Bihar Board Class 10th Syllabus

English

Name of the Unit	Topics
English Prose	Two questions need to be attempted among three short answers type questions (4 marks) One explanation among three different passages (4 marks) Comprehension questions need to be attempted among two passages (4 marks) Use of words (2 marks) One needs to be attempted among two long answer type questions (6 marks)
Grammar	Combining of sentences Correction of sentences Correction of sentences (2 marks) Direct and indirect narration (2 marks)
Vocabulary	Antonyms of two words Synonyms of two words Substitution of word (two groups) Homophones
Translation	Translate from English to Hindi Translate from Hindi to English
Composition	One essay for 250 words among 4-5 different topics Application Writing or Letter Writing

Social Science

Name of the Unit	Topics
History	1) The Rise of Nationalism in Europe 2) The Nationalist Movement in Indo-China 3) Nationalism in India 4) The Making of a Global World5) The Age of Industrialisation 6) Work, Life and Leisure: Cities in the Contemporary World 7) Print Culture and the Modern World 8) Novels, Society and History
Civics	1) Power Sharing 2) Federalism 3) Democracy and Diversity 4) Gender, Religion and Caste5) Popular Struggles and Movements 6) Political Parties 7) Outcomes of Democracy 8) Challenges to Democracy
Geography	1) Resources and Development 2) Forest and Wildlife Resources 3) Water Resources 4) Agriculture5) Minerals and Energy Resources 6) Manufacturing Industries 7) Lifelines of National Economy

Economics	1) Development 2) Sectors of the Indian Economy 3) Money and Credit4) Globalisation and the Indian Economy 5) Consumer Rights

Mathematics

Name of the Unit	Topics
Real Numbers	Euclid's Division Lemma and Algorithm, Fundamental Theorem of Arithmetic, Rational and Irrational Numbers
Polynomials	Geometric Meaning of The Zeroes, Zeroes and Coefficients, Division Algorithm For Polynomials
Pair of Linear Equations in 2 Variables	Graphical Solution to Linear Equations , Substitution Method, Elimination Method, Cross Multiplication Method, Equations Reducible to Linear Form
Quadratic Equations	Introduction to Quadratic Equations, Method of Completing The Square, Nature of Roots, Equations Reducible to Quadratic Form
Arithmetic Progression	Introduction to Arithmetic Progression, nth Term of an A.P. , Sum of n Terms of an A.P. , Word Problems of A.P.
Triangles	Basic Proportionality Theorem, Topic 2 – Converse of BPT, Criteria For Similar Triangles, Problems on Similar Triangles, Areas of Similar Triangles, Pythagoras Theorem Topic 7 – Problems on Pythagoras Theorem
Coordinate Geometry	Distance Formula, Section Formula, Area of Triangles
Introduction to Trigonometry	Trigonometrical Ratios, Trigonometric Tables, Trigonometric Ratios of Complementary Angles , Introduction to Trigonometric Identities, Applications of Trigonometric Identities
Some Applications of Trigonometry	Introduction to Heights and Distances ,Applications of Heights and Distances
Circles	Tangents to A Circle, Properties of Tangents
Constructions	Constructions of Similar Triangles ,Construction of Tangents
Areas Related to Circles	Area and Circumference of a Circle, Areas of Sectors and Segments, Areas of Combination of Figures
Surface Areas and Volumes	Surface Area: Combination of Solids, Volume: Combination of Solids, Conversion of Solids, Frustum of A Cone
Statistics	Arithmetic Mean of Grouped Data, Mode of Grouped Data, Median of Grouped Data, Relation Between Central Tendencies, Cumulative Frequency Curve
Probability	Classical Approach to Probability, Applications of Probability

Physics

Unit I	Electrostatics
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Unit II	Current Electricity
Unit III	Magnetic Effects of Current and Magnetism
Unit IV	Electromagnetic Induction and Alternating Currents
Unit V	Electromagnetic Waves
Unit VI	Optics
Unit VII	Dual Nature of Matter and Radiation
Unit VIII	Atoms and Nuclei

