

BACHELOR OF EDUCATION

STATUTES, ORDINANCES AND REGULATIONS

(From 2008-09 onwards)

A candidate who, after taking the bachelor's or Master's degree of this university or some other Indian University recognized for the purpose by the Executive Council, has completed a regular course of study in a college affiliated or recognized for the purpose by the Executive Council for one academic year and has during the course of they year, delivered at least 40 lessons as presented under the supervision of the staff of the college may be admitted to the examination for the degree of Bachelor of Education.

Provided that a person who has taken B.A. degree of the Punjab University in English and one other full elective subject other than a classical or modern Indian language after passing Honours Examination either in Hindi or Punjabi may be admitted to the examination for the degree of Bachelor of Education.

A candidate who has passed vidyalankar or vedalankar examination of Gurukul Kangri (Haridwar) may also be admitted to the B.Ed. course provided he passed the said examination in those subjects for which he is eligible for admission to M.A. course in this university.

A candidate who has passed Alankar examination of Gurukul Kangri with any three subjects of B.A. examination of Agra university along with English may be admitted to the B.Ed. course.

A person who passed the B.A. examination in General English and one other subject or takes the master's degree after passing the B.A. examination in general English and one other subject, shall not be eligible for admission to the examination for the B.Ed. degree.

NOTE :

- (1) The examination shall be conducted by means of papers and shall include practical tests and assessment of sessional work.

- (2) Every candidate shall be required to have a competent knowledge of the following :
 - I. Teacher in emerging Indian Society.
 - II. Development of Learner and Teaching learning Process.
 - III. Development of Educational System in India.
 - IV. Essentials of Educational Technology and Management.
 - V&VI. Methods of Teaching:
 - (i) Every candidate will be required to offer course in two school subjects.
 - (ii) The methodology of the following school subjects will be allowed under paper V & VI:
 - (a) Modern Indian Language-Hindi (b) Modern Foreign language-English (c) Classical Indian Language-Sanskrit (d) Physical Science (e) Mathematics (f) Social Studies (g) Commerce (h) Biology.
 - VII. One special paper.

- (3) Any candidate, who has passed B.Ed. examination of the university or any other examination recognized by the executive Council as equivalent to specialize in an subject (or in any additional subject) shall be allowed to present himself for examination in that subject (both theory and practical); provided that candidate has attended lectures I affiliated college for three month and delivered 20 lessons in the subject. Examination in theory and practice will be the same as for the regular candidates offering the special paper.
- (4) The division at the B.Ed. examination shall be assigned separately for the theory and practice as follows :
- First division 60 percent (of the aggregate marks of Theory and Practical separately)
 Second division 48 percent
- All the rest in the third division if they obtain the minimum pass marks as set forth below.
- (5) The B.Ed Examination shall consists of six compulsory papers, one special paper, practical test and Assessment of work in practice. The compulsory papers will be as follows:

Paper I	Teacher in Emerging Indian Society	100 marks
Paper II	Development of Learner and Teaching Learning Process	100 marks
Paper III	Development of Educational System in India	100 marks
Paper IV	Essential of Educational technology and Management	100 marks
Paper V & VI	Methods of Teaching (two)	100marks each
Paper VII	Any one special from the following	100marks
	A- Population Education	
	B- Environmental Education	
	C- Educational Administration & Management	
	D- Educational And Mental Measurement	
	E- Teaching of Values	
	F- Computer In Education	

The minimum pass marks shall be 30 percent in each paper and an aggregate of 36 percent marks in theory papers. Under paper V and VI, every candidate will be required to offer course in two of the following school subjects each carrying 100 marks:

- (a) Modern Indian Language-Hindi
- (b) Modern foreign Language-English
- (c) Classical Indian Language-Sanskrit
- (d) Physical Science
- (e) Mathematics
- (f) Social Studies
- (g) Commerce
- (h) Biology

(6) The B.Ed. practical shall consist of Teaching Practical and assignments. It shall be compulsory for all the students. The Teaching practical and assignments shall be of 200 marks, out of which 50 marks shall be allotted for internal assessment as detailed below :

- | | | |
|-------|--|----------|
| (i) | Preparation of 10 model plans in each of the teaching subjects
(10 marks for each teaching method) | 20 marks |
| (ii) | Criticism Lessons (two)
(10 marks to each criticism lesson) | 20 marks |
| (iii) | Community Services/Making Case Study of a child/ Writing
Essay on any dimension of education/Framing 30 objective
type of questions in each of the teaching subject offered.
Essay on any dimension of Education/Framing 30 objective
type of questions in each of the teaching subject offered. | 10marks |

The evaluation of item no. (i) will be done by the teachers teaching methodology of these subjects. The evaluation of item no. (ii) will be done jointly by a panel of three teachers nominated by HOD. The evaluation of item no. (iii) will be done by HOD or teacher nominated by HOD.

- (7) A. Candidates are required to obtain 40% marks in order to pass the practical examination. Every candidate shall give satisfactory evidence of ability to manage the class and shall deliver two lessons in subjects specified in presence of the examiners.
- B. The head of department shall maintain a compiled record of sessional work of each of the students.
- C. The board of practical examiners shall consist of two external examiners and one internal examiner from the concerned institution by rotation. Out of two external examiners, one examiner shall be from out of the university. The third examiner shall be from university campus in affiliated colleges who shall also be the examiner for Psychology Practical the third examiner in the university campus shall be from any government institution of Kumaun University.
- D. The internal as well as external examiner of any of the practical examination of B.Ed. / M.Ed. should have at least three years experience of teaching these classes.
- E. The teaching practical marks of the candidate who failed in theory but passed in teaching practical in a particular year shall be taken into account on his/her subsequent appearance at B.Ed. examination. But his/her marks in psychology practical (in paper II) shall not taken into account on his/her subsequent appearance in B.Ed. The candidate shall be required in appear in psychology practical again at the time of appearing at subsequent B.Ed. examination.

