

**SYLLABUS FOR CLASS XI ENTRANCE EXAM (SCIENCE STREAM)**  
**2024-25**

**PHYSICS:**

**25 MARKS**

Refraction; laws of refraction, refractive index.

Refraction of light by spherical lens, Image formed by spherical lenses, Lens formula including Numericals (Derivation not required), Magnification. Power of lens, Dispersion, Scattering, Defects of vision and their corrections.

**Electricity:** Electric current, electric potential, potential difference, ohm's law, resistances, combination of resistances, heating effect of electric current, electric power

**CHEMISTRY:**

**25 MARKS**

**THEME: MATERIALS**

**Unit : Chemical Substances – Nature and Behaviour**

**Carbon compounds:** Covalent bonding in carbon compounds. Versatile nature of carbon, Saturated and unsaturated carbon compounds. Homologous series, Nomenclature, chemical properties of carbon compounds. Some important carbon compounds – Ethanol and ethanoic acid, soaps and detergents and unsaturated carbon compounds.

**Metals and Non-Metals:**

Physical properties, Chemical properties of metals. How do metals and non-metals react? Occurrence of metals, Extraction of metals, Refining of metals, Corrosion and its prevention.

**Acids Bases and Salts:** Their definitions in terms of furnishing of H<sup>+</sup> and OH<sup>-</sup> ions. Chemical properties of acids and bases. Concept of pH scale, importance of pH in everyday life, preparation and uses of sodium hydroxide, Bleaching powder, Baking soda, Washing soda and plaster of paris.

**BIOLOGY:**

**50 MARKS**

1. **Genetics** – Mendel's law of inheritance, Monohybrid and Dihybrid cross, terms gene, allele, heterozygous, homozygous, dominant, recessive, mutation, variation, phenotype, ABO blood group system, genotype, sex determination in humans beings.
2. (a) Transpiration, Photosynthesis, experiments to show the necessity of light, CO<sub>2</sub>, chlorophyll for Photosynthesis.  
(b) Circulatory system-main features, structure and working of heart, blood vessels, structure and functions of blood, its composition, Brief idea of lymph, double circulation.  
(c) Structure of excretory system and nephron, urine formation, role of nephron.  
(d) Digestive system, structure and function of various parts.  
(e) Brief outline of Respiration, Respiratory system, its parts and their functions.
3. Human Reproductive system – structure and functions of parts, Menstrual cycle, fertilization, implantation, Methods of population control.

**P.T.O.**

4. Vegetative Propagation, Structure of Flower, Reproduction in Plants, Pollination, Fertilisation, Structure of Seed, germination of seed.
5. Our Environment – Biotic and Abiotic components, Food chain, Ozone layer, Waste Management

**OR**

**MATHS:**

**50 MARKS**

1. Polynomials
2. Pair of Linear Equations in Two Variables
3. Quadratic Equations
4. Co-ordinate Geometry
5. Introduction to Trigonometry
6. Heights & Distances
7. Areas Related to Circles
8. Surface Area & Volume (Cylinder, Cone, Sphere, Cuboid)
9. Probability
10. Arithmetic Progression
11. Triangles

# **SYLLABUS FOR CLASS XI ENTRANCE EXAM (COMMERCE STREAM)**

**2024-25**

## **ENGLISH:**

**50 MARKS**

### 1. **READING:**

- 2 Comprehension passages Analytical/ factual/ descriptive)
- Passages will have Short Answer Type/MCQ/gap-filling/ Complete the sentences.
- Passages can be in the form of Poetry/Paragraphs.
- Vocabulary testing

### 2. **WRITING:**

**Short Type:** Analytical Paragraph Writing

**Long Type:** Letter to Editor, Letter of complaint, Letter of Enquiry, Placing order, Story Writing

### 3. **GRAMMAR:**

- Editing : Errors and Omissions
- Gap filling
- Tenses
- Passive Voice
- Reported Speech
- Modals
- Subject – Verb agreement
- Dialogue Completion/ Writing

## **MATHS:**

**50 MARKS**

1. Polynomials
2. Pair of Linear Equations in Two Variables
3. Quadratic Equations
4. Co-ordinate Geometry
5. Introduction to Trigonometry
6. Heights & Distances
7. Area Related to Circles
8. Surface Area & Volume (Cylinder, Cone, Sphere, Cuboid)
9. Probability
10. Arithmetic Progression
11. Triangles

# **SYLLABUS FOR CLASS XI ENTRANCE EXAM (HUMANITIES STREAM)**

**2024-25**

**ENGLISH:**

**50 MARKS**

1. **READING:**

- 2 Comprehension passages (Analytical/ Factual/ Descriptive)
- Passages will have MCQ/Short Answer Type/gap-filling/Complete the sentences.
- Passages can be in the form of Poetry/Paragraphs.
- Vocabulary testing

2. **WRITING:**

**Short Type:** Composition Writing

**Long Type:** Letter to Editor, Informal letter, Speech, Story Writing, Letter of Complaint

3. **GRAMMAR:**

- Editing: Errors and Omissions
- Gap filling
- Sentence transformation
- Rearrange jumbled words into sentences
- Passive Voice
- Reported Speech
- Dialogue Completion
- Subject – Verb Agreement
- Tenses

1. **HISTORY:**

**25 MARKS**

- A. The Indian National Movement (1857 – 1917)
- B. Mass Phase of the Indian National Movement (1915 – 1947)
- C. The Contemporary World

2. **CIVICS:**

**25 MARKS**

- Union Legislature
- Union Executive
- Union Judiciary