



## MATHEMATICAL KANGAROO COMPETITION - 2019-20

**Pre-Ecolier - 1 & 2 (Grade- 1 & 2):** Simple arithmetic operations with 1 digit and 2-digit numbers. Distinguishing simple figures. Time and clock. Number of days in a week and number of months in a year.

**Ecolier – 1 & 2 (Grade- 3 & 4):** Simple arithmetic operations with 1,2,3 and 4-digit numbers. Recognizing geometric figures. Magic square with a sum of 15. Time & clock. Number of days in a week & number of months in a year. Addition, subtraction, multiplication and division. Properties of sets. Perimeter and area of square and rectangle.

**Benjamin- 1 & 2 (Grade- 5 & 6):** Addition, subtraction, multiplication, division. Magic squares, Fractions and decimals. Clock and calendar. Perimeter of a polygon, area of rectangle and triangle. Mathematical logic. Lines and rays on a surface. A cube, a rectangular solid. Acute, right, and obtuse angles.

**Cadet – 1 & 2 (Grade – 7 & 8):** Operations on rational numbers. Powers of natural numbers. Angles: acute, right, and obtuse. Equations, inequalities and systems of linear equations. Area of rectangle, triangle and circle. Lines and rays on a surface. Volume and surface area of geometric figures. Supplementary angles, sum of angles in a triangle and in a quadrilateral. Mathematical logic.

**Junior – 1 & 2 (Grade -9 & 10):** Operations on real numbers. Functions, polynomials, equations, inequalities. Sequences of numbers. Elements of combinatorics. Synthetic & analytic plane geometry.

**Student – 1 & 2 (Grade – 11 & 12):** Operations on real numbers. Functions, polynomials, equations, inequalities. Sequences of numbers. Elements of combinatorics. Synthetic & analytic plane geometry.



## HIPPO ENGLISH OLYMPIAD - 2019-20

Questions will be drawn from school plus syllabus from different standard curriculum of national and international level.



## IOA - SCIENCE OLYMPIAD - 2019-20

**Grade – 1:** Living and non-living things. Plant Kingdom. Animals. Human Body and Healthy Habits. Our Need. Safety Rules and Good Manner. Our Family And Surrounding. Our Earth. Our Universe.

**Grade – 2:** Living Things and Non-Living Things. Plant Our Green Friends. The World of Animals. My Body. Our Basic Need. Good Habits. More about Safety Rules. Air, Water, Weather and Seasons. Rocks and Minerals. Light and Shadow. Sun Moon Earth and Our Environment.

**Grade – 3:** Living and Non-Living Things. Parts of a Plant. Animals and Their Eating Habits. Birds. Organs and Organ Systems. Our Houses and Clothes. Safety and First Aid. Solids, Liquids, Gases and Materials. Light, Sound and Force. Rocks and Soils. Our Environment and Pollution. Materials. Air, Water and Weather. The Sun, Stars and Moon. Measurement Standard Units.

**Grade – 4:** Plant Life. Animals Life. The human body. Matter. Our needs. Force, work and energy. Safety and first aid. Air, water and weather. The solar system. Our environment.

**Grade – 5:** living nonliving things. Plants. Animals. Food and health. Bones and muscles. Nervous system. Human excretory and blood circulatory System. Rocks and minerals. Soil. The earth, the moon and the sun. Our environment, natural disasters And pollution. Energy, electricity, magnet and simple Machine.

**Grade – 6:** The Building Blocks of Life. Transportation system in plants and animals. Electrical system. Our environment. Heredity and reproduction. Sorting and separation of materials into groups. Fibre to fabric. Fun with magnets. Light, shadow and reflection. Garbage in, garbage out.

**Grade – 7:** Nutrition in Plants and Animals. Respiration in Organisms. Transportation in Plants and Animals. Reproduction in Plants. Heat. Acids, Bases and Salts. Changes around Us. Weather, Climate & Adaptation of Animals to Climate. Winds, Storms and Cyclones. Natural Resources and Their Conservation. Motion and Time. Electric Current and Its Effects. Light.

**Grade – 8:** Crop Production and Management. Microorganisms-friend and FOE. Synthetic Fibres and Plastics. Coal and Petroleum. Combustion and Flame. Adolescence and Reproductive Health. Reproduction in Animals. Metal and Non-Metal. Force, Pressure and Friction. Sound. Chemical Effects of Electric Current. Light and Our Universe.

**Grade – 9:** Nature of matter and Behavior. Cell, Tissues, Organ and Organ System. Biological Diversity, Health and Diseases. Motion and Force. Work, Power and Energy. Gravitation. Sound and Sound Energy. Physical Resources. Bio-geochemical cycles in nature. Food & Food Production.

**Grade –10:** Chemical Reactions. Acids, Bases and Salts. Metals and Non-Metals. Carbon Compounds. Periodic Classification of Elements. Life Processes. Control and Co-ordination in animals & Plants. Reproduction. Heredity and Evolution. Light and Light Energy. Effects of Current. Magnetic Effects of Current. Sources of Energy. Our Environment. Management of Natural Resources.

**Grade – 11:** Questions of Grade 11 contest will be drawn from common topics of CBSE, ISC and IB curriculum.