B.Ed. COURSES

PAPER I : TEACHER IN EMERGING INDIAN SOCIETY

M.M. 100

COURSE OBJECTIVES:

To enable the student teachers understand:

- (1) The relationship between philosophy and education and implications of philosophy on education.
- (2) The importance and role of education in the progress of Indian Society.
- (3) The contribution of great educationists in the field of education.
- (4) The need to study education in sociological perspective; the process of social change and socialization to promote the development of a sense of commitment to the teaching profession and social welfare.
- (5) Their role in the creation of new social order in the country and learn about various social welfare opportunities in which they can participate helpfully.
- (6) The means and measures towards the promotion of national integration and protection of human rights.

COURSE CONTENTS: It consists of six units, each attempting to realize one objective.

UNIT I:

Education: nature and meaning; its objective in relation to the time and place. Functions of education with reference to individual, social & national levels. Education in the western context with specific reference to Rousseau & Pestalozzi.

UNIT II:

Philosophy and education: significance of studying philosophy in understanding educational practices and problems; Major philosophical systems-their salient features and their impact on education.

- (a) Naturalism with reference to the views of Rousseau and Rabindra Nath Tagore.
- (b) Idealism with reference to the philosophy of Plato and Socrates.
- (c) Pragmatism with reference to Dewey.

- (d) Realism with reference to Aristotle and Jainism.
- (e) Humanism- Historical, Scientific & Buddhist.

UNIT III:

Educational Thinkers and their contribution in developing the principles of education.; M.K. Gandhi- Concept of basic education; Swami Vivekananda-Man making education; Tagore-Education of complete living, Sri Aurbindo Ghosh-Integral education.

UNIT IV :

Knowledge about the Indian constitution and its directive principles; various articles mentioned in the constitution that are related to education.

UNIT V :

Sociological bases of education, Relationship between individual to individual and individual to society, education as an agent of social change, education as a means of national welfare through the immediate welfare of society, education and human resource development.

UNIT VI :

Meaning of national integration and its need, role of teacher and educational institutions in achieving national integration through democratic interaction; Importance of cultural heritage.

UNIT VII.

Agencies of education-formal, Informal and Non-formal

BOOKS RECOMMENDED :

- | | | | |
|----|---------------------------------|---|---|
| 1. | J.Ross | : | Ground work of Educational Theory |
| 2. | Brubacher | : | Modern Philosophies of Education |
| 3. | R.S. Pandey | : | Teacher in Developing Indian Society |
| 4. | R.S. Pandey | : | Udiyaman Bhartiya Samaj mein Shikshak |
| 5. | R.K.Rawat, Purohit & Singh | : | Udiyaman Bharitya Samaj mein Shikshak |
| 6. | N.R. Saxena & Shikha Chaturvedi | : | Education in Emerging Indian Society |
| 7. | S.P. Chaube & Akhilesh Chaube | : | Philosophical and Sociological Foundations of Education |

PAPER II : DEVELOPMENT OF LEARNER AND TEACHING – LEARNING PROCESS

M.M. 80

COURSE OBJECTIVES : To enable trainee teachers to

- (1) Acquire knowledge and understanding of stages of human development and developmental tasks with special reference to adolescent learners.
- (2) Develop understanding of the process of learning in the context of various theories of learning.
- (3) Understand intelligence, motivation and various types of exceptional children.
- (4) Develop skills for effective teaching-learning process and use of psychological tests.

COURSE CONTENT :

NOTE : One question from unit VI shall be compulsory comprising of 20 marks.

UNIT I : Nature of Educational Psychology and Learner :

- (a) Educational Psychology : meaning, methods and scope; functions of educational psychology.
- (b) Stages of human development, stage specific characteristics and developmental tasks.
- (c) Adolescence : the concept and its meaning in various perspectives namely physiological, cognitive, sociological and chronological.

UNIT II : Learning and Motivation

- (a) Nature of Learning; Learning Theories-Behaviorists (Skinner's) and Humanistic (Maslow's).
- (b) Factors influencing learning and teaching process.
- (c) Motivation-nature, types, techniques of enhancing learner's motivation.

UNIT III : Intelligence

- (a) Nature and Characteristics of intelligence and its development.
- (b) Theories of intelligence, Spearman's two factor theory, Thurstone's theory, Thurstone's primary mental abilities.
- (c) measuring Intelligence - Verbal, non-verbal and performance tests (one representative of group test and individual test each)

UNIT IV : Exceptional Children

- (a) Concept of exceptional children, types and their education.
- (b) Individual differences- nature, accommodating individual differences in the classroom.

UNIT V :

Personality - Definition, meaning and nature; development of personality; type and trait theories of personality.

UNIT VI : Statistics

Elementary Statistical methods; Basic statistical concepts needed for treatment and interpretation of psychological data (measures of central tendency and variability (standard deviation only) and their calculations} graphical representation of data, correlation by rank difference method and its uses.

BOOKS RECOMMENDED :

1. Morris 1. Bigge and Hunt : Psychological Foundations of Education
2. Blair and Jones : Educational Psychology

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|----|--------------------------|---|---|
| 3. | Crow and Crow | : | Educational Psychology |
| 4. | Ross J. | : | Groundwork of Educational Psychology |
| 5. | J.S. Walia | : | Development of learner and Teaching Learning Process |
| 6. | K.G.Sharma | : | Shiksha mein Prambhic Sankhyiki |
| 7. | P.D. Pathak | : | Shiksha Manovigyan |
| 8. | R.K.Rawat & Kusum Sharma | : | Adhigamkarta Ka Vikas Awam Shikshan
Adhigam Prakriya |

PYSCHOLOGICAL PRACTICAL

M.M. 20

There shall be a psychological practical of 20 marks.

1. The student has to acquire the knowledge of conducting at least two experiments and two test from the following :
 - (a) Experiment : Learning, Memory and Fatigue
 - (b) Psychological Tests :
 - (i) One intelligence test or Emotional intelligence Scale
 - (ii) One adjustment inventory or Ego-identity Scale
 - (iii) One achievement test.

