### Scheme of Examination and Syllabus to the Post of School Assistant (Non-Languages i.e. Mathematics, Physical Science, Biological Science & Social Studies) of TRT

Duration: 2 Hours & 30 Minutes

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SCHOOL ASSISTANT - MATHEMATICS
SYLLABUS

Part – I
GENERAL KNOWLEDGE AND CURRENT AFFAIRS (Marks: 10)

Part - II
PERSPECTIVES IN EDUCATION (Marks: 10)


2. Teacher Empowerment: Meaning, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.


Part - III
CONTENT (Marks: 44)

1. NUMBER OF SYSTEM: Number system (N,W,Z,Q,R,) and their properties, diff. types of surds, Rationalization of mono, Binomial surds, extraction of square roots of real numbers. Complex number as an order pair of real numbers and their fundamental operations, representation in the form of a+ib – conjugate complex numbers, Modules and amplitude of complex numbers-illustrations, geometrical representations of complex numbers in Argand plane- Argand diagram. Prime and composite numbers, types of primes (co, twin, relative etc.) prime factors, multiple factors, GCF, LCM, relation bet. GCD & LCM. Modulus of a real number, Absolute value

2. SETS AND RELATIONS: Statements: Consecutiveness, Negation, Disjunction, Conjunction, Conditional, Bi-conditions (Bi-Implications), algebra of statements, Quantifies, Converse, Inverse and contra positive of a conditional, proofs Direct and indirect proofs – methods of disproof, an application of truths tables to switching networks, sets – proofs of some laws of set operations, principle of duality, a comparison between the algebra of sets and statements, Tautologies and contradictions, Concept of a set: Definition, Null set, equality of set, cardinal number, subset, super set, Universal set, union, intersection, venn diagrams, compliment, Relations: Ordered pairs, image, pre-image, range, injection, surjection, Bijection, finite set Cartesian products, Domain and range of a relations, Inverse relation, Types of relations, Relations and functions. Functions: Types of functions definitions, Theorems on function, Domain, Range, inverse and real valued functions. Identity function, Constant function, Equal function, even and odd function, polynomial functions, Rational functions, Algebraic functions, Exponential functions, Logarithmic functions, Exponential and Logarithmic Series, Greatest Integer functions. Composite function, and its property, graphs of functions, Compound functions. Equations of functions

3. COMMERCIAL MATHEMATICS: Ratio and proportion, Rate, Unitary method, Percentages, Trade Discount, Average, Simple interest, Compound interest, Partnership, Time and distance, Time and work, clocks and calendar problems.

ALGEBRA: Laws of exponents: Laws of rational indices, Multiplication and division of polynomials, some special products, Factorization of Quadratic Expressions.
Logarithms: Definition, simple laws of logarithms, some additional laws, characteristic, Mantissa Exponents.

Algebra of expressions: Square roots, Homogeneous, Symmetric cyclic expression and Factorization, symmetric expressions, cyclic expressions, quadratic equations, reciprocal equation, relation between roots and coefficients, nature of roots, to find the quadratic equation whose roots are given. Remainder theorem, Horner's method, trial and error method, finding multiple roots, graphical solutions.

Binomial Theorem: Standard binomial expansion, theorem, integral part, fractional part, numerically greater terms, largest problems, approximation using Binomial theorem.

Mathematical induction: principles of mathematical induction and theorems and its applications, problems on divisibility.

4. LINEAR EQUATIONS: Linear equations in two variables: System of linear equations, Simultaneous equation in two variables, Dependant equations, Linear equations and their graphs, Linear functions, System of equations, linear programming-problems (LPP). The fundamental theorem, graphical method of solving an LPP, a closed converse polygon, general graphical methods – application of LPP.

