

# JEECUP Syllabus

## Physics

- Measurement
- Motion in one dimension
- Laws of Motion
- Motion in two dimensions
- Electrostatics
- Current Electricity
- Magnetic Effect of Current
- Magnetism in Matter
- Electromagnetic induction
- Ray Optics and optical instruments
- Wave Optics
- Modern Physics
- Work, Power, and Energy
- Linear Momentum and collisions
- Rotation of a rigid body about a fixed axis
- Gravitation
- Oscillatory motion
- Mechanics of solids and fluids
- Heat and thermodynamics
- Wave

## Chemistry

- Atomic Structure
- Chemical Bonding
- Redox Reactions
- Chemical Equilibrium and Kinetics
- IUPAC
- Polymers
- Carbohydrates
- Solid State
- Petroleum
- Acid-Base Concepts

- Electrochemistry
- Catalysis
- Colloids
- Colligative Properties of Solution
- Periodic Table
- Preparation and Properties
- Thermochemistry
- General Organic Chemistry
- Isomerism

## **Mathematics**

- Algebra
- Probability
- Dynamics
- Statics
- Trigonometry
- Co-ordinate Geometry
- Calculus
- Vectors

## **Biology**

### **Zoology**

- Origin of Life
- Organic Evolution
- Mechanism of Organic Evolution
- Detailed studies of Protozoa, Porifera, Coelenterate, Aschelminthes, Annelida, and Arthropod.
- Human Genetics and Eugenics
- Applied Biology
- Mammalian Anatomy (Eg. Rabbit)
- Animal Physiology

## **Botany**

- Plant Cell
- Protoplasm
- Ecology
- Ecosystem
- Cell differentiation Plant Tissue
- Anatomy of Root, stem, and leaf
- Important phylums
- Soil
- Photosynthesis
- Genetics
- Seeds in angiospermic plants
- Fruits

## **Agriculture**

- Agricultural Physics and Chemistry
- Agricultural Engineering and Statistics

## **General Intelligence & Reasoning**

- Analogies
- Similarities and differences
- Space visualization
- Spatial orientation
- Problem-solving
- Analysis
- Judgment
- Decision making
- Visual memory
- Discrimination
- Observation
- Relationship concepts
- Arithmetical reasoning and figurative classification
- Arithmetic number series

- Non-verbal series
- Coding and decoding
- Statement conclusion
- Syllogistic reasoning etc.
- Semantic analogy
- Space orientation
- Space visualization
- Venn diagrams
- Drawing inferences
- Punched hole/pattern –folding & unfolding
- Figural pattern – folding and completion
- Indexing
- Address matching
- Date & city matching
- Classification of center codes/roll numbers
- Small & capital letters/numbers coding
- Decoding and classification
- Embedded figures
- Critical thinking
- Symbolic/number analogy
- Figural analogy
- Semantic classification
- Symbolic/number classification
- Figural classification
- Semantic series
- Number series
- Figural series
- Problem-solving
- Word building
- Coding & decoding
- Numerical operations
- Symbolic operations
- Trends
- Emotional intelligence
- Social intelligence

## **Numerical Ability & Scientific Aptitude**

- Arithmetical questions up to 10th standard
- Data / Table analysis, Graph & Bar Diagram and Pie Chart analysis
- Questions related to the common use of science (Physics & Chemistry)
- Calculation of fraction, percentages, square roots etc.
- Profit & Loss and Interest calculations
- Health & Nutrition

## **General Awareness**

- Current events and of such matters of everyday observations
- Questions relating to India and its neighboring countries
- History
- Culture
- Geography
- Economic Scene
- General Policy & Scientific Research

## **English**

- Word Meanings
- Reading comprehension's followed by questions.
- Antonyms & Synonyms
- Meaning of Phrases & Idioms
- Fill in the blanks – Complete/ Improvement of the sentences with the correct use of Pronouns, Verbs, Adverbs & Adjectives