2. The distribution of 20 marks shall be :

One Experiment	5 marks
One Psychological Test	5 marks
Practical Note Book	5 marks
Viva-Voce	5 marks

3. There shall be two examiners for this examination, one external and one internal by rotation. Both shall jointly examine the candidate and award the marks out of 20 in accordance with the above distribution.
4. Candidates are required to obtain 40% marks in order to pass the psychology practical.

PAPER III : DEVELOPMENT OF EDUCATIONAL SYSTEM IN INDIA

MM.100

COURSE OBJECTIVES: To enable the student teachers to:

- (1) Understand the development of education as influenced by socio-political forces of the time.
- (2) Acquire knowledge of characteristics features of ancient, medieval and British system of education in India and of their strengths and limitations.
- (3) Under the contribution of various major committees and commissions on education set up from time to time.
- (4) Appreciate the developments in Indian education in post-independence era.

COURSE CONTENTS:

UNIT I :

Education in India during (a) Vedic (b) Buddhist (c) Medieval Period

UNIT II :

Macaulay's Minute & Bentick's resolution of 1835; Wood's Dispatch-1854; Lord Curzon's Education policy; growth of national consciousness; National Education Movement.

UNIT III :

Recommendations of Indian Education commission-1882, its influence on the subsequent Development of education; Essential features of Sadler Commission Report-1917; Wardha Scheme of education-1937; Sargeant Scheme-1944.

UNIT IV :

Radhakrishnan Commission-(1948), Secondary Education Commission (1952-53); Indian Education Commission (1964-66); National Policy of Education (1986); Revised National Policy (1992).

UNIT V :

Recent developments in education-NCTE, NCF 2005, EDUCATION FOR ALL, Delors report, Function of IASE& DIET.

BOOKS RECOMMENDED:

1. S.P. Chaubey : A History of Education in India
2. S.P. Chaubey : Bhartiya Shiksha ka Itihas
3. R.S. Pandey : Development of Indian System of Education
4. G.S.D. Tyagi : Bharat mein Shiksha ka Vikas
5. Govt. of India Publication: National Policy of Education (1986): Programme of Action.
6. Krishan gopal : Bhartiya Shiksha ka vikas aur Samasyaye

PAPER IV : ESSENTIALS OF EDUCATIONAL TECHNOLOGY AND MANAGEMENT

M.M. 100

COURSE OBJECTIVES :

1. To obtain a total perspective of the role of technologies in modern educational practices.
2. To equip the student teacher with various technological applications available to him/her for improving instructional practices.
3. To help the teacher for the specific management of education.
4. To provide the teacher the skills required for effective instructional and institutional management.
5. to develop the professional skills required for guiding pupils.

COURSE CONTENTS :

UNIT I :

Definition of educational technology, distinction between hardware and software technologies; Their role in modern educational practices.

Hardware technologies : Important accessories and their applications-OHP, still and movie Projectors, audio-video recording instruments, TV, Computers, new technologies like e-mail, Internet etc.

Innovations in teaching – use of SSST, micro teaching, programmed instruction, psychological uses of modern technologies-Edgar Dale's cone of Experience.

UNIT II :

Teaching – Meaning, types, principles, maxims of teaching, Phases of teaching.

Taxonomy of educational objectives in cognitive domain, writing objectives in behavioural terms, Art of questioning, types & importance of questions, good and defective questions, ways of receiving answers.

UNIT III :

Meaning of Guidance-rationale for guidance services, concept of counseling, directed and Non-directed counselling.

Organization of school guidance services, use of community resources for school guidance services, Career guidance services; Career information center; Career conferences.

UNIT IV :

Management in Education : The principal of school, duties in managing the school, qualities of the principal. The school time table – its importance, types and principles of construction. School discipline – Meaning & Scope, problems and solutions.

Managing school health services :

- (a) Need, Medical examination, organization and its follow up programmes.
- (b) Problems of personal and group health of children with special reference to physical exercises, school meals and malnutrition.

Managing Curriculum – principles of curriculum, development of curriculum a secondary level organization of co-curricular activities.

Managing physical resources – school building, site & playground, sanitation & ventilation, Furniture & equipment, problems of posture, laboratory, workshop, museum, library & school hostel

UNIT V:

School inspection and supervision, Evaluating institutional performance-methods used-pupil evaluation, teacher evaluation, peer rating, super visor rating, community rating, and evaluation of institutional performance.

UNIT VI:

Action Research- meaning, concept, process & limitation.

BOOKS RECOMMENDED :

1. Technology of Teaching : R.A. Sharma
2. Educational Technology : Shailendra Bhushan and Anil Kumar
3. Shekshik Takniki Ki Avshyaktayein Ewam Prabandh : R.K. Rawat, Gupta & Singh
4. Educational Technology and Management : J.C. Agarwal

1. Definition and nature of language, importance of language to the social and personal life of man.
2. A brief history of Hindi literature (prose, poetry and grammar) and general principles of Language teaching.
3. (a) Intensive study and methods of teaching prose.
(b) Study and investigation of the methods of teaching poetry and its appreciation and preparation.
(c) Aims of grammar teaching, formal and informal, different methods of teaching grammar and Evaluation, correlation with text and composition.
4. Factors in language learning :
(a) Oral Work- nature, importance, different type of oral exercise, pronunciation, principles and methods of conducting oral work.
(b) Reading (silent and oral reading), importance of reading, aims, characteristics of model reading by the teacher, organization of oral reading at different stages.
(c) Teaching of spelling, causes of spelling mistakes, technical causes, practical causes, methods of removing spelling mistakes.
5. Composition: aims, types of compositional work for different grades, Teaching composition Oral and written work at different level.
6. Need of text book, meaning of text book, aims, types of text book, merits and demerits of text book, text book for different level and their use.
7. Evaluation in Hindi- Meaning of evaluation in Hindi teaching, Problems of evaluation in Hindi, Utility of evaluation in Hindi, Characteristics of evaluation in Hindi.
8. Use of Audio-Visual aids in Hindi teaching.
9. Remedial teaching in Hindi.
10. Lesson planning in Hindi (Prose, Poetry and Grammar)

BOOKS RECOMMENDED :

- | | | | |
|----|-------------------|---|--------------------------|
| 1. | Bhai Yogendrajeet | : | Hindi Bhasha ka Shikshan |
| 2. | Raman Bihari Lal | : | Hindi Shikshan |
| 3. | Ram Shakal Pandey | : | Hindi Shikshan |
| 4. | B.N. Sharma | : | Hindi Bhasha ka Shikshan |
| 5. | K. Kshatriya | : | Matra Bhasha Shiksha |

UNIT I

Language-its nature and importance in human life, language and society, English language.

