PAPER-1

Education in the Emerging Indian Society

Unit-1 Relating Education to Philosophy, Selected schools of Philosophy (Idealism, Realism, Naturalism, Pragmatism) and their educational implications.

Unit-2 Education - its aims in the modern context:
(a) Concept of Education, discrimination between education, training, instruction, schooling and indoctrination.
(b) Types of education - formal, informal and non-formal.
(c) Aims of education relevant to modern Indian Society.

Unit-3 Education and present day Indian Society,
(a) Education as an instrument of social change:
   Concept of social change, different aspects of social change, factors affecting social changes in India
(b) Role of the teacher in bringing social change.
(c) School as a sub-social system.
(d) School and community relationship and programmes of a community school.
(e) Areas of school and community collaboration.

Unit-4 Education, planning and national development:
(a) Meaning of national development.
(b) Role of planning in economic development.
(c) Role of education in economic development.
(d) Education as human capital

Unit-5 Education in relation to problems of environment and population:
(a) Components of environment pollution.
(b) Deformation of environment and its effects.
(c) Methods of improving environment and the role of teacher.
(d) Population education, need and importance.

Unit-6 Education for national integration and international understanding:
(a) Meaning of nationalism
(b) Education and nationalism
(c) Role of the teacher in national integration and international understanding.
(d) Role of education for international understanding
PAPER—II
Educational Psychology

1. Educational Psychology: its scope and importance for the teacher.
2. Psychology of development: learner’s growth (intellectual, social and emotional) and development with special reference to Indian adolescents.
3. Psychology of learning: concept of learning, characteristics of acquired behaviour, how learning takes place, Thoradike’s connectionism, Pavlov’s classical conditioning, Skinner’s operant conditioning and Gestalt’s theory.
4. Psychology of motivation: meaning and concept of motivation, technology and devices motivating the learner.
5. Intelligence: the concept and its definition, theories (Spearman’s Two Factor Theory and Thurstone Group Factor Theory) Measurement of intelligence, uses and application of intelligence tests.
6. Personality: its meaning, nature and assessment,
8. Elementary Statistics in Education: Graphical representation of data, Mean, Median, Mode, Standard Deviation and co-relation (Rank difference method only).

PAPER-III (A)
Indian Education System—Structure and Problems

Unit-1 Primary Education, Problems of Wastage and stagnation, Universalisation of Education and organising non-formal programmes for drop outs.


Unit-3 Teacher Education at various levels of Education, Pre-service and In-service Education, Measures for qualitative improvement of teacher Education.

Unit-4 Adult, Continuing, Lifelong and Distance Education. Need, Problems, Agencies and Materials.

Unit-5 Some emerging problems:
(a) Public Schools and their future.
(b) Religious and Moral Education.
(c) Women Education and Co-education.
(d) Population Education.
(e) New Education Policy.
PAPER IV

Essentials of Teaching Learning

Unit—1 Concept of Teaching:
Definitions of teaching, variables of teaching, relationship between teaching and learning.
Teaching Models - Glassers Basic Model, Enquiry Training Model, Concept attainment model.

Unit—2 Principles of Teaching:
General principles of teaching, Psychological principles of teaching, maxims of teaching.

Unit—3 Educational Technology:
Meaning, concept and scope of Educational Technology, Types of Educational Technology in teaching-learning.

Unit—4 Approaches and Strategies:
System approach, programmed learning; principles of programmed learning, styles of programming (linear, branching and Mathletics); preparation, writing, try out, and evaluation of programmes.

Unit—5 (a) Microteaching - concept and significance, microteaching cycles, practising selected teaching skills such as narration, questioning, probing, presentation and feedback through microteaching session, Indian Model of microteaching.
(b) Simulated teaching: concept, significance and procedure of simulated teaching.
(c) Interaction, analysis: procedure with respect to the Flanders 10 category system, practice in coding and decoding.
(d) Action research strategy and its uses for behaviour modification of teachers and other functionaries.

Unit—6 Lesson Planning
Need and importance of lesson planning.

