(X)
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GUIDELINES
&
DRAFT SYLLABUS

NPSC COMMON EDUCATIONAL SERVICES
(TEACHER EDUCATION)
EXAMINATION

SYLLABUS

SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)
GENERAL PAPER (COMPULSORY FOR GROUPS 'A' AND 'B')

MARKS: 100

PAPER I

UNIT -1: BASES FOR EDUCATION OF TEACHERS

- Thinkers: Gandhi, Tagore, Dewey, Krishnamurthy, Montessori, Ivan Illich, Pierre Bourdieu and Paulo Freire.
- Theories: Bahaviourism, Cognitivism, Constructivism, Mutiple Intelligence, 21st Century Skills
- Commissions and Policies: Secondary Education Commission; Indian Education Commission; National Policy of Education, 1986; Revised National Policy, 1992; National Curriculum Framework, 2005; Universalization of Elementary and Secondary Education; Justice Verma Committee Report, 2013, New Education Policy 2020

UNIT – 2: TEACHER EDUCATION AND TEACHING:

- Curriculum Framework for Quality Teacher Education, 1998; National Curriculum Framework for Teacher Education, 2009
- Indian and Global Perspectives of Teacher Education, Aims and Scope of TE; Challenges in TE; Types and importance of TE; Norms and Standards for TE, 2014, 2018;
- Role and functions of NCTE, UGC, NCERT,NUEPA, RCI, SCERT, NAAC in TE, DIETs and Secondary Teacher Education Institutions,
- Gender Identity Construction, Role of different Agencies in addressing Gender Inequalities; Concept of Inclusion, Special Needs of Learners and role of Curriculum, School and Teachers in the context of different Learning Disabilities.
- Preparation of teachers: Teaching Skills; Pre-internship, Internship and Post-internship; Lesson Planning; Student Teachers'Feedback; Teacher Education Institution and School Partnership; Teaching as a Reflective Practice.
- Professional Ethics for Teacher Educators
- Models of Teaching: Concept Attainment; Enquiry Training; Group Investigation
- Methods, Techniques and Strategies of Teaching

UNIT – 3: EDUCATIONAL RESEARCH

- Meaning of Educational Research, Types of Educational Research

- Research Design: Identification of Problem, Formulation of Research Questions, Hypotheses, Sampling, Tools and Techniques of Data Collection
- Research Proposal; Review of Literature; Referencing & APA style
- Problems of Research in Teacher Education; Action Research

UNIT – 4: CURRICULUM & EDUCATIONAL EVALUATION

- Concept, Types and Determinants of Curriculum; Dimensions of Curriculum, Need and Significance of Curriculum and Syllabus in Schools; Curriculum Construction as a Continuous Process.
- Concept of Measurement, Assessment, Evaluation, Test and Examination
- Types of Evaluation: Formative and Summative; Subjective and Objective; Continuous and Comprehensive Evaluation; Norm-referenced Test and Criterion-referenced Test
- Assessment tools - with special reference to Constructivist Approach and Online assessment
- Steps and Procedures for Standardisation of a Test
- Grading: Absolute vs. Relative
- Observation and Assessment of student-teacher's teaching; criteria for Assessment of teaching during Internship

UNIT – 5: LEADERSHIP AND COMMUNICATION

- Meaning and Functions of Leadership
- Leadership Styles; Teacher as a leader; qualities of an Academic Leader
- Models of Decision Making; factors influencing Decision Making; techniques of Decision Making
- Academic leader and communication; levels of communication;
- Types of organisational communication: formal, informal, horizontal, vertical
- Classroom communication; barriers to effective communication, communication in an inclusive classroom; importance of team-building; transforming teaching-learning process
- Technology and Communication in Education
- Role of Drama and Art in Teaching-Learning.

SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)
GROUP-A

PAPER II-A (i)

CORE COURSE (PHILOSOPHICAL FOUNDATION)

UNIT I:

- Philosophy: Origin, Definition, Characteristics; Branches of Philosophy; Metaphysics- Meaning, Nature, Necessity and Methods; Logic: Meaning, Types; Ethics-Meaning, Nature, Scope and Utility; Epistemology: Historical Evolution, Meaning, Nature and Scope; Knowledge-: Definition, Classification, Methods of Valid Knowledge, Belief and Knowledge.
- Theories of Mind and Body: Dualism, Monism; Theories of Religion- Buddhism, Jainism, Hinduism, Sikhism, Christianity, Islam, Zoroastrianism, Confucianism; The Schools of Indian Philosophy-Astika and Nastika; Itihasas (Epics)- Concept, Ramayana and Mahabharata; Rasa- Definition, Nature and Scope; Hermeneutics-Meaning, Components; Venn Diagram.

UNIT II:

- Socrates: Dialectical Method; Plato- Theory of Knowledge, The Theory of Ideas; Rene Descartes- Skeptical Method, Understanding and Imagination, Ideas, Mind-Body Dualism; Immanuel Kant-Conception of Critical Philosophy, Philosophy of-Knowledge, Transcendental Knowledge, God and Morality; Karl Marx- Theory of Human Nature, Affirmation of Human Nature, Negation of Human Nature; Soren Kierkegaard- Philosophy of Existence- Subjectivity, Man, God, Morality and Salvation; Edmund Husserl- Phenomenology as a Rigorous Science of Consciousness, the Phenomenological method.
- Swami Vivekananda: Reality and God, Man Universal Religion; Mahatma Gandhi-God and Truth, Nature of World and Man, Nature of Religion, Concept of Swaraj; Sri Aurobindo- Two Negations, Reality as Saccidananda, Supermind, Evolution, and Integral Yoga; B.R. Ambedkar- Varna and Caste System, Neo-Buddhism.

UNIT -III:

- Relationship between Philosophy and Education, Concept and Nature of Philosophy of Education,Scope and function of Educational Philosophy, Philosophical basis of Value Education
- Philosophy and Aims of Education, Curriculum and Methods of teaching: - Existentialism, Naturalism, Pragmatism, Idealism, Realism, Constructivism, Logical Positivism, Humanism; Samkhya, Vedic, Buddhist, Jain, and Islamic Philosophies and their contributions to Education.

