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TWO YEAR B.Ed. (SECONDARY)

Barkatullah University, Bhopal

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(National Council of Educational Research and Training)
-A HILLS, BHOPAL 462 013 (M.P.)

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REGIONAL INSTITUTE OF EDUCATION

(National Council of Educational Research and Training)

SHYAMLA HILLS, BHOPAL 462 013 (M.P.)

ACKNOWLEDGEMENT

We are thankful to Prof. J.S. Rajput, Chairman, NCTE, for providing the initial momentum, necessary broad guidelines and funds for drafting this Curriculum for Two Year B.Ed. (Secondary) programme in Science, Mathematics and Humanities.

We express our sincere thanks to Prof. A.K. Sharma, Director, NCERT and Prof. A.N. Maheshwari, Joint Director, NCERT, for continuous guidance and precious suggestions.

Our thanks are due to all the Experts and Resource Persons without whose academic inputs and commitment this document would not have been completed in time.

We are also thankful to the members of the Core Groups from this Institute for their untiring efforts at all stages of the preparation of this document.

G. Ravindra

Principal

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PREFACE

The present Teacher Education Curriculum at the Secondary Stage is generally based upon the Frame Work brought out by the NCTE in 1978 and subsequently revised in 1988. The development and changes over the last two decades require a fresh look at the curriculum. Thus for a long time it has been felt that the existing Teacher Education Curriculum for the secondary stage should be revised as the present one year B.Ed programme does not meet the professional requirements of secondary school teachers. In view of the increasing challenges in the field of teacher education and the development that have taken place in the society. In general, and the secondary school system, in particular, it needs to be replaced by a programme which is more rigorous and comprehensive and fulfils the present day requirements and aspirations.

In the context of new socio-cultural, political and techno-economical concerns, the onset of revolution in the field of information technology, crisis of social and moral values and increasing class-room complexities, the vision of the prospective teacher of the 21st century has to be broadened by adding to the curriculum subjects like Value Education, Human Rights education, Women Education, Population Education, Adolescence Education, Special Education, Vocational Education etc. Ingenuity of the teacher lies first in understanding the national ethos and then in planning for teaching within this frame-work as a professional. A teacher helps in improving the quality of human life in the context of multiple internal and external forces impinging on society. The Emerging Indian Society calls upon the teacher to develop an insight into the nature of our society, its varieties and complexities to make Teacher Education Programme relevant to the needs of our community.

Most of our universities and colleges of education provide teacher education programmes wherein content is generally omitted from the curricula on the argument that the university degree equips the graduates with the requisite knowledge of their respective subjects and the job of the teacher educators starts at the point where the job of the university ends. But this view is hardly based on realistic assumptions, as our Bachelor's degree programme of the universities is not specifically aimed at preparing teachers for schools and this curriculum, they produce general graduates eligible for various types of professional and academic

pursuits. As a result of this assumption the most important responsibility of the teacher i.e., transaction of the content of the school subject - becomes the victim of negligence. Some universities do provide some content enrichment courses but that is usually limited to a few subjects. By and large this aspect of the Secondary teacher hangs like a loose button in this coat of Teacher Education. Majority of our Teacher Education Institutions do not cater to the deficiency of knowledge and skills in the subject the teacher- trainee is supposed to teach. There is, therefore, a strong need to integrate content and methods with reference to multi-level teaching at this stage.

The existing one year programme emphasises uniform teaching-learning methodology for all students of different subjects without taking into account the fact that different strategies and methods of teaching should be adopted in order to teach each of them effectively. It hardly takes care of pedagogical analysis and teaching strategies of different topics/units prescribed in the syllabus and also the special methodology for average, below average and talented learners. Moreover the existing B.Ed syllabus is too much theory-oriented and does not emphasise practical. It hardly needs any argument that theory is of little use unless it is integrated with practice.

Besides enriching the content deficiency of the prospective teachers, there is a need to highlight the broad competencies which are to be developed among the students at the end of 10-year schooling. The prospective teacher of the subject must know what are the terminal competencies and the methodology of developing subject specific competencies in various subjects. It is not sufficient that the teacher acquires only knowledge competencies. He has to learn how to develop them in his students through class-room interaction.

The existing 10-year curriculum at school level needs teachers to teach Languages, Social Sciences, Science, Mathematics and Work Experience etc. There are no distinct subjects like Economics, History, Geography, Political Science, Physics, Chemistry, Zoology and Botany at the school stage. The graduates produced by the university system may be capable to teach these subjects individually but they are not competent to teach Social Sciences or Science as one school subject (which includes units/topics from different branches of social sciences or science) as it is not expected from the graduates to have studied all these subjects at their graduation. In the present circumstances the university graduate will have to be equipped with suitable pedagogical inputs besides the strategies and techniques of teaching

the subjects in the integrated form so as to satisfy the immediate needs of the secondary school system.

The existing Internship/School Experience Programme in stereotyped. In the majority of Teacher Training Colleges, it is merely an eye-wash, where the trainees teach without any proper planning, critical supervision and the essential feed-back. The trainees do not get the required School Experiences except teaching a few lessons on their own to fulfil the formality. It needs to be strengthened and make it really fruitful in terms of properly guided planning, effective organisation, strict execution, and sincere supervision and meaningful feedback. It has to be supplemented by substantial field experiences, multi-cultural placement, orientation of co-operating teachers, guided field observations, substitute teaching opportunities, team-teaching, opportunities to reflect on their experiences, analysing and synthesising events during school attachment, training in the core skills, application of skills, preparation of teaching materials and use of A/V aids.

Besides this, emphasis is also required on training to develop teaching materials to make it relevant to class room teaching - learning situation. The trainees also require orientations in the areas of information technology so that they can get maximum information in minimum time.

There is a need to incorporate modes of conducting practical in Work Experience, Health and Physical Education, Aesthetic Education and Working with the Community. Our Teacher Training Institutions need to develop interactive culture, bring innovations in the mode of transaction, demonstration of skills/competencies and teaching strategies for specific units/topics followed by group discussion. A practising teacher should also get opportunities of examining the school curriculum, text books and teaching-learning aids.

On various occasions a point is repeatedly raised that the existing B.Ed product is not adequately prepared to teach at the secondary stage and whatever he learns at the teacher training institutions, is not able to implement since the school realities are different. The contemporary scene of Teacher Education thus presents an utterly anomalous situation. The teachers are left on their own to adjust to their academic, organisational and professional requirements or ignore these demands of their profession. Educationists of the country will have to realise that the situation demands a radical change in our attitude to curriculum design. A patch-work would no longer be relevant and effective. It has therefore, become

essential to prepare comprehensive teacher education curricula that would produce teachers of indisputable worth.

