

SYLLABUS FOR ADMISSION IN 12TH CLASS (MEDICAL AND NON-MEDICAL STREAM)

Subject	Written
English	<ul style="list-style-type: none"> ➤ Writing skills ➤ Article writing and Speech Writing, Letter Writing (Formal / Informal) ➤ Reading Comprehension ➤ Editing.
Physics	<p>1. Gravitation :</p> <ul style="list-style-type: none"> ➤ Kepler's Laws and universal law of Gravitation. ➤ Variation of 'g' with depth and altitude. ➤ Escape velocity & orbital velocity. <p>2. Properties of Bulk matter :</p> <ul style="list-style-type: none"> ➤ Types of modulus (Young, bulk and shear). ➤ Pascal law and applications. ➤ Bernoulli's theorem and applications. ➤ Definitions of surface energy, surface tension, angle of contact, Action of detergents. <p>3. Thermodynamics :</p> <ul style="list-style-type: none"> ➤ Zeroth law. ➤ First and second law of thermodynamics. ➤ Reversible and irreversible processes. <p>4. Behaviour of Perfect Gas & Kinetic theory :</p> <ul style="list-style-type: none"> ➤ Assumption of kinetic theory. ➤ Kinetic interpretation of temperature. ➤ Law of equipartition of energy. ➤ Degree of freedom and concept of mean free path, Avogadro's no. <p>5. Oscillations and waves :</p> <ul style="list-style-type: none"> ➤ SHM and its characteristics (Displacement, Velocity, Acceleration Phase, Time period, Frequency etc. ➤ Energy in SHM. ➤ Simple pendulum and its time period, second's pendulum. ➤ Organ pipes, beats, Doppler effect in sound. <p>Note :</p> <ul style="list-style-type: none"> ➤ Numerical problems on : ➤ Gravitation ➤ Thermodynamics for testing numerical solving ability and mathematical thinking.
Chemistry	<p>1. Redox Reaction : Balancing of equation by oxidation method and Ion-electron method Types of Redox reaction. Oxidation Number</p> <p>2. Some basic concept of chemistry Molarity, Molality, Mole fraction, limiting reagent.</p> <p>3. Chemical bonding - Co-valent bond , ionic bond , hybridisations.</p> <p>4. Thermodynamic. - Close open and isolated system, different type of enthalpy of reactions, entropy, and Gibbs energy.</p> <p>5. Organic Chemistry : Some basic principle and techniques</p> <ul style="list-style-type: none"> ➤ Nomenclature ➤ Isomerism ➤ General organic chemistry

Biology	<p>1. Zoology :</p> <ul style="list-style-type: none"> ➤ Respiration system ➤ Circulatory system ➤ Skeletal system ➤ Breathing & Exchange of Gases. ➤ Locomotion & Movement. ➤ Neural control & coordination. <p>1. Botany :</p> <ul style="list-style-type: none"> ➤ Plant Growth Hormones ➤ Respiration in Higher Plants. ➤ Photosynthesis in Higher Plants.
Maths	<p>1. Limit & Derivative</p> <ul style="list-style-type: none"> ➤ Concept of Limit ➤ Theorem on Limit. ➤ Algebra on Limits. ➤ Derivative of standard function. <p>2. Binomial Theorem :</p> <ul style="list-style-type: none"> ➤ Proof of binomial theorem for positive Indices. ➤ To find general term of the expansion ➤ Middle term of the Expansion ➤ Pascal's Triangle. <p>3. Relation and function</p> <ul style="list-style-type: none"> ➤ Domain, Range. <p>4. Straight line.</p> <ul style="list-style-type: none"> ➤ To find the slope of line when angle, co-ordinates and equation of line is given. ➤ Conditions for two lines to be parallel perpendicular and angle between two lines. ➤ Various form of the equation of a line slope form, two points form, slope intercept form and intercept form. ➤ Distance of a line from given points. <p>5. Trigonometric functions with Identities.</p> <p>6. Three dimensional Geometry :</p> <ul style="list-style-type: none"> ➤ Co-ordinate axes, Co-ordinate planes ➤ Section formula

Note –

- Refer NCERT Book.
- Similar Questions will be asked from the Textual and Exercise.
- Paper will have objective as well as Subjective Type Questions.