In-equations: Linear in-equations and their graphs, System of in-equations. Linear equations in two variables, System of linear equations, simultaneous equation in two variables Dependant equations, linear equations and their graphs, linear functions, system of equations, System of two points, which is not parallel to X-axis, Midpoint of the segment following A(x1,y1), B(x2,y2) equation of a line passing through the origin having slope m, The slope intercept form of a line, the point slope form of a line, the intercept form of a line, the two point form of a line, linear in-equations, their graphs, system of linear in-equations.

Rational integral of x, remainder theorem, Horner's method of synthetic division, problems leading to quadratic equations, graphical solutions of quadratic, Quadratic inequalities in one variable, solution of quadratic in-equations the principle of mathematical induction, The binomial theorem, Pascal triangle.

Quadratic expressions, equations in one variable, sign of quadratic expressions, changes in signs and maximum and minimum values, quadratic inequalities, relation between the roots and the coefficient in an equation, remainder theorem, connecting problems, solving an equation when two or more of its roots are connected by Cartesian relations, Horner’s method of synthetic division, trial and error method, Procedure to find multiple roots.

5. GEOMETRY

Structure of geometry, axioms, Historical background, Basic axioms, Parallel line, theorems, triangles and polygons, angles of a polygons, theorems based on, Polygon congruence of triangle SAS, ASA, SSA, axioms, Parallelogram and its
properties, Triangles, Particular types, geometric inequalities in a triangles some theorem, circles and concurrent lines in triangles, Theorems based on circles, Concurrent lines in a triangle, Median, Altitudes of a triangle, line of symmetry, axis of symmetry, point symmetry, image of an angle.

Quadrilaterals, example of different Quadrilaterals, Parallel lines and triangles, theorems, intercept, Theorems, locus, points equidistant from two given points. Theorems, an concurrency, attitude, circum centre, ortho centre, centroid, Areas, polygonal region, Area axiom, congruent axiom, area monotonic axiom, area of parallelogram theorem, Area of Triangle, Theorem based quit, circles are of a circle, semi circle, segment of a circle, Congruence of a circle, Theorems based on circle.

Similar polygons, similar triangle and their properties, Basic proportionality theorem, vertical angle bisection theorem, Similar Triangle, AAA similarity, SSA, SAS similarities Pythagoras theorem, Tangents to a circle, different properties of a tangent to a circle, segments of a chord, Common tangents to two circles.

GEOMETRICAL CONSTRUCTIONS
Construction of triangles, constructions involving concurrence lines, triangles and circles, harder cases, Geometrical constructions involving circles and tangents and triangles and quadrilaterals.

6. MENSURATION
Square, rectangle, triangle, Quadrilateral, Circle, Ring (Annulus), Sector.
Prism, total surface area of right prism, volume of a prism, Volume of a cube, Cuboids, The right pyramid, Cylinder, Hollow cylinder, Cylindrical shell, ratio’s of cylinders, cone, Hollow cone, solid cone, Curved surface area, total surface area, volume of a right circular cone, Sphere: Surface area of a sphere, total surface area of a hemisphere, Volume of a sphere, Hollow hemisphere.

7. MATRICES
Matrix Definition, Order of a matrix, Types of matrices, Equality of two matrices, Addition, Subtraction, multiplication of matrix, Product of two matrices, properties of products of matrices, transpose of matrix, properties, skew symmetric matrix, Adjoint and inverse of a matrix, simultaneous linear equations, types of system of simultaneous linear equations, consistency and inconsistency of Simultaneous equation.

Multiplicative inverse of a square matrix, singular and non singular matrix, solution of a system of linear equations in two variable using matrices determinants, properties of determinants, Matrix inverse method and Cramer’s, Inversion and Gauss Jordan method and Solving Equations

Triangle matrices, properties of addition of matrices, sector multiple of a matrix
8. STATISTICS
Cumulative frequency distribution, LCFD, GCFD, Frequency graphs, lesser then frequency distribution, Greater than frequency distribution.
Central Tendency: means of the ungrouped data, Weighted AM, means grouped data, Merit and demerits of AM, Medians from ungrouped and grouped data, mode of ungrouped and grouped data, Empirical relation among mean, Median and mode.
Probability: Random Experiments and Events, Definition, Axiomatic Approach, Independent and Dependent Events, Conditional Probability, Bayes Theorem, random variables, theoretical distributions.