An over view of the preceding details demands that to achieve the objectives of Teacher Education at secondary stage specified in the curriculum must be tailored to suit the requirements of contemporary school education. Keeping in view all the requirements of secondary school teachers, a comprehensive curricula has been designed for the B.Ed course in Languages, Social Sciences, Science and Mathematics. In order to transact this curriculum and to ensure achievement of objectives at this stage it would be more appropriate to extend the total period of B.Ed course. Through the national consultations initiated by the NCTE, a strong consensus has emerged in favour of enhancing the B.Ed course from one academic year to two years.

The proposed curriculum is definitely distinct from the existing One year B.Ed programme as it has taken care of the areas of content enrichment, teaching-learning strategies, suitable methodology for each subject, essential pedagogical inputs student teaching and practical activities, physical education, community experiences, work experience education. Another important aspect of teacher training programme i.e., the School Experiences has also been given the desirable weightage in terms of time and evaluation. Core Training Programme, demonstration lessons, observations of lessons taught by the subject teachers and actual teaching experiences for a longer duration have also been provided. Besides, the curriculum also provides essential and relevant practical work in the form of Projects, Assignments, Community Work and Action Research related to the subjects of teaching with a view to equip the prospective teacher to become a responsible, aware to his changing social needs and the master of his trade with a sense of commitment to his profession.

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ORDINANCE

RELATING TO

EXAMINATION FOR THE DEGREE OF TWO YEAR BACHELOR OF EDUCATION (SECONDARY)

The two year degree course in education provided by the Regional Institute of Education, Bhopal shall lead to the degree of Two Year B.Ed. (Secondary). This degree course shall consist of two academic years, there being an examination at the end of each such year known as Part-I and Part-II.

A candidate shall be eligible to appear for the Two Year B.Ed. (Part I) examination if

i. He / She has passed – B.A/B .Sc. degree of a recognized University.

ii. (a) A candidate who has passed any other examination recognized as equivalent there to by the University for this purpose, and who has attended a regular course of study for one academic year in the Regional Institute of Education, Bhopal shall also be eligible for appearing at the B.Ed. Part-I Examination.

(b) A candidate who, after passing the B.Ed. Part-I Examination of the University has attended a regular course of study for one year in the Regional Institute of Education, Bhopal, shall be eligible to present himself/herself at the B.Ed. Part-II Examination.

<u>Explanation:</u> The term "regular course of study" used in this paragraph shall have the meaning assigned to it by sub-para (iv) of part-I of Ordinance No.6 relating to Examinations (General).

(a) Every student of the Regional Institute of Education, Bhopal seeking admission to the examination shall submit through the Principal an application on prescribed form together with necessary fees and the following certificates from the Principal, viz., Certificate of :-

(i) good conduct,

(ii) fitness to present himself/herself at the examination, and

(iii) having attended at least 75% of lectures/seminars, etc. in respect of theory papers and laboratory work, etc. in respect of practicals, if prescribed, separately.

b) If the Principal of the Institute is unable to grant, in respect of any student, any of the certificates referred to in sub-para(a) above, he shall forward a statement of grounds of his inability to do so to the Registrar for consideration of the Vice-Chancellor who may after holding such further inquiry, if any, as he deems necessary, order for debarring the candidate from appearing at the examination or otherwise in accordance with the merit of the case.

c) Deficiency in attendance not exceeding fifteen percent may be on the recommendation of the Principal of the Institute, condoned by the Vice-Chancellor in accordance with the provisions of para 5 of the Ordinance (No.6) relating to examinations (General).

4. Every candidate for any of the Part-I, and Part-II Examination shall be examined in the subjects as given in the structure of the course (Scheme of Examination). 8

5. (a) The examinations shall be conducted by means of written theory papers and also practicals in the case of such subjects as have practical training prescribed by the Board of Studies.

(b) The Scheme of Examinations for different parts shall be as shown in 'Scheme of Examination'.

(c) The scope of studies in different subjects for an examination shall be as prescribed by the Academic Council on the recommendation of the Board of Studies and the Faculty of Education from time to time and printed in the prospectus for the year concerned or published by notification.

6. (a) (i) The written part of the Annual Examinations shall be held at the Regional Institute of Education, Bhopal in, as far as possible, March, April every year, the date of commencement of them having been notified by the Registrar in advance.

(ii) The practical part of the examinations in subjects in which such practicals are prescribed may be arranged either before or after the written examination in accordance with the convenience of the Institute, provided that the date fixed for the practical examination (s) shall be notified by the Principal of the Institute in advance on the Institute's Notice Board, with prior approval of the Registrar.

(b) The supplementary examinations for all parts shall be held as far as possible in July and August every year for such candidates as are eligible for appearing there.

(a) In order to be successful at any of the examination for the Two Year B.Ed. degree an examinee must obtain not less than 40 percent of the total marks in each subject for internal as well as external examination separately and also 40 percent of minimum marks of all subjects offered by him/her in the aggregate, except otherwise mentioned in Scheme of Examination.

(b) Subjects in which both theory and practicals are prescribed for the purpose of this paragraph, will be treated as separate subjects and to pass the examination, an examinee must obtain 40 percent marks separately in theory and practicals.

(a) There shall be no division assigned to the successful candidates of Two Year B.Ed. Part-I examination.

(b) Successful candidates at the B.Ed. Part-II examination shall be placed in the division in accordance with the following scale on the basis of aggregate marks obtained in all the subjects in Part-I and Part-II taken together:

(i)	40% or above but less than 50% marks	:	Third Division
(ii)	50% or above but less than 60% marks	:	Second Division
(iii)	60% or above marks	:	First Division

A candidate for any examination for the Two Year B.Ed. degree who has appeared at the examination in all subjects including practicals, if any as required by para 3(a) above and has failed in not more than two subjects by not more than 3 marks in total but has secured at least the minimum aggregate marks required, shall be eligible for award of grace marks upto a limit of 3 marks which shall, however, not be added anywhere.

A candidate at any of the examinations held under the provisions of this Ordinance missing a division by not more than one mark, shall be entitled to Vice-chancellor's one grace mark and the grace mark go awarded shall no where be added: Provided that the benefit under this paragraph shall not be granted to any candidate to get the benefit under foregoing paragraph 9 or paragraph 10 hereinafter appearing.

(a) Actual marks obtained by a candidate who passes an examination under the provisions of this paragraph in more than one attempt shall be added together to compute his/her aggregate marks in the case of Part-I examination and to assign

the division in the case of Part-II examination. Provided that the statement of marks issued to a candidate for examination shall clearly indicate that the marks of the paper declared earlier have been brought forward.

(b) Candidate eligible to reappear in one subjects who intend to present themselves at the supplementary examination following the preceding annual examination may be permitted to join provisionally the next higher class, in which case provisional admission can be granted to a candidate having supplementary at the B.Ed. Part-I examination, and count attendance of his/her maintained. If they are declared successful at the first supplementary examination, their admission to the higher class shall be confirmed and if they fail, the admission shall stand cancelled.

