# SYLLABUS BREAK-UP

# CLASS IX MATHEMATICS

| Chapters | Topics |
|---|---|
| **1. Chapter -2** | **Polynomials** |
| | 2.1 Introduction |
| | 2.2 Polynomials in One Variables |
| | 2.3 Zeroes of Polynomial |
| | 2.4 Remainder Theorem |
| | 2.5 Factorization of Polynomials |
| | 2.6 Algebraic Identities |
| | Problem discussion |
| **Activity 1** | Factorization of Polynomials |
| **2. Chapter -1** | **Number System** |
| | 1.1 Introduction |
| | 1.2 Irrational Numbers |
| | 1.3 Real Numbers and their Decimal Expansion |
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| | 1.4 Representing Real Numbers on the Number Line |
| | 1.5 Operations on Real Numbers |
| | 1.6 Laws of Exponents for Real Numbers |
| | Problem Discussion |
| **3. Chapter -6** | **Lines and angles** |
| | 6.1 Basic Terms & definitions |
| | 6.2 Intersecting lines and Non Intersecting Lines |
| | 6.3 Pairs of angles |
| | 6.4 Parallels Lines and a Transversal |
| | 6.5 Lines Parallel to the same Lines |
| | 6.6 Angle sum Property of a Triangle |
| | Problem discussion |
| **4. Chapter -7** | **Triangles** |
| | 7.1 Congruence of triangles |
| | 7.2 Criteria for congruence of triangles |
| | 7.3 Some properties of a Triangle |
| | 7.4 Some more criteria for the congruence of the Triangles |
| | 7.5 Inequalities in a Triangle |
| | Problem discussion |
| **Activity 2,3** | Centroid and Incentre of a triangle |
| | **Revision for Pre Mid Term Examination** |
| **5. Chapter -5** | **Introduction to Euclid's Geometry** |
| | 5.1 Euclid's Definition, Axioms and Postulates |
| | 5.2 Equivalent version of Euclid's Fifth Postulate |
| | Problem discussion |
| **6. Chapter -3** | **Co-ordinate Geometry** |
| | 3.1 Introduction of a Cartesian System |
| | 3.2 Plotting a Point in the Plane |
| | Problem Discussion |
| **7. Chapter -12** | **Heron's formula** |
| | 12.1 Area of a triangle by Heron's formula |
| | 12.2 Application of a Heron's Formula |
| | Problem discussion |

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| **8. Chapter -8** | **Quadrilaterals** | |
| | 8.1 Angle sum Property of a Quadrilateral | |
| | 8.2 Types of quadrilateral | |
| | 8.3 Properties of Parallelogram | |
| | 8.4 Another condition for a Quadrilateral to be a Parallelogram | |
| | 8.5 The Mid Point Theorem | |
| | Problem discussion | |
| **9. Chapter -9** | **Area of Parallelogram and Triangles** | |
| | 9.1 Figure on the same Base and between the same Parallels | |
| | 9.2 Parallelogram on the same Base and between the same parallels | |
| | 9.3 Triangles on the same base and between the same parallels | |
| | Problem Discussion | |
| **Activity 4** | Mid Point theorem | |
| **Activity 5** | Area of a Parallelogram & Area of a Trapezium | |
| **Activity 6** | Parallelogram on the same base | |
| | Lab Activities - 05 | |
| | **Revision for Mid Term Examination** | |
| **10. Chapter -4** | **Linear Equation in Two Variables** | |
| | 4.1 Introduction of Linear Equation | |
| | 4.2 Solution | |
| | 4.3 Graph of Linear Equation in two variables | |
| | 4.4 Equation of Lines parallel to x- axis and y axis | |
| | Problem discussion | |
| **11. Chapter -15** | **Probability** | |
| | 15.1 Probability an Experiment Approach | |
| | Problem discussion | |
| **12. Chapter -11** | **CONSTRUCTIONS** | |
| | 11.1 Basic constructions | |
| | 11.2 Some constructions of triangle | |
| | Problem discussion | |
| **13. Chapter -10** | **Circles** | |
| | 10.1 Circles and its related terms: A review | |
| | 10.2 Angle subtended by a chord at a point | |
| | 10.3 perpendicular from the centre to a chord | |
| | 10.4 Circle through three points | |
| | 10.5 Equal chords and their Distances from the Centre | |
| | 10.6 Angle subtended by an arc of a Circle | |
| | Problem Discussion | |
| **Activity 7** | Central Angle Theorem of circles | |
| **Activity 8** | Angles in the Same Segment | |
| **Activity 9** | Angles in Major and Minor segments | |
| **Activity 10** | Cycle quadrilateral | |
| **14. Chapter -14** | **STATISTICS** | |
| | 14.1 Collection of Data | |
| | 14.2 Presentation of data | |
| | 14.3 Graphical Representation of data | |
| | 14.4 Measure of Central Tendency | |
| | Problem Discussion | |
| **15. Chapter -13** | **SURFACE AREA AND VOLUMES** | |
| | 13.1 Surface area of a cuboids and cube | |
| | 13.2 Surface area of right Circular Cylinder | |
| | 13.3 Surface area of a Right Circular cone | |
| | 13.4 Surface Area of a Sphere | |
| | 13.5 Volume of Cube and Cuboids | |
| | 13.6 Volume of Cylinder | |
| | 13.7 Volume of right Circular Cone | |
| | 13.8 Volume of sphere | |
| | Problem discussion | |
| | LAB ACTIVITIES-5 | |
| | **Revision for Post Mid Term Examination** | |
| | **Activity Based Test Conduction** | |
| | **Revision for Annual Examination** | |