UNIT-IV:

- Thoughts and Educational contributions of Western Philosophers:Paulo Freire, John Dewey, Socrates, Plato, Ivan D Illich, Immanuel Kant, Rousseau, Pestalozzi, Herbart Froebel.
- Rousseau- Negative Education,Froebel - Kindergarten,Montessori - Children House,

Paulo Freire- Banking Concept of Education, Pedagogy of the Oppressed and Critical Pedagogy, Ivan Illich- De Schooling, Dewey- Instrumentalism.

UNIT- V:

- Thoughts, Educational Contributions of Indian Philosophers and their relevance to Modern Educational Practices: Vivekananda, Aurobindo, Rabindranath Tagore, Jiddu Krishnamurty, Mahatma Gandhi, Radhakrishnan, Gijju Bhai.
- Vivekanada- Man Making Education, Aurobindo- Integral Education, M.N. Roy- Radical Humanism, Jawaharlal Nehru- Scientific Temper.

SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)
PAPER II-A(ii)

CORE COURSE (SOCIOLOGICAL FOUNDATION)

UNIT-I:

- Sociological Theories of Emile Durkheim, Max Weber, Robert K. Merton, G.H.Mead, Pierre Bourdieu, Michel Foucault, Ivan Illich, Jurgen Habermas, R.K. Mukherjee, M.N. Srinivas and Irawati Karve.
- Sociological Concepts & Institutions: Social Structure, Community, Culture, Identity, Status and Role, Identity, Religion; Social difference, Hierarchy, Inequality & Marginalisation; Gender, Sexuality and Disability; Race, Tribe & Ethnicity; Social Mobility, Modernisation & Development; Social Transformation and Globalisation.

UNIT-II:

- Agrarian Social Structure & Emergent Class Structures, Decline of Agrarian Economy, De-Peasantisation and Migration; Changing Inter-Community relations and Violence, Urbanism, Urbanity & Urbanisation, Society and Citizenship, Gender and Development, Reservations and Politics, Poverty and Exclusion, Changing Material Culture, Indigenous Knowledge Systems, Gender and Environment, Cultural Identity and Mobilisation, Culture and Environment.
- Science, Technology & Society- technology and changing family relations, Children, Youth and Elderly, Changing Care and Support Systems, Domestic Violence and Crime against Women, Food and technology; E-Governance & Surveillance Society; Media-Print, Electronic, Visual & Social Media; State Policy, Digital Divide & Inclusion.

UNIT -III:

- Sociology of Education- Meaning, scope and significance of Sociology of Education Education as a social sub system, its characteristics and relationship with other

subsystems of the society: Economy, Polity and Religion; the Structural Characteristics of the School– School as a social system: Views of Willard Waller.

- Socialisation- Agents of Socialisation, Professional Socialisation of Teachers: Meaning, Stages of Professional Socialisation of Teachers; Relationship with Administrators, colleagues, students and parents, Student Control Ideology.

UNIT-IV:

- Education and Cultural Change and Development; Social Stratification: Dimensions of stratification in India; Education and Social mobility; Education in a Stratified Society – its roles and functions;
- Diversity in Modern Indian Society- role of Education in addressing Diversity among Learners; Teaching -Learning and language, Language & Society; Importance of teachers' use of Language in the Classroom– Teaching, Learning and Culture
- School Curricula – the dynamics of Gender Discrimination and Education; Education of the disadvantaged: Problems of Access to Education; Multicultural Education – Expansion of Professional Education.

UNIT-V

- Problems of Modern Indian Society and the Role of Education- Neo-Capitalism & Neo-Liberalism, Lawlessness, Adhocism, Secularism, Education of the Disadvantaged/Marginalised,Equity, Equality and Education; Identity and Autonomy of Indian Education;
- Education and Changing Social Context- Globalisation and Liberalisation, Poverty and Unemployment; Child Labour; Terrorism, Dessidence and Seperatism, changing Gender Roles, Family Structure, Domestic Violence and Crime against Women, Identity Crisis, Influence of Media, Substance Abuse, Physical and Mental Health,
- Divergence of the State, Society and Education.

SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)
GROUP-A

PAPER II-A(iii)

CORE COURSE (PSYCHOLOGICAL FOUNDATION)

UNIT-I : Basic Developmental Processes:

- Growth and Development; Principles of Development; Factors influencing Development.
- Stages of Life Span Development with special focus on Childhood and Adolescence. Promoting psychological well – being across major stages of the lifespan.
- Role of Genetic and Environmental factors in determining human behaviour.
- Domains of HumanDevelopment: Cognitive development: perspectives of Piaget and Vygotsky;Language Development; Emotional Development; Moral Development:

Perspective of Kohlberg;Socio-Cultural Contexts for Human Development: Family; Peers, Media & Schooling.

UNIT-II: Psychology of Individual Differences:

- Individual Differences - Meaning, significance and causes; Educational significance.
- Personality: Nature of Personality; Culture, Genderand Personality; Perspectives on personality: Psychodynamic (Freud), Humanistic (Maslow) and Social(Bandura); Biological and Sociocultural determinants; Assessment of Personality-Use of Self-report Inventories, Interview, Projective and Non-Projective tests; Familiarity with MMPI, Rorschach, WAT, and TAT.

- Intelligence: Concept of intelligence; Emotional Intelligence: Models; Emotional Quotient Cmpetencies: Self-awareness, Self-Regulation, Motivation, Empathy, and Interpersonal skills; Importance of Emotional Intelligence and its Educational implications; Theories of Gardner, Sternberg, & PAS; Heredity, Environment, and Intelligence; Measuring Intelligence: Intelligence tests - Individual, group, performance, verbal, nonverbal.