12. A candidate for the Two Year B.Ed. examination who fails in one theory paper/one practical part, may, at his/her option, reappear as a supplementary candidate in the paper/practical concerned only, in next supplementary examination immediately following.

13. (a) (i) A candidate failing in any or all of the parts may re-appear as an ex-student in the part concerned or in the whole, as the case may be, at a subsequent examination without being required to undergo regular course of studies in a institute again, subject to his/her complying with the provisions of ordinance and regulations as prescribed at the time of present examination. Provided that such advantage of appearing at the examination as ex-student shall be admissible for a period of three years from the date when the candidate had appeared at the examination as a regular student.

(ii) An ex-student candidate seeking permission for re-admission to subsequent examination shall submit his/her application on prescribed form indicating the papers and parts of the examination intended to appear at, through the Principal of the Institute of which he had been a regular student by the date fixed for the purpose together with such fees and documents as are required of all relevant ordinances. Provided the candidate must mention in the examination application form his/her desire for being exempted from the internal assessment of a paper.

(b) After re-appearing subsequently at an examination in one or the parts in which he/she obtains the minimum pass marks in the papers or the practicals and in the aggregate as the case may be, as required by para 4 (c) above, placed in the

Course structure and Scheme of Examination
(Sciences and Mathematics)

FIRST YEAR

pers	Max. Marks			Pass Marks*	Exam. duration (Hrs.)	Contact pds. per week	Page nos.
	Ext.	Int.	Total				
Education in Emerging Indian Society	75	25	100	40	3	4	1
Psychology of Teaching and Learning	75	25	100	40	3	4	4
Instructional Technology	75	25	100	40	3	4	7
Curriculum, Evaluation & Action Research	75	25	100	40	3	4	11
Content-cum-Methodology-I Science I / Maths I	75	25	100	40	3	4	14
Content-cum-Methodology- II :Science II (for Maths group) lMaths II (for Science group)	75	25	100	40	3	4	20
Practicum	-	50	50	20	-	4	26
II Other Activities							67
Field work with community	-	25	25	10	-	2	
Work Experience-I	-	25	25	10		2	
Physical Education	-	25	25	10		2	
Aesthetic Education	-	25	25	10		2	
Pre-Internship	-		150	60	-	-	76
	Total =		900			36 pds. per week	

Passing separately in External and Internal is necessary.

division to which he/she is entitled to this aggregate marks worked out bringing forward marks in the other part obtained earlier.

14. The Executive Council shall publish the results of the examination by notifying the Roll Nos. and names of successful candidates, but not later than the 60th day from the date when the written examination was over.

15. In the notification declaring the results of the B.Ed. Part-II examination names of first 10 successful examinees who have secured First Division shall be arranged in order of merit.

Course structure and Scheme of Examination
(Sciences and Mathematics)

SECOND YEAR

	Papers	Max. Marks			Pass Marks *	Exam. duration (Hrs.)	Contact pds. per week	Page
		Ext.	Int.	Total				
I	Secondary Education in India-Status, Problems and Issues	75	25	100	40	3	4	78
II	School Management	75	25	100	40	3	4	81
III & IV	Optional (Any two from the following): i) Guidance & Counselling ii) Education of Children with Special Needs iii) Information Technology Literacy iv) Vocational Education v) Population Education vi) Environmental Education vii) Pre-School Education viii) Elementary Education ix) Educational Technology x) Women Education	75+ 75	25+ 25	100 + 100	40 + 40	3 + 3	4 + 4	84 to 110
V	Content-cum-Methodology-I Science I / Maths I	75	25	100	40	3	4	113
VI	Content-cum-Methodology- II Science II (for Maths gp.) Maths II (for Science group)	75	25	100	40	3	4	120
VII	Practicum	-	50	50	40	3	4	126

VIII Other Activities i) Field work with community ii) Work Experience-I iii) Physical Education iv) Aesthetic Education	 - - - -	 25 25 25 25	 25 25 25 25	 10 10 10 10	-	 2 2 2 2	145
IX Internship	-		350	140	-	-	153
Total =			1100			36 pds. per week	

* Passing separately in External and Internal is necessary.

Course structure and Scheme of Examination
(Languages and Social Sciences)

FIRST YEAR

Papers	Max. Marks			Pass Marks*	Exam. duration (Hrs.)	Contact pds. per week	Page nos.
	Ext.	Int.	Total				
I Education in Emerging Indian Society	75	25	100	40	3	4	1
II Psychology of Teaching and Learning	75	25	100	40	3	4	4
III Instructional Technology	75	25	100	40	3	4	7
IV Curriculum, Evaluation & Action Research	75	25	100	40	3	4	11
V Content-cum-Methodology-I Teaching Strategies in Languages (Hindi / English / Urdu / Marathi / Gujarati)	75	25	100	40	3	4	30
VI Content-cum-Methodology-II Teaching Strategies in Social Sciences	75	25	100	40	3	4	50
VII Practicum	-	50	50	20	-	4	
i) Hindi / English / Urdu / Marathi / Gujarati/							59
ii) Social Sciences							65
VIII Other Activities							67
ii) Field work with community	-	25	25	10	-	2	
iii) Work Experience-I	-	25	25	10		2	
iii) Physical Education	-	25	25	10		2	
iv) Aesthetic Education	-	25	25	10		2	
IX Pre-Internship	-		150	60	-	-	76
	Total =		900			36 pds. per week	

Passing separately in External and Internal is necessary.

Course structure and Scheme of Examination
(Languages and Social Sciences)

SECOND YEAR

Papers	Max. Marks			Pass Marks *	Exam. duration (Hrs.)	Contact pds. per week	Page
	Ext.	Int.	Total				
I Secondary Education in India-Status, Problems and Issues	75	25	100	40	3	4	78
II School Management	75	25	100	40	3	4	81
III & IV Optional (Any two from the following): ix) Guidance & Counselling ii) Education of Children with Special Needs iii) Information Technology Literacy iv) Vocational Education)v) Population Education)vi) Environmental Education vii) Pre-School Education xvi) Elementary Education ix) Educational Technology x) Women Education	75+ 75	25+ 25	100 + 100	40 + 40	5 + 3	6 + 4	84 to 110
V Content-cum-Methodology-I Methods of Teaching Lang.	75	25	100	40	3	4	130
VI Content-cum-Methodology- II Methods of Teaching So. Sci.	75	25	100	40	3	4	143
VII Practicum	-	50	50	40	3	4	-
VIII Other Activities i) Field work with community ii) Work Experience-I iii) Physical Education iv) Aesthetic Education	- - - -	25 25 25 25	25 25 25 25	10 10 10 10	-	2 2 2 2	145

X Internship	-		350	140	-	-	153
Total =			1100			36 pds. per week	

Passing separately in External and Internal is necessary.

