

SNGS TALENT REWARD TEST

SYLLABUS — GRADE 8

For Grade 8 Students Seeking Admission to Grade 9

Test Structure

Section	Questions
Mathematics	20 Questions
Science	20 Questions
Total	40 Questions
Duration	1 Hour 30 Minutes
Marks per Question	2 Marks

No negative marking. Answers to be marked on the OMR answer sheet provided.

Syllabus

Mathematics	Science
1. General Aptitude • Logical reasoning and pattern recognition • Number series, analogies, and relationships • Visual reasoning and spatial intelligence • Data interpretation and problem-solving • Mathematical puzzles, code breaking, ciphers • Direction and distance problems 2. Squares and Cubes • Perfect squares/cubes and their properties • Methods to find squares and cubes • Square roots and cube roots • Relationship between squares and cubes • Applications in real-life problems 3. Exponents • Laws of exponents (product, quotient, power rule) • Negative, zero, and fractional exponents • Scientific notation and standard form • Comparison and simplification of exponential forms • Applications of exponents 4. Story of Numbers • History of number systems (Roman, Egyptian, Babylonian) • Decimal system; concept of zero • Number patterns in nature (Fibonacci, golden ratio) • Magic squares, binary and other number bases • Famous mathematicians and their contributions	1. Electricity: Magnetic and Heating Effect • Magnetic effect and heating effect of current • Electric and voltaic cells • Electromagnets 2. Exploring Forces • What is force; different types of forces • Weight and its measurement 3. Nature of Matter • Elements, compounds, and mixtures • Solutes, solvents, and solubility 4. Invisible World • Microorganisms: bacteria, viruses, fungi, protozoa • Role of microorganisms in daily life • Food preservation and spoilage • Diseases caused by microorganisms • Cells as basic units of life; plant vs animal cells • Microscopy and its applications 5. Health • Balanced diet, food groups, nutritional deficiencies • Personal hygiene and disease prevention • Communicable and non-communicable diseases • First aid and emergency care • Mental health and stress management • Exercise, fitness, and environmental health factors