9. COMPUTING
Introduction to computers, Historic development of computers, Structure of a computer, working characteristics of Computers, Problem solving, flow charts and their representation, Operations box, Data box, Decision box, loops, Algorithm, Flow diagram using boxes for mechanics.

10. PROGRESSIONS
Progressions: Common difference, nth term, sum of the first nth terms Arithmetic, Geometric and Harmonic Progressions and problems. AM, GM, HM and its Problems.

11. TRIGONOMETRY
Unit of measurement of angles: Radian measure, relation between radian and degrees, 6 Trigonometric ratios and transformations, behavior of trigonometric functions, Trigonometric functions of complementary angles, trigonometrically tables. Inverse trigonometric functions, Hyperbolic Functions, Properties of Triangles, graphs and periodicity, Trigonometric ratios of compound angles, Trigonometric ratios of multiple and sub multiple angles, Angle of elevation and angle of depression, heights and distance. Trigonometric Expansions.

12. ANALYTICAL GEOMETRY
Distance between two points, Division of a segment internally and externally in a given ratio, slope, Area of triangle, The Straight Line; Pairs of St Lines.
LOCUS, Transformation of Axes.
Three Dimensional Geometry: Co-ordinates; Direction Cosines and Ratios; Cartesian equation of a plane. Circles and System of Circles, Parabola, Ellipse, Hyperbola and polar coordinates.

Part – IV
Teaching Methodology (Marks: 16)
3. Aims and Values of teaching Mathematics, Instructional objectives (Blooms taxonomy)
6. Unit Plan, Year Plan, Lesson Planning in Mathematics.
7. Instructional materials, Edgar Dale's Cone of Experience.
8. Evolving strategies for the gifted students and slow learners,
10. Mathematics club, Mathematics structure, Mathematics order and pattern sequence.
SCHOOL ASSISTANT - PHYSICAL SCIENCES
SYLLABUS

Part – I
GENERAL KNOWLEDGE AND CURRENT AFFAIRS (Marks: 10)

Part - II
PERSPECTIVES IN EDUCATION (Marks: 10)


2. Teacher Empowerment: Meaning, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.


Part - III

CONTENT (Marks: 44)


2. NATURAL RESOURCES AIR AND WATER: Air, Composition of air, Measurement of Atmospheric Pressure, Air Pollution, Volumetric Composition of Water, Hardness of Water, Drinking Water and Supply Water Pollution, Cyclone, Pascal’s Law, Archimedes’ Principle, Boyle’s Law, Bernoulli’s Principle, Wind, Rainfall.


4. NATURAL PHENOMENA


5. KINEMATICS AND DYNAMICS


6. MAGNETISM

- Natural and Artificial Magnets, Properties of Magnets, Magnetic Induction. Terrestrial magnetism, Magnetic field around a magnet, elements of terrestrial magnetism, Theory of Magnetism, Inverse square of
magnetism, Magnetic field due to a bar magnet, Mapping of magnetic lines of force due to a bar magnet: neutral points, magnetic properties of materials. Coulomb’s Inverse Square Law, Definition of Magnetic Field, Magnetic Lines of Force, Uniform and Non-Uniform Magnetic Fields. Couple acting on a bar magnet placed in a uniform magnetic field, Definition of magnetic moment of magnet. Magnetic Induction due to a bar magnet on axial and equatorial lines. Types of magnetic material, Para, Dia, and Ferro magnetism, Definition and properties.