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FIRST YEAR

PAPER I - EDUCATION IN EMERGING INDIAN SOCIETY

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainee will be able to :

- philosophical, social and cultural traditions of Indian society.
- the complexities of Indian Social structure and current social and national problems.
- role of education in social and national reconstruction.
- role of various agencies in education to bring about all round development of the child.

Course Content -

UNIT-I: Education - Concept and Functions:

- Concept and nature of education;
- Aims and functions of education as an instrument of human resource development;
- Role of education in the process of socialization, social change, social control a cultural development.

UNIT-II: Emerging Education in India:

- Main features of educational system in pre-independent India with special reference educational contribution of Macauley, Mahatma Gandhi, Ravindranath Tagore a Vivekanand;
- Evolution of Educational Policy in Post independent India – Secondary Educati Commission (1952-53), Education Commission (1964-66), Review of 10 - ye School Curriculum (1977-78), NPE (1986) and POA – (1992).

UNIT-III: Education and Society:

- Agencies of education – Home, School, Community and Mass Media;
- Co-ordination between school and community;
- Role of NCERT, NCTE, NIEPA, CABE & UNESCO in the development Education.

INIT-IV: Equalizing Educational Opportunities:

- Constitutional provisions regarding equality of opportunities;
- Measures to promote equality of opportunities;
- Compensatory Educational Programmemes to meet the needs of special groups - socially disadvantaged groups, disabled, and women – Role of School and Community.

INIT-V: Educational Set-up and Role of Teacher in providing Education for All:

- Village and Town level – (School Complex, Voluntary Organizations, Parent – Teacher Associations;
- District level – (District Institute of Education and Training – DIET; District Boards of Education (DBEs);
- State Level – State Institute of Education, (SIE), State Council of Educational Research and Training (SCERT), State Institute of Science Education (SISE).
- Non-formal Education, Adult Education and Community Participation;
- Education for quality of life – (Work experience, population education, Health and Environment concerns).

essional Work:

Any one of the following:

(i) Study of the special educational provisions made for the girls, SCs/STs and minority students.

(ii) Impact of education and quality of life – A group study.

(iii) Visits of different types of schools and preparation of school profiles.

(iv) Observation of in-service teacher education programmeme and preparation of report.

uggested Readings:

Agrawal, J.C. & Agrawal, S.P., (1992). *Role of UNESCO in Education*, Vikas Publishing House, Delhi

Anand, C.L. *et.al.* (1983). *Teacher and Education in Emerging Indian Society*, NCERT, New Delhi.

Coombs, Philip H., (1985). *The World Crisis in Education* , Oxford University Press, New York.

4. Mani, R.S., (1964). *Educational Ideas and Ideals of Gandhi and Tagore*, New Book Society, New Delhi.

5. Mathur, S.S., (1988). *A Sociological Approach to Indian Education*, Vinod Prakashan, Agra

6. Mistry, S.P., (1998). *Non-formal Education – An Approach to Education for All*. Radha Publications, New Delhi

7. Mohanty, J., (1986). *Indian Education in Emerging Society*, Sterling Publishers.

8. Mukherji, S.M., (1966). *History of Education in India*, Archarya Book Depot, Baroda

9. Naik, J.P. & Syed, N., (1974). *A Students's History of Education in India*. MacMillan Co., New Delhi

10. NCERT, (1986). *School Education in India – Present Status and Future Needs*, New Delhi.

11. Salamatullah, (1979). *Education in Social Context*, NCERT, New Delhi

12. Srinivas, M.N., (1986). *Social Changes in Modern India*, Allied Publishers, Bombay

13. Govt. of India, (1986). *National Policy on Education*, Min. of HRD, New Delhi

14. Govt. of India, (1992). *Programmeme of Action (NPE)*, Min. of HRD

15. UNESCO., (1997). *Learning the Treasure Within*.

FIRST YEAR

PAPER II - PSYCHOLOGY OF TEACHING AND LEARNING

ime: 3 hrs. Max. Marks: Ext. 75, Int.25

ote: Questions will be set from each unit with only internal choice.

bjectives:

The teacher – trainee will be able to :

- understand psychology as applied to teaching and learning,
- understand the nature of learning,
- appreciate the development and growth of the learner,
- know the various types of differences which exist among the individuals.

ourse Cont ent-

nit-I: Nature and Role of Educational Psychology

Meaning, nature and scope of educational psychology.

Methods of studying learner's behavior at the adolescent stage: - Observation, Interview, Experimentation and Case Study.

Role of instruction in learning.

nit-II: Growth and Development of Adolescent

Concept of growth and development

Nature-nurture and peer factors influencing development,

Adolescent period and its problems.

Dimensions of development: Cognitive (Piaget) Emotional (Erikson) Personal-Social, and Moral Development (Kohlberg).

iit-III: Individual Differences.

Factors causing individual differences: phychological, genetic and environmental.

Individual differences with regard to intelligence, achievement, creativity, giftedness and talent.

Catering for individual differences; Navodaya Vidyalaya Programmeme.

- Elementary statistical procedures – Measures of Central tendency, Variability and Rank Order method of correlation.

Unit-IV: Teaching – Learning Process.

- Concept and nature of learning,
- Basic learning theories:
  - (i) Behaviorists - Thorndike's: trial, error and success; Skinner's reinforcement in shaping behavior.
  - (ii) Cognitivists - Ausubel's reception learning and expository teaching; Burner's discovery-learning, Gagne's eight types of learning, intellectual skills, discrimination learning, concept learning, rule learning.
  - (iii) Gestaltist's - Insight learning; Kohler's problem solving; Katoma's match stick problem.
- Models of teaching related to learning theories – Information Processing: Concept Attainment and Advance Organizer models.

Unit-V: Applications of Psychology to Education.

- Guidance, Counselling and Career education
- Types of guidance activities – Educational, Vocational, Personal-Social, Group Guidance activities
- Classroom as a group
- Dealing with children with special needs.
- Adjustment problems of adolescent.

Sessional Work -

Any three of the following:

(i) Administration of a psychological test: a personality inventory/ an attitude scale/ a creativity test/ non-verbal test of intelligence.

(ii) Project work on : Child with behavior problem/ Talented child/ a Learning Disabled child/ a Slow Learner/ a Disadvantaged child.

(iii) An experiment on learning: Level of Aspiration.

(iv) Administration of a concept formation test

(v) Study of intelligence of atleast 5 school students.

uggested Readings:

Ambron, S.R. (1981). *Child Development*, Holt Rinehart & Winston, New York.

Atkinson, Richard C. *et.al.* (1983). *Introduction to Psychololgy*. Harcourt Brace Johanovich Inc. New York.

Barry and Johnson (1964). *Classroom Group Behavior*, Macmillan. New York.

Bhargava, Mahesh (1994) :*Introduction to Exceptional Children*, Sterling Publishers Pvt. Ltd. New Delhi.