- Creativity: Meaning and Nature,characteristics of acreative person,Necessityfor fostering Creativity and Guiding Creative Children; Creativity and intelligence; Criteria of Creative Activities; Types and aspects of Creativity- Verbal vs. non-verbal creativity, Individual vs. group creativity; Strategies for Fostering Creativity.
- Interest: Characteristics; Measurement - Questionnaires, R.R Singh's Interest Record Card, Strong Vocational Interest Blank, and Thurstone's Vocational Interest Schedule.
- Aptitude: Characteristics andEducational Significance of Aptitude.
- Attitude: Nature, characteristics and functions of attitude; Attitude formation and change;

UNIT-III

- Learning: Meaning and nature, Types of learning- Cognitive, Verbal, Concept and Skilllearning; Principles and applications of Classical conditioning, Operant conditioning, Observational and Constructivist Learning and their differences; Transfer of Learning: Concept, types, educational implications.
- Factors Affecting Learning:Motivation-Concept and functions of motivation,Classification of Motives;Theories of Motivation: Drive theory, Arousaltheory, Expectancy theory, Goal-Setting theory and Achievement motivation;Motivational strategies for a variety of learners and Dynamics; Remembering and Forgetting – Concept, Categories, Forms/Types.

UNIT- IV

- Mental Health and Adjustment: Factors affecting Mental Health; Characteristics of a Mentally healthy Person; strategies to promote Mental Health; Adjustment Mechanisms; Role of the schoolin preservation and promotion of Mental Health of children.
- Need of Guidance and Counselling;Role of teacher in Guidance and Counselling; Counselling Applications: Child and Adolescence Counselling; Family Counselling; School and Career Counselling.

- Crisis Intervention:Suicide, Grief, and Sexual Abuse; Initial Assessment in Counselling – Case history, MSE: Identifying a Client's problem using a clinical interview with reference to Children and Adolescents.
- Managing Classroom Behaviour -Group Dynamics: Leadership, Team building and Techniques of Managing Group.
- Stress and Coping: Nature of Stress, Symptoms of Stress; Various sources of Stress: Environmental, Social, Physiological and Psychological; Stress and Health: Effects of Stress on Health; Managing stress: Methods - Yoga, Meditation, Relaxation Techniques; Problem Focused andEmotion Focused Approaches.

UNIT- V

- Inclusive Education: Nature, Concept& Importance; Addressing Classroom diversity: Gender, Socio-Economic, Caste.
- Changing Practices in Education of Children with Disabilities:Segregation,Integration & Inclusion; Educational Programs and Placement of Exceptional Children; Concept and Categorization of Exceptionality; Learning Styles; Gifted, Retarded, Learning Disabled: Their Identification and Training
- Access, Equity, Relevance, Participation &Empowerment of Children with Special Needs; Challenges in Inclusive Education: Attitudinal, Physical & Instructional.

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SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)

GROUP-B

PAPER-II B(i)

PEDAGOGY OF MATHEMATICS

Unit-I

Linear Transformations; Algebra of Matrices; Solution of System of Linear Equations; Cayley-Hamilton Theorem; Linear Programming Problems and Solution; Analytic Functions, Cauchy-Riemann Equations, Cauchy's Theorem, Cauchy's Integral Formula, Taylor's Series; Singularities; Laurent's Series; Cauchy's Residue Theorem; Contour Integration; Functions of a Real Variable, Mean Value Theorem, Taylor's Theorem; Functions of Two or Three Variables: Partial Derivatives, Maxima and Minima, Lagrange's Method of Multipliers; Double and Triple Integrals; Solution of Algebraic and Transcendental Equations of One Variable; Solution of System of Linear Equations by Gaussian Elimination and Gauss-Jordan (Direct), Gauss-Seidel (Iterative) Methods; Newtons And Lagrange's Interpolation; Numerical Integration: Trapezoidal Rule, Simpson's Rules, Gaussian Quadrature Formula; Euler and Runge Kutta-Methods; Binary System; Arithmetic and Logical Operations on Numbers; Algebra of Binary Numbers; Basic Logic Gates and Truth Tables; Boolean

Algebra; Normal Forms; Algorithms and Flow Charts for Solving Numerical Analysis Problems.

Unit- II

Rectilinear Motion, S.H.M, Motion in A Plane; Equilibrium Of a System of Particles; Common Catenary; Principle of Virtual Work; Equilibrium of Forces in Three Dimensions; Generalized Coordinates; D' Alembert's Principle and Lagrange's Equations; Hamilton Equations; Motion of Rigid Bodies in Two Dimensions; Equation Of Continuity; Euler's Equation of Motion for Inviscid Flow; Two-Dimensional and Axisymmetric Motion; Vortex Motion; Navier-Stokes Equation; Formulation Of Differential Equations; Equations of First Order and First Degree, Integrating Factor; Orthogonal Trajectory; Clairaut's Equation, Singular Solution; Second And Higher Order Linear Equations with Constant Coefficients; Complementary Function; Particular Integral and General Solution; Second Order Linear Equations with Variable Coefficients, Euler-Cauchy Equation; Tabular and Graphical Representation of Data; Measures Of Central Tendencies and Dispersion; Standard Scores; Percentiles; Scale of Measurement; Correlations and Regression Analysis and their application; Normal Distribution and Applications Of NPC.

UNIT III

Meaning, Nature and Values of Mathematics, Abstractness of Mathematics; Different branches of Mathematics; Aesthetic Aspect of Mathematics; Historical Development of Mathematical Concepts: Contribution of Some Famous Indian Mathematicians; Teaching of Mathematical Modeling; Building Blocks of Mathematics: Mathematical Propositions, Drawing Conclusions, Axioms, Postulates, Theorem, Truth Tables, Necessary and Sufficient Conditions; Types of Theorems; Types of Proofs- Direct Proofs, Indirect Proofs, Proof by Contradiction, Proof by Exhaustion, Proof by Mathematical Induction .

UNIT IV:

Aims and Objectives of Teaching Mathematics at Different Stages; Mathematics Curriculum at Different Stages of School Education; Learning Resources in Mathematics: Contextualization, Criteria and Concerns. Development of curricular materials in Mathematics: textbooks, workbooks, teacher handbooks. Integrating Co-Curricular Activities with Mathematics Education. Approaches to Organization of Mathematics Curriculum at Various Stages of School Education. Methodology of Development of Curricular Materials. Approaches in Teaching of Mathematics: Behaviorist, Cognitivist and Constructivist; Issues and problems in Teaching-Learning of Mathematics; Qualities required of a Mathematics Teacher.

