USWA COLLEGE ISLAMABAD
Syllabus of Mathematics for Entry Test Class 7th
Session 2025 – 26

The students should know

- Set, kinds of set, operation on sets (like union, intersection etc) and related symbols ($\in \notin \cup \cap \subseteq \varnothing$ etc.)
- Fractions (their addition, subtraction, division and multiplication) and related symbols ($\leq, \geq, =, \neq$ etc.)
- Algebra (addition, subtraction, division and multiplication)
- Polynomials (Monomial, binomial, trinomial, like terms, unlike terms, variable, exponent, co-efficient, constant etc.)
- Integer, Operations on integers (e,g. addition, subtraction, division and multiplication)
- How to find percentage, average etc.
- Ratio, proportion.
- Lowest form of common fractions.
- How to find L.C.M and H.C.F
- How to find Area (square, triangle, rectangle etc.)
- How to find the area and volume of cube and cuboid.
- How to bisect Line / side and angle.
- How to construct different angles with the help of compass.
- How to construct triangle.

Reference Book :
National Book Foundation for Class 6th

Paper Pattern for Class 7th

Multiple Choice Questions (MCQs)	10 Marks
Short Questions (6 Questions of 5 marks each)	30 Marks
Long Question (2 Questions of 10 marks each)	20 Marks
Total Marks:	60 Marks

The students should know

- Basic concept of Set, kinds of set, operation on sets (like union, intersection etc) and related symbols ($\in \notin \cup \cap \subseteq \varnothing$ etc.)
- Operations on integers (like addition, subtraction, division and multiplication) and related symbols ($\leq$, $\geq$, $=$, $\neq$ etc.)
- Additive and multiplicative inverses of integers.
- Laws of exponents.
- Concept of rational numbers.
- Addition, subtraction, division and multiplication of Polynomial values of algebraic expressions.
- Factorization of polynomials.
- How to use identities to factorize different polynomials
- How to find loss, profit, their percentage, average etc.
- How to find GST, property tax, zakat, ushr etc.
- Concept of linear equation and solution of linear equations.
- Ratio, continued ratio and proportion (direct and inverse).
- How to find square root of numbers, common fraction, mixed fraction and decimal fractions.
- Types of fraction, types of common and decimal fractions.
- Ascending and descending order of polynomials.
- How to find circumference, radius, diameter and area of circle.
- How to find the area and volume of cube, cuboid and cylinder.
- How to construct triangle, rectangle and parallelogram.
- How to construct different angles with the help of compass.

Reference Book :
National Book Foundation for Class 7ᵗʰ

Paper Pattern for Class 8ᵗʰ

Multiple Choice Questions (MCQs)	10 Marks
Short Questions (6 Questions of 5 marks each)	30 Marks
Long Question (2 Questions of 10 marks each)	20 Marks
Total Marks:	60 Marks