Bourne, L.E. (1985). *Psychology: Its Principles and Meaning*. Holt, Rinehart Land Winston, New york.

Christian, Jyoti (1984). *Classroom Group Dynamic*, Anu Books, Meerut.

Cruickshank, W.M. (1980) : *Psychology of Exceptional Children and Youth*. N.J. Prentice Hall.

DeCecco, John P. (1977). *The Psychology of Learning and Instruction*. Prentice Hall of India Pvt. Ltd., New Delhi.

Gessel, A.L. & Allagh, F.H. (1946): *The Child from Five to Ten*, Harper & Brothers, New York.

. Hurlock, E.B., (1964). *Child Development*, McGraw Hill Book Co. New York.

.. Klausmeier, Herbert, J. (1985). *Educational Psychology*. Harper and Row, New York.

. Kochar, S.K., (1989).*Guidance and Counselling in College and Universities*, Sterling Publishers Pvt. Ltd., New Delhi.

. Lindgren, H.C. (1980) *Educational Psychology in the Classroom* (Sixth ed.) Oxford University Press, New York.

. Pasricha, Prem, (1976). *Guidance and Counselling in India Education*. NCERT, New Delhi.

. Smith Ronald E, Sarason, I.G., and Sarason, Barbara R. (1982). *Psychology: The Frontiers of Behaviour*, Harper and Row Pub. New York.

Shrivastava, G.N.P. (1985). *Recent Trends in Educational Psychology*. Agra Phychological Research Cell, Belanganj, Agra.

Shrivastava, G.N.P. (1986). *Recent Trends in Personality study*. Agra Psychological Research Cell, Belangunj, Agra.

Shrivastava, G.N.P. (1999). *Shiksha Manovigyan, Naveen Vikkchardharayen*. Concept publishing Company, New Delhi.

FIRST YEAR

PAPER III - INSTRUCTIONAL TECHNOLOGY

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainee will be able to :

- understand the concept of teaching and its selected models
- learn the technique of available instructional resources;
- plan teaching activities and develop familiarity with assessment techniques.

Course Content:

Unit-I : Teaching, Learning and Instruction

- Conception of Teaching: Teaching as Science and teaching as art. Techniques and strategies.
- A conceptual Model of Instruction and factors affecting instruction. (St rasser's interpretation; Basic teaching model of Glaser).
- Models of Teaching: Introduction – with reference to Information Processing Models.
- Teaching Strategies for cognitive growth (Hilda Taba Model)
- Concept Attainment Model of Bruner.

Unit-II : Instructional Objectives:

- Taxonomy of instructional objectives – cognitive, affective, phychomotor.
- Characteristics of instructional objectives. (Mager's contribution).
- Task analysis; Competency – Based Instruction.
- Mastery Learning; Remedial Instruction

Unit-III : Instructional Resources and Techniques:

- Use of Educational Technology in Instruction
- Magnetic Boards.
- Use of Print and Non Print Media.

- Radio, ETV, Audio & Video Tapes, Use of Computers in instruction, Text-books, Workbooks, Supplementary Reading Materials, Teacher's guides

Unit-IV : Teaching – Learning Methods:

- Field trip; source Method, Group project.
- Improvisation; Apprenticeship training in vocational education.
- Role playing / imitation / Modeling.
- Teaching skills and Micro teaching.
- Brainstorming, Dialogue method, Quizzing.
- Team Teaching
- Gaming and Simulation.

Unit-V : Planning for Instruction:

- Writing instructional objectives.
- Unit and Lesson Planning
- Planning and Execution of Unit Testing.
- Assessment of Learning outcomes.

Professional Work :

Assignments :

i) Lesson Planning based on concept attainment and Hilda Taba Model.

ii) Identification of local specific resources of learning.

iii) Organizing a brain storming/team teaching session.

Suggested Readings:

Allen, Dwight, and kevin Ryan (1969). Micro Teaching, Addison Wesley Pub. Co. London.

Anderson, E.J. and Hunder, E. (1967) Improving the Teaching Analysis of Classroom Verbal Interaction, New York, Holt Rinehart and Winston, Inc.

Bloom, B.S. (1956) Taxonomy of Educational objectives; Cognitive Domain, Book-I Mckey New York.

Bereday, George, F., and Lanwery Joseph (1963) Education and Training of Teacher, Trens. Brother Ltd., London.

Bruner, J.S. (1966) Towards a Theory of Instruction; Harard University Press Massachussetts.

6. Buch M.B., and Santhanam, M.R. (1972) Communication in classroom. CASE, Faculty of Ed. & Psy. M.S. University, Baroda

7. Davis, Irork (1971). The Management of Learning, McGraw Hill, London.

8. Dunkin, Michael, J. et. Al. (1974). The study of Teaching, Holt Rinehart and Winston Inc. New York.

9. Gage, N.L. (1964). Theories of Teaching. In Theories of Learning and Instruction, NSSE University Press Year Book, Chicago.

10. Gilett, A.N. and Sadlar, J.E. (1962). Training for Teaching. George Allen and Unwin Ltd.

11. Gurney, P. (1953). Education and the Training of Teachers. Longmans Green and Co. Ltd.

12. Joyce, Bruce and Weil, Marsha (1972). Models of Teaching, Prentice hall Inc. Englewood Chiff, New Jersey.

13. Hauston, W.R. and Robert, B. Howsan (1972). Competency Based Teacher Education. Progress, Problems and Prospects, Science Research Associates (SRA), Chicago.

14. Krath Whole, Dvid, A. et.al. (1964). Taxonomy of Educational objectives. Handbook-II. Affective Domain, David Mekay.

15. Nagpure, V. (1992). Teacher Education at Secondary Level, Himalaya Publishing House. 'Ramdoot', Dr. balerao Marg, Girgaon, Bombay 400 004

16. Passi, B.K. (1976), Becoming Better Teacher. Micro Teaching. Sahitya Mudranalaya, Ahmedabad.

17. Sharma, R.A. (1983) Technology of Teaching; International Publishing House, Meerut.

18. Stones, E. and S. Morris (1972). Teaching Practice, Problem and Perspective Methuen & co., London.

19. Storm, Robert D. (1971). Teaching and Learning Process. Prentice Hall Inc. Englewood Ciffs. New Jersey.

20. Shrivastava, G.N.P. (1999). Teacher Training: Management; Concept Publishing Company. New Delhi.

21. Sharma, R.A. (1987) Educational Technology, Loyal Book Depot, Meerut.

22. Sharma, R.A. (1997). Teacher Education, Loyal Book Deppot, Meerut

23. Tanner, Daneil (1972). Using Behavioral objectives in the classroom, MacMillan Company, New York.

24. Torney, et.al. (1973). Micro Teaching Research Theory and Practice, Universal Press, Sidney.

25. Vedanayagan, E.G. (1988). Teaching Technology for College Teachers. Sterling Publishers Private Ltd. New Delhi .

26. White, William, L. (1969). Psychological Principles Applied to Classroom Teaching. McGraw Hill, New York.

FIRST YEAR

PAPER IV - CURRICULUM, EVALUATION AND ACTION RESEARCH

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectiy.es:

The teacher – trainee will be able to :

- understand concept and principles of curriculum;
- understand and state educational objectives in various domains;
- apply evaluation techniques for scholastic and non-scholastic subject areas.
- understand the methods of conducting action research; and
- use statistical techniques in action research analysis.

