

## SYLLABUS for 2026

### For Engineering Programmes

#### PHYSICS

##### Section A: Electromagnetism

- Electrostatics: Electric charges, fields, potential, capacitance, dielectrics.
- Current Electricity: Ohm's law, Kirchhoff's laws, electrical resistance, potentiometer.
- Magnetic Effects: Biot-Savart law, Ampere's law, moving charges, cyclotrons.
- Magnetism: Magnetic dipole, earth's magnetic field, paramagnetic/diamagnetic materials.
- EMI & AC: Faraday's law, Lenz's law, self/mutual inductance, LCR circuits, transformers.

##### Section B: Optics & Modern Physics

- Optics: Reflection, refraction, lenses, prisms, wave optics (interference, diffraction).
- Dual Nature of Matter: Photoelectric effect, de Broglie relation.
- Atoms & Nuclei: Rutherford/Bohr models, binding energy, radioactivity.
- Electronic Devices: Semiconductors, diodes, transistors, logic gates.

#### CHEMISTRY

##### Section A: Physical & Inorganic

- Physical Chem: Solutions, Electrochemistry, Chemical Kinetics.
- Inorganic Chem: d and f Block Elements, Coordination Compounds.

##### Section B: Organic Chemistry

- Halides: Haloalkanes and Haloarenes.
- Oxygen Containing: Alcohols, Phenols, Ethers, Aldehydes, Ketones, Carboxylic Acids.
- Nitrogen Containing: Amines.
- Bio-Chem: Biomolecules (Carbohydrates, Proteins).

#### MATHEMATICS

##### Section A: Calculus & Relations

- Relations & Functions: Types of relations, inverse trigonometric functions.
- Algebra: Matrices, Determinants (properties, applications).
- Calculus I: Continuity and Differentiability, Applications of Derivatives (tangents, maxima/minima).
- Calculus II: Integrals (definite/indefinite), Applications of Integrals (area under curves).

##### Section B: Vectors, 3D & Probability

- Differential Equations: Order, degree, linear differential equations.
- Vectors: Scalar and vector components, dot/cross products.

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- 3D Geometry: Direction cosines, lines, planes.
- Linear Programming: Optimization problems.
- Probability: Conditional probability, Bayes' theorem, probability distributions.

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## For BBA Programmes

### QUANTITATIVE APTITUDE

#### Arithmetic & Algebra

- Arithmetic: Percentages, Profit & Loss, Simple & Compound Interest, Averages, Ratios.
- Number Systems: Properties of numbers, divisibility, HCF/LCM.
- Algebra: Linear equations, quadratic equations, progressions.

#### Geometry & Data

- Geometry: Triangles, circles, mensuration (area/volume).
- Modern Math: Permutation & Combination, Probability, Set Theory.
- Data Interpretation: Tables, bar charts, pie charts, line graphs.

### LOGICAL REASONING

#### Verbal Reasoning

- Patterns: Series completion, Analogy, Classification, Coding-Decoding.
- Relationships: Blood Relations, Direction Sense Test.
- Logic: Logical Deduction, Statement & Assumptions.

#### Non-Verbal Reasoning

- Visual: Figure Matrix, Paper Cutting/Folding.
- Spatial: Cubes and Dice, Mirror Images.
- Rules: Rule Detection, Grouping of Images.

### VERBAL ABILITY

#### Grammar & Vocabulary

- Grammar: Agreement, Time and Tense, Parallel construction, Relative pronouns, Prepositions, Modals.
- Vocabulary: Synonyms, Antonyms, Odd Word, One Word Substitution.

#### Reading & Composition

- Reading Comprehension: Content/ideas, Vocabulary context, Inference.
- Language: Jumbled letters/sentences, Idioms/Phrases.