CHILD DEVELOPMENT AND PEDAGOGY (Marks: 30)

1. DEVELOPMENT OF CHILD
   - Development, Growth & Maturation - Concept & Nature
   - Principles of Development & their educational implications
   - Factors influencing Development - Biological, Psychological, Sociological
   - Understanding Development - Piaget, Kohlberg, Chomsky, Carl Rogers and Erikson
   - Individual differences - Intra & Inter Individual differences in the areas of Attitudes, Aptitude, Interest, Habits, Thinking (Divergent & Convergent), Intelligence and their Assessment
   - Development of Personality - Concept, Factors effecting development of Personality, Child Rearing Practices, Self-Concept
   - Adjustment, Behavioral problems, Defense Mechanisms, Mental Health
   - Methods and Approaches of Child Development – Introspection, Observation, Interview, Case study, Experimental, Rating Scales, Anecdotal Records, Questionnaire, Cross sectional and Longitudinal
   - Developmental tasks and Hazards

2. UNDERSTANDING LEARNING
   - Concept, Nature of Learning - Input - Process - Outcome
   - Factors of Learning - Personal and Environmental
   - Approaches to Learning and their applicability - Behaviorism (Skinner, Pavlov, Thorndike), Constructivism (Piaget, Vygotsky), Gestalt (Kohler, Koffka) and Observational (Bandura)
   - Dimensions of Learning - Cognitive, Affective and Performance
   - Motivation and Sustenance - its role in learning.
   - Memory & Forgetting
   - Transfer of Learning

3. PEDAGOGICAL CONCERNS
   - Teaching and its relationship with learning and learner
   - Learners in Contexts: Situating learner in the socio-political and cultural context
   - Children from diverse contexts - Children With Special Needs (CWSN), Inclusive Education
   - Understanding of Pedagogic methods - Enquiry based learning, Project based learning, Survey, Observation and Activity based learning, Co-operative & Collaborative learning
   - Individual and Group learning: Issues and concerns with respect to organizing learning in class room like Study habits, Self learning and Learning to learn skills
   - Organizing learning in heterogeneous class room groups - Socio-economic background, Abilities and Interest
   - Paradigms of organizing Learning - Teacher centric, Subject centric and Learner centric
   - Theory of Instruction - Bruner
   - Teaching as Planned activity - Elements of Planning
   - Phases of Teaching - Pre active, Interactive and Post active
   - General and Subject related skills, competencies required in teaching and attributes of good facilitator
   - Learning resources - Self, Home, School, Play, Community, Technology
   - Distinction between Assessment for Learning & Assessment of Learning, School based Assessment, Continuous & Comprehensive Evaluation : Perspective & Practice
II Language-I Marathi (Marks 30)

(A) Content

I. आकलन
   a) अपठित गद्य
   b) अपठित पद्य

II. कविपरिचय, लेखक परिचय, चरित्रकार, गद्य, पद्य विविध प्रक्रिया

III. प्रयोगाचे प्रकार, शोभक्रमवार लिहाणे, विरामचिन्हे, भाषांतर

IV. वर्णमाला, शब्दाच्या जाती, वचन, काठ, विभक्ती, विराम चिन्ह, संधी, समास, 
    विरूढार्थी, समानार्थी, पर्यावरणीमार्ज, वाक्यप्रवर्त, महणी, अलंकार.

(B) Methodology

I. भाषा - व्याख्या स्वरूप उद्देश

II. मातृभाषा - स्वरूप, उद्धेदे, तैमारती पुत्र, परस्पर संबंध, माध्यमाची

III. भाषा कौशल्य विकास - लेखन, वाचन, आकलन, बोधन

IV. अध्ययन अध्यापनाच्या पद्धती

V. शैक्षणिक साहित्य

VI. अभ्यासक्रम, वार्षिक नियोजन, घटक नियोजन, पाठ नियोजन

VII. मुल्यांकन
III. LANGUAGE - II (ENGLISH) (Marks: 30)

CONTENT (Marks: 24)

5. Degrees of Comparison 6. Direct and Indirect Speech 7. Questions and question tags,
Sentences, 15. Sequencing of the Sentences in the given paragraph 16. Error
identification within a sentence.

PEDAGOGY (Marks: 06)

1. Aspects of English:- (a) English language - History, nature, importance, principles of
   English as second language (b) Problems of teaching / learning English
2. Objectives of teaching English.
3. Phonetics
4. Development of Language skills:- (a) Listening, Speaking, Reading & Writing (LSRW).
   (b) Communicative skills.
5. Approaches, Methods, Techniques of teaching English.
   (a) Introduction, Definition and Types of approaches methods and techniques of
   teaching English (b) Remedial teaching.
6. Teaching of structures and vocabulary items.
7. Teaching learning materials in English
8. Lesson Planning
9. Curriculum & Textbooks
10. Evaluation in English language Teaching - CCE

IV. MATHEMATICS (Marks: 30)

CONTENT (Marks: 24)