UNIT V:

Different Methods of Teaching Mathematics: Inductive and Deductive, Analytic and Synthetic, Problem Solving, Heuristic and Competence based Approach in teaching mathematics. Identification of Different Learning Styles; Teaching Gifted/Slow Learners in Mathematics; Pedagogical Analysis in Mathematics; Reflective Discussion; Recreational

Mathematics; Computer Assisted Learning and Computer-Based Instructions; Use and Preparation of Teaching Aids; Low Cost No Cost Teaching Learning Materials.

Concept of Evaluation, Types of Evaluation- Formative, Summative, Criterion, Diagnostic; Tools and Techniques of Evaluation in Mathematics; Types of Mistakes In Mathematics, their Identification, Prevention and Remedial Measures.

SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)

GROUP-B

PAPER-II B (ii)

PEDAGOGY OF LANGUAGE

UNIT – 1: PEDAGOGY OF LANGUAGE

- Philosophical, social and psychological processes involved in language learning
- Theories, Approaches and Methods of language learning: Behaviourist, Mentalist, Constructivist, Multi-lingual Approach, Communicative Approach, Thematic Approach, Grammar Translation Method, Direct Method, Structural-situational Approach, Audio-lingual Approach
- Participatory Strategies of teaching language; Strategies and Techniques of teaching grammar, vocabulary, comprehension and composition
- Techniques of teaching listening, speaking, reading and writing
- Use of ICT in English Language Teaching and Learning; Webinar

UNIT – 2: LITERATURE AND LANGUAGE LEARNING

- Meaning of Prose, elements of prose, types of prose, objectives of teaching prose at different levels
- Meaning of poetry; objectives of teaching poetry at different levels, elements of poetry: imagery, allegory, rhyme, rhyme scheme, meter, simile, metaphor, alliteration, stanza
- Teaching of prose and teaching of poetry
- Planning of prose and poetry lessons – Herbatian vs Constructivist

UNIT – 3: LINGUISTICS AND LANGUAGE LEARNING

- Language Learning and Language Acquisition; Functions of language; Factors affecting language learning
- Linguistic process involved in learning of languages: Contrastive Analysis, Error Analysis, Structural Analysis
- Morphology, Syntax, Semantics
- Discourse Analysis: Speech acts, Conversational Maxims, Conversational Analysis, Text Analysis and Critical Discourse Analysis

- Sound Patterns: phonetic symbols and transcription, place and manner of articulation, rhythm, word stress, sentence stress, intonation

UNIT – 4: LANGUAGE CURRICULUM

- Meaning of language curriculum and language syllabus; prescriptive and descriptive curriculum
- Principles of preparing a good language curriculum
- Factors affecting language curriculum development; language needs analysis in curriculum development; selection and sequencing of content, development of activities and tasks for language teaching
- Types of Language syllabus; Stages in language syllabus design
- Curriculum for a multi-lingual classroom; differential tasks
- Three language formula and problems associated with it; language policy with reference to NEP 2020.
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UNIT – 5: EVALUATION AND LEARNING AIDS IN LANGUAGE TEACHING

- Concept of Evaluation in Language Teaching and Learning, purposes of using tests in English language teaching
- Planning and construction of test items to test listening, speaking, reading, writing and composition
- Types of mistakes committed by language learners and Remedial Teaching
- Diagnostic Test; Testing Learning Outcomes
- Characteristics of effective audio-visual aids in teaching-learning language
- Types of audio-visual aids in ELT: Audio, Visual, Audio-visual and their uses
- Language Laboratory

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SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)

GROUP-B

PAPER-II B (iii)

PEDAGOGY OF SCIENCE

Unit I

- Units and Dimensions; Motion and Laws of Motion; Work, Energy and Power; Motion of System of Particles and Rigid Body; Gravitation; Pressure; Floatation; Surface Tension; Viscosity; Elasticity; Oscillations and Waves; Simple Harmonic Motion; Waves; Sound Waves; Heat and Thermodynamics; Optics; The Human Eye

and Defects; Dual Nature Of Matter; Static Electricity; Current Electricity; Magnetism; Electromagnetism; Electromagnetic Waves; Electronic Devices; Communication Systems; Atomic and Nuclear Physics; Radioactivity; Nuclear Fission And Fusion; The Fundamental Forces; Magnetic Effect of Current; Optics;

- Dual Nature of Matter; Atoms and Nuclei; Matter and Its State; Gases and Liquids; Equilibrium; Atomic Structure; Chemical Bonding and Molecular Structure; Periodic Classification of Elements; Oxidation and Reduction; Acids, Base and Salts; Behavior of Gases; Kinetic Theory of Gases; Electrolysis; Carbon and Its Compounds; Fuels; Metallurgy; Metals And Non-Metals; Chemical Reactions; Radioactivity; Electrochemistry; Catalyst; Hydro-Carbons; Fertilizers; Concepts of Ph Scale; Organic Chemistry: Some Basic Principles and Techniques; Hydrocarbons; Environmental Chemistry.

UNIT II

- Pathogens; Parasites causing human diseases - Malaria, Dengue, Chikungunya, Filariasis, Ascariasis, Typhoid, Pneumonia, Common cold, Amoebiasis, Ring worm and their control; Basic concepts of immunology - vaccines; cancer, HIV and AIDS; Adolescence - drug and alcohol abuse. Microbes in food processing, industrial production, sewage treatment, energy generation and microbes as bio-control agents and bio-fertilizers. Antibiotics; production and judicious use.
- Biodiversity - Concept, patterns, importance; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, Sacred Groves, biosphere reserves, national parks, wildlife, sanctuaries and Ramsar sites.
- Biotechnological Applications in Agriculture; Biotechnological Applications in Medicine; Transgenic Animals; Ethical Issues.

Unit III:

- Meaning, Concept, Nature, Scope and Importance of Science; Aims and Objectives of Teaching Sciences at Various Stages of School Education; Process and Product aspects of Science; Scientific Attitude: Concept and Development.
- Behaviourism and Constructivism; Theory of Cognitive Constructivism; Vygotsky's Social Constructivism, Socio-Cultural Context in Construction of Scientific Knowledge; Scientific Method and Knowledge Construction Through Experiments; Contemporary, Contextual Issues and Problems in Teaching-Learning Science; Qualities required of a Sciences Teacher.