UNIT II

Language as a discipline, structure of a language-phonemes, morpheme, objectives of English morphology, syntax and uses, kinds of sentences.

UNIT III

Place and importance of English

UNIT IV

The role of mother tongue in teaching English

UNIT V

Principles of teaching English

UNIT VI

Aims and objectives of teaching English at junior and senior stages.

UNIT VII

Method and approaches of teaching English, translation of grammar method, direct method, West's new method, substitution method, bilingual method, structural approach, situational Approach.

UNIT VIII

Teaching of speaking, pronunciation, reading, writing vocabulary, spelling, prose, poetry, Grammar, translation, composition.

UNIT IX

Organization of an effective programme of English teaching.
Organization of teaching and learning materials at junior and senior stages.

UNIT X

Audio-visual aids in teaching of English.

UNIT XI

Evaluation in English

UNIT XII

Lesson planning for teaching English

BOOKS RECOMMENDED :

1. K.K. Bhatia : New Technique of teaching English as Foreign Language
2. P.D. Pathak : English Teaching
3. N.P. Pahuja : English Teaching

PAPER V & VI (c)

TEACHING OF SANSKRIT

M.M. 100

1. The position of Sanskrit in India. Its historical background, its cultural, literary and linguistic values and relation with modern India languages.

2. Aims of teaching Sanskrit at different stages. Comparison and contrast with aims of teaching Hindi and English.
3. The place of Sanskrit as a subject in educational and curricular organization with emphasis on when and how it shall start.
4. General principles of teaching of Sanskrit.
5. The method of teaching Sanskrit. The old method as compared and contrasted with new ones. A synthetic approach may be aimed at; The grammatical method, the translation method, the Analytical method, Explanatory method, the direct method and the Herbartian plan, advantages and limitations of these methods.
6. Methods of teaching of different forms at different stages : Prose, Poetry, Grammar, Composition, Translation, Drama, Rapid Reader; Aims, methods and plan of teaching.
7. The importance of phonetics and correct pronunciation.
8. The importance of audio-visual aids and their use in teaching Sanskrit.
9. Qualities of a good Sanskrit teacher.
10. Techniques of evaluation-new types of tests in Sanskrit teaching.
11. Different methods of Reading : Individual reading, silent reading, and loud reading. Their aims, importance and value.
12. Importance and use of good handwriting in Sanskrit teaching.
13. Importance and use of material aid in Sanskrit teaching.
14. Action research in Sanskrit teaching, its meaning, development and utility.
15. Lesson planning.

BOOKS RECOMMENDED :

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|----|---------------------|---|----------------------------------|
| 1. | Ram Shakal Pandey | : | Sanskrit Shikshan |
| 2. | V.N. Chaube | : | Sanskrit Shikshan Vidhi |
| 3. | Baldev Upadhyay | : | A history of Sanskrit Literature |
| 4. | Raghu Nath Safaya | : | Sanskrit Shikshan |
| 5. | Raghu Kumari Sharma | : | Sanskrit Shikshan Paddhati |
| 6. | H.E. Palmer | : | Principles of Language Study |
| 7. | Garg & Dutta | : | Sanskrit Shikshan |

PAPER V & VI (d)

TEACHING OF PHYSICAL SCIENCE

M.M. 100

UNIT I

Nature of modern sciences-thrust areas in physical science-impact of science on Modern Communities, globalization and science; major discoveries and landmark developments in science; Eminent foreign scientists-Newton, Einstein, Stephen Hawkins, Eminent Indian Scientists – C.V.Raman, Homi Jahangir Bhabha, J.C. Bose.

UNIT II

Justification of including science as a subject of study in school curriculum. Objectives of teaching science-taxonomy of educational objectives-organizing learning experiences for achieving specified learning outcomes.

UNIT III

Major methods used for science instruction, Factors to be considered in the selection of methods.

UNIT IV

Co-curricular and non-formal approaches, Activity approaches and non-formal methods of science teaching in terms of field trips, school gardening, science clubs. Visits to science museums, maintenance of aquariums, herbariums and organizing science fairs and excursions to be taken up.

UNIT V

Planning for teaching: developing year plans, unit plans, lesson plans. Content analysis and identification of concepts. Preparation and development of improvised apparatus; preparation, selection and use of teaching aids; innovations in teaching the subject in terms of team teaching, programmed teaching, seminar presentations, micro-teaching and computer assisted teaching.

UNIT VI

Curriculum and resource utilization, Interior for designing a Physical science, curriculum, approaches of curriculum organization, Adapting the curriculum to local needs and requirements and the availability of local resources. Practical work in science teaching; record writing in science projects.

UNIT VII

Curricular accessories and support material-Textbooks, Journals, Handbooks, Students workbooks, display slides, laboratory materials, audio-video support material etc.

UNIT VIII

Evaluating outcomes of science teaching; Test assumptions about evaluation. Items formats, try-outs, item analysis, developing teacher made tests, scoring procedures, developing tests for measuring specific outcomes-cognitive outcomes, affective outcomes, psycho-motor outcomes. Diagnostic testing and remedial teaching.

UNIT IX

Designing lesson plans, ability to convert any teaching unit into an instructional Unit, Using accepted pedagogical practices, formation of lesson plans.