7. ELECTRICITY


9. MODERN PHYSICS:


13. Classification of Elements And Periodicity in Properties: Symbols and formulae, Radicals and their formulae, Chemical equation, Meaning, Calculations based on equations and relationship of reactants and products by weights, Classification of Elements, The Periodic Law, Modern Periodic Table, The significance of atomic number and electronic configuration, Classification of elements into s, p, d, f blocks and their characteristics, Period trends in physical and chemical properties of elements, Periodic trends of elements with respect to atomic radii, ionic radii, inert gas radii, ionization energy, electron gain energy, electro negativity, Valency, Variation of atomic radii in inner transition elements.

Alkali and Alkaline Earth Metals
Alkaline Earth Metals, Electronic configuration, occurrence, Trends in properties of alkaline earth metals, Reactions of alkaline earth metals, General methods of preparation of Alkaline Earth Metals, Anomalous properties of the first element in each group, Diagonal relationship. Trends in properties like ionization, enthalpy, atomic and ionic radii, reactivity with oxygen, hydrogen, halogens and water, uses, Preparation and properties of some important compounds by different methods: Sodium hydroxide, Salts of oxo acids, Sodium carbonate and Sodium hydrogen carbonate, Sodium chloride, Biological importance of sodium and potassium, CaO, CaCO3 and CaSO4 preparation and uses, Industrial uses of lime and lime stone, Biological importance of Mg and Ca

P-Block Elements; Group 15 Elements (VA)


14. Chemical Bonding and Molecular Structure
Types of Bonds, Inter Molecular Attractions, Energy changes during a chemical reaction, Exothermic and Endothermic Relations, ionic bond, energy changes in ionic bond formation, Properties of ionic Compounds, Covalent Bond, Multiple Covalent Bonds, Shapes of some molecules. VSEPR theory,
The valence bond approach for the formation of covalent bonds, Directional nature of covalent bond, Properties of covalent bond, Different types of hybridization involving s, p and d orbitals and draw shapes of simple covalent molecules, Definition of coordinate covalent bond with examples, Description of molecular orbital theory of homo nuclear diatomic molecules, Bonding, antibonding molecular orbitals, σ, π bond orbitals, their symmetry.

15. Chemical Kinetics, Energetics, Chemical Calculations And Stoichiometry
Chemical combination, Chemical decomposition, Chemical displacement, Chemical Double decomposition, Slow and Fast reactions, Rate of a Reaction, Factors affecting the reaction rate, Reversible and Irreversible Reactions, Law of conservation of mass, Law of definite proportions, Law of multiple proportions, Rate law, units of rate constant, Collision theory of reaction rates (elementary ideas), concepts of activation energy. Stoichiometry - Meaning of Chemical Equations, Thermochemical Equations, Problems Based on Equations, Laws of chemical combination, principles and examples, Molar mass, concept of equivalent weight with examples, Percentage composition of compounds and calculations of empirical and molecular formula of compounds, Oxidation number concept, Balancing of redox reactions by ion electron method and oxidation number method, Types of redox reactions, Applications of redox reactions in titrimetric quantitative analysis and redox reactions in electrode process, Numerical calculations based on equations. Equilibrium - Differences between Physical and Chemical change, Equilibrium in physical and chemical process, Dynamic nature of equilibrium, law of mass action, Equilibrium Constant, Factors affecting equilibrium.

16. Solutions, Acids And Bases

17. Chemistry of Carbon Compounds

18. Carbohydrates, Proteins, Vitamins & Lipids
Carbohydrates, Manufacture of Cane-sugar, Manufacture of Alcohol, Classification (aldoses and ketoses), Monosaccharides (glucose and fructose), Oligosaccharides (sucrose, lactose, maltose), Polysaccharides (starch Cellulose, Glycogen – Preparation, properties and structure, Importance. Proteins - Elementary idea of amino acids, peptide bond, Poly peptides, Proteins, Primary Structure, secondary structure, Tertiary structure and quaternary structure (qualitative ideas only), De-naturation of proteins, enzymes. Vitamins - Classification, Functions in biosystems. Lipids - Classification, structural features, Functions in biosystems.