Course Content:

Unit-I : Curriculum : Concept and Principles:

- Changing and expanding concept of curriculum: scholastic, non scholastic and hidden curriculum, syllabus, course and curriculum differentiation.
- Principles of selection of learning experiences.
- Organisation of learning experiences – scope, sequence, continuity and balance.
- Curriculum adaptation.

Unit-II : Taxonomy of Educational Objectives:

- Cognitive domain
- Affective domain
- Psychomotor domain.
- Stating instructional objectives.

Unit-III : Evaluation: Concept and Principles:

- Modern concept of Evaluation: Measurement, Assessment and Evaluation Vs. Examination.
- Evaluation of Scholastic aspects , Achievement Test, Blue Print, Characteristics of Standardized Test, Reliability, Validity.
- Teacher made tests. Item – type, construction and selection

- Grading procedures.
- Diagnostic testing.
- Oral testing.
- Continuous evaluation.
- Practical examination

Unit-IV : Evaluation of Non-Scholastic aspects:

- Creativity testing.
- Rating scales.
- Attitude Scales – Likert / Thurstone / Semantic differential.
- Interest inventories and Behavioural checklist.
- Questionnaire.

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Unit-V : Action Research

- Concept, nature and need of Action Research.
- Types of Action Research (Individual and Collaborative).
- Drafting Proposals; steps and procedures of conducting Action Research.
- Analysing data – statistical technique for t,F, F^2 test.
- Reporting in Action Research Format and Style.

Sessional Work:

1. Planning, execution and reporting of Action Research conducted in a class room.

Suggested Readings:

1 Arora G.L. (1988) *Curriculum and Quality in Education*, New Delhi: NCERT.

2 Bloom B. (Ed.) 1956, *Taxonomy of Educational Objectives*, New York: Longmans, Green and Co.

3 Corey, SM (1953), *Action research to Improve School Practice*. New York: Teachers' College Columbia University.

4 Garret, H.E. (1967) *Statistics in psychology and Education*, Bombay: Vakls.

5 Gronlund, N.E. (1981). *Measurement and Evaluation in Teaching*. New York: Macmillan.

6 Guilford J.P. and B. Fruchter (1987) *Fundamental Statistics in Education and Phychology*. Tokyo: McGraw Hill.

7 MHRD (1993). *Learning without Burden*. Report of the National Advisory Committee.

8 Natrajan V. and Kulshreshta SP (1983). *Assessing non-Scholastic Aspects – Learners Behavior*, New Delhi: Association of Indian Universities.

9 NCERT (1985), *Curriculum and Evaluation*, New Delhi: NCERT.

10 NCERT (1988) *National Curriculum – A Frame work* New Delhi: NCERT.

11 Norris N. (1990) *Understanding Educational Evaluation*, Kogan Page Ltd.

12 Pachaury A.C. (1996), *Exemplar Research Designs for conducting Action Research* (A Report Bhopal; Deptt. Of Ext. Edu. RIE

13 Singh H.S. (1974) *Modern Educational Testing*. New Delhi: Sterling Publication.

14 Thorndike RL and Hagen (1977). *Measurement and Evaluation in Psychology and Education.*

FIRST YEAR

PAPER V - CONTENT-CUM-METHODOLOGY-I

SCIENCE - I

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainee will be able to :

- teach effectively the facts, concepts, and principles related to class IX science syllabi.
- understand the concept of integration of science.
- know different approaches and methods of teaching various concepts of science.
- develop the skill of preparing unit plan and lesson plan.
- use different teaching aids for effective teaching.

The contents of Units – I, II, and III may be transacted with special emphasis on and demonstration of specific teaching methods/strategies for optimization of learning out comes. It will also include pedagogical analysis of the subject.

UNIT-I

- Force and Motion, Newton's laws of motion, with illustrative examples, Gravity and Gravitation, Orbital and escape velocities, weightlessness in space, Motion of a simple pendulum, correlation of work and energy, different kinds of energy, wave motion, longitudinal and transverse waves, representation of wave motion,
- Heat and molecular motion, concept of temperature, differences between heat and temperature, specific heat and thermal capacity, change of state, latent heat, simple numerical problems.
- Laws of reflection and refraction, Image formation by plane spherical mirrors and lenses, ray diagrams, microscopes and telescopes, white light and colours of objects, colour of sea and sky,
- Concept of electric potential and electric current, mechanism of current flow in a conductor Ohm's law, electrical power, resistance in series and parallel,

preliminary idea of Ammeter, Voltmeter and Multimeter, electric motor, Electro magnetic induction, magnetic flux, Faraday's laws and Lenz's law, self and mutual induction, AC generators and transformers, Electricity used at home, domestic wiring, fuse as a safety device.

- Typical numerical problems related with above topics.

UNIT-II :Adaptation:

- Structural & Functional potentialities of organism.
- Structural and functional Adaptation.
- Land, Water & Air habitat and Adaptation.
- How did adaptation occur ?
- Man's adaptability.
- **Life Processes:**
- Nutrition and its types.
- Photosynthesis – Raw materials and activities related to understand the process.
- Respiration – Glycolysis – kreb's cycle
- Transpiration.
- Blood and its brief composition.
- Circulation and its types with emphais on structure of Human heart and also heart kinetics.
- Lymph, Nature, composition, distribution, Nodes and system.
- Excretion – types – structure and function of the organ Activities including Dialysis of the system.
- **Reproduction:**
- Asexual & its types.
- Sexual reproduction plants, animals, human reproductive system. Female cycles. Gestation, placenta control and co-ordination chemical co-ordination in animals and plants-Hormones Nervous system simple to complex organization and differences and influence of evolution regions and functions. Associated structuring.

UNIT-III

- Language of chemistry, atoms and molecules, protons, electrons, neutrons, symbols, valence, formulate, writing of chemical equations.

UNIT-III

- Language of chemistry, atoms and molecules protons, electrons, neutrons, symbols, valence, formulate, writing of chemical equations.
- Classification of elements : History of classification, mendeleefs periodic table modern periodic table.
- Chemical bonding inertness of noble gases causes of chemical conbitation, tonic and covelent banding
- Chemical reactions : Introduction to chemical reaction types, of chemical reactions.

