

Bhabha Atomic Research Centre (BARC) Syllabus

BARC Syllabus - Mathematics

- Relations and Functions
- Logarithms
- Complex Numbers
- Quadratic Equations
- Sequences and Series
- Trigonometry
- Cartesian System of Rectangular Coordinates
- Statistics
- Differentiation
- Introduction to Three Dimensional Geometry
- Straight Lines
- Circles
- Conic Sections
- Permutations and Combinations
- Vectors
- Exponential and Logarithmic Series
- Sets and Set Theory
- Probability Function
- Limits and Continuity
- Applications of Derivatives
- Indefinite Integrals Binomial Theorem
- Matrices
- Determinants
- Definite Integrals

Bhabha Atomic Research Centre (BARC) Science Syllabus

- Laws of motion.
- Thermal properties of matter.
- Units and measurements.
- Kinetic theory.
- Gravitation.
- Work, energy, and power.
- Wave optics.
- Oscillations.
- Physical world.
- Mechanical properties of solids.
- Ray optics and optical instruments.
- Motion in a straight line.
- Thermodynamics.

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- Motion in a plane.
- Nuclei.
- Mechanical properties of fluids.
- Systems of particles and rotational motion.
- Electric charges and fields.
- Moving charges and magnetism.
- Electromagnetic induction.
- Electrostatic potential and capacitance.
- Magnetism and Matter.
- Current electricity.
- Alternating current.
- Dual nature of radiation and matter.
- Electromagnetic waves.
- Atoms.
- Waves.
- Semiconductor electronics.
- Communication systems.
- The s – block elements.
- P-block elements – group 14 (carbon family).
- Organic chemistry-some basic principles and techniques and hydrocarbons.
- Solutions.
- Surface chemistry.
- Thermodynamics.
- Chemical equilibrium and acids-bases.
- Hydrogen and its Compounds.
- Atomic structure.
- D and f block elements & coordination compounds.
- Classification of elements and periodicity in properties.
- Environmental chemistry.
- Biomolecules.
- Solid state.
- States of matter: gases and liquids.
- Chemistry in everyday life.
- Stoichiometry.
- General principles of metallurgy.
- Organic compounds containing c, h, and o.
- P- block elements group 13 (boron family).
- P-block elements.
- Chemical bonding and molecular structure.
- Electrochemistry and chemical kinetics.
- Haloalkanes and haloarenes.
- Polymers.

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- Organic compounds containing nitrogen.

barc.gov.in Syllabus - General Awareness

- National Dance
- Music & Literature
- Indian Culture
- Scientific observations
- Political Science
- World organizations
- Countries and Capitals
- Famous Places in India
- Books and Authors
- Important Dates
- About India and it neighboring countries
- Science and innovations
- New inventions
- Economic problems in India
- Geography of India
- National and International current affairs