19. Chemistry & Industry

20. General Principles Of Metallurgy
Occurrence and Relative Abundance of metals in earth’s crust, The Metallurgy of Iron & Extraction, Protection of Metals and Prevention of Corrosion, Principles and methods of extraction – concentration, reduction by chemical and electrolytic methods and refining

21. Environmental Chemistry
Pollution: Air, Water and Soil Pollution, Oxides of Carbon, Carbon Monoxide, Oxides of nitrogen and Sulphur, Chlorofluoro carbons, Chemical reactions in atmosphere, smogs, major atmospheric pollutants, acid rain, Ozone and its reactions, effects of depletion of ozone layer, Green house effect and global
warming, Pollution due to industrial wastes, Green chemistry as an alternative tool for reducing pollution with two examples.

Part – IV

Teaching Methodology (Marks: 16)


2. The History and Development of Science: A brief introduction to oriental and western science, Contribution of the following Scientists in the Development of Science: Aryabhatta, BhaskaraCharya, Aristotle, Copernicus, Newton, Einstein, C.V.Raman, Various organizations working for the development of science in India

3. Aims and Values of teaching Physical Sciences: Aims of teaching Physical Sciences, Values of teaching Physical Science, Correlation of Physics and Chemistry with other subjects

4. Objectives of teaching Physical Sciences: Meaning and importance of objectives, Bloom's Taxonomy of Educational objectives, Specific / Behavioral objectives / (Instructional objectives), Critique on Bloom’s Taxonomy


6. Planning for effective instruction in Science: Year Plan, Unit Plan, Lesson Plan, Learning experience, characteristics, classification, source and relevance.

7. Teaching Learning Material (TLM): Characteristics and Importance of TLM, Classification and Types of TLM, Hardware and Software in TLM, TLM-Principles to be followed, Edgar Dale’s cone of learning experience.


10. Non-formal Science Education: Science Clubs, Science Fairs – purposes, levels, organization, advantages, Science Library, Role of NGOs and State in popularizing Science
SCHOOL ASSISTANT – BIOLOGICAL SCIENCE
SYLLABUS

Part – I
GENERAL KNOWLEDGE AND CURRENT AFFAIRS (Marks: 10)

Part - II
PERSPECTIVES IN EDUCATION (Marks: 10)


2. Teacher Empowerment : Meaning, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.


Part - III

CONTENT (Marks: 44)

1. Biological Sciences: Its importance and human welfare, Branches of Biology, Biologists, Reputed Biological Institutions in India

2. Living World: Life and its Characteristics, Classification of Living Organisms

3. Microbial World: Virus, Bacteria, Algae, Fungi and Protozoan, Useful and Harmful Micro-organisms


7. Our Environment: Abiotic and Biotic factors and Ecosystems, Natural Resources – Classification, Judicial use of Renewable, Non-renewable and Alternative Resources, Wild Life - Conservation, Sanctuaries, National Parks in India, Biogeochemical Cycles, Pollution – Air, Water, Soil and Sound Global Environmental issues – Global Warming (Green House Effect), Acid Rains and Depletion of Ozone layer, Food Chain

Part – IV
Teaching Methodology (Marks: 16)
1. The Nature & Scope of Science: A brief introduction of Oriental and Western Science, Nature of Science, Scope of Science, Substantive and Syntactic Structure of Science.
2. Aims and Values of Teaching Biological Sciences: Aims of teaching Biological Sciences, Values of teaching Biological Sciences.
3. Objectives of Teaching Biological Sciences: Importance of Objectives of Teaching Biological Sciences, Bloom’s Taxonomy of Educational Objectives and limitations, Writing Instructional Objectives and Specifications
6. Science Laboratories: Importance of Practical work in Biological Sciences, Planning Science Laboratory, Procurement, Care and Maintenance of Laboratory Equipment, Maintenance of different Registers, Safety and First aid, Development of Improvised Apparatus
8. Biological Science Teacher: Qualities of a good Biological Sciences Teacher, Roles and Responsibilities
SCHOOL ASSISTANT - SOCIAL STUDIES
SYLLABUS

