

UDIAM
TEACHER ENHANCEMENT TEST-SYLLABI
For classes IX to XII-Secondary level
Paper I and Paper II

PAPER.1.1. ADOLESCENT PSYCHOLOGY (14yrs. To 18 yrs.)

1.1.1. Adolescent Psychology: definition, Nature and Characteristics, Methods of studying Adolescents

1.1.2. Principles of development, Role of Heredity and Environment on development, Developmental needs Physiological, Intellectual, Language, Emotional and Social, Developmental tasks, Problems of adolescence, Identity crisis, Underachievement, Peer Pressure, Substance Abuse, Delinquency, Health Problems.

1.1.3. Adjustment Mechanisms: Challenges and Remedies, Developmental theories: Piaget, Bruner, Freud, Erikson, Kohlberg, Special reference to adolescence, Classroom implications. Theories of Learning

1.1.4. Nature and concept of Learning: Maturation and learning, characteristics of learning, Transfer of learning, classroom implications.

1.1.5. Factors affecting learning: Motivation, Intelligence, Interest, Attention, Attitude, Anxiety, Level of aspiration, Memory, Learning Context, Content of Learning, Learner Characteristics- Teacher's role.

1.1.6. Creativity: concept, nature, process, measurement, characteristics of creative children, relationship between creativity and achievement, fostering creativity.

1.1.7. Theories of learning: Principles of learning: contributions of Thorndike, Pavlov, Skinner, Kurt Lewin, Piaget, Bruner, Vygotsky, Ausubel, Gagne, Gestalt Psychology, Constructivist approach in learning Classroom implications.

1.1.8. Children with special needs: Gifted, Backward, mentally challenged, Physically Challenged: Problems and Challenges, Inclusive Education, Educational provisions, Teaching Aptitude Teaching Concept, Nature & objectives, Steps in Teaching, Factors affecting Teaching children with special needs.

1.1.9. Teacher: Teacher characteristics, Identification of learner needs, creating appropriate learning situations, effective teacher, progressive teacher, teaching styles, Teacher Roles as Motivator, Facilitator, Democratic leader, Guide, Counsellor, Mentor, Social Engineer Classroom Implications, Methods and Techniques of Teaching: Learner Centered Teaching Strategies, Projects, Group Discussion, Activity, Co-operative Learning, Seminars, Debates etc. Effective use of ICT, AV Aids, Improvisation, Tools and Techniques of Evaluation, summative evaluation, formative evaluation, diagnostic evaluation, remedial evaluation, Unit Tests, Concept of CCE and Assessment, Classroom Management, Skills in Planning and

Implementation, Decision Making, Positive Feedback.

1.1.10. Personality of the Teacher: Emotional Maturity, Balanced Personality, Attitude, Values and Professional Ethics. Understanding teaching and learning in the context of NCF2023, and right to education act 2009(RTE).

1.2. EDUCATIONAL PHILOSOPHY

1.2.1. Salient features of ancient Indian education

1.2.2. Aims and objectives of secondary education and structure,

1.2.3. Education in India- Status, Problems and Issues

1.2.4. Concept of Education

1.2.5. Indian and Western. Aims of Education;

1.2.6. Functions of Education.

1.2.7. Education as an instrument of Social Control, Social Change, Preservation of Cultural Heritage

1.2.8. Values, Preservation of Cultural Heritage and Values.

1.2.9. School and the society, Culture and Education, School as a Social System.

1.2.10. Salient Features of Ancient Indian Education.

1.2.11. Vedic, Buddhist, Islamic Tradition in Education.

1.2.12. Major landmarks of British System of Education in Colonial India its Curricula and Methods.

1.2.13. Efforts towards evolving a national system of Education with respect to vivekanand, Tagore, Gandhi ,J.Krishnamurti, GijuBhai.

1.3. SECONDARY EDUCATION

1.3.1. General Aims and Objectives of Secondary Education and Structure., Education during Post Independence Period. Constitutional provisions for education, Secondary Education commission 1952-53, Education Commission 1964-66, New Education Policy 1986 with Program of Action 1992, New Education policy2020.

1.3.2. Different streams of Secondary Education 1) C.B.S.E. 2) I.C.S.E. and 3) State Board with respect to curriculum and Examination Systems.

1.3.3. Secondary School Teacher Qualifications, Competences, Job Profile, Professional Code, Ethical code of conduct, Role of Secondary school teacher in Emerging India.

1.3.4. Programs for enhancing efficiency and productivity of school teachers- In-service training – orientation and content enrichment programs.

PAPER-2-SELECTIVE SUBJECTS

(A Candidate shall choose any two subjects from below)

2.1.TEACHING LANGUAGES(ENGLISH,HINDI)

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.

