li> <li>▪ 9.5 Cyclic Quadrilaterals</li> </ul>	<ul style="list-style-type: none"> <li>▪ 9.1 Angle Subtended by a Chord at a Point</li> <li>▪ 9.2 Perpendicular from the Centre to a Chord</li> <li>▪ 9.3 Equal Chords and their Distances from the Centre</li> <li>▪ 9.4 Angle Subtended by an Arc of a Circle</li> <li>▪ 9.5 Cyclic Quadrilaterals</li> </ul>
10	Heron's Formula	<ul style="list-style-type: none"> <li>▪ 10.1 Area of a Triangle – by Heron's Formula</li> </ul>	<ul style="list-style-type: none"> <li>▪ 10.1 Area of a Triangle – by Heron's Formula</li> </ul>

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PHASE 4			
Ch. No.	Chapter Name	Subtopics	YE portion
			<b>Total Marks: 80</b> <b>Duration: 3 hours</b>
			<b>PT1, PT2 and PT3 portions are included</b>
11	Surface areas and Volumes	<ul style="list-style-type: none"> <li>▪ 11.1 Surface Area of a Right Circular Cone</li> <li>▪ 11.2 Surface Area of a Sphere</li> <li>▪ 11.3 Volume of a Right Circular Cone</li> <li>▪ 11.4 Volume of a Sphere</li> </ul>	<ul style="list-style-type: none"> <li>▪ 11.1 Surface Area of a Right Circular Cone</li> <li>▪ 11.2 Surface Area of a Sphere</li> <li>▪ 11.3 Volume of a Right Circular Cone</li> <li>▪ 11.4 Volume of a Sphere</li> </ul>
12	Statistics	<ul style="list-style-type: none"> <li>▪ 12.1 Graphical Representation of Data</li> </ul>	<ul style="list-style-type: none"> <li>▪ 12.1 Graphical Representation of Data</li> </ul>