BOOKS RECOMMENDED :

1. D.S. Rawat : Vigyan Shikshan
2. M.S. Rawat and Agrawal : Navin Vigyan Shikshan
3. Ram Shankar Shukla : Vigyan ka Addhyayan
4. M.S. Yadava : Teaching of Science
5. Narendra Vaidya : Planning for science Teaching in collaboration.
6. Narendra Vaidya : The Impact Science Teaching

7. Narendra Vaidya : Problem Solving Science Education collaboration
8. Narendra Vaidya : Strategies in Science Education collaboration
9. Narendra Vaidya : Reshaping our School Science Education
10. Gordan nand books of Science Teacher
11. A Report : Secondary modern science Teaching
12. Herbert Dithair: Teaching elementary School science
13. Raghu nath Prasad : Vigyan Shikshan

PAPER V & VI (e)

TEACHING OF MATHEMATICS

M.M. 100

1. Nature & Importance of mathematics; Brief History of Mathematics; Contributions of Indian Mathematics with reference to Bhaskaracharya, Aryabhata, Ramanujan and contributions of Euclid, Pythagoras and Gauss.
2. Aims of mathematics teaching, Objectives of teaching mathematics in terms of instruction and behaviour.
3. Methods of Mathematics Teaching-inductive, deductive, analytical, synthetic, heuristic, project, laboratory, lecture and question-answer; Techniques of teaching mathematics viz. oral, written, drill, assignment, supervised study, programmed learning, self-study, group work, and review.
4. Meaning and importance/purpose of lesson plan, various approaches of lesson plan, characteristics of a good lesson plan, preparation of a lesson plan on various topics of secondary mathematics.
5. Need and type of teaching aids, how to use material aid, characteristics of good teaching aids, Importance and development of mathematics laboratory, recreational mathematics.
6. Teaching mathematics to gifted and backward children : their identification and provisions for mathematics education; Remedial teaching in mathematics-its meaning, principles of diagnosis and remediation.
7. Principles and rationale of curriculum development; Types of mathematical problems their place in curriculum, causes of difficulty in problem solving, suggestions to handle problems syllabus of mathematics of different grades and their critical evaluation; correlation of mathematics with other subjects.

8. Evaluation in mathematics – Purpose of evaluation, types of test items-their merits and demerits, qualities of a good mathematics test, brief procedure of preparation of mathematics achievement test.
9. Textbooks in mathematics-importance and qualities of a good textbook in mathematics; Need, importance and organization of mathematics library.
10. Teaching of Arithmetic-objective of arithmetic teaching; role of drill and constructive play in primary arithmetic developing speed and accuracy in mathematics, teaching of some important topics of arithmetic.
11. Teaching of Algebra-importance of algebra, objectives of algebra teaching, when to teach Algebra, teaching of important topics in algebra.
12. Teaching of Geometry-role of hypothesis, axioms, postulates and assumptions in mathematics teaching, objectives of geometry teaching, stages of geometry teaching-experimental, analytical or deductive systematizing stages, kinds of proof in geometry, teaching of important topics in geometry.
13. Mathematics teacher-functions and qualities of mathematics teacher.

BOOKS RECOMMENDED :

1. D.R. Davis : The Teaching of Mathematics
2. Aditya Narain Tewari : Ganit Shikshan
3. Rawat and Agarwal : Ganit Shikshan
4. K.S. Siddhu : The Teaching of Mathematics
5. Sudhir Kumar &
D.N. Ratnalikar : The Teaching of Mathematics
6. Manpal Singh : Modern Teaching of Mathematics
7. S.M. Agrawal : A course in Teaching of Modern Mathematics
8. Smith : A History of Mathematics
9. C.Papola : Teaching of Mathematics.

1. Social Studies teaching : need and justification of teaching Social Study as a separate subject in school curriculum; fundamental principle of social studies course.
2. Objectives of teaching social studies; Objectives of teaching subject at different levels, scope of social studies and values of teaching social studies.
3. Need for the planning of curriculum, construction of curriculum, general pattern of social studies curriculum.
4. Various methods & techniques of teaching social studies.
5. Audio-visual aids in social studies, need, principles for use of teaching aids, Advantages and Problems in the use of material aids.
6. Textbook of social studies; importance, value, characteristics of good textbook.
7. Social Studies library and laboratory, need and management, material and equipments.
8. Evaluation in social studies; meaning, purpose, objectives and criteria of good examination, Evaluation the results of SST.
9. Lesson planning : value and importance, types of lesson planning, steps in lesson planning (herbartrian)

BOOKS RECOMMENDED :

1. Guru Saran Das Tyagi : Samajik Adhyayan Shikshan
2. Renu Gupta : Samajik Adhyayan Shikshan
3. Renu Gupta : Teaching of Social Studies
4. S.K.Kochhar : Teaching of Social Studies
5. J.C. Agarwal : Teaching of Social Studies
6. A.S. Kohli : Teaching of Social Studies

UNIT I

(a) Place of Commerce in school curriculum and its relationship with other subjects e.g. geography, agriculture, psychology and other physical and social science. (b) objectives of teaching commerce in schools.

UNIT II

(a) Skills to be developed in student teachers : (i) Intellectual Skills (ii) Psychomotor Skills (iii) Verbal Communication Skills (iv) skills conducive to human relations (b) Skills to be developed in school students : (i) Ability to understand the specific terms used in commerce (ii) ability to understand the general principles that govern the trade and commerce of the country (iii) understanding the processes used in commerce and industry (iv) knowledge of forming the firms and commercial establishments, trade unions and labour organizations (v) Making skillful traders-organizers and entrepreneurs.

UNIT III

(a) Methods of teaching commerce: (i) Deductive method (ii) Demonstration method (iii) Narration (iv) observation (v) Illustration (vi) Examination (vii) Drill (b) Lesson planning and Unit planning in commerce : (i) Necessity of planning for commerce teaching (ii) characteristics of good lesson planning (iii) Preparation of lesson plans and unit plans in commerce subjects.