Unit IV

- Meaning, Concept and Types of Curriculum; NCF- 2005 Related to Science; Principle for Curriculum Development and Approaches to Organization Of Science Curriculum at Various Stages Of School Education; Integrating Co-Curricular Experiences with Science Education and their Importane.
- Correlation of Science with other Subjects; Characteristics of Different Disciplines of Science and their Interrelationship, Integration and Application in Real Life; Critical Analysis of Science Curriculum at Different Stages; Learning Resources in Science; Environmental Resources- Selection, Preparation and Utilization of

Learning Aids and use of ICT in Science; Role of Experiments in Science, integration of theories and experiments, Planning and Organization of Laboratory Work and Reporting Skills, Low Cost Science Experiments; Experiences in Science-Science Centres, Science Museums, Science Clubs, Science Fairs, Field Trips, Mobile Science Lab, Vivarium and Aquarium.

Unit V

- Pedagogical Analysis and Organisation of Teaching Learning in Science; Encouraging and Respecting Children's Responses; Strategies, Methods and Techniques of Teaching Science: Lecture, Demonstration, Team teaching, Brain Storming; Child-Centered Approaches in Science Education- Project, Assignment and Problem Solving; Models of teaching- Concept Attainment, Inquiry Training, and Inductive Thinking Model.
- Continuous and Comprehensive Evaluation in Science; Aspects of Evaluation: Conceptual, Attitudinal, Reasoning and Decision Making, and Skill Evaluation. Tools and Techniques of Evaluation- their Construction and Use in Science-Teacher-made Tests, Diagnostic Test, Aptitude Scale, Checklist, Rating Scale, and Anecdotal Record; Self-Assessment; Peer Assessment; Assessment of Teachers by Students.

SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)
GROUP-B

PAPER-II B (iv)

PEDAGOGY OF SOCIAL SCIENCES

UNIT-I:

- Major Civilisations of the World: Mesopotamian, Egyptian, Chinese & Harappan; Major Revolutions: American, French, Chinese, Russian & Industrial Revolutions and the rise of Nation States;
- Important Dynasties/Periods of Indian History: Mauryan, Gupta & Mughal; Establishment of the British Empire in India, the World Wars and Indian Independence; Indo-China War and its impact.

- Constitution & Government:
  Meaning & Types of Constitution; Forms of Government- Totalitarian, Authoritarian, Liberal Democracy; Unitary & Federal; Parliamentary & Presidential- features & comparisons between the different forms; Party System; Organs of Government- Legislature, Executive & Judiciary; their functions, comparison between the organs of Government in U.S.A. and India.
- Indian Democracy:
  Salient features and Goals of the Indian Constitution; Challenges to Indian Democracy; Unity in Diversity- Emotional Integration; Localisation vs Globalisation;

UNIT-II:

- Nature and Scope of Geography; Branches of Geography.
- Physical Geography: Major Landforms - Mountains, Plateaus and Plains; Types of Rocks; Atmosphere: Composition and Structure, atmospheric pressure and wind; Global climate change.
- Human Geography: World population- Distribution, growth and distribution; Economic Activities- Primary, Secondary, Tertiary.
- Geography of India- Physiography, Climate and Economic Activities.
- Meaning and Types of Economies; Micro and Macro Economics; Demand and Supply- Theories and Factors; Elasticity of Demand and Supply; Markets: Types; Income and Employment; Money, Banking and Fiscal Policy;
- Development- concept, aspects of Development; Resources- meaning and types, Resource Utilisation and Sustainable Economic Development with particular reference to Industry and Agriculture in India; Employment and the role of Service Sector in Indian Economy; Features of Indian Economy, Indian Economy and Liberalisation, Globalisation and Privatisation; Problems of the Indian Economy.

UNIT-III:

Meaning & Nature of Social Sciences as a school subject; Aims & Objectives of Teaching Social Sciences at different levels of School education; Social Sciences and Social Studies- development of Social Sciences as a School subject in India under the different Educational Policies and Curriculum Frameworks; Specialised Knowledge versus Inter-disciplinary Knowledge of the Social Sciences; Relationship between the component disciplines of Social Sciences; Importance of Social Sciences as a school subject- Social Sciences and the Aims of Education; Problems in teaching-learning Social Sciences; its Status in the School Curriculum; Personal and Professional Qualities required of a Social Sciences Teacher.

UNIT-IV:

- Approaches, Methods and Models of Teaching-Learning Social Sciences- Teacher-directed and Learner-directed Approaches to teaching-learning; Disciplinary, Correlational & Integrated approaches; Problem Solving and Project Methods, Concept Attainment and Inquiry Training Models, Co-operative and Collaborative

Learning, Social Constructivism and its importance in teaching-learning Social Sciences.

- Innovative teaching-learning in Social Sciences- relating Content to Context, use of ICT, Simulation and Role Play, Brain Storming, Team Teaching, devising and use of Innovative teaching-learning Materials and Techniques.

UNIT-V:

- Transactional Planning, Assessment and Evaluation- Planning an effective Social Sciences Lesson- Aspects and Considerations for Planning; Concept Mapping, Content Organisation and Thematic Planning in Social Sciences- relevance and challenges; Assessing Learning Outcomes in Social Sciences - Aspects of Learning Outcomes, Continuous & Comprehensive Evaluation in Social Sciences; Tools and Techniques for Assessment and Evaluation- their Preparation and Use.

SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)

GROUP-C

CI-Performing Arts (Drama and Art in Education)

PAPER-CI (i)

Full Marks : 100

Unit - 1: Aesthetics and Arts

- Meaning and concept of 'Art' and 'Aesthetic'.
- Development of Artistic and Aesthetic Sensibility.
- Types of Arts: Fine Art, Visual Art, Performing Art, Literary Art.
- Educational values of Art and Aesthetic.
- Aims and objective of incorporating Art in Education.

Unit – 2: Drama, Art and Education

- Roots of Drama and Art in Education.
- Evolution and Practices of Art Education in India and Western context.
- Pedagogical application of Drama and Art in Education.
- Drama-based Pedagogy - a Constructivist Approach for transformational Education.
- Importance of Drama and Art in teaching-learning of different subjects at school level.