2.2.TEACHING PHYSICAL SCIENCE:(PHYSICS, CHEMISTRY)

Science and its developments in India - Science teaching as a process - product and contributions of eminent Indian scientists - developing scientific attitude, Aims and objectives of teaching Physical Science, Objectives of science teaching as envisaged in National Curriculum Framework (2023) - Values (practical, disciplinary, recreational etc) to be attained. Taxonomy of educational objectives - Bloom, Yager - science process skills - developmental strategies. Theoretical basis of science teaching and learning. Cognitive theories - Piaget, Bruner, Gagne - constructivist learning - Vygotsky, generating knowledge experiential learning - scope and limitation - reflection - a basic process from learning experience - problem based learning. Planning science teaching and learning, unit plan, lesson plan - strengthening instruction by means of A-V aids, video lessons and computer assisted lessons. Models of teaching - characteristics - science process models, information processing models - concept attainment model, inquiry training model, constructivist model, Methods and strategies for teaching and learning Physical Science - direct and indirect, inductive, deductive, guided discovery, enquiry, investigatory and constructivist methods of instruction - scientific method. Approaches - integrated, interdisciplinary, environmental, problem solving and scientific process approach - behaviorist approach and constructivist approach. Science curriculum - modern trends in curriculum construction - concept of correlation - features of a science textbook. Workbook for pupils and handbook for teachers. Role of science laboratories, libraries, science clubs, science museums, fairs etc. in promoting science learning. Tools and Techniques of evaluation in science learning - objective based formative, summative, continuous and comprehensive evaluation, achievement tests - construction and administration - diagnostic testing, remedial teaching - objective type tests - advantages, new trends in evaluation grading, question bank.

2.3.TEACHING NATURAL SCIENCE(BIOLOGY)

UNESCO - 4 pillars of education a. 2. Learning to learn, b. Learning to do, c. Learning to live together, d. Learning to be. Broad national goals of teaching biological sciences, Broad national goals & objectives of science teaching as envisaged in NCF - 2023. Mc Cormick and Yager-Taxonomy of teaching science,b. Process domain, c. Creativity domain, d. Attitudinal domain, e. Application domain. Nature of science as a process and product - Process skills in science. Science curriculum Concentric curriculum - Spiral curriculum - Principles of curriculum construction - Difference between curriculum and syllabus. Planning for instruction, Classroom implications of constructivism and critical pedagogy - Meaning of pedagogic analysis Importance of pedagogic analysis - Year planning, unit planning, lesson planning. Methods of Teaching Natural science: Lecture method - Lecture cum Demonstration method, Project method - Experimental method - Heuristic method - Dalton plan - Biography method - Inductive method - Deductive method. Audio-Visual aids and other support materials, Importance of using teaching -learning aids - Multisensory approach - Science lab and importance of practical work - Science library - Science fair - Field trips - Science textbooks- school projects. Evaluation, Construction of achievement test - Continuous and comprehensive evaluation (CCE) Grading.

2.4. TEACHING MATHEMATICS:

Nature and scope of Mathematics, Meaning, language, characteristics, significance, practical utility, curricular considerations and psychological considerations. Trends and Developments in Mathematics Historical development of Mathematics, latest developments in Mathematics, eminent Mathematicians and their contributions. Place of Mathematics in Secondary School Curriculum, Aims and objectives of learning Mathematics at secondary school level, Correlation of Mathematics with life, with other subjects and correlation among various branches of Mathematics. Values of teaching Mathematics. Planning of teaching at different stages. Approach to Mathematics learning, Importance of constructivist learning; Concept of learning to learn; concretization of abstract ideas using learning aids, activities and illustrations; Techniques of individualizing instruction in Mathematics, Theoretical bases of teaching Mathematics, Learning theories of Piaget, Burner and Gagne and the implications of these theories in the teaching of Mathematics, Learner centeredness. Modern strategies and Methods of teaching Mathematics, Models of teaching, process-oriented strategies - projects, seminars, field trips and debates, Methods of teaching - Inductive method, deductive method, analytic method, synthetic method, laboratory method, project method, problem solving method, heuristic method. Teaching-Learning materials in Mathematics, Textbooks, handbooks, workbooks, qualities of good mathematics

textbook and learning aids. Curricular Activities in Mathematics learning, Mathematics club, laboratory, library, organization of Mathematics fair; Evaluation of student performance, Continuous and comprehensive evaluation, grading the performance, achievement test, diagnostic test, diagnosis and remediation, qualities of a good achievement test, types of test items.

