YADAVINDRA PUBLIC SCHOOL, PATIALA

SYLLABUS FOR ENTRANCE EXAMINATION 2020-21

CLASS-XI

ENGLISH   **MM: 50**

1. Composition (300 words)   (20)
2. Transformation of sentences   -
   (a) Direct - Indirect,   (10)
   (b) Active - Passive   (10)
3. Change the Tense   (10)

SCIENCE

➤ **Physics:**

1. **Effects of Current**: Electric current, potential difference and electric current. Ohm's law; Resistance, Resistivity, Factors on which the resistance of a conductor depends. Series combination of resistors, parallel combination of resistors and its applications in daily life. Heating effect of Electric Current and its applications in daily life. Electric Power, Inter relation between P, V, I and R.

2. **Magnetic Effects of Current**: Magnetic field, field lines, field due to current carrying conductor, field due to current carrying coil or solenoid; Force on current carrying conductor, Fleming's left hand rule. Electromagnetic induction. Induced potential difference, Induced current. Fleming's Right Hand Rule, Direct current, Alternative current: frequency of AC, Advantage of AC over DC. Domestic electric circuits.

3. **Refraction**: laws of refraction, refractive index, Refraction of light by spherical lens, Image formed by spherical lenses, Lens formula (Derivation not required), Magnification, Power of lens; applications of spherical mirrors and lenses. Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life.

➤ **Chemistry:**
1. Acids, Bases and Salts
2. Metallurgy
3. Organic Chemistry

➤ **Biology:**
1. Photosynthesis
2. Cell Division
3. Endocrine system
4. Circulatory system
5. Nervous system

HISTORY

1. Nationalism in India.
2. The Union Parliament – Lok Sabha and Rajya Sabha.
3. The United Nations Organisation – Organs and agencies.

GEOGRAPHY

1. Minerals and Energy Resources in India
2. Agriculture in India
3. Water Resources in India
4. Industries in India

ECONOMICS

1. Concept and definitions of Economics – Acc. to Marshall, Robins and Samuelsson.
2. Basic problems of Economics and solution to the problems.
3. Various forms of Economics: Capitalistic, Socialistic and Mixed Economy.
4. Money and banking.
5. Consumer awareness.

MATHEMATICS

1. **Quadratic Equation:**
   - Quadratic equation in one unknown. Solving by factorization and formula.
   - Nature of roots
2. **Coordinate Geometry:**
   - Distance formula
   - Section and midpoint formula
3. **Similarity:**
   - Similarity of triangles. Ratio of areas of similar triangles are proportional to the squares of the ratios of the corresponding sides.
4. **Circles:**
   - Arc and Chord properties
   - Angle Properties
   - Tangent properties
5. **Mensuration:**
   - Circle – Area and circumference.
   - Three dimensional solids – Cylinder, Cone & Sphere
6. **Trigonometry:**
   - Trigonometrical ratios
   - Trigonometrical identities
   - Trigonometrical ratios of complementary angles
7. **Probability:**
   - Simple problems on Probability