Part – I
GENERAL KNOWLEDGE AND CURRENT AFFAIRS (Marks: 10)

Part – II
PERSPECTIVES IN EDUCATION (Marks: 10)


2. Teacher Empowerment: Meaning, interventions for empowerment, Professional code of conduct for teachers, Teacher motivation, Professional development of Teachers and Teacher organizations, National / State Level Organizations for Teacher Education, Maintenance of Records and Registers in Schools.


Part - III
CONTENT (Marks: 44)

GEOGRAPHY

1. Maps: reading analysis, different kinds, and making of maps- Globe as the model of earth.
3. The Earth: Interior of the Earth – Structure, Temperature, Pressure and Density of the Earth’s interior, Major Rock types and their characteristics (Igneous Rocks, Sedimentary Rocks and Metamorphic Rocks)
7. Earthquakes: Causes and Effects of Earthquakes, Distribution of Earthquakes
9. Ground water: Tanks, building of tanks – decline of tanks and fishing in tanks.- ground water level or water table – rocks and ground water in telangana- recharging of ground water – quality of ground water and use of ground water.
10. Forests: description and distribution- status of forests in telangana- tribal use of forests-forest products- economic importance and trade- deforestation-forest conservation- (social forestry) –forest rights Act


HISTORY
1. Study of the Past: Pre-historic Age, Proto-historic Age, Historic Age
2. Bronze Age Civilization
4. The Medieval World: Main Features of Medieval Europe, Political Developments – Feudalism, The Holy Roman Empire, The Rise of Islam and the spread of Islam, India in Medieval Ages, Asia in the Medieval times – China and Japan
5. Ancient Indian Civilization: Indus Valley Civilization (Harappan Culture), Aryan Civilization – Early Vedic and Later Vedic Civilization
6. Political and Religious Developments of 6th century B.C.
8. India from 300 A.D. to 800 A.D: The Gupta Empire, The Pushyabhuti Dynasty (Harshavardhana)
9. Deccan and South Indian Kingdoms: The Chalukyas, the Pallavas, the Cholas, the Rashtrakutas, the Yadavas and the Kakatiyas
10. The Muslim Invasions in India: The Condition of India on the Eve of Arab Invasions, Turkish Invasions, Ghaznavids Raids and its results, Effects of Muslim Invasions
12. The South Indian Kingdoms: The Kakatiyas, The Vijayanagara Empire, The Bahmani Kingdom

13. Mughal Empire: Conditions of India on the eve of Babur’s Invasion, Babur, Humayun, Shershah, Akbar, Jahangir, Shahjahan, Aurangajeb, The reasons for the downfall of Mughal Empire, The rise of Marathas, History of the Sikhs


16. India between 1858 – 1947: Political, Economic and Social Policies in India, British Policy towards Indian Princess, British Policies towards neighbouring countries

17. Changes in Economic and Social sectors during the British period: Agriculture, Famines in India between 1858 – 1947, Rise of New Classes in Indian Society


Communalism and Corruption in High places- the Era of coalition politics-Mandal, Mandir, Market.


23. Land lords and tenants under the British and Nizams- Freedom movement in Hyderabad State.


30. Nationalist Movements: Rise and fall of Napoleon, French Revolution of 1830 and the 1848 Revolt, Unification of Germany and Italy, Socialist Movements – Rise of Working class, Paris Commune of 1871

31. Imperialism: Factors in the rise of Imperialism, Forms and Methods of Imperialism, Scramble for Africa and Asia, Colonialism in America.