Unit—7 Audio-Visual Aids
a) Need and importance of A.V. Aids, types of A.V. aids, principles of selection, precautions and effective use of A.V. Aids.
b) Use of hardware and software in education consisting of simple pictures, charts, maps and electronic gadgets such as Over-head Projectors, Epidiascope, Radio and Audio Materials, T.V. Video Material and Computers. Software such as simple book, Format Modules and programmed learning packages.
Teaching of English

Unit 1
1. The role of English in India To-day.
2. The conditions under which English is taught and learnt.
3. Nature of language and its implications for the language teacher (what language is and how it is learnt), Definition, linguistic principles and misconception about language.
4. General principles of language learning and teaching with special reference to the teaching of English.
5. Aims of teaching English as a second language in India.
6. Methods of teaching English:
   a) Grammar/Translation.
   b) Direct
   c) Bilingual
   Note: Actual demonstration of the said methods is to be done with the school students, selecting appropriate content from their text books.
7. Structural Approach.

Unit 2
Teaching the Elements of language
8. Vocal: Nature of words and meaning—Function of content words, active & passive vocabulary, selection, gradation, presentation, expansion of vocabulary.

Unit 3
Developing Linguistic Skills
10. Development of skills of listening and speaking.
12. Teaching reading with comprehension.
13. Teaching of poetry.
15. Teaching skills required for developing reading skills—selecting and presenting reading material, preparing reading material, asking questions, diagnosing reading difficulties, organising practice sessions, organising reading games.
16. Development of the writing skills—Importance and characteristics of writing (good handwriting) causes of bad handwriting and remedial measures. Teaching the mechanics of writing.
17. Teaching composition—Guided to free composition.

Unit 4
Instructional aids for teaching English.
18. a) Importance of instructional aids: and their effective use.
   b) Uses of the following aids: Chalkboard, flannel boards, pictures, cut-outs, charts, tape-recorder, record player (Linguaphones) radio, television films, and filmstrip, language laboratory.
   c) To develop skill for developing appropriate teaching aids with available resources.

Unit 5
Evaluation of language skills.
19. a) Importance and characteristics of a good test.
   b) Construction of test items for evaluating students, acquisitions of (i) Listening and reading comprehension (ii) Speaking ability and pronunciation; (iii) Vocabulary (iv) Structures.
Teaching of Life Sciences: (Paper: II & VII)

Unit-1: Place of Life Sciences: Inclusion of Life Sciences and present position of Life Sciences in the school curriculum.

Unit-2: Aims and Objectives of Teaching of Life Sciences:
1. General aims of teaching of Life Sciences.
2. Formulation of instructional objectives of Life Sciences.

Unit-3: Methodology of Life Sciences and methods of teaching of Life Sciences.
1. Lecture-cum-demonstration Method:
   Pre-demonstration preparations. Setting up of the demonstration, post-demonstration activities illustration with suitable content (Actual demonstration of the above method).
2. Project Method:
   Selection of suitable project of Life Sciences, planning of the selected project, execution, evaluation and recording of the selected project.
3. Heuristic approach with pertinent examples from contents related to particular class.
4. Lesson planning based on the above methods.
5. Problem solving approach.

Note: Every specific method of teaching of Life Sciences is to be demonstrated by selecting some appropriate content.

Unit-4: Evaluation of Life Sciences:
Nature, purpose and technique, preparation of objective based and objective type test, evaluation of practical experiment in Biology. Assessment of projects and sessional work.

Unit-5: Co-curricular Activities in Life Sciences.
1. Importance and organisation of science club, hobbies and fairs.
2. Biological Excursions and visits to places of scientific interest.

Unit-6: Teaching aids in Life Sciences:
Charts, Diagrams, Models, Specimens, their use and importance.

Unit-7: Problems connected with teaching of Life Sciences:
1. Identification of the problems.
2. Remedial teaching and enrichment programme, preparing a diagnostic test in life sciences.

Unit-8: Professional growth of Life-Science teacher:
1. New trends and experiments in life sciences programmes with special reference to projects in India and abroad.
2. Life Sciences journals and instructional material.
3. National Talent Search Scheme (NTSS).
4. Biology workshops seminars, Teacher associations.
5. National and state level institutions of science.

Unit-9: Content Portion
1. Biology and Healthy environment
2. Space Biology
3. Cell structure and cell theory
4. Life history and scientific contribution of Dr. Har Govind Khurana.
Teaching of Physical Sciences. (Paper: V & VI)

Unit 1 What is science? Meaning of facts, concepts, generalization, law, and theory. Importance, aims and objectives of teaching physical sciences in secondary schools. Translating general objectives into performance based objectives.

