



Chemistry Entrance Exam Requirements

Grade 10 to Grade 11 S

- ✓ Chapter 1: Structure of the Atom
- ✓ Chapter 2: Molecules
- ✓ Chapter 3: Ions
- ✓ Chapter 4: Chemical Reactions - Stoichiometry
- ✓ Chapter 5: Solutions

Grade 11 S to Grade 12 S

❖ Unit 1: Electrochemistry: Oxidation and Reduction

- ✓ Chapter 1: Oxidation Reduction Reactions
- ✓ Chapter 2: Oxidation Reduction Potential
- ✓ Chapter 3: Balancing Oxidation Reduction Reactions
- ✓ Chapter 4: Redox Titration – Stoichiometry

❖ Unit 4: Organic Chemistry

- ✓ Chapter 5: Elemental Analysis
- ✓ Chapter 6: Alkanes
- ✓ Chapter 7: Alkenes

Biology Entrance Exam Requirements

Grade 10 to Grade 11 S

❖ Chapter 4: Nervous communication

- ✓ Lesson 1: Organization of the Nervous System in the vertebrates
- ✓ Lesson 2: Organization of the Nervous System in the invertebrates
- ✓ Lesson 3: Histology of the nervous system: the neuron; a functional unit
- ✓ Lesson 4: From stimulus to Response: pathways and nervous centers
- ✓ Lesson 5: Nature of the Nervous Message: recordable electric signals
- ✓ Lesson 6: The Coding and The Treatment of the Nervous Information
- ✓ Lesson 7: One Way Communication: Synapses

❖ Chapter 5: Hormonal Communication

- ✓ Lesson 1: Chemical Communication
- ✓ Lesson 2: The Thyroid: an endocrine gland
- ✓ Lesson 3: Functional Characteristics of an Endocrine Gland

Grade 11 S to Grade 12 S

❖ Chapter 2 DNA, genetic information, and cell cycle (Activities 1 to 4)

- ✓ Activity 1: The Karyotype
- ✓ Activity 2: Mitosis, equational division
- ✓ Activity 2': Meiosis reductional division
- ✓ Activity 3: The structure and chemical components of chromosomes
- ✓ Activity 4: Identical reproduction and cell cycle (DNA replication)

❖ **Chapter 3 Protein (Activities)**

- ✓ Activity 1: Proteins are an association of amino acids.
- ✓ Activity 2: The gene structure and information unit.
- ✓ Activity 3: Transcription is the first step of protein synthesis.
- ✓ Activity 4: Translation second step of protein synthesis
- ✓ Activity 5: Fate of synthesized protein

❖ **Chapter 4 Biological identity and genotype (Activities 1to 3)**

- ✓ Activity 1: Phenotypes and proteins
- ✓ Activity 2: Genes and alleles
- ✓ Activity 3: Genotype (mutation)



Physics Entrance Exam Requirements

Grade 10 to Grade 11 S

❖ Unit 1: Electricity

- ✓ Chapter 1: Electrostatics
- ✓ Chapter 2: Potential Difference
- ✓ Chapter 3: Electric Current
- ✓ Chapter 4: Resistors
- ✓ Chapter 5: Sources of Electromotive Force - Electric Loads
(Electric Circuits)

❖ Unit 4: Mechanics

- ✓ Chapter 12: Description of Rectilinear Motion
- ✓ Chapter 13: Nature of Rectilinear Motion
- ✓ Chapter 14: Forces
- ✓ Chapter 15: Newton's Laws

Grade 11 S to Grade 12 LS

- ✓ Chapter 7: Kinematics: Motion of a particle in a plane.
- ✓ Chapter 9: Newton's Second Law and applications (Dynamics)
- ✓ Chapter 10: System of Particles
- ✓ Chapter 12: Work and Energy
- ✓ Chapter 14: Capacitors
- ✓ Chapter 15: Magnetic Field
- ✓ Chapter 16: The Magnetic Field of a Current
- ✓ Chapter 17: Magnetic Force

Grade 11 S to Grade 12 GS

- ✓ Chapter 7: Kinematics: Motion of a particle in a plane.
- ✓ Chapter 9: Newton's Second Law and applications (Dynamics)
- ✓ Chapter 10: System of Particles
- ✓ Chapter 11: Rotational Dynamics

- ✓ Chapter 12: Work and Energy
- ✓ Chapter 14: Capacitors
- ✓ Chapter 15: Magnetic Field
- ✓ Chapter 16: The Magnetic Field of a Current
- ✓ Chapter 17: Magnetic Force