

# KVPY Syllabus

## For SA stream

Physics: Applications in Daily Life, Kinematics, Laws of Motion, Work, Energy and Power, Physical World and Measurement, Gravitation, Thermodynamics, Magnetic Effects of Current, Sources of Energy, Reflection, Refraction, Electromagnetic Induction.

Chemistry: Thermodynamics, States of Matter: Gases and Liquids, Classification of Elements and Periodicity in Properties, Environmental Chemistry, Chemical Reactions, Metals and Nonmetals, Periodic Classification of Elements, Carbon Compounds, Acids, Bases and Salts, Basic Concepts of Chemistry.

Mathematics: Coordinate Geometry, Mathematical Reasoning, Statistics and Probability, Trigonometric Functions, Real Numbers, Polynomials, Geometry, Introduction to Trigonometry, Statistics, Quadratic Equations, Probability, Surface Areas, and Volumes.

Biology: Plant Physiology, Diversity of Living Organisms, Cell: Structure and Function, Human Physiology, Control and Coordination in Animals and Plants, Heredity and Evolution, Reproduction, Life Processes, Our Environment.

## For SX stream

Physics: Thermodynamics, Electrostatics, Refraction, Current Electricity, Electromagnetic Induction and Alternating Current, Magnetic Effects of Current, Reflection of Light, Electromagnetic Induction, Kinematics, Work, Energy and Power, Sources of Energy, Physical World and Measurement, Gravitation, Laws of Motion.

Chemistry: Chemical Reactions, Environmental Chemistry, Solid State, Electrochemistry, Chemical Kinetics, Isolation of Elements, Periodic Classification of Elements, Surface Chemistry, States of Matter: Gases and Liquids, Metals and Nonmetals, Carbon Compounds, Basic Concepts of Chemistry, Thermodynamics, Classification of Elements and Periodicity in Properties.

Biology: Human Physiology, Biology and Human Welfare, Control and Coordination in Animals and Plants, Ecology and Environment, Cell: Structure and Function, Genetics and Evolution, Life Processes, Plant Physiology, Diversity of Living Organisms, Reproduction.

Mathematics: Trigonometric Functions, Geometry, Linear Programming, Vectors and 3D Geometry, Calculus, Relations and Functions, Coordinate Geometry, Mathematical Reasoning, Real Number, Polynomials, Introduction to Trigonometry, Surface Areas and Volumes, Statistics and Quadratic Equations, Probability, Statistics, and Probability.

## For SB stream

Physics: Thermodynamics, Reflection, Electrostatics, Current Electricity, Electromagnetic Induction and Alternating Current, Waves and Optics, Electricity and Magnetism, Electrostatics and Thermal Physics, Electromagnetic Induction, Physical World and Measurement, Sources of

Energy, Refraction and its Applications in Daily Life, Kinematics, Laws of Motion, Magnetic Effects of Current, Work, Energy and Power, Gravitation.

Chemistry: Metals and Nonmetals, Environmental Chemistry, Solid State, Electrochemistry, Chemical Kinetics, Isolation of Elements, Surface Chemistry, Chemical Bonding, Chemistry of Noble Gases, Structure and Bonding, Alkenes, Cycloalkenes, Dienes and Alkynes, Thermodynamics, Chemical Reactions, Basic Concepts of Chemistry, Periodic Classification of Elements, Carbon Compounds, Acids, Bases and Salts, States of Matter: Gases and Liquids, Classification of Elements and Periodicity in Properties.

Biology: Plant Physiology, Reproduction, Diversity of Living Organisms, Cell: Structure and Function, Biology and Human Welfare, Biotechnology, Genetics, Life Processes, Human Physiology, Control and Coordination in Animals and Plants, Genetics and Evolution, Our Environment, Ecology and Environment.

Mathematics: Coordinate Geometry, Mathematical Reasoning, Statistics and Probability, Trigonometric Functions, Linear Programming, Relations and Functions, Analytical Geometry in Two Dimensions, Vector Algebra, Evaluation of Integrals, Statistics, Surface Areas and Volumes, Vectors and 3D Geometry, Calculus, Real Number, Polynomials, Geometry, Introduction to Trigonometry, Quadratic Equations, Probability.