### Level-III

## Part-I Syllabus for Child Development and Pedagogy

A) Concept of development and its relationship with learning, Principles of the development of children, Influence of Heredity & Environment.

Socialization processes: Social world & children (Teacher, Parents, Peers).

Piaget, Kohlberg and Vygotsky: constructs and critical perspectives.

Freud's Psychosexual Development Theory, Erikson's Theory of Psychosocial Development.

Concepts of child-centered and progressive education, Critical perspective of the construct of Intelligence, Multi-Dimensional Intelligence, Language & Thought, Gender as a social construct; gender roles, gender-bias and educational practice, Individual differences among learners, understanding differences based on diversity of language, caste, gender, community, religion etc.

Distinction between Assessment for learning and assessment of learning; School-Based Assessment.Continuous & Comprehensive Evaluation: perspective and practice.

Formulating appropriate questions for assessing readiness levels of learners; for enhancing learning and critical thinking in the classroom and for assessing learner achievement.

B) Concept of Inclusive education and understanding children with special needs: Addressing learners from diverse backgrounds including disadvantaged and deprived.

Addressing the needs of children with learning difficulties, "impairment" etc.

Addressing the Talented, Creative, Specially abled Learners.

### Learning and Pedagogy:

How children think and learn; how and why children "fail" to achieve success in schoolperformance.

Basic processes of teaching and learning; children's strategies of learning; learning as a socialactivity; social context of learning.

Child as a problem solver and a "scientific investigator"

Alternative conceptions of learning in children, understanding children's "errors" as significant steps in the learning process.

Cognition & Emotions.

Motivation and learning.

Factors contributing to learning - personal & environmental.

Bandura's Social Learning: Constructs and Critical Perspective.

### Part-II Syllabus for Language

#### A) Language-I (Hindi)

Language Comprehension Questions:

Reading unseen passages - two passages one prose or drama and one poem with questions on comprehension, inference, grammar and verbal ability (Prose passage may be literary, scientific, narrative or discursive).

### Pedagogy of Language Development Questions:

Learning and acquisition, Principles of language Teaching, Role of listening and speaking; function of language and how children use it as a tool, Critical perspective on the role of grammar in learning a language for communicating ideas verbally and in written form, Challenges of teaching language in a diverse classroom; language difficulties, errors and disorders, Language Skills,

Evaluating language comprehension and proficiency: speaking, listening, reading and writing.

**Teaching-** learning materials: Textbook, multi-media materials, multilingual resource of the classroom, Remedial Teaching.

### B) Language – II (English)

### Language Comprehension Questions:

Two unseen prose passages (discursive or literary or narrative or scientific) with question oncomprehension, grammar and verbal ability.

Pedagogy of Language Development:

Learning and acquisition, Principles of language Teaching, Role of listening and speaking; function of language and how children use it as a tool, Critical perspective on the role of grammar in learning a language for communicating ideas verbally and in written form; Challenges of teaching language in a diverse classroom; language difficulties, errors and disorders, Language Skills.

Evaluating language comprehension and proficiency: speaking, listening, reading and writing.

**Teaching** - learning materials: Textbook, multi-media materials, multilingual resource of the classroom, Remedial Teaching.

# Part-III Syllabus for General Studies

A) Haryana related history, current affairs, literature, Geography, Civics, Environment, Culture, art, traditions, and welfare schemes of Haryana Government.

### B) General Intelligence & Reasoning:

It would include questions of both verbal and non-verbal type. This component may include questions on analogies, similarities and differences, space visualization, spatial orientation, problem solving, analysis, judgment, decision making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning and figural classification, arithmetic number series, non-verbal series, coding and decoding, statement conclusion, syllogistic reasoning etc.

The topics are: Semantic Analogy, Symbolic/Number Analogy, Figural Analogy, Semantic Classification, Symbolic/Number Classification, Figural Classification, Semantic Series, Number Series, Figural Series, Problem Solving, Word Building, Coding & de-coding, Numerical Operations, symbolic Operations, Trends, Space Orientation, Space Visualization, Venn Diagrams, Drawing inferences, Punched hole/ pattern-folding& un-folding, Figural Pattern-folding and completion, Indexing, Address matching, Date & city matching, Classification of centre codes/roll numbers, Small & Capital letters/numbers coding, decoding and classification, Embedded Figures, Critical thinking, Emotional Intelligence, Social Intelligence.

#### QuantitativeAptitude:

The questions will be designed to test the ability of appropriate use of numbers and number sense of the candidate. The scope of the test will be computation of whole numbers, decimals, fractions and relationships between numbers, Percentage. Ratio & Proportion, Square roots, Averages, Interest, Profit and Loss, Discount, Partnership Business, Mixture and Allegation, Time and distance, Time & Work, Basic algebraic identities of School Algebra & Elementary surds, Graphs of Linear Equations, Triangle and its various kinds of centers, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles, Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square base, Trigonometric ratio, Degree and Radian Measures, Standard Identities, Complementary angles, Heights and Distances, Histogram, Frequency polygon, Bar diagram & Pie chart.

### **Mathematics**

A) Arithmetic, Algebra and Trigonometry: Real number system and its analysis, Arithmetic Progressions, Polynomials, Linear equations in two variables, Quadratic Equations, Introduction to Trigonometry and its applications to find Heights and Distances.

Geometry and Mensuration: Euclid's Geometry, Lines and Angles, Congruence and Similarity of Triangles, Quadrilateral, Circle, Heron's Formula, Area Related to

Circles, Surface area and Volumes of combination of Solids.