Unit - 3: Indian Arts in Education

- Defining Classical, Folk and Contemporary forms of Indian Arts.
- Introduction to dance and theatre forms spread over various regions of India.
- Regional Arts and Crafts in India and their educational implications.
- Awareness of various instruments, costumes and make ups used in Indian art forms.

- Exploration and experimentation with different methods of Visual and Craft Arts.
- Importance of Indian Arts in Cognitive Development.

Unit – 4: Foundation in World Theatre

- Theories of Origin of Theatre: From Greek to Twentieth-century Theatre.
- Dramatic Forms and Styles of Theatre.
- Different Structure of Play Writing.
- History of Acting and Performance.
- Different tools and techniques of theatre adaptable for curriculum purpose.

Unit – 5: Foundation in Indian Theatre

- Classical Sanskrit Theatre.
- History and development of Modern Indian Theatre.
- The Concept and Philosophy of Popular Theatre.
- Street Play and the themes of early Modern Theatre
- Emergence of Modern Indian Playwrights and their contribution to Indian theatre.

CI- Performing Arts (Drama and Art in Education)
PAPER-CI (ii)
Full Marks: 100

Unit – I: Drama and Art as Critical pedagogy

- Critical Pedagogy in Practice in the 21st century: Possibility and Challenges.
- Critical Pedagogy in Teacher Education.
- Rethinking education through Critical Pedagogy.
- Creating dialogic education through Critical Pedagogy.
- Transforming Education from a Critical Perspective.

Unit – II: Applied Theatre

- Defining Applied Theatre and the extended practice of Theatre
- Works of eminent scholars who contributed to the knowledge of Applied Theatre.
- Emergence of New Practices: Drama in Education, Theatre in Education, Drama Therapy, Community Theatre, Prison Theatre, Theatre of the Oppressed.
- From Teaching to Facilitation in Education.
- Social and Educational Impact of Applied Theatre.

Unit - III: Drama and Art in Education

- Pioneers and theorists of Drama Education.

- Integration of Arts in Curriculum: Approaches, practices in western and Indian context.
- Creative Drama to Creative teaching in Education.
- The role and skill of a Drama teacher.
- Use of Drama conventions in classroom.

Unit – IV: Theatre in Education

- Theatre for Education: Concepts of Bertolt Brecht, Augusto Boal, Paulo Freire.
- History & Practice of Theatre in Education in UK, Europe and India.
- Techniques of Participatory programme by adults for children.
- Performing for Children: Play by different Theatre Groups and TIE Company.
- Developing Theatre Workshop with children, Devising performance with Children.

Unit – V: Personal Growth and Self-Development

- Cognitive, Social & Emotional Development from early childhood to adulthood.
- Physical Education: Breathe and its importance in training the voice, Diction & Vocal Development, Voice Modulation, Introduction to Theatre Music.
- Foundation in Acting: Body Movement, Imagination, Expression, Observation, Improvisation, Gestures and Postures.
- Movement analysis based on kinesthetics, Yoga, Theatre Games, Dance, Folk, Storytelling, Puppetry and other forms.

SYLLABUS FOR COMBINED EDUCATIONAL SERVICES
(TEACHER EDUCATION)

GROUP-C

CII- Physical Education

PAPER-CII (i)

Full Marks: 100

Unit -I:

Physical education and adapted physical education and their objectives. Growth and development of physical education in India: Recreation- its principles, characteristics and importance. Modern trends in recreation. Indoor and outdoor recreational programmes.

Recreational programmes for various categories of people. Wellness- its importance, benefits and challenges. Teaching Aptitude – nature, objectives, characteristics of teaching, learner characteristics and teaching methods. Social aspects of sports- sports as a socializing agency, social values , sports leadership, sports as cultural heritage and social aspects of competition. Structure and functions of international and national bodies controlling various games and sports,

Unit -II:

Exercise physiology its scope and importance in the field of physical education and sports. Cardio respiratory adaptations to long and short term physical activities. Muscle- its types , characteristics and functions. Microscopic structure of muscle fibre. Sliding filament theory of muscular contraction. Types of muscle fibres and sports performance. Muscular adaptations to exercise. Neuro-muscular junction and transmission of nerve impulse, kinesthetic Sense organs and neural control of motor skills. Bio-chemical aspects of exercise - Metabolism of food products. Aerobic and anaerobic systems during rest and exercise. Direct and indirect methods of measuring energy cost of exercise. Recovery process - Physiological aspects of fatigue. Restoration of energy stores. Recovery oxygen. Nutritional aspects of performance. Environmental influence on human physiology under exercise. Women in sports- trainability. Physiological gender differences and special problems of women athletes. Aging - Physiological consequences, life style management and healthful aging. Physiological responses of various therapeutic modalities and rehabilitation. Physiological aspects of various Ergogenic aids. Massage manipulations and their physiological responses.

Unit- III:

Kinesiology and biomechanics. Modern trends in biomechanics. Planes and Axes of human body. Joints and their movements. Muscle attachments - Origin, insertion, action and leverage of the principal muscles used in sports. Motion: its laws and their application in sports. Projectile and principles of projections Linear and angular kinematics and kinetics. Friction, Spin, impact and elasticity. Air and water dynamics. Mechanical advantage and applications of Levers in sports. Posture and its deformities with their corrective exercises. Kinesiological, Muscular and mechanical analyses of fundamental movements: Mechanical analyses of major sports skills

Unit – IV:

Sports psychology- its importance in the field of physical education and sports. Motivation in sports- types, theories and dynamics. Psychological factors affecting sports performance- Emotions, Anxiety aggression, stress , self confidence, concentration , mental practice and goal setting. Personality- Theories of personality, measurement of personality. Group dynamics, Group cohesion and leadership in sports. Cognitive process- memory and thinking. Principles of Motor skill learning. Transfer of training and its types with its implication in sports. Long and short term psychological preparation for performance/ competition. Psychological skill training for activation and relaxation Spectators and sports performance.