2.5. TEACHING SOCIAL SCIENCES (HISTORY, CIVICS, GEOGRAPHY, POLITICAL SCIENCE)

Meaning, Nature, Scope, Importance and Correlation of History civics and political science - National goals, Cause effect relationships of natural phenomena, principles related to Geography, use of natural resources and development of regions, meaning and use of maps and their importance in daily life. Aims, Objectives and Values of instruction - Taxonomy of instructional objectives and specific outcomes of learning - Pedagogical analysis - objectives, advantages and dimensions - Planning of instruction - Importance, stages and principles -Methods, approaches and principles of instruction-traditional Vs modern - Instructional strategies - Criticism for selection, characteristics and principles - Characteristics, elements and families of models of teaching - Curriculum - modern trends, principles and organizational approaches- Learning resources and co-curricular activities in learning - Learner needs and types of learning Basic requirements of learning - process skills, pre-requisites and student skills Evaluation - Purpose, modern trends and principles - Types of tests/questions - merits and demerits Social science Teacher - qualities, qualifications and professionalism.

2.6. TEACHING COMMERCE, ECONOMICS, ACCOUNTANCY & BUSINESS STUDIES

Nature and scope of Commerce, Economics and Accountancy/Business Studies

Meaning, language, characteristics, significance, practical utility, curricular considerations and psychological considerations of above subjects, Trends and Developments in Commerce/Economics/Accountancy, Historical development of Commerce/Economics/Accountancy/Business Studies, latest developments in Commerce and related subjects, eminent people in commerce and their contributions. Familiarize with the principles of developing accountancy curriculum; Principles of accounts and practice in recording transactions and interpreting individual as well as company accounts, understanding of the form and classification of financial statements as a means of communicating financial information. Field Trips, Education at Tours, Market Studies and Surveys, Place of Commerce in Secondary School Curriculum, Aims and objectives of learning commerce at secondary school level, correlation of commerce with life, with other subjects and correlation among various branches of commerce. Values of teaching Commerce. Planning of teaching at different stages. Approach to Commerce learning Importance of constructivist learning; Concept of learning to learn; concretization of abstract ideas using learning aids, activities and illustrations; Techniques of individualizing instruction in commerce. Theoretical bases of teaching Commerce, Learning theories of Piaget, Burner and Gagne and the

implications of these theories in the teaching of Commerce, Learner centeredness, Strategies and Methods of teaching Commerce, Economics, Business Studies.

1. Lecture method, 2. Demonstration method, 3. Team Teaching Method , 4. Problem Solving Method, 5. Inductive and deductive Method, 6. Project Method, 7. Discussion method, 8. Seminar method, 9. Symposium, 10. Work Shop, 11. Panel Discussion, 12. Brain Storming method, 13. Heuristic Method, 14. Simulation Method, 15. Role Play Method, 16. Surveys and Market studies, Teaching - Learning materials in Commerce, Economics, Accountancy & Business Studies, Textbooks, handbooks, workbooks, qualities of good textbook and learning aids, Curricular Activities in Commerce learning, Commerce club, laboratory, library, organization of Commerce fair; Evaluation of student performance, Continuous and comprehensive evaluation, grading the performance, achievement test, diagnostic test, diagnosis and remediation, qualities of a good achievement test, types of test items.

2.7. TEACHING PHYSICAL EDUCATION:

Health Education, First-Aid, Corrective and Adapted Physical Education Health Education: Definitions, determinants and spectrum of health, Communicable diseases- disease cycle, method of disease transmission- immunity- concept of hygiene- community health- Nutrition Classification of foods- Proximate principles - important sources and functions of vitamins and minerals- Balanced diet- Under nutrition- Malnutrition- Lifestyle diseases: Type II diabetics, Hypertension, osteoporosis, obesity, heart diseases. First-Aid: Definition, Principles of first-aid- Wounds, types and its management- Common sports injuries and its management- CPR- RICE- ABC of first-aid- First-aid for burns, scalds, animal bite, snake bite, heat stroke, drowning- Electric shock- Safety at home- safety at school- Safety at sports and Physical Education. Corrective Physical Education: Definition and concept of posture- disadvantages and causes of bad posture- Types of postural deviations and its causes- Khyphosis, lordosis, scoliosis, knock-knees, bow-legs, flat foot- Massage and its classifications- Principles of prevention of injuries- treatment of postural deviation through corrective exercises. Adapted Physical Education: Definition of disabling conditions - Designing Physical Education programs for differently abled students - Benefits of Physical Education for students with disabilities- Recreational sports opportunities- Competition opportunities: Paralympics - Classification of disability: Physical disabilities, Mental retardation, Visual impairment, Hearing impairment , Behavioral disorders, Characteristics and functional limitations of the above disabilities Teaching Methodology in Physical Education Definitions and Functions of Education - Types of Education- Formal, Informal and Non-formal education- Principles of teaching

