### Telangana Syllabus class 10

**Science**

| **Science Syllabus** | |
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| Unit I: Chemical Substances | **Chemical Reactions** - Chemical equation, Balanced chemical equation, implications of a balanced chemical equation, types of chemical reactions: combination, decomposition, displacement, double displacement, precipitation, neutralization, oxidation, and reduction. **Acids, Bases, and Salts** - Their definitions in terms of furnishing of H+ and OH- ions, General properties, examples, and uses, the concept of pH scale(Definition relating to logarithm not required), the importance of pH in everyday life; preparation and uses of sodium hydroxide, Bleaching powder, Baking soda, Washing soda and Plaster of Paris. **Metals and Non-Metals** - Properties of metals and non-metals, reactivity series, formation and properties of ionic compounds, basic metallurgical processes, corrosion, and its prevention. **Carbon Compounds** - Covalent bonding in carbon compounds. Versatile nature of carbon. Homologous series Nomenclature of carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes, alkanes, and alkynes), the difference between saturated hydrocarbons and unsaturated hydrocarbons. |
| Unit II: World of Living | **Reproduction** - Reproduction in animal and plants (asexual and sexual) reproductive health-need for and methods of family planning. safe sex vs HIV/AIDS. Childbearing and women’s health. **Heredity and Evolution** - Heredity; Mendel’s contribution- Laws for the inheritance of traits: Sex determination: brief introduction; Basic concepts of evolution. |
| Unit III: Natural Phenomenon | **Reflection of Light at Curved Surfaces** - Images formed by spherical mirrors, Centre of curvature, principal axis, principal focus, focal length, mirror formula (Derivation not required), magnification. **Refraction** - Laws of refraction, Refractive index, Refraction of light by the spherical lens, Image formed by spherical lenses, Lens formula (Derivation not required), Magnification. Power of a lens. |
| Unit IV: 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, the parallel combination of resistors and its applications in daily life, the Heating effect of electric current and its applications in daily life, Electric power, Interrelation between P, V, I and R. |

### Social Science

| **Social Science Syllabus** | |
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| Unit I: India and the Contemporary World | **The Rise of Nationalism in Europe** - The growth of nationalism in Europe after the 1830s, The ideas of Giuseppe Mazzini, etc, General characteristics of the movements in Poland, Hungary, Italy, Germany, and Greece. |
| Unit II: Contemporary India | **Resources and Development** - Types – natural and human, Need for resource planning, natural resources, land as a resource, soil types and distribution, changing a land-use pattern, land degradation, and conservation measures. |
| Unit III: Water Resources | Sources, distribution, utilization, multi-purpose projects, water scarcity, need for conservation and management, rainwater harvesting. (One case study to be introduced) |
| Unit IV: Agriculture | Types of farming, major crops, cropping pattern, technological and institutional reforms, their impact, the contribution of Agriculture to national economy-employment, and output. |
| Unit V: Minerals and Energy Resources | Types of minerals, distribution (Note: on the map only) use and economic importance of minerals, conservation, types of power resources: conventional and non-conventional, distribution and utilization, and conservation. |
| Unit IV: Manufacturing Industries: | Types, spatial distribution (Note: on the map only) contribution of industries to the national economy, industrial pollution, and degradation of the environment, measures to control degradation. |

### Mathematics

| **TS 10th Class Syllabus for Mathematics Syllabus** | |
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| Unit I: Number System | **Real Numbers**- Euclid division lemma - Introduction, HCF, Some number generalizations, rational and irrational numbers, Fundamental Theorem of Arithmetic – statements, LCM, HCF, Properties of real numbers in terms of rationality and irrationality, Proofs of results, the irrationality of numbers decimal expansions of rational numbers in terms of terminating, non-terminating, recurring decimals, and vice versa. **Logarithm** - Introduction of logarithms, Conversion of a number in exponential form to a logarithmic form, Properties of logarithms, Laws of logarithms, Standard base of logarithms, and usage |
| Unit II: Sets | **Sets and Their Representations** - Empty set, Finite and Infinite sets, Equal sets. Subsets, Subsets of the set of real numbers (especially intervals with notations), Universal set and cardinality of sets, Venn diagrams - Sets, Subsets, Disjoint sets, Basic operations on sets - Union, Intersection, Difference of sets |
| Unit III: Algebra | **Polynomials** - Zeroes of a polynomial (Linear, Quadratic cubic polynomials), Geometrical meaning of Zeroes of quadratic and cubic polynomials using graphs, Relationship between zeroes and coefficients of a polynomial with particular reference to quadratic polynomials, Statement and simple problems on division algorithm for polynomials with integral coefficients, Zeroes of a biquadratic polynomial.  **Pair of Linear Equations in Two Variables** - Pair of linear equations in two variables. Geometric representation of different possibilities of solutions/ inconsistency, Algebraic conditions for several solutions (Consistent, inconsistent), Solution of pair of linear equations in two variables algebraically – by substitution, by elimination methods – Simple situational problems. Simple problems on equations reducible to linear equations in two variables. **Quadratic Equations** - Standard form of a quadratic equation ax2+bx+c=0, (a ≠ 0), Solutions of quadratic equations (only real roots) by factorization, and by completing the square, i.e., by using a formula to find roots of quadratic equation, Relationship between discriminant and nature of roots. Problems related to day-to-day life situations. **Progressions** - Sequence and series, Progressions – introduction, Motivation for studying AP, Derivation of standard results of finding the nth term and sum of first n terms of A.P, Motivation for studying G.P, nth term of G.P. |
| Unit IV: Trigonometry | **Trigonometry** - Introduction, Trigonometric ratios of an acute angle by using right-angled triangle i.e. sine, cosine, tangent, cosecant, and cotangent., Values (with proofs) of the trigonometric ratios of 30, 45, and 60 degrees. Motivate the ratios, whichever are defined at 0 and 90 degrees, Relationship between the ratios. Trigonometric Identities: Proof and applications of the identities sin2A+cos2A=1, 1+tan2A=sec2A, cot2+1=cosec2A, Simple problems on identities, Trigonometric ratios of complementary angles. **Applications of Trigonometry** - Angle of elevation, Angle of depression, Simple and daily life problems on heights and distances. Problems should not involve more than two right triangles and angle elevation/depression should be only 30, 45, 60 degrees. |
| Unit V: Coordinate Geometry | **Coordinate Geometry Lines (In two-dimensions)** - Review the concepts of coordinate geometry done by the graphs of linear equations, Distance between two points i.e. P (x1, y1) and Q (x2, y2), Section formula (an internal division of a line segment in the ratio m:n), Area of a triangle on the coordinate plane, Slope of a line joining two points |
| Unit VI: Geometry | Similar Triangles, Construction, Tangents, and Secants to a circle |
| Unit VII: Mensuration | **Surface Areas and Volumes** **Data Handling** - Statistics, Probability, Mathematical Modelling |

### TS SSC English Syllabus

| **English Syllabus** | |
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| Unit I: Personality Development | A. Attitude is Altitude Biography  B. Every Success Story Is Also Narrative a Story of Great Failures Essay C. I will Do It Biography |
| Unit II: Wit and Humor | A. The Dear Departed (Part - I) Play  B. The Dear Departed (Part - II) Play  C. The Brave Potter Folk Tale |
| Unit III: Human Relations | A. The Journey Narrative  B. Another Woman Poem  C. The Never-Never Nest Play |
| Unit IV: Film and Theatre | A. Rendezvous with Ray Essay  B. Maya Bazaar Review  C. A Tribute Essay |