Unit IX	Electronic Devices
Unit X	Communication Systems

Chemistry

Unit I	Topics
Chemical Kinetics:	Rate of reaction, Collision Theory, Activation energy, Rate constant, Factors affecting rate constant, Temperature coefficient Molecurity of reaction, order of reaction, Types of Order of Reaction- Zero, First, Pseudo-monomolecular reaction, Reaction constant for first order reaction, Half life for first order reaction, Related Numerical.
Ionic Equilibrium:	Electrolytes (Strong and weak), Arrhenius theory of electrolytic dissociation, Ostwald's dilution law Ionic Product of Water, Theory of Acids and bases(Arrhenius theory, Lewis concept, Bronsted and Lawry concept), Salts and their types, PH Value, Common Ion Effect, Solubility product, Applications of Common ion effect and solubility product, Salt hydrolysis, Buffer Solution (Acidic and Basic Buffer,), working of buffer solution Indicators- definition,characteristics PH-Range, working of Phenolphthalein and methyl Orange-Ostwald's theory and Quinoid Theory.
Chemical Equilibrium	Reversible reaction, Active mass, Chemical equilibrium, Law of mass action, Application of law of mass action on different equilibria,Equilibrium Constant and its characteristics, Relation between Kp and Kc, Factors affecting equilibrium constant, Le-Chetelier's principle.
Dilute Solution	CONCENTRATION OF SOLUTION- g/l, %, Molarity, Molality, Normality and molar fraction, COLLIGATIVE PROPERTIES- Osmotic Pressure- semipermeable membrane, Osmosis, exo-osmosis, endosmosis, Osmotic pressure, Berkeley-Hartley method, Lowering of Vapour Pressure, Elevation of Boiling Point, Depression of Freezing point,Vont Hoff's Factor. Catalysis Definition, Characteristics, Types- positive, negative, auto and induces catalysis ,Homogeneous and heterogeneous catalysis, Catalytic promoter and catalytic poison, Theory of Catalysis- Intermediate compound theory and Adsorption theory.
Distribution Law	Definition, Limitations, Nernst's equation
Thermodynamics and Thermo chemistry	System(open, closed and isolated), Boundary, surroundins, Thermodynamic Processes(Isothermal, Adiabatic, Isochoric, Isobaric, Cyclic), Internal Energy, Enthalpy, First Law of thermodynamics, Applications of First law of dynamics, Heat of Reaction, Heat of Formation, Heat of combustion, Heat of Neutralization, Hess's law of constant heat summation and it's applications.
Colloidal State	Types of solution- True solution, Colloidal solution, suspension, Definition of Colloidal solution, characteristics of Colloidal solution, Types of Colloidal solution – Lyophilic and Lyophobic, Preparation of Colloidal solutions- dispersion methods(Colloidal mill, Bredig arc, Peptization), Condensation method, chemical methods(double decomposition, Hydrolysis, Oxidation, Reduction), Purification of Colloidal solution(simple and electro-Dialysis, Ultrafiltration), Properties of colloidal solution-Nature, Diffusibility, Effect of gravity,

	Surface tension, Visibility, Optical Properties(Tyndall effect), Kinetic Property(Brownian movement), Electrophoresis, Coagulation, Flocculation value, Protection and protective colloids, Gold Number, Application of Colloidal solution.
Organic Chemistry	Purification of Organic Compounds, Estimation of Organic compounds, Classification and nomenclature of Organic Compounds, Isomerism, Mechanism of Organic reactions, Alkanes, Petroleum, Halogen Derivatives of Alkanes, Alcohols, Ether, Aldehydes and Ketones, Carboxylic Acid, Derivatives of Monocarboxylic acid, Urea, Alkyl Amine, Carbohydrates and Food.
Aromatic Chemistry	Lab / Industrial Methods of Preparation and physical and chemical properties of Followings- Benzene, Toluene Chlorobenzene Phenol , Benzaldehyde, Benzoic Acid, Nitrobenzene, Aniline