MATHEMATICS …Grade: 8 … Allocated Marks: 35 … Time allowed: 70 minutes

The ability of the students regarding general concepts of Mathematics, practiced in the respective classes at every school, is evaluated through the Entry Test paper of Mathematics. The paper comprises of three sections. The very first question of the paper is in objective form, however, the second portion of paper is calculation based sums, and the last portion is of problem solving skills, geometry & shapes. (Note: Calculator is not allowed)

- **Fill in the Blanks** (1.0×4)
- **Sums** (4.0 ×4)
- **Problem Solving Skills, Geometry & Shapes** (5.0× 3)

SYLLABUS of MATHEMATICS for ADMISSION to GRADE:8

Sets: Identification of Set, Types of Set, Subset, perform operations on Sets (Union, Intersection, difference) and Complement of a set

Square Root: Finding Square Root of Natural numbers, Common fractions and Decimals which are perfect squares, Solving Word Problems Related to Square Roots.

Rational Numbers: Operations on Rational numbers, Verification of Commutative, Associative & Distributive Properties of Rational numbers, Additive identity and multiplicative identity, additive inverse and multiplicative inverse of Rational numbers, Comparison and ordering of Rational Numbers, Representation of Rational numbers on Real Number line, Types of Decimals, Conversion of Rational numbers to Decimals & Rounding off Decimals

Direct and Inverse Variation: Continued ratio, Direct & Inverse Proportion & related word problems, Real life problems related to Time & Work and Time & Distance, Conversion of units of speed i.e. km/h to m/s and vice versa.

Algebra: Algebraic Expressions and Sentences, Polynomials and Types of polynomial w.r.t terms and degree, ordering of Polynomials w.r.t variable. Addition, Subtraction and Multiplication of Polynomials, Expansion of algebraic expressions by using identities $(a\pm b)^2$ *and* (a^2-b^2), Factorization by using identities $(a\pm b)^2$, (a^2-b^2), Solution of Linear equations & related word problems .

Geometry: Concept of circle, relation between radius and diameter, circumference and area of circle, real life problems related to area and circumference of circle.