Teaching Methods in Physical education: Lecture Method, Command Method , Demonstration Method, Imitation Method, Project Method, Discussion Method, Group Directed Practice Method, Dramatization, At Will Method, Set Drill Method , Whole Method, Part Method, Whole-Part Whole

Method, Stage-Whole Method- Presentation Techniques : Meaning Importance and step involved in presentation, Preparation-Personal and Technical, Command-Its types, command used in different situations, Formation-Its types, and situations for using different formations, Class Management-Meaning and Principles, Practice Teaching, Micro Teaching- Educational Technologies: Importance of teaching aids, Criteria in selecting teaching aids, Information and Communication Technologies (ICT) in Physical Education. Lesson Planning: Meaning and objectives of Lesson Plan, Principles of Lesson Plan, Types and parts of lesson plan - Tournaments: Types of Tournaments, Types of fixtures, Organization of tournaments, Event Management. - Intramurals: Objectives of intramural, Organization of Intramural competitions, Annual sports day – Extra-murals: Objectives of extra-mural competitions. Test & Measurements in Physical Education & Sports. Meaning of the terms: test, measurement and evaluation- -Need and importance of test, measurement and evaluation in physical Education- Criteria in the selection of test - Scientific Authenticity, Validity, Reliability , Objectivity, Norms , Administrative feasibility, Educational applications - Administration of a testing program- Duties before, during and after testing- Measurement of Cardio respiratory function - Cooper's 12 minute Run/Walk test, Harvard's step test and its modifications -Measurement of motor fitness- AAHPER physical fitness test battery, JCR test- Measurement of general motor ability- Barrow motor ability test (Men), Scott Motor ability test (Women), Mc Cloys' general motor ability test- Measurement of Strength -Kraus-Weber minimum muscular fitness test, Roger's physical fitness index. Sport Skill Tests: Basketball: Johnson's basketball test, Knox basketball test - Football: AAHPER football test, McDonald Soccer test- Volleyball: Brady volleyball test, AAHPER volleyball test Badminton: Lockhart and McPherson's test, French short-serve test - Tennis: Broer Miller test, Dyer's test- Hockey: Friedel field hockey test- Frank-Tyson's Cricket skill tests. b) c) d) Anthropometry: Girth measurements - Width measurements -Height and weight readings - Skinfold measurements -Body composition and indices. Statistics: Measures of Central Tendency (Mean, Median and Mode)- Measures of Variability (Range, Quartile Deviation and Standard Deviation). Rules and measurements of selected games: Track & Field- Basketball- Football- Volleyball- Hockey Cricket- Shuttle Badminton-Table Tennis- Handball- Kho-Kho- Kabaddi-Swimming. General Theory and Methods of Training. Definitions of conditioning, training, coaching and sports training- Objectives and principles of sports training- Training load- Load adaptation process, super compensation, overload- signs and symptoms of overload, remedial measures and methods of overcoming overload. Physical Fitness: Definition of physical fitness, health-related physical fitness - skill/performance related physical fitness - components of physical fitness. Strength: Definition of strength- Types of strength - Factors determining strength - Methods of strength training - Endurance : Definition of endurance - Classification of endurance - Factors determining endurance - Methods of

endurance training- Basic methods of conditioning- continuous method, interval method, repetition method- Speed: Definition of speed - Types of speed abilities Factors determining speed - Methods of developing speed abilities- Speed barrier - Flexibility: Definition of flexibility - Types of flexibility- Factors determining flexibility- Methods of flexibility training Coordinative abilities: Definition of coordinative abilities- Importance of coordinative abilities- Types of coordinative abilities- Methods to develop coordinative abilities Technical training: Definition of technique - Importance of technique- Process of technique learning (phases of skill acquisition) - Methods of technique training- - Concept tactics and strategy- Periodical cycles (micro, meso and macro cycles) - Principles of Planning- Periodization- Definition of periodization , Importance of periodization, Types of periodization.

2.8. TEACHING COMPUTER SCIENCE

Aims and Objectives of Teaching Computer Science. Aims of Teaching Computer Science, Need for Teaching Computer Science, Objectives of teaching computer science, Bloom's taxonomy of Educational Objectives, Objectives of Cognitive Domain, Objectives of Affective Domain, Objectives of Psycho-motor Domain, Computer Science teaching at Different levels of school, The place of Computer Science in Higher Secondary Curriculum., Importance of Teaching Computer science in the Higher Secondary level, Teaching Computer Science in relation to other school subjects, Teaching - Learning materials in Computer science, Textbooks, handbooks, workbooks, qualities of good textbook and learning aids. Curricular Activities in Computer science learning, Computer club, laboratory, library, organization of Computer fair; Evaluation of student performance Continuous and comprehensive evaluation, grading the performance, achievement test, diagnostic test, diagnosis and remediation.

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