Unit-2 Correlation of physical science with other subjects, within itself and with daily life.

Unit-3 Lesson Planning in Physical Science for secondary schools. Formulating performance objectives and preparing a lesson plan on a given unit/topic.

Unit-4 Methodology of teaching physical sciences.
   1. Heuristic method.
   2. Lecture-cum-demonstration method.
   3. Project method.
   4. Problem solving method (steps of scientific method).

Note: All these methods are to be demonstrated by selecting appropriate learning experiences from textbooks of secondary schools.

Unit-5 Teaching aids.
   1. Importance & Principles for the selection of teaching aids.
   2. Types of teaching aids
   3. Specific aids like charts, models, epidiascope, Overhead Projector etc.
   4. Preparing improvised teaching aids.

Unit-6 Science laboratories and its equipments.
   2. Physics and Chemistry Kits.
   3. First aid box and its use.

Unit-7 Co-curricular activities.
   2. Science Fairs.

Unit-8 Evaluation in Physical sciences.
   1. Defects of the present systems of examinations.
   3. Objectives – based evaluation different types of objective and short answer-tests examples.

Unit-9 Preparation of gases e.g. O₂, H₂, CO₂ etc. and studying the properties of the same.
   ii) Acids, bases and salts.
   iii) Oxidation and reduction.
   iv) Atomic Structure.
   v) Laws of motion.
   vi) Sources of energy.
Teaching of Mathematics (Paper-Ⅴ & Ⅶ)

Unit-I
a) Elements of new mathematics.
   i) Ideas of undefined terms, axioms; postulates and methods of reasoning and proof.
   ii) Sets and their elementary operations.
   iii) Structures of number systems.
   iv) Shortcomings of Euclidean Geometry and characteristics of Non-euclidean Geometries.
  
b) History of the notation system and Computer Mathematics.
  
c) Contributions of Aryabhatta, Bhaskaracharya and Ramanuja in mathematics.

Unit-2
a) Importance or value of teaching of Mathematics.
  
b) Aims and objectives of teaching mathematics at the secondary stage.
  
c) Translation of objectives in behavioural terms.

Unit-3
a) Principles of curriculum construction.
  
b) Formulation of curriculum.
   i) Formulation of objectives.
   ii) Selection and organisation of the content and topics.
   iii) Suggesting appropriate learning experiences.
   iv) Suggesting suitable methods and technique for evaluation.

Unit-4
Methods and Techniques of teaching Mathematics.

a) Methods: Inductive, deductive, analytic-synthetic, laboratory and project.
  
b) Techniques: Oral work, written work, drill work, Home-work and self study.

NOTE: The various methods and techniques are to be demonstrated by selecting appropriate learning experiences.

Unit-5
Equipment for teaching Mathematics

a) Text-books: function, selection and evaluation,
  
b) Audio-Visual Aids in teaching of mathematics.
  
c) Organisation of i) Mathematics laboratory.
     ii) Mathematics library.
     iii) Mathematics club.

Unit-6
Evaluation in Mathematics, Preparing objective based test items in mathematics.

Unit-7
a) Backwardness in mathematics – Diagnosis and remedial teaching preparing a diagnostic test in mathematics.
  
b) Enrichment programmes for the gifted.

Unit-8
Lesson planning in Mathematics.
Teaching of Social Studies  

Unit-1 Social Studies: its meaning, nature and scope.

Unit-2 Aims of teaching social studies.

Unit-3 Social studies curriculum—selection and organisation. A critical study of curriculum for primary, middle and high classes in Haryana.

Unit-4 Methods of teaching social studies—project method, lecture method, discussion method, problem method and discussion unit method.

Note: The specific methods are to be taught through actual demonstration by selecting appropriate content and not at all in isolation.

Unit-5 Social studies teacher.

Unit-6 Social studies laboratory.

Unit-7 Utilisation of community resources for the teaching of social studies.

Unit-8 Audio-visual aids in teaching of social studies.

Unit-9 Lesson planning in social studies.

Unit-10 Evaluation in social studies.

Unit-11 Fundamental rights and duties, natural resources, India's First War of Independence (1857).