Annual Syllabus (2025-26)
Class – X
Subject: Mathematics (Code: 041 & 241)

Course Structure

Units	Unit Name	Marks
I	Number Systems	06
II	Algebra	20
III	Coordinate Geometry	06
IV	Geometry	15
V	Trigonometry	12
VI	Mensuration	10
VII	Statistics & Probability	11
Total		**80**
Internal Assessment		20
Grand Total		100

Chapter No. & name	Competencies
1. REAL NUMBERS • Fundamental Theorem of Arithmetic - statements after reviewing work done earlier and after illustrating and motivating through examples • Proofs of irrationality of $\sqrt{2}$, $\sqrt{3}$, $\sqrt{5}$ etc.	The learner: • Develops understanding of numbers, including the set of real numbers and its properties. • Extends the understanding of powers (radical powers) and exponents. • Applies Fundamental Theorem of Arithmetic to solve problems related to real life contexts.
3. PAIR OF LINEAR EQUATIONS IN TWO VARIABLES • Pair of linear equations in two variables and graphical method of their solution, consistency /inconsistency. • Algebraic conditions for number of solutions. • Solution of a pair of linear equations in two variables algebraically - by substitution, by elimination. Simple situational problems.	The learner: • Describes plotting a pair of linear equations and graphically finding the solution. • Models and solves contextualized problems using equations (e.g., simultaneous linear equations in two variables).

5. ARITHMETIC PROGRESSIONS • Motivation for studying Arithmetic Progression • Derivation of the nth term and sum of the first n terms of AP and their application in solving daily life problems.	The learner: • Develops strategies to apply the concept of A.P. to daily life situations.
6. TRIANGLES Definitions, examples, counter examples of similar triangles. • (Prove) If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio. • State (without proof) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side. • State (without proof) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar. • State (without proof) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar. • State (without proof) If one angle of a triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar.	The learner: • works out ways to differentiate between congruent and similar figures. • establishes properties for similarity of two triangles logically using different geometric criteria established earlier such as Basic Proportionality Theorem etc.
7. COORDINATE GEOMETRY • Concepts of coordinate geometry. • Distance formula. Section formula (internal division).	The learner: • Derives formulae to establish relations for geometrical shapes in the context of a coordinate plane, such as, finding the distance between two given points, to determine the coordinates of a point between any two given points.
8. INTRODUCTION TO TRIGONOMETRY • Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined) • Motivate the ratios whichever are defined at 0° and 90°. Values of the trigonometric ratios of 30°, 45° and 60°. • Relationships between the ratios. **TRIGONOMETRIC IDENTITIES** • Proof and applications of the identity $\sin^2 A+\cos^2 A = 1$. • Only simple identities to be given.	The learner: • Understands the definitions of the basic trigonometric functions (including the introduction of the sine and cosine functions). • Uses Trigonometric identities to solve problems.

9. HEIGHTS AND DISTANCES: **Angle of elevation, Angle of depression** • Simple problems on heights and distances. Problems should not involve more than two right triangles. Angles of elevation/depression should be only 30°, 45°, and 60°.	The learner: • Applies Trigonometric ratios in solving problems in daily life contexts like finding heights of different structures or distance from them.
14. PROBABILITY • Classical definition of probability. • Simple problems on finding the probability of an event.	The learner: • Applies concepts from probability to solve problems on the likelihood of everyday events.
➢ **The above content is to be completed for Mid Term Examination by 06th September, 2025.** ➢ **Mental Maths & Maths Lab activities** ➢ **Revision of syllabus for Mid Term Examination**	
Mid Term Examination 2025	
2. POLYNOMIALS • Zeros of a polynomial • Relationship between zeros and coefficients of quadratic polynomials.	The learner: • develops a relationship between algebraic and graphical methods of finding the zeroes of a polynomial.
4. QUADRATIC EQUATIONS • Standard form of a quadratic equation $ax^2 + bx + c = 0$ $(a \neq 0)$. • Solutions of quadratic equations (only real roots) by factorization, and by using quadratic formula. Relationship between discriminant and nature of roots. • Situational problems based on quadratic equations related to day-to-day activities to be incorporated	The learner: • Demonstrates strategies of finding roots and determining the nature of roots of a quadratic equation.
11. AREAS RELATED TO CIRCLES • 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° and 120° only.	The learner: • Derives and uses formulae to calculate areas of plane figures.

10. CIRCLES Tangent to a circle at point of contact. • (Prove)The tangent at any point of a circle is perpendicular to the radius through the point of contact. • (Prove) The lengths of tangents drawn from an external point to a circle are equal.	The learner: • derives proofs of theorems related to the tangents of circles.
12. SURFACE AREAS AND VOLUMES • Surface areas and volumes of combinations of any two of the following: cubes, cuboids, spheres, hemispheres and right circular cylinders/cones.	The learner: • Visualises and uses mathematical thinking to discover formulae to calculate surface areas and volumes of solid objects (cubes,cuboids, spheres, hemispheres, right circular cylinders/cones, and their combinations).
13. STATISTICS • Mean, median and mode of grouped data (bimodal situation to be avoided).	The learner: • Calculates mean, median and mode for different sets of data related with real life contexts.
➢ **The whole syllabus is to be completed for Annual Examination by 06th December, 2025.** ➢ **Mental Maths & Maths Lab activities** ➢ **Revision of whole syllabus for Pre-board Examination.**	
Pre-board Examination 2025	
➢ **The annual examination will comprise the whole syllabus.** ➢ **Practice of Sample question papers provided by CBSE and DOE.** ➢ **Revision of whole syllabus for Board Examination.**	
Board Examination 2026	

MATHEMATICS – STANDARD (Code-041)

QUESTION PAPER DESIGN

CLASS–X (2025-26)

Time: 3 Hours **Max. Marks: 80**

S. No.	Typology of Questions	Total Marks	% Weightage (approx.)
1	**Remembering:** Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. **Understanding:** Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas	43	54
2	**Applying:** Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	19	24
3	**Analysing:** Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations **Evaluating:** Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. **Creating:** Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions	18	22
	Total	**80**	**100**
	INTERNAL ASSESSMENT	**20 MARKS**	
	Pen Paper Test and Multiple Assessment (5+5)	**10 MARKS**	
	Portfolio	**05 MARKS**	
	Lab Practical (Lab activities to be done from the prescribed books)	**05 MARKS**	

MATHEMATICS - BASIC (Code–241)

QUESTION PAPER DESIGN

CLASS–X (2025-26)

Time: 3 Hours **Max. Marks: 80**

S. No.	Typology of Questions	Total Marks	% Weightage (approx.)
1	**Remembering:** Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. **Understanding:** Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas	60	75
2	**Applying:** Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	12	15
3	**Analysing:** Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations **Evaluating:** Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. **Creating:** Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions	8	10
	Total	**80**	**100**
	INTERNAL ASSESSMENT	**20 MARKS**	
	Pen Paper Test and Multiple Assessment (5+5)	**10 MARKS**	
	Portfolio	**05 MARKS**	
	Lab Practical (Lab activities to be done from the prescribed books)	**05 MARKS**	