

SYLLABUS

PHYSICS

11 th	12 th
Motion in a Straight Line (excluded-Position time graph, Speed & Velocity)	Electric Charge and Fields (excluded- Uniformly charged thin spherical shell)
Motion in a Plane	Electrostatic Potential and Capacitor
Law of Motions (Newton's 2 nd Law, Momentum & Friction)	Current Electricity
Work, Power and Energy	Moving Charges and Magnetism (excluded- cyclotron)
Thermodynamics (excluded- heat engine & refrigerator)	Electromagnetic Induction
Simple Harmonic Motion	Alternating Current (excluded- power factor & wattles current)
	Ray optics

CHEMISTRY

11 th	12 th
Some Basic Concepts of Chemistry	Solid State (exclude- electrical & magnetic properties , semiconductor part)
Structure of Atom (excluded- Thomson's & Rutherford's Model)	Solution (exclude-abnormal molar mass, Van't Hoff factor)
Classification of Elements and Periodicity	Electrochemistry (exclude- types of cell & law of electrolysis)
Chemical Bonding	Chemical Kinetics (exclude- concept of collision theory, activation energy & Arrhenius equation)
Gaseous State (exclude- liquefaction of gases, Kinetic energy & Molecular Speed)	The P-Block (exclude- preparation & properties of phosphine, sulphuric acid, oxides of nitrogen, phosphorous, halides & Oxo acids)
Basic Concepts of Organics Chemistry (exclude- methods of purification & quantitative analysis)	Coordination compounds
	Haloalkanes and Haloarenes (exclude- uses of all compounds)
	Alcohol, Phenol and Ether (exclude- uses with reference to methanol & ethanol)

MATHEMATICS

11 th	12 th
Trigonometry	Relation and Functions (exclude- composite function & Inverse of function)
Complex Number (exclude- Polar representation & square root of complex number)	Matrices
Quadratic Equation	Determinant
Permutation and Combination	Continuity and Differentiability (exclude- Rolle's & Lagrange's MVT)
Limits and Derivatives	Application of Derivative (exclude- rate of change of bodies, approximation)
Sequence and Series (exclude- formula for special term like sum of k, k^2 & k^3)	Integration (exclude- definite integrals as limit of sum, integration of form $\sqrt{ax^2 + bx + c} dx$)
	Application of Integration (area between any of the two above said curves)

BOTANY & ZOOLOGY

11 th BOTANY	12 th BOTANY
Cell Cycle and Cell Division	Reproduction In Organism
Photosynthesis In Higher Plants	Principles Of Inheritance & Variations
Morphology of flowering Plants	Molecular Basis Of Inheritance
Anatomy of Flowering Plants	Biodiversity & Conservation
The Living World	
Biological Classification	
Plant Kingdom	
11 th ZOOLOGY	12 th ZOOLOGY
Animal Kingdom	Human Reproduction
Structural Organisation in Animals	Evolution
Digestion and Absorption	Human Health & Disease
Excretory Products and their Elimination	Biotechnology-Principle & Process
Neural Control and Coordination	Biotechnology & its Application
Chemical Coordination and Integration	

GENERAL INSTRUCTIONS FOR ENGINEERING TEST PAPER:

1. There are total 60 questions and four sections - Section I (Aptitude), Section II (Physics), Section III (Chemistry) & Section IV (Mathematics).
2. Each section contains 15 Questions.
3. +4 marks will be given for each correct answer and –1 marks for each wrong answer. In all other cases, no marks will be given.
4. There is only one correct response for each question. Filling up more than one response in each question will be treated as wrong response and marks for wrong response will be deducted accordingly as per instruction 3 above.
5. **Duration of test will be 2 hours.**
6. **Maximum marks is 240.**

GENERAL INSTRUCTIONS FOR MEDICAL TEST PAPER:

1. There are total 90 questions and four sections - Section I (Physics), Section II (Chemistry), Section III (Zoology) & Section IV (Botany).
2. There are 20 Questions each in Section I & II and 25 Questions each in Section III & IV.
3. +4 marks will be given for each correct answer and –1 mark for each wrong answer. In all other cases, no marks will be given.
4. There is only one correct response for each question. Filling up more than one response in each question will be treated as wrong response and marks for wrong response will be deducted accordingly as per instruction 3 above.
5. **Duration of test will be 2 hours.**
6. **Maximum marks is 360.**