UNIT IV

Teaching aids for commerce: (i) Audio visual aids (ii) Visual aids (iii) traditional aids-Blackboard, textbook.

UNIT V

Curriculum construction in commerce: (i) Principles of formation of commerce Syllabus for class IX, X, XI & XII classes (ii) Selection and organization of content for Different Classes (iii) New trends in curriculum construction in commerce.

UNIT VI

Textbooks in commerce: (i) Importance and need of textbooks IX, X, XI & XII classes (ii) selection of textbooks IX, X, XI, XII classes (iii) review of some commerce Textbooks prescribed for these classes.

UNIT VII

Evaluation in teaching commerce : (i) Meaning and purpose of evaluation (ii) Need of evaluation in commerce (iii) Relationship of objectives & evaluation (iv) Evaluation procedures.

UNIT VIII

- (a) Developing commerce room/library, Laboratory and commerce teachers forum
- (b) Commerce teacher's professional qualities.
- (c) Related practical work :
 - (i) Survey of villages-population, occupation of the people, their income, standard of living etc.
 - (ii) Visits to shops & factories-study of their working, purchases and sales department, account keeping, correspondence and other business writings.
 - (iii) Production processes
 - (iv) Visits to fairs and Arranging Exhibition etc.

BOOKS RECOMMENDED :

1. Seema Rao : Teaching Of Commerce
2. G.S. Karthik : Teaching Of Commerce
3. R.P. Singh : Teaching Of Commerce
4. R.P. Singh : Vanijya Shikshan
5. Udayvir Saxena : Vanijya Shikshan
6. I.B.Singh : Vanijya Shikshan
7. J.C. Agarwal : Teaching Of Commerce

PAPER V & VI (h)

TEACHING OF BIOLOGY

M.M.100

COURSE CONTENTS:

1. Development of science education, development of biology education; Biology meaning and nature, Branches of biology, importance of biology.
2. Aims And Objectives of Biology teaching need: and Types- general & specific. Taxonomy of Educational Objectives- cognitive, affective and psycho-motor domain.
3. Methods of biology teaching –Lecture, Observation, Laboratory, Demonstration, Supervised study, Heuristic, Project, Historical, Discussion, Problem Solving, Concentric- their characteristics and limitations.

- New techniques for biology teaching – Investigation, Enquiry, Field Trip, Team Teaching.
4. Curriculum- Attempts to develop Biology Curriculum, Present day curriculum- limitations and improvements, Innovations in development of biology curriculum like Blue vision, Yellow vision, Green vision, Nuffield Project, etc.; co-curricular activities In biology.
 5. Text Books of Biology- need, characteristics and defects; Biology Library, selection of books for library.
 6. Teaching Aids in Biology- purpose, characteristics and classification; Aquarium, Terrarium and Vivarium; herbariums, organizing science fairs, Organization of Biology Laboratory.
 7. Evaluation in Biology - need, techniques-their merits and demerits, experimental Projects in biology.
 8. Teaching of Gifted and Backward students of biology –their Identification, characteristics and provision for education, diagnostic work and remedial teaching.
 9. Correlation of Biology with other subjects
 10. Lesson Planning in Biology-need, characteristics and limitations. Various approaches of lesson planning.
 11. Biology Teacher- characteristics of good biology teacher.

BOOK RECOMMENDED:

1. Jeeva Vigyan Shikshan: S.P Kulshrestha
2. Jeeva Vigyan Shikshan :Shailendra Bhushan

The candidate has to select any one special paper from the following:

PAPER VII: (Any one from the following)

- A- POPULATION EDUCATION
- B- ENVIRONMENT EDUCATION
- C- EDUCATIONAL ADMINISTRATION AND MANAGEMENT
- D- EDUCATIONAL AND MENTAL MEASUREMENT
- E- TEACHING OF VALUES
- F- COMPUTER IN EDUCATION

(Note: In Paper VII-F, there shall be a paper of theory of 80 marks and practical of 20 marks .The examiners for this practical shall be the same as for the psychology practical .The distribution of marks shall be as follows: practical note book-5 marks, practical task-10 mars, viva-voice-5 marks ,total marks-20 marks.)

PAPER VII- A

POPULATION EDUCATION

M.M 100

COURSE OBJECTIVES

1. To develop in the student teacher an understanding of the concept and importance of population education.
2. To enable the students to understand various terminologies connected with population studies and factors responsible for population growth.
3. To develop an awareness of the implications of population growth on various aspects of social functioning.
4. To help students teacher to understand the effect of unchecked growth of population of the depletion of the natural resources from the environment.
5. To help student teacher to appreciate the role of population education as an educational intervention for upgrading the quality of social functioning.

COURSE CONTENTS:

UNIT I

- Introduction: concept, need, scope, importance and objectives.

UNIT II

- Population Dynamics: distribution and density, population composition according to age, sex, rural, urban, literacy -all India.
- Factors affecting the population growth: fertility, mortality and migration (mobility).

UNIT III

- Population and quality of life: population in relation to –socio economic development, health status, nutrition health services and education.
- Effect of unchecked growth of population on natural resources and environment.

UNIT IV

- Scope of population education in schools
- Curriculum of population education in schools, integration of population education with the general school curriculum.

UNIT V

- Methods and approaches: Inquiry approach, observation, self-study, discussion, assignments
- Use of mass media: newspapers, Radio, Television. A.V.aids.

UNIT VI

- Family life education; Concept of family, family role and responsibility, family needs and resources, responsible parenthood, life values and belles.

UNIT VII

- Role of teachers in creating awareness of the consequences of population problems, inculcating new values and attitudes leading to modification of student's behavior.
- Working with community to build awareness.

UNIT VIII

-Roll of central and state government in population control and health preservation:

National population policy, various population related policies and programmes, Voluntary and International agencies-UNEP, WHO, UNESCO etc.

