JCECE Syllabus

Mathematics

- Algebra: Matrices, Determinants
- Vectors and 3-D geometry: Vectors, 3-D geometry
- Linear Programming: Linear Programming
- Relations and Functions: Relations and Functions, Inverse
- Trigonometric Functions
- Calculus: Continuity and Differentiability, Applications of Derivatives,
- Integrals, Application of the Integrals, Differential Equation
- Probability

Physics

- Magnetic Effect of Current and Magnetism: Moving Charges and
- Magnetism, Magnetism, and Matter
- Optics: Ray Optics and Optical Instruments, Wave Optics
- Dual Nature of Matter: Dual Nature of Radiation and Matter
- Electrostatics: Electric Charges and Fields, Electrostatic Potential and Capacitance
- Electronic Devices: Semiconductor Electronics
- Electromagnetic Induction and Alternating Current: Electromagnetic
- Induction, Alternating Current
- Current Electricity
- Electromagnetic Waves
- Atoms and Nuclei
- Communication System

Chemistry

- Chemical Kinetics
- Solid State
- Solutions
- Haloalkanes and Haloarenes: Haloalkanes, Haloarenes, Uses and
- Environmental Effects
- Alcohols, Phenols, Ethers
- Surface Chemistry
- Biomolecules: Proteins, Vitamins, Carbohydrates, Nucleic Acids
- p-Block Elements: Group 15 Elements, Group 16 Elements, Group 17
- Elements, Group 18 Elements
- Electrochemistry
- D and F block elements: Lanthanoids, Actinoids
- Isolation of Elements
- Aldehydes, Ketones, and Carboxylic Acids
- Organic compounds containing Nitrogen: Amines, Cyanides and
- Isocyanides, Diazonium salts
- Coordination Compounds
- Chemistry in Everyday Life: Chemicals in medicines, Chemical in food, Cleansing agents
- Polymer

Biology

- Diversity in the Living World
- Plant Physiology
- Structural Organisation in Animals and Plants
- Human Physiology
- Cell: Structure and Functions
- Reproduction
- Genetics and Evolution

- Biology and Human Welfare
- Biotechnology and its Applications
- Ecology and Environment