

Physics Syllabus

Alternating Current

Current Electricity

Electromagnetic Induction

Electrostatics

Gravity

Kinematics

Laws of motion

Magnetic effects of current

Physical-world and measurement

Reflection of light

Refraction

Source of energy

Thermodynamics

Work, energy and power

Chemistry Syllabus

Acids

Basic concepts of chemistry

Environmental Chemistry

Chemical reactions

Metals and non-metals

Carbon compounds

Gases and liquids

Classification of elements and periodicity in properties

Periodic classification of elements

Salts and bases

States of matter

Thermodynamics

Biology Syllabus

Cell: Structure and Function, Human Physiology

Control and coordination in animals and plants

Diversity of living organisms

Heredity and Evolution

Life Processes

Our environment

Plant physiology

Reproduction

Mathematics Syllabus

Calculus
Relations and functions
Geometry
Introduction to trigonometry
Linear programming
Mathematical reasoning
Polynomials
Probability
Quadratic equations
Coordinate geometry
Vectors and 3-D geometry
Trigonometric functions

KVPY SX syllabus

SX stream is for Class XII students. The syllabus includes topics from Class X, Class XI and Class XII. Like the SA stream, Physics, Chemistry, Mathematics and Biology are the subjects included in the KVPY SX syllabus. The main difference in the syllabus of the SA stream and SX stream is that Class XII portions are also included for the SX stream. The important topics covered in all four subjects are listed below.

Physics Syllabus

Alternating current

Calorimetry and thermal expansion

Capacitance

Centre of mass

Circular Motion

Current electricity

Elasticity and viscosity

Electromagnetic induction

Electromagnetic waves

Electrostatics

Fluid mechanics

Friction

Geometrical optics

Gravitation

Heat transfer

Kinetic theory of gases and thermodynamics

Magnetic effect of current & magnetic force on charge or current

Measurement error and experiment

Modern physics-I

Newton's law of motion

Nuclear physics

Projectile motion

Rectilinear motion

Relative motion

Rigid body dynamics

Semiconductors

Simple harmonic motion

Sound waves

Surface Tension

Unit and dimension

Wave on a string

Wave optics

Work, Power and Energy

Chemistry Syllabus

Alcohols

Aldehydes and ketones & carboxylic acid

Aromatic Compounds

Atomic structure

Basic concepts of chemistry

Biomolecules and polymers

Chemical bonding

Chemical equilibrium

Coordination compounds

d & f block

Electrochemistry

ethers

Gaseous state

Haloalkanes and haloarenes

Hydrocarbon (Alkane, Alkene & Alkyne)

Ionic equilibrium

Kinetics

Nitrogen compounds

Organic chemistry basic principle

p-block

Periodicity

phenols

Qualitative Analysis

Redox

s-block

Solid-state

Solutions

Stereoisomerism

Surface chemistry Metallurgy

Thermodynamics

Biology Syllabus

Biology and Human Welfare

Cell: Structure and Function

Control and Coordination in Animals and Plants

Diversity of Living Organisms

Ecology and Environment

Genetics and Evolution

Human Physiology

Life Processes

Plant Physiology

Reproduction

Mathematics Syllabus

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

KVPY SB syllabus

This test is meant for students in the 1st year of the UG course. The syllabus includes topics from Class X, Class XI, Class XII and 1st year of college. Just like the SA stream and SX stream, SB stream also includes four subjects: – Physics, Chemistry, Mathematics and Biology. The important topics with respect to each subject are mentioned below.

Mathematics syllabus

Polynomials

Analytical geometry in two dimension

Calculus

Coordinate Geometry

Evaluation of integrals

Geometry

Introduction to Trigonometry

Linear Programming

Mathematical Reasoning

Probability

Real Number

Relations and Functions

Statistics and Probability

Statistics and Quadratic Equations

Surface Areas and Volumes

Trigonometric Functions

Vector Algebra

Vectors and 3D Geometry

Biology Syllabus

Biology and Human Welfare

Cell: Structure and Function

Control and Coordination in Animals and Plants

Diversity of Living Organisms

Ecology and Environment

Genetics and Evolution

Human Physiology

Life Processes

Plant Physiology

Reproduction

Our Environment

Biotechnology

Genetics

Chemistry Syllabus

Alcohols

Aldehydes and ketones & carboxylic acid

Alkenes

Alkynes

Aromatic Compounds

Atomic structure

Basic concepts of chemistry

Biomolecules and polymers

Chemical bonding

Chemical equilibrium

Chemistry of Noble Gases

Coordination compounds

Cycloalkenes

d & f block

Dienes

Electrochemistry

ethers

Gaseous state

Haloalkanes and haloarenes

Hydrocarbon (Alkane, Alkene & Alkyne)

Ionic equilibrium

Kinetics

Nitrogen compounds

Organic chemistry basic principle

p-block

Periodicity

phenols

Qualitative Analysis

Redox

s-block

Solid-state

Solutions

Stereoisomerism

Structure and bonding

Surface chemistry Metallurgy

Thermodynamics

Physics Syllabus

Alternating current

Calorimetry and thermal expansion

Capacitance

Centre of mass

Circular Motion

Current electricity

Elasticity and viscosity

Electromagnetic induction

Electromagnetic waves

Electrostatics

Fluid mechanics

Friction

Geometrical optics

Gravitation

Heat transfer

Kinetic theory of gases and thermodynamics

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Newton's law of motion

Nuclear physics

Projectile motion

Rectilinear motion

Relative motion

Rigid body dynamics

Semiconductors

Simple harmonic motion

Sound waves

Surface Tension

Unit and dimension

Wave on a string

Wave optics

Work, Power and Energy

Electricity and Magnetism

Thermal physics

Preparation Tips and Tricks for KVPY

- Following the KVPY test syllabus and preparing for the exam according to the importance of the main topics will assist students in studying systematically and allow them to achieve high scores.
- Once you've gone over each concept, note it down in your notebook in your own words and go over it again every day. This will undoubtedly aid in the clarification of fundamental concepts.
- Students should solve KVPY exam papers from previous years. As a result, they will have a better understanding of the exam format, relevant topics, and sorts of questions that will be asked in the exam. Candidates must answer KVPY sample papers and be familiar with the format of the question paper.
- To avoid confusion, students must stick to the same set of books throughout. This will direct them to study more deliberately as a result of this. They can use some other books in addition to NCERT to acquire a range of questions to solve and better prepare. It is recommended that you cover the complete KVPY Syllabus 2021 using only the best literature.
- Students will be familiarised with the KVPY exam, including the paper pattern and difficulty level, through the mock examination. It will also get them used to taking a computer-based test. For the SA, SB, and SX streams, the KVPY mock test 2021 will be offered in both English and Hindi.

The Kishore Vaigyanik Protsahan Yojana (KVPY) is a prestigious national level fellowship program in basic science. It is conducted by the department of science and technology, Government of India. The objective of the program is to encourage students to make careers in science research. The KVPY aptitude test does not have any prescribed syllabus. The applicants are expected to study the syllabus of the class they are studying in, in order to clear the aptitude test. The test is conducted for three different streams namely SA, SX and SB.