

## **ANNEXURE-1**

### **SYLLABUS FOR ONLINE SCHOOL LEVEL (LEVEL-I) EXAMINATION SENIOR GROUP (CLASS - IX, X & XI)**

#### **A. PHYSICS**

- Motion
- Force and Laws of Motion
- Gravitation
- Work and Energy
- Sound
- Light – Reflection and Refraction, dispersion and its application
- Electricity
- Magnetic Effects of Electric Current
- Sources of Energy
- Physical World and Measurement
- Kinematics
- Laws of Motion
- Work, Energy and Power
- Motion of System of Particles and Rigid Body
- Gravitation
- Properties of Bulk Matter
- Thermodynamics
- Behavior of Perfect Gases and Kinetic Theory of Gases
- Oscillations and Waves

#### **B. CHEMISTRY**

- Matter in our surrounding
- Is matter around us pure?
- Atoms and molecules
- Structure of atom
- Chemical reactions and equations
- Acids, bases and salts
- Metals and Non-metals
- Periodic classification of elements
- Carbon and its compounds
- Some Basic concepts of chemistry
- Structure of atom
- Periodic classification of elements and periodic properties
- Chemical bonding and molecular structure
- States of matter
- Thermodynamics
- Equilibrium
- Redox reactions

- Hydrogen
- s-block elements (Group 1 and 2)
- p-block elements (groups 13, 14, 15)
- Some basic principles and techniques
- Hydrocarbons
- Environmental chemistry

### **C. BIOLOGY**

- Cell organization
- Animal tissues
- Plant tissues
- Improvement of crop
- Animal husbandry
- Animal nutrition, respiration, circulation and excretion
- Plant nutrition, respiration, transportation and excretion
- Animal nervous system
- Coordination in plants (stimuli and hormones)
- Animal reproduction
- Human eye
- Genetics
- Environment
- Animal diversity and kingdom
- Plant diversity and kingdom
- Organismic classification
- Morphology and anatomy of plants
- Structural organization of animals
- Cell biology
- Macromolecules
- Plant physiology (photosynthesis, respiration and plant growth and development)
- Animal physiology (respiratory, circulatory, excretory, nervous and endocrine systems)

### **D. MATHEMATICS**

- **Arithmetic** - Law of Indices & Surds, Real Numbers, Logarithms, Calendar
- **Algebra** - Simultaneous & Quadratic Equation, Polynomials, Factor & Remainder Theorem, Permutations & Combination, Inequations, Functions, AP, GP & HP, Complex Number, Probability
- **Geometry** - Circle Theorem, Area of Parallelogram, Apollonius Theorem & Stewart's Theorem, Trigonometric Identity, Properties and Solution of Triangles, Straight Line, Differentiation, Conic Section
- **Mensuration** - Sphere, Cone, Cylinder, Pyramid, Prism
- **Statistics** - Measures of Central Tendency, Mean deviation and Median Deviation about Mean, Standard Deviation, Variance

### **E. Logic & Reasoning**

Crypt arithmetic (Alphametics), Logical Sequence Series, Coding & decoding, Blood Relations,

Input & Output, Binary Logic, Standard LR Sets, Cubes and Visual Puzzles, Word Problems, IQ puzzles, Sequencing, Grid Puzzles, Linear and Circular Seating Arrangements. Visual Puzzles, Cubes and Dices, Venn Diagrams, Math based reasoning, Direction, Order and Ranking, Clocks & Calendar, Analogy, Syllogism, Analytical puzzles, Inequalities, Image based question.

Games and Tournaments, Input & Output, Binary Logic, Cubes and Visual Puzzles, Word Problems, IQ puzzles, Logical connectives, Sequencing, Grid Puzzles, Linear and Circular Seating Arrangements, Visual Puzzles, Cubes and Dices, Venn Diagrams, Math based reasoning, Critical path, Decision making, Mirror image & water image, Odd one out, shape constructions, Paper folding, Figure matrix