UNIT IV :Nature & Scope of Science:

- Science and its nature, scientific method and scientific attitude Historical development of science, science and its relationship with Technology, social sciences and mathematics.
- Objectives of science teaching at secondary level, short range and long range objectives, behavioral objective and their difficulty levels.
- Concept of integrated science, meaning of integration of science, need and justification appreciation of integration of science with illustrative examples from secondary curriculum.

UNIT V :

(a) Approaches and Methods of Teaching Science:

- Teacher-centered and Learner-centered approaches. Inductive deductive, synthetic and analytic approaches, environmental approach, Lecture method, Lecture-demonstration, discussion, Heuristic method, Laboratory, Problem solving and project method, enquiry/Investigatory methods, special measures appropriate to gifted and slow learners.

(b) Unit Planning and Lesson Planning:

Necessity of lesson planning and unit planning in science teaching, its essential features, preparation of one Model unit plan and one model lesson plan on any topic.

(c) Teaching aids:

Visual, Audio and Audio-visual Aids to teaching such as chart, models (working, non-working) films, TV, Teleconferencing Radio, computer as Teaching aids. Use of field trips,

science exhibition Science club and Science parks as reinforcement of class room teachi their planning and organization.

Suggested Readings:

1 Science: *A text book for Class IX*, NCERT, New Delhi.

2 Verma, P.S. and Agarwal, V.K. : *Science for Ninth Class*, S. Chand & Company, New Dell

3 Sharma, R.C. : *Science Teaching*

4 Das, R.C. : *Science Teaching in schools*

5 Nair, C.P.S. : *Teaching Science in our Schools.*

6 *New Trends in Biology Teaching* UNESCO, Paris

7 Duggal S.P. : *Chemistry Teaching.*

8 Romey : *Enquiry Techniques in Teaching Sciences.*

9 Brandin, J : *Source Book of Physical Science*

10 Thurber and Walter : *Exploring Science.*

11 Drivor, Guesne and Tiberghien : *Children's Ideas in Science.*

12 Bell, Watts and Elligton : *Learning, Soing and Understanding in Science.*

13 Driver : *Pupil as Scientists.*

14 Piaget and Inhelder : *Growth of Logical Thinking.*

15 Kenny, J.G. : *A Philosopher's Look at Science*

16 Mathews, M.R. : *Contributions from History, Philosophy and Sociology of Science and Mahematics.*

17 Robinson, J.T. : *The nature of Science and Science Teaching.*

18 Mason, S. : *A History of Science.*

FIRST YEAR

PAPER V- CONTENT-CUM-METHODOLOGY - I
MATHEMATICS-I

3 hrs. Max. Marks: Ext. 75, Int.25

Questions will be set from each unit with only internal choice.

ctives:

The teacher – trainee will be able to :

- *appreciate* the abstract nature of mathematics.
- *distinguish* between mathematics and science.
- *appreciate* the aesthetic sense of mathematics.
- *analyse* critically the views and thoughts of mathematicians about the nature, scope and significance of mathematics.
- *distinguish* between analytic and synthetic method of teaching mathematics.

I: Nature and Scope of Mathematics

The abstract nature of Mathematics, The Distinction between Science and Mathematics, The views and thoughts of Mathematicians about the nature, scope and significance of Mathematics.

I : Methods of Teaching Mathematics

Analytic and Synthetic, Inductive and Deductive Methods. Their chief features and significance in teaching Mathematics. Distinction between Analytic and Synthetic methods, and that between Inductive and Deductive method. Distinction between Mathematical Induction and Inductive approaches.

Plane Geometry:

Similarity and Congruency of triangles, Parallelograms, Locus, Geometrical constructions of triangles and quadrilaterals under given conditions, Linear symmetry.

ategies:

To deal with similarity and congruency, the photo-snaps of same and different sizes can be used. While discussing construction of triangles and of quadrilaterals it may be clearly emphasised that three sides uniquely determine a triangle while with four sides no unique quadrilateral can be constructed. Here itself the idea of necessary and sufficient conditions can be highlighted. For linear symmetry

activities with a plane mirror can be used.

UNIT IV : Algebra:

Set theory, Elementary idea of Logic – converse, inverse and contrapositive of any implication, Surds, Factorization of Polynomials, Remainder Theorem and logarithm.

Teaching Strategies:

For set theory, Venn diagram should be judiciously. For Logic adequate examples and counter examples be used. For Factorization of polynomials analogy with the factorization of numbers may be used. The importance of Remainder Theorem may be emphasised by highlighting the fact that one can find a remainder without actually dividing. The definition of logarithm can be arrived at through a question of the type : If $2^x = 5$, then what is x ?

UNIT V: Trigonometry, Computing and Statistics

Trigonometrical identities, heights and distances. Elementary idea of computing. Elementary idea of statistics.

Teaching Strategies:

For trigonometrical formulae suitable mnemonics may be used. For heights and distances, group activities may be done. For Computing and Statistics simulation activities may be done. The distinction between verification and proof may also be emphasised.

Note:

The contents for the units III, IV and V will be covering the entire contents of NCERT Text book for Class IX.

Suggested Readings:

1. Polya G. : *Mathematical Discovery*, Vol. I & II (1962), John Wiley & Sons.
2. Kapur J.N.: *The Spirit of Mathematics* (1992), Mathematical Trust Society, New Delhi.
3. Courant R., Robbins H. : *What is Mathematics?* (1963), Oxford University Press.
4. Bell E.T :*The Development of Mathematics* (1940), McGraw Hills
5. Butler G.H., : *The Teaching of secondary mathematics* (1965) Wren F.L. McGraw Hill Book Company.
6. NCERT, *Text Books on Mathematics Class IX.*

FIRST YEAR

PAPER VI-CONTENT-CUM-METHODOLOGY-II

SCIENCE-II (For Maths Group)

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- teach effectively the facts, concepts and principles related to VI, VII and VIII class science syllabi.
- know and understand the nature and scope of science
- know the different approaches and methods of teaching of different concept of science.
- develop the skill of preparing unit plan and lesson plan.
- use different teaching aids for effective teaching.

The contents of Units – I, II, and III may be transacted with special emphasis on and demonstration of specific teaching methods/strategies for optimization of learning out comes. This will also include pedagogical analysis of the subject.

UNIT-I

- Measurement, Importance of measurement in science, measurement of physical quantities and their units, kinds of motion, concept of force and its effects, types of forces, simple machines, concept of energy and work different forms of energy transformation of energy, sources of energy.
- Heat, concept of temperature, their units heat capacity, change of state modes of transfer of heat with examples
- Sources of light shadows, rectilinear propagation, the eclipses, reflection of light, formation of image by a plane and spherical mirror, ray diagrams.
- Production of sound, vibration, pitch, loudness, frequency, general idea of the science of some musical instruments the sounds of music.
- Concept of electric charge, positive and negative charges, electroscope, current as flow of charges, electricity in nature.
- Typical numerical problems based on the above topics

UNIT-II

- Organization of living body: cells, tissues and organs. Unicellular and multi cellular organisms.
- Micro organisms : Different groups and their action, harmful and useful activities of micro organisms
- Crop, plants and their production: Basic practices, plant breeding, soil improvement, protection from pests and weeds
- Organic evolution: Origin of species, evidences of evolution
- Conservation of Natural Resources Renewable and non-renewable sources, forest conservation.
- Useful animals and plants food fiber & timber producing plants, animal husbandry, honey bees, pisciculture poultry.