Suggested readings:

1. Population education: p.k gupta, r.lall book depot, meerut.
2. Population education: n.p.s. chandel & vijay k. nand, vinod pustak mandir,Agra.
3. Jansankhya Shiksha Shikshan: R.K. Sharma & R.S. Varma,Radha Prakashan Mandir,Agra.
4. Jansankhya Shiksha: N.P.S. Chandel & Vijay K.Nand, Vinod Pushtak Mandir,Agra.

PAPER VII-B:

ENVIRONMENTAL EDUCATION

M.M 100

COURSE OBJECTIVE

1. To enable the student teacher understand about the concept of environmental education.
2. To develop in the student teacher a sense of awareness about the environmental pollution.And possible hazards and its causes and remedies.
3. To develop a sense of responsibility towards conservation of environment, bio-diversity and sustainable development.
4. To develop reasonable understanding about the role of school and education in fostering the idea of learning to live in harmony with nature.
5. To enable the students to understand about the various measures available to conserve the environment for sustaining the development.

COURSE CONTENTS:

UNIT I

- Environment: meaning, types, need & importance of environment.
- Environmental Education: meaning, objectives, scope and nature of environmental education.

UNIT II

- Types of environmental pollution-physical, air, water, noise, and chemical.
- Causes and effects of environmental hazard, global and local: environmental pollution and its remedies.
- Green house effect-an impending catastrophe.
- Ozone layer depletion –environmental threat, acid rain, pillar melting, rise of sea level and their implications.

UNIT III

- Teaching methods of environmental education at various levels-their merits and demerits.

-Salient features of environmental awareness through education: Programmes of environmental education for secondary school children.

UNIT IV

-Biodiversity: Conservation of genetic diversity. An important environment priority: Learning to live in harmony with nature.

UNIT V

-Programmes of environmental education for attitude changes among the children.

-Role of school in environmental conservation and sustainable development.

Suggested Readings:

1. Environmental Education: V.K. Nanda, Anmol Publications, New Delhi
2. Teaching of Environmental Education: H.S. Sharma & S.K. Jain; Radha Prakashan Mandir, Agra.
3. Prayaveran Shiksha: Radha Ballabh Upandhyay; Vinod Pustak Mandir, Agra.
4. Paryavaran Shiksha: R.A. Sharma, R.Lall book Depot, Meerit.

PAPER VII-C: EDUCATIONAL ADMINISTRATION & MANAGEMENT M.M 100

COURSE OBJECTIVES

- To acquaint the student teachers with the concept and concerns of educational administration.
- To develop an understanding of the role of the headmaster and the teacher in school management.
- To enable the student teacher to critically analyze the administrative scenario in relation to the functioning of the other secondary schools of the area.
- To acquaint the students teacher with the scientific practices of educational management and keep him to apply it in work situation.

COURSE CONTENTS

UNIT I

- Conceptual framework: concept of educational administration.
- Concept of educational management human beings as inputs, process and products inputs.
- Need, objectives, scope and functions of educational administration and management.

UNIT II

- Role and functions of headmaster: basic functions of administration- Planning, organizing, directing and controlling.
- Maintenance of discipline, control management.
- Supervision and inspection, defects in the present supervision and inspection.
- Types of supervision.
- Crisis in management.

UNIT III

- Decision making-concept, types and limitations.

UNIT IV

- Management of schools: Role of headmaster in planning of school activities.
- Approaches to management-manpower approach, cost benefit approach ,social demand approach, social justice approach.
- Involvement of other functionaries and agencies in the preparation of a plan.
- Delegation of authority and accountability,
- Role of the headmaster in monitoring, supervision and evaluation.
- Role of the headmaster in monitoring the staff, in resolution of interpersonal conflicts.
- Role of the headmaster in creating resources and managing financial matters.
- Optimum use of available resources for growth and development of the school.
- Staff development programmes .
- Role of teachers in school management and administration.

UNIT V

- Role of central government in educational administration
- Education as concurrent subject.
- Central administrative machinery of education.
- Various advisory bodies of central government.

UNIT VI

- Educational administration in the state: the administrative structure in the field of education in the state with specific reference to Uttarakhand State.
- Control of school education in the state-a critical analysis.
 - Function of the state government in relation to secondary and higher secondary schools.
 - Functions of the board of secondary education in controlling secondary schools.
 - Problems of secondary school administration in government schools.

Suggested Readings:

1. Administration of public education: Stephan J. Knezevich , Harper & row Publications, New York.
2. Educational Administration: R.B.Kimbrough & M.T.Nunnery, MacMilan Publishing co.Inc,New York
3. Education Administration, Supervision, Planning and Financing: R.P.Bhatnagar & Vidya Agrawal, R.Lall Book Depot, Meerut.
4. Educational Administration, Supervision and School Management: Jagannath Mohanty,Deep &Deep Publications,New Delhi.
5. Shiksha Prashashan Awam Paryavekshan: Vidyawati K.C.Mallaya,Madhya Pradesh Hindi Granth Academy, Bhopal.
6. Shaikshik Prashashan:R.P. Bhatnagar & Vidya Agrawal, R.Lall Book Depot, Meerut.
7. Shiksha Prabandhan: R.A. Sharma: Surya Publication Meerut.

8. Shaikshik Prabandhan Awam vidyalaya Sangathan: Pratidsha Sharma and Neeraj Sharma, Avishkar Publication, Jaipur.

PAPER VII-D: EDUCATIONAL AND MENTAL MEASUREMENT M.M. 100

COURSE OBJECTIVES

1. To acquaint the student teacher with the basic scientific concepts and practices in educational and mental measurement.
2. To enable the student to tabulate and find out some standard meaning from the raw scores by using statistical procedures.
3. To develop skills and competencies in the student teacher for the use of the techniques in the field.
4. To enable the student teacher to interpret the result of educational measurement.
5. To enable the student understand about various educational and mental measurement tools.

COURSE CONTENTS

UNIT I

- Historical Development of measurement, Quantitative and Qualitative measurement, functions of measurement.
- Scales of measurement: nominal, ordinal, internal, and ratio scales.
- Measurement and evaluation Steps of evaluation process, Tools of Evaluation, Uses of evaluation.

