

RAMAKRISHNA MISSION VIVEKANANDA VIDYAMANDIR
ADMISSION TEST YEAR-(2021-22)
CLASS-XI SUBJECT-CHEMISTRY FULL MARKS-10

1. ATOMIC STRUCTURE

- a> About Sub-atomic particles
- b> Thomson, Rutherford and Neil's Bohr Atomic Model and their drawbacks

2. CLASSIFICATIONS OF ELEMENTS AND PERIODICITY IN PROPERTIES

- a> Understand the periodic law
- b> Find out group and period number of an element.
- c> Periodic trends in properties of elements
- d> Nature of oxides.

3. CHEMICAL BONDING AND MOLECULAR STRUCTURE

- a> Understand different theory of bonding.
- b> Types of bonding
- c> Kossel-Lewis approach

4. REDOX REACTION

- a> Define oxidation and reduction with example
- b> Oxidizing and Reducing agent
- c> Calculating Oxidation number

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SYLLABUS FOR APTITUDE TEST OF CLASS- XI (2021-2022): MATHEMATICS

1. Set theory : Sets , Type of sets , subset, Union, Intersection and Compliment of Sets , Disjoint Set , Power Set , Symmetric difference of two Sets , Cardinal Number of Sets , Venn Diagrams , Algebraic Operation on Sets, De-Morgan's Law, Number of elements in Different Sets.

2. Trigonometry: Measurement of Angles, Trigonometric Functions, Trigonometric Ratios of Compound Angles.

3. Laws of Indices and Logarithm: Basic Concepts, Formulas and Problems.

4. Quadratic Equations : Solutions of Quadratic Equation, Sum and Product of Roots , Nature of Roots, Relation between Roots and Co-efficient. Formation of an Equation with given Roots.

5. Co-ordinate Geometry: Cartesian System of Rectangular Co-ordinates-Distance formula, section Formula, Area of Triangle & Quadrilateral .Locus.

6. Number System: Natural Number, Whole number ,Integer ,Rational Number ,Irrational Number Real Number & their properties, Interval, Absolute value & properties.

7. Probability: Random Experiment, Outcomes, Sample Space, Event, Mutually Exclusive Event, Impossible & certain Event, Complimentary Event, Equally probable Events, Exhaustive Events. Classical Definition of Probability.

Syllabus for Aptitude Test of Class XI (2021-22) Biology

1. Cell as the basic unit of life

Cell Theory, Cell as Basic Unit of Life, Ultrastructure of Prokaryotic Cell, Ultrastructure of Eukaryotic Cell, Cell Wall, Cell Membrane

Cell Organelles: Plastids, Mitochondria, Golgi bodies, Endoplasmic Reticulum, Ribosome, Lysosome, Nucleus, Centrosome, Microbodies, Cytoskeleton, Cilia and Flagella, Cytoplasm

2. Cell cycle & Cell Division

Cell Cycle, General Idea About Chromosome, Amitosis, Mitosis, Meiosis

3. Digestion and Absorption

Alimentary System, Digestive Glands, Role of Digestive Enzymes in Digestion, Gastrointestinal Hormones, Peristalsis, Digestion, Absorption, Energy Value of Food, Basal Metabolism, Egestion, Nutritional and Digestive Disorder

SYLLABUS FOR APTITUDE TEST OF CLASS- XI (2021-2022): Physics

Linear motion, projectile motion, vector, Newton's laws of motion, elasticity, surface tension, viscosity, thermal expansion, conduction of heat, lens, Coulomb's law, Ohm's law, series and parallel combinations of resistances, Joule's law of electrical heating, electromagnetism.

Question Pattern

Full Marks: 35

| Subject | Question Type | Marks |
|--------------------------------------|---|-----------------|
| Mathematics OR, Biology | Short Answer Type Question Very Short Answer Type Question | 2x5=10 1x5=5 |
| Physics | Short Answer Type Question Very Short Answer Type Question | 2x3=6 1x4=4 |
| Chemistry | Short Answer Type Question Very Short Answer Type Question | 2x3=6 1x4=4 |