Unit -V:

Development of teacher education for physical education in India. Qualities, qualifications and responsibilities of physical education personnel at primary, secondary and higher education levels. Scope of physical education personnel in the promotion of health, fitness and wellness. Recent Government policies for promoting physical education and sports in India. Hierarchy of organizational set-up in physical education at schools, colleges and university level. Role of public & private sectors in the promotion of physical education and sports in the country. Curriculum development- Concepts and principles of curriculum planning. Subject matter for different levels of education - primary, secondary and higher education. Curriculum design and content- importance, selection and classification of subject matter with reference to age, sex and differently- abled pupils. Integrated programme for boys and girls. Teaching aids - Time-table, Concepts, credit system for various subject courses theory and practical, Impact of technology in physical education and sports, Curriculum evaluation: Concepts and purpose; procedure and appraisal.

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CII- Physical Education
PAPER-CII (ii)
Full Marks: 100

Unit -I:

Health- its objectives and spectrum. Health education, its importance and principles . Role of genetics and environment in achieving health. Health-related physical fitness. Community health programme- Health appraisal & health instructions. National health promoting government & private agencies. School Health programme and Personal Hygiene. Communicable diseases: causes, symptoms, prevention through other means and Immunization. Psychosomatic disorders/ sedentary life style diseases: causes, symptoms and prevention. Role of exercise, dieting and combination of exercise & dieting on weight control. First-aid- objectives and principles. First-aid for Shock, poisoning, burns, drowning, bleeding, electric shock and common sports injuries.

Unit -II :

Pollution- Air, water, sound and radiation. Effects of pollution on health, Preventive and safety measures from pollution. Nutrition- Balanced diet and its components. Nutritional Deficiencies. Understanding of malnutrition and nutritional supplements. Effects of smoking, alcohol, & drugs on health; prevention and rehabilitation. Yoga- Yoga as a way to healthy and integrated living and socio-moral development of a person. Harmony- with body, in family, in society, in nature, in existence. Rabindranath Tagore's concern on yoga education. Yoga and mental health, Yoga practices.

Unit -III:

Sports training- its characteristics and principles. Training load, its features, principles and adaptation process. Means and methods of executing. Overload, its Causes, symptoms and remedial measures. Strength- its characteristics, types of strength, factors determining strength and strength development. Endurance- its characteristics, types of endurance, factors determining endurance and endurance development. Speed- its characteristics, types of Speed, factors determining Speed and speed development. Flexibility-its characteristics, types of flexibility, factors determining flexibility and flexibility development. Coordinative abilities- its characteristics, types of coordinative abilities, factors determining coordinative abilities and development of coordinative abilities. Technique and skill- its characteristics and importance. Different stages of technique development and technique training. Tactics and strategy. Planning- its importance and principles. Types of planning. Periodization- its importance, objectives and types of periodization. Concept of different periods - Preparatory, competition and transitional. Types of Competition: Talent identification- process and procedure.

Unit - IV:

Test, measurement and evaluation -their importance in physical education and sports. Principles and processes of evaluation in physical education. Criteria of selecting an appropriate test and administration of testing programme. Types of tests and construction of standard knowledge and skill tests. Tests for fitness- Physical fitness, motor fitness, motor ability and motor educability. Health related fitness tests. Test for fitness components- strength, endurance, speed, flexibility and coordinative abilities. Sports skill tests- Badminton, Basketball, Football, Hockey, Tennis, and Volleyball. Anthropometric Measurements- land marks and measurement of various body segments ,height, sitting-height, weight, diameters, circumferences, skinfolds, body mass index, ponderal index. Somatotype and Posture evaluating techniques. Testing of physiological phenomena- Blood pressure, breathing frequency vital capacity, heart rate, pulse rate, body temperature and body composition. Tests for psychological variables- Anxiety, aggression, team cohesion, achievement motivation, mental-toughness, and self-efficacy.

Unit - V:

Management- its principles and theories. Scope of management in physical education and sports. Guiding principles for organizing physical education & sports programmes in institutions. Personnel management- objectives and principles. Self-appraisal, communication skills and time management. Essential skills of administration. Financial management- objectives, purposes, principles and scope. Planning and preparation of budget. Mechanics of purchase and auditing. Supervision - objectives, principles and importance of supervision. Techniques of supervision. Duties and responsibilities of a supervisor. Facility management- planning, procuring and maintenance of facilities- indoor and outdoor facilities. Planning and management of sports infrastructure. Management of records. Role of sports manager-

interpersonal, informational and decision making. Managerial skills – technical, human and conceptual. Qualities and qualification of sports manager.

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SYLLABUS FOR COMBINED EDUCATIONAL SERVICES

Performing Arts (Drama and Art in Education)

Full Marks : 200
Descriptive : 100 marks
Objective : 100 marks

Course Content

Unit 1: Introduction to Theatre and Drama

- History of World Drama, History of Indian Drama, History of Design & Space, History of Acting, Modern Theatre, Emergence of New Theatre: Drama in Education and Theatre in Education.

Unit 2: Understanding Arts in Educations

- Development and the Parameters of Theatre, Aesthetics in Education, The Poncept and philosophy of Popular Theatre, Street Theatre, Theatre in Action Groups, Theatre and Social Reforms, Education and the making of Meanings, Drama and Art as Pedagogy for Learning and Development.

Unit 3: Applied Theatre

- Meaning of Applied Theatre, Pioneering contributors of Drama and Art in Education – Dorothy Heathcote, Peter Slade, John Dewey, Anthony Jackson, Helen Nicholson, Gavin Bolton, etc. Drama in curriculum, Teacher in role, Drama-Based approaches in the Classroom, Drama and the Cross-Curriculum Project, Drama and Constructivism, Understanding of Drama and Art in Education, Use of Drama Conventions.

Unit 4: Drama Beyond Classroom

- Critical Pedagogy, Education and Social Change, Theatre of the Oppressed, Theatre for Development, Socially Engaged Participatory Art, Education and Diversity, Cultural Stereotypes and Social Stigma, Education for Consciousness Rising, Social Awareness and Community Development.

Unit 5: Theatre in Education

- Theatre for Education Concepts of Bertolt Brecht, Augusto Boal, Paulo Freire Pedagogies, Praxis and Performance Participatory theatre: History & Practice of UK, Europe and India, Techniques of Participatory Programme by Adults for Children Performing for Children: Play by different Theatre Groups and TIE Company Developing Theatre Workshop with Children, Devising Performance with Children.