1. Number System:
   Natural Numbers, Whole Numbers, Integers, Rational Numbers & their fundamental
   operations (addition, subtraction, multiplication and division). Primes Composite
   Numbers, Co-Primes, Twin Primes, Relationship between LCM & GCD, Indian
   currency, Representation of Natural, Whole, integers and rational numbers on a
   number line. Terminating and Non-terminating decimals, Non-terminating but
   recurring decimals, square, square root, cube, cube roots of numbers, Pythagorean
   triplets. Applications on number system
2. Fractions:
   Concept of Fractions, Proper Fractions, Improper Fractions, Mixed Fractions,
   Decimal Fractions, Comparison, Fundamental operations on fractions (addition,
   subtraction, multiplication and division), Representation of a fraction in pictorial form
   and on a number line, reciprocal of fraction, uses of fractions in daily life
3. Arithmetic:
   Unitary method, percentages, profit and loss, ratio and proportion, direct proportion,
   discount, simple interest, compound interest, time and work, time and distance, tax
   (Vat).
4. **Geometry:**
   Basic idea of geometry (2D & 3D shapes), types of angles, construction and measurement of angles, types of angles, lines, triangles, types of triangles, quadrilaterals, types of quadrilaterals, congruence, property of congruencies of triangles (SAS, SSS, ASA, RHS), construction of triangles and quadrilaterals, patterns with geometrical shapes, representing 3D Shapes into 2D Shapes, Euler's relation, Properties of triangles, parallelogram, trapezium, Rhombus, Rectangle, Square and Kite, Concept of Circles, Symmetry.

5. **Measurements:**
   Length, Weight, Capacity, Time and their Standard Units, Surface Area and volume of a cube and a cuboids, perimeter and area of triangle, quadrilateral, parallelogram, rectangle, Rhombus, Square and Trapezium. Circumference of a circle, Area of Circle, Circular paths, other polygons and sector in a circle.

6. **Data Applications:**
   Introduction to Data, Data Presentation, Preparation of Frequency distribution table, Bar Graph, Pictograph, Histogram, Mean, Median and Mode of ungrouped data, determination of Mean by deviation method, Cumulative Frequency Distribution Table, Frequency Polygon, Frequency Curve and Cumulative Frequency Curves.

7. **Algebra:**
   Introduction to Algebra, Simple equations, solving linear equation in one variable, exponents and powers, Algebraic expressions, Addition, Subtraction, Multiplication, Division and Factorisation of algebraic expressions, algebraic identities.

**PEDAGOGY (Marks: 06)**

1. Definitions and Nature of Mathematics
2. Aims, values, instructional objectives of teaching Mathematics and Academic Standards
3. Methods of Teaching Mathematics
4. Instructional material in Mathematics - TLM in Mathematics
5. Instructional Planning
6. Continuous Comprehensive Evaluation (CCE) – Formative Assessment, Summative Assessment – Processes and procedures
7. Designing, Administration, Analysis of scholastic Achievement test (SAT)
8. Diagnostic and Remedial Teaching
9. The Mathematics Teacher
10. Resource Utilization
11. Curriculum and Text Book
V. ENVIRONMENTAL STUDIES (Marks: 30)

CONTENT (Marks: 24)

1. **My Family** - My Family - Family tree, migration, changing structures of family - nuclear and joint families, festivals.
3. **Plants and Animals** - Plants & animals in our surroundings, Plant & Animal products, parts of a plant, photosynthesis, parts of a flower, pollination, fertilization, fruits, seeds. Wild & cultivated plants, wild & domestic animals their food, arrangement of teeth in animals.
4. **Our Food** - Different types of food, storage of grains and vegetables, storage of food, Food - animal husbandry, Nutrients of food, deficiency diseases.
5. **Shelter** - Need, different types of houses, electrical appliances - their use, social life in ants and honey bees, Animals shelter - variation.
6. **Air** - Importance of air, composition of air, atmospheric pressure, diseases spread through air and their prevention, air pollution - causes, its impact, and measures to prevent, Green House effect.
8. **Water** - Importance, water resources, tanks, aquatic flora and fauna, measurement of liquids, Water pollution - causes, impact, measures to prevent, purification of water, drought, floods.
9. **Our Body - Health - Cleanliness** - External, Internal parts of our body, Bones, Muscles, Sense organs, Digestion, Respiration, Nervous system, Excretory system, Circulatory system, First Aid.
10. **Mapping** - Direction, Mandal, District, State, India
11. **History and culture of India** - Evolution of Man, Pre-historic period, Indian culture and Heritage, Civilization, Medieval period culture, Ancient monuments, Religious movements: Jainism, Buddhism, Bhakti movement, Great personalities, Indian freedom movement, Modern India.
12. **Our country (India)** - Location, Area, Physical features, Climate, Natural resources, Continents and Oceans, Historical places in India, Population.
14. **Indian constitution** - Preamble, Major concepts, Fundamental rights, Fundamental duties, Child Rights
15. **Security** - Earth Quakes, Floods, Fire, First Aid, 108, 104 Vehicles

PEDAGOGY (Marks: 06)

1. Concept and scope of Environmental Studies (Science & Social Studies)
2. Aims & Objectives of teaching Environmental Studies (Science & Social Studies) Academic Standards of Teaching EVS
3. Relation to Science and Social Studies
4. Curriculum and its transaction
5. Learning Environment
6. CCE