Statistics and Probability: Bar graph, Histogram, Frequency Polygon, Measures of Central Tendency: Mean, Median, Mode and Measures of Dispersion: Range, Mean deviation, variance and standard deviation of ungrouped/grouped data. Probability Theoretical Approach, Axiomatic Approach, Conditional Probability, Multiplication Theorem on Probability, Independent Events, Bayes' Theorem, Theorem of total probability.

B) Sets, Relations and Functions: Sets and their Representations, Types of Sets, Venn Diagrams, Operations on Sets (Union, Intersection, Difference), Complement of a Set, Ordered Pairs, Cartesian Product of Sets, Relation and its types, Function and its Types, Algebra of Functions, Composition of Functions, Invertible Functions, Radian and Degree Measure, Trigonometric Functions and their Graphs, Principal Value and Properties of Inverse Trigonometric Functions.

Algebra: Complex Numbers and Quadratic Equations, Argand Plane, Linear Inequalities, Linear Programming Problem and its Mathematical Formation, Permutations and Combinations, Binomial Theorem, Pascal's Triangle, Sequences and Series(G.P.), Relation between Arithmetic and Geometric Means, Matrices and its Types, Operations on Matrices, Transpose of a Matrix, Symmetric and Skew Symmetric Matrices, Invertible Matrices, Determinants of matrices of order one, two and three, Area of a Triangle using Determinants, Minors and Cofactors, Adjoint and Inverse of a Matrix, Solution of system of linear equations using inverse of a matrix.

Calculus: Intuitive Idea of Limit, Limits of different functions(Polynomial, Rational, Trigonometric, Exponential and Logarithmic functions), Definition of Continuity and Differentiability, Algebra of Continuous and Differentiable functions, Definition of Derivative, Algebra of Derivatives, Derivatives of different functions (Polynomial function, Trigonometric function, Composite functions, Chain Rule, Implicit functions, Inverse Trigonometric functions, Exponential and Logarithmic functions), Logarithmic Differentiation, Derivatives of functions in Parametric Forms, Second Order Derivative, Rate of change of Quantities, Application of Derivatives, Increasing and Decreasing functions, Maxima and Minima, Process of Integration, Different methods of Integration, Fundamental Theorem of Calculus, Evaluation of Definite Integrals by Substitution, Properties of Definite Integrals. Application of Integrals, Area under Simple Curves.

Vectors and Coordinate Geometry: Two and Three Dimensional Coordinate Geometry, Straight Lines, Conic Sections(circles, ellipse, parabola, hyperbola, a point, a straight line and a pair of intersecting lines as a degenerated case of a conic section), Coordinate axes and Coordinate planes in three dimensions, Distance between two points, Definition of Vector, Position Vector, Direction Cosines,

Types of Vectors, Addition of Vectors, Multiplication of a vector by a Scalar, Components of a Vector, Vector joining Two Points, Section Formula, Scalar (or dot) Product of Two Vectors, Projection of a Vector on a line, Vector (or cross) product of Two Vectors, Direction Cosines and Direction Ratios of a Line, Equation of a Line in Space, Angle between two Lines, Shortest Distance between Two Lines. Subject related Pedagogy.

Psychology

Understanding Mind and Behaviour; Popular Notions about the Discipline of A) Psychology; Evolution of Psychology; Development of Psychology in India; Branches of Psychology; Psychology and Other Disciplines; Psychology in

Everyday Life.

Methods of Enquiry in Psychology, Goals of Psychological Enquiry; Steps in Conducting Scientific Research; Alternative Paradigms of Research; Nature of Psychological Data; Some Important Methods in Psychology; Observational Method, Experimental Method, Correlational Research, Survey Research, Psychological Testing, Case Study, Analysis of Data: Quantitative Method, Qualitative Method, Limitations of Psychological Enquiry; Ethical Issues.

Sensory, Attentional and Perceptual Processes, Knowing the world; Nature and varieties of Stimulus; Sense Modalities; Functional limitation of sense organs; Attentional Processes; Selective Attention, Sustained Attention; Perceptual Processes; Processing Approaches in Perception; The Perceiver; Principles of Perceptual Organisation; Perception of Space, Depth and Distance: Monocular Cues and Binocular Cues, Perceptual Constancies; Illusions; Socio-Cultural Influences on Perception.

Learning, Nature of Learning; Paradigms of Learning; Classical Conditioning; Determinants of Classical Conditioning; Operant/Instrumental Conditioning, Determinants of Operant Conditioning; Key Learning Processes; Observational Learning; Cognitive Learning; Verbal Learning; Skill Learning; Factors Facilitating

Learning; Learning Disabilities.

Human Memory, Nature of memory; Information Processing Approach: The Stage Model; Memory Systems: Sensory, Short-term and Long-term Memories; Levels of Processing; Types of Long-term Memory: Declarative and Procedural, Episodic and Semantic, Nature and Causes of Forgetting: Forgetting due to Trace Decay, Interference and Retrieval Failure, Enhancing Memory: Mnemonics using Images and Organisation.

Human Development, Meaning of Development; Life-Span Perspective on B) Development; Factors Influencing Development; Context of Development; Overview of Developmental Stages; Prenatal Stage, Infancy, Childhood, Challenges of Adolescence, Adulthood and Old Age.

Thinking; Nature of Thinking; Building Blocks of Thought; The Processes of Thinking; Problem Solving; Reasoning; Decision making; Nature and Process of Creative Thinking; Nature of Creative Thinking; Process of Creative Thinking; Thought and Language; Development of Language and Language Use.

Motivation and Emotion; Nature of Motivation; Types of Motives; Biological