**Civics:**


2. Community and Groups: Types of Community and Groups, Community Development, Civic life, Social evil in our Society, Evolution of Society, Culture and Society


8. Secularism: Need and Importance, India – Religious tolerance, Promotion of Secularism in India.
9. World Peace and Role of India: India in the International Era, Foreign Policy, Non-Alignment Movement (NAM) Policy, India and Common Wealth, India’s relations with super powers, India and neighbours, India and SAARC, India’s leading role in the World.


11. Traffic Education / Road Safety Education.


13. Culture and Communication- Handicrafts and handlooms in Telangana Structural Monuments- performing arts and artists, Film and print media and sports: Nationalism and Commerce.

Economics:


III. a) Theory of Demand: Meaning, Determinants of Demand, Demand Schedule – Individual and Market Demand Schedule, the Law of Demand, Demand Curve, Demand function, Elasticity of Demand.


VI. Revenue and Expenditure: Types of Revenue, Taxation – Direct and Indirect Taxes, Types of Taxes, System of Taxation – Progressive, regressive, Proportionate, Cannons of Taxation, Effects of Taxes, Public Expenditure

VII. Budget: Meaning, Definition, Central and Stage Budgets, Types of Budget – Surplus, Balanced and Deficit, Classification of Revenue & Expenditure in Budget, Types of Deficits.

VIII. Money: Definition, Functions of Money, Classification of Money, supply of Money.

IX. Banking: Commercial Banks – functions, Central Bank – origin, functions, Reserve Bank of India, Co-operative Rural Banks, Regional Rural Banks.


XII. a) Indian Economy: Characteristics of Indian Economy before Independence, Indian Economy since Independence – Organized and Unorganized Sectors.
   d) Agriculture sector in India: Importance, Characteristics of Indian agriculture, Causes of Low Productivity, Measures to increase Agriculture Productivity in India, Land reforms in India, Green Revolution, Agriculture Marketing, Agricultural Finance, Role of Banks in Agriculture Development (Commercial Banks, NABARD, Co-operative Banks, Regional and Rural Banks).
   f) Tertiary Sector (Service Sector) - importance
   g) Problems of Indian Economy: Poverty, Unemployment, Regional Disparities, Inflation, Income Inequalities – Lorenge Curve.
   h) Planning: Meaning and Definition, Planning Commission, Five Year Plans in India – A brief review, General and specific objectives of Indian Five Year Plans, Achievements and failures of Five Year Plans.

XIII. Natural Calamities and Disaster Management- Sustainable Development.
Part – IV
Teaching Methodology (Marks: 16)

1. Social Studies – Meaning, Nature and Scope: Defining Social Studies, Main features of Social Studies, Social Studies and Social Sciences differentiated, Scope of Social Studies – Types of Subject material and learning experiences included in the study of Social Studies, Need and importance of Social Studies

2. Values, Aims and Objectives of Teaching Social Studies: Values of teaching Social Studies, Aims of teaching Social Studies at Secondary Level, Instructional Objectives of teaching Social Studies, Relationship of instructional objectives with general aims and objectives of Social Studies, Taxonomy of Educational and instructional objectives, Writing objectives in behavioural terms


4. Instructional Strategies in Social Studies: Techniques, devices and maxims, Different methods of teaching Social Studies - Story telling, lecture, source, discussion, project, problem, inductive, deductive, observation, assignment – socialized recitation, Team teaching, Supervised study

5. Planning for Instruction: Developing teaching skills through Micro-teaching, Year Planning, Unit Planning, Lesson Planning

6. Instructional Material and Resources: Text books, work books, supplementary material syllabus, curriculum guides, hand books, Audio visual, Social Studies laboratory, library, clubs and museum, Utilizing community resources

7. Social Studies Teacher: Qualities of a good Social Studies teacher, Roles and responsibilities

8. Evaluation in Social Studies: Concept and purpose, Types of Evaluation, Evaluation as a continuous and comprehensive process, Different techniques of Evaluation, Preparation for Scholastic Achievement test