Unit 6: Child Development

- Physical, Language, Cognitive, Social & Emotional, Early Childhood Development (3 Years to 6 Years), Middle Childhood Development (6 Years to 11 Years), Adolescence

Development (12 Years onwards), Practice with Children, Child Development Through Drama and Art.

Unit 7: Theatre Arts & Self Development

Integrated Arts in Education, Drama for Self-Development, Importance of Aesthetics in Self-Understanding, Artistic and Aesthetic Sensibility.

Unit 9: Physical Education

- **Voice and Speech:** Breath and its importance in Training the Voice, Diction & Vocal Development, Voice Modulation, Introduction to Theatre Music,.
  Yoga: Asanas, Body & mind preparation through Sukhasana & simple Poses/Asanas, Surya Namaskar, Awareness of one's ability to relax in the poses, Kriyas, Pranayamas
  Foundation in Acting: Body Movement, Imagination, Observation, Improvisation, Gestures and Postures

Unit 10: Performance

- Classroom Performance, Story-telling, Adults performing for Children, Participatory and Interactive Performance (Devised Play), Making Play with Children, Theatre workshop with Children

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SYLLABUS FOR COMBINED TECHNICAL SERVICES EXAMINATION

PERSPECTIVES IN EDUCATION: **PSYCHOLOGY**

PAPER I

PSYCHOLOGY OF LEARNING AND DEVELOPMENT (100 marks)

UNIT-I: DEVELOPMENTAL ASPECTS OF LEARNER (20 marks)

- Concept of Growth and development; principles of development and its implication to teaching and learning process.
- Stages of growth and development across various stages from infancy to adolescence.
- Piaget's concept of cognitive development.
- Kohlberg's theory of moral development.
- Erikson's psycho-social development theory.
- Factors affecting Growth and development.

UNIT-II: THEORETICAL FRAMEWORKS OF LEARNING (20 marks)

- Learning: concept, characteristics, learning process and factors affecting learning
- Theories of learning: Behavioristic theory, Gestaltalist and Information processing model, Socio-cultural theory of Vygotsky, social learning approach.

- Motivation : Concept, type: intrinsic and extrinsic motivation, , motivational cycle, Educational implications, theories of motivation: McClelland's Achievement motivation, Maslow's Needs hierarchy

UNIT-III: CREATIVITY AND INTELLIGENCE (20 marks)

- Creativity: Meaning, characteristics, role of teacher in developing creativity and critical thinking, Brain storming method.
- Theories of creativity: Taylor's psychoanalytic and Ariet's theory of creativity, assessment methods.
- Intelligence: meaning, factors affecting intelligence, assessment of intelligence, Fluid and crystallized intelligence, Gardner's multiple intelligence model, Spearman's two factor model, Thurstone's primary mental abilities.

UNIT-IV: PERSONALITY AND ADJUSTMENT (20 marks)

- Personality: meaning concept, and nature.

- Theories of personality: Psychoanalytic, Behavioristic, Humanistic, Trait and type approaches.
- Assessment techniques of personality: Projective, Paper-pencil tests
- Interest and aptitude: Concept, educational implications.
- Attitude: Concept, Attitudinal theories and its assessment and educational implications.
- Adjustment: Concept, nature and factors affecting adjustment.
- Defense Mechanism and Conflict Management.

UNIT-V: ATTENTION, PERCEPTION AND MEMORY (20 marks)

- Attention: Meaning,Nature, Conscious and automatic processes, selective attention, divided attention, factors influencing attention
- Perception: Meaning, Principles of perception, Bottom-up and Top-down processing in perception, Theories: Gibson's Direct Perception, Feature theories, Template theory, prototype theory
- Memory: Meaning, nature, factors influencing memory.Role of memory in cognition, Memory as constructed and inferential activity. Theories: Baddley, Atkinson and Shiffrin. Metacognition and memory, Forgetting.

PAPER II

APPLICATIONS OF PSYCHOLOGY (100 marks)

UNIT-I: APPLICATION OF PSYCHOLOGY TO EDUCATIONAL FIELD (20 marks)

- Understanding Learning styles, Gifted Children, Intellectual disability, learning disabilities.
- Standardized psychological tests: Meaning, types and interpretation, issues with the use of standardized tests in educational institutions.
- Educational, vocational guidance and career counselling.
- Personality development and value education

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UNIT-II: APPLICATION OF PSYCHOLOGY IN ORGANIZATIONS (20 marks)

- Personnel selection and training, use of psychological tests in the industry, training in human resource development
- Stress and its management: Nature of stress, role of cognitive appraisals in stress, work stressors, Management of stress
- Ergonomics and consumer psychology
- Organizational culture, job satisfaction, psychological capital, leadership, Communication.

UNIT-III: PSYCHOLOGICAL MEASUREMENT OF INDIVIDUAL DIFFERENCES (20 marks)

- Nature of individual differences: Aptitude, Interest, intelligence, personality, attitudes
- Standardized tests: Characteristics, Construction, types.
- Ethical issues in the use of psychological tests.

UNIT-IV: PSYCHOLOGICAL WELL BEING AND MENTAL DISORDERS (20 marks)

- Concepts of health, positive health, wellbeing and mental disorders
- Causal factors in mental disorders: Biological, Psychodynamic, Behavioral, Socio-cultural, Humanistic-Existential perspectives.
- Types of mental disorders: Anxiety disorders, Depressive Disorders, Bipolar disorders, Schizophrenia spectrum disorders, Substance use disorders.
- Psychological approaches to therapy: Psychodynamic, Behavioral, Cognitive.

UNIT-V: APPLICATION OF PSYCHOLOGY IN OTHER FIELDS (20 marks)

- Military Psychology: Devising psychological tests for defense personnel for use in selection, training, counseling.
- Sports Psychology: Psychological interventions in improving performances in sports.
- Media Psychology: Aggression and media, gaming addiction, media and prejudice

- Psychology of gender: Issues of discrimination, glass ceiling effect , women and Indian society

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