UNIT II

- Types of tests: essay, objectives & performance tests; Individual Vs. group tests; oral Vs. written tests; speed Vs. power tests; teacher made Vs. standardized tests.
- Test Construction: Planning; Item analyses- procedures and item selection; preparing the final draft.
- Qualities of test: Reliability- meaning & its types; validity-meaning and its types; Usability of tests.

UNIT III

- Techniques of test conduct-importance of establishing rapport with students, arranging the seats and distribution of questions for minimum pilgauge and copying; techniques for avoiding guessing in answering; objective scoring.

UNIT IV

- Norms- Meaning and Types
- Interpreting Measurement: Normal Probability Curve, Skew ness and Kurtosis
- Percentiles and percentiles ranks, Standard Scores.

UNIT V

-Achievement tests: construction of standardized achievement tests, Types of test item.

-Measurement of Intelligence: Concept of intelligence, Binet tests, concept of I.Q., Individual and group tests of intelligence.

-Aptitudes and personality tests: use of aptitude tests-overview.

-Use of creativity tests.

Suggested Readings:

1. Measurement and Evaluation in Psychology and education: R.L.Thorndike and E.P.Hagen
2. Essential of Psychological Testing: L.J.Cronbach.
3. Measurement and Evaluation in Teaching: N.E.Gronlund.
4. Statistics in Psychology and Education: H.E.Garrett.
5. Manovigyan Aur Shiksha mein Mapan Awam Moolyankan: vipin Asthana and R.N.Aggrawal
6. Shiksha mein Mapan,Mollyankan Awam Sankhyiki:Mridula Rawal & Beena Kapoor.

PAPER IV-E:

TEACHING AND VALUES

M.M. 100

COURSE OBJECTIVES:

1. To understand the nature and sources of nature, and disvalues.
2. To understand the classification of values under different types.
3. To appreciate educational values like democratic, secular, and socialist.

COURSE CONTENTS

UNIT I

-Nature and sources of values, biological, psychological, social and ecological determinates of values-their bearing on education in varying degrees.

UNIT II

-Classification of values into various types- material, social, moral, and spiritual values; status of values, how these can be realized through education.

UNIT III

-corresponding to values there are evils of disvalues- material, social, economic, moral and religious evil leading to faithfulness and irreverence; how can education overcome these negative values.

UNIT IV

-Level of values realization, how to resolve the conflicts among values, how to work for the integration of values that are embedded in education

UNIT V

-Development of values as a personal and life long process-teaching of values as an integral part of education.

UNIT VI

-Evaluating that-teachers and other schools personnel are value laden, Students and parents are value laden, Curriculum is value laden .Evaluate

- Value of self-sacrifice Vs. value of self centeredness

- Value of excellence Vs. values of ego- centricism.

-value of work Vs. values of selfishness.

-every teacher of all teachers needs to teach values.

Suggested Readings:

1. Value Education: N.Venkataiah,(ed.) APH Publishing Corporation,Delhi.
2. Value Education: Y. K. Singh and Ruchita Nath, APH Publishing Corporation,Delhi.
3. Moolya Shiksha:R.S.Pandey,R.Lall book Depot.Meerut.
4. Research in Value Education : N.Venkataiah and N.Sandhya,APH Publishing corporation, Delhi.

PAPER VI-F: COMPUTER IN EDUCATION

M.M. 80

COURSE OBJECTIVES:

1. To acquaint the student with the basic elements of computers and its use in education.
2. To acquaint them with various types of educational software packages.
3. To prepare students for using computers for educational purposes.
4. To acquaint them with information technology and internet.

COURSE CONTENTS

UNIT I

- Computer-Meaning and characteristics.
- Development of computers-its generations; Types of computers.
- Hardware and Software parts –CPU, ALU, CONTROL UNIT, Memory-Types of memory
- Peripherals of computer- Input output devices.

UNIT II

- Types of Computer Operating system-single user, DOS; Multi user-windows based operating system, UNIX.

UNIT III

- Application software (e.g. Word processor, Spread sheet, Power point presentation, Internet browsers-mail)-their important features, Criteria for evaluating educational software.
- Programming language-high level and low level language.
- Electronic Networking-LAN, WAN, World Wide Web.

UNIT IV

- Using MS Word- Brief description of creating & editing the text, Using Graphics, Saving the document
- Using MS Excel- Brief description of creating a spread sheet, Use of spread sheet in e-learning.
- Using MS Power Point - Brief description of procedure to create a slide, presentation of slide show.

-Using internet-Important feature of Internet, e-mail, Internet in research and education.

UNIT V

-Meaning of Computer assisted Instruction and Computer Managed Instruction.

-Application of Computer in teaching-(Preparation of lesson plans, notes, Question Paper, report card etc.)

- Application of Computer in Learning-(Searching Directory, Using encyclopedia, Using e-books, Use of computers in Project Work, writing notes and application, making greeting cards & invitations etc.)

- Use of Computer in education- Administrative uses, in Guidance, Research, Testing, Educational Planning and Open Learning system.

UNIT VI

-Advantages and disadvantages of Computer in education.

-Some Issues regarding use of computers like Ethics, Copyright, Hacking, Mathematical Calculation etc.

PRACTICUM:

-Writing notes and letters with the help of word processor.

-Making a spread sheet

-Preparing report card in computer

-Preparation of a lesson plan by using text, images video, clip art etc.

-operating e-mail address

-Sending and receiving the electronic messages

-Accessing desired web sites

-Downloading information from net.

Suggested Readings:

1. Multimedia : making it work: Vaughan, Tay ; McGraw Hill
2. Computer in education: Tul Jain(ed.); Esha Books, Delhi
3. Emerging Trends in Teaching of Computer Science: Ratho,T.N. and Prakash,R.Kanishka Publication,Delhi.
4. Computer Shiksha: Alok Upadhyay and Neeraj singh : Vinod Pushtak Mandir, Agra
5. Soochana Awam Sampreshan Takniki : J.C. Agarwal, RSA International, Agra