UNIT-III

- States of matter, properties of matter, elements, compounds and mixtures, atoms and molecules, formulae of some common compounds.
- Chemical reaction and equation
- Acids, bases and salts:- properties and reactions of alkalis with acids
- Water: Types, physical properties purification composition and uses.

UNIT-IV : Nature and scope of Science:

- Science and its nature, scientific method and scientific attitude, historical development of science, science and its relationship with technology, social sciences and mathematics.
- Objectives of science teaching at secondary level, short and long range objectives, behavioral objectives and their difficulty level.

UNIT-V : Approaches and Methods of Teaching Science

a. Teaching techniques:

Teachers centered and learner centered approaches, inductive – deductive, synthetic analytic approaches, lecture method, lecture demonstration discussion, heuristic method, problem solving and project method, enquiry, investigatory method, special measures and approaches for gifted and slow learners.

(b) Unit Planning and less an planning

Necessity of lesson and unit planning in science teaching, its essential features, preparation of one model unit plan and one model lesson plan on any topic

(c) **Teaching aids**

Audio, Visual and audio-visual aids to learning such as charts, models (working and non-working) films, TV and Radio, computer as teaching aid. sets use of field trips, science club and science parks.

Suggested Readings:

1 *Science: A Text Book for Class* VI, NCERT, New Delhi

2 *Science: A Text Book for Class VII*, NCERT, New Delhi

3 *Science: A Text Book for Class VII*, NCERT, New Delhi

4 Sharma, R.C.: *Science Teaching*

5 Das, R.C. : *Science Teaching in School*

6 Nair C.P.S.: *Teaching Science in our schools*

7 *New Trends in Biology Teaching*, UNESCO, Paris

8 Miller, D.F. and Bluydesh, G.W. *Methods and Materials for Teaching in Biological Sciences.*

9 Duggal S.P. : *Chemistry Teaching.*

10 Romey : *Enquiry Techniques in Teaching Science.*

11 Bell, Watts and Ellington : *Learning, doing and understanding in Science.*

12 Kenny, J.G. : *A Philosopher's Look at Science.*

13 Mathews , M.R. : *Contributions from History, Philosophy and Sociology of Science and Mathematics.*

14 Robinsons, J.T. : *The nature of Science and Science Teaching.*

FIRST YEAR

PAPER VI - CONTENT CUM-METHODOLOGY - II

MATHEMATICS-II (For Science Group)

Time: 3 hrs. Max. Marks: Ext. 75, Int.2

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainee will be able to :

- *distinguish* between inductive and Synthetic Method.
- *appreciate* the aesthetic sense of mathematics.
- *analyse* critically the views and thoughts of mathematicians about the nature, scope and significance of mathematics.
- *distinguish* between mathematics and science.
- *distinguish* between verification and proof.

UNIT I: The Nature and significance of mathematics:

The importance of mathematics in life: Distinction between science and mathematics; The views and thoughts of mathematics about nature, scope and significance of mathematics.

UNIT II :

Inductive method and synthetic method. Their chief features and significance in teaching mathematics. Activity method.

UNIT III :

Place value, Factors and Multiples, L.C.M. and H.C.F. of numbers, Linear Equations, Ratio and Proportion, Unitary method, Percentage and their applications in profit and loss problems, simple interest.

Teaching Strategies:

For teaching place values, number cubicals bars, flats and cubes may be used. For L.C.M. and H.C.F. appropriate models may be used. For linear equations simple balance may be used to explain the addition, subtraction, multiplication and division. Profit and Loss, and Simple Interest may be taught by using suitable simulation activities. Where ever possible simple idea of mathematical modelling can be highlighted.

UNIT IV :

Properties of rational numbers and their comparison, recurring decimals, multiplication of binomials, Direct and Inverse variations, problems on time and work; time and distance.

Teaching Strategies

Motivation for recurring decimals may be given by illustrating with examples of periodicity in general and then its link with rational numbers be introduced by Long Division process. The result $(x+a)(x+b) = x^2 + (a+b)x + ab$ may be arrived at by Geometrical Models on card board, and students may be encouraged to construct further models for product $(x+a+b)(x+c)$, The motivation for direct and inverse variation concept can be done through plotting a data on graph paper and through examples from life. The problems on time and work can be dealt by suitable simulation activities.

UNIT V:

Ruler compass construction of right-angled triangle, construction of perpendicular bisectors, Idea of Pythagoras Theorem, properties of triangles, area of parallelograms, path around (in and outside) a rectangle also the central paths.

Teaching Strategies:

Distinction between construction by actual measurement and ruler compass construction may be clearly highlighted by emphasising the unit-freeness of the latter, besides the logical need. The impossibility of trisection of 60° angle may also be pointed out. Pythagoras Theorem may be arrived at by various types of models prepared on card boards. The generalisation of Pythagoras Theorem to other figures such as semi circule, regular polygons may also be discussed. Students can be motivated to discover the properties of triangles through group activities. The idea of area of parallelogram can be given through heuristic approach. The distinction between verification and proof. be emphasised.

Suggested Readings:

1. Polya G. : *Mathematical Discovery*, Vol. I & II (1962), John Wiley & Sons.
2. Kapur J.N.: *The Spirit of Mathematics* (1992), Mathematical Trust Society, New Delhi.
3. Courant R., Robbins H. : *What is Mathematics?* (1963), Oxford University Press.

4. Butler G.H., *The Teaching of secondary mathematics* (1965) Wren F.L. McGraw Hill Book Company.
5. NCERT, *Text Books on Mathematics Class VI and VII.*

FIRST YEAR

PAPER VII – SCIENCE PRACTICUM

Max. Marks: 50

Objectives:

The Teacher – trainees will be able to :

- acquire knowledge of lab work and lab techniques
- prepare different types of teaching aids and practise innovations and improvisation.
- develop skill of demonstration of practical.
- develop the skill of manipulation of apparatus and materials, observation, reporting, analysis, interpretation and drawing conclusion.

(A) Training on Prescribed Practicals:

- To classify exothermic and endothermic reactions by measuring heat, in chemical reactions.
- To distinguish between electrovalent and covalent compounds on the basis of the following properties:

(i) Solubility in water

(ii) Conductivity in water

- To find the relation in current, time and mass of metal deposited in electroplating.
- To prepare crystals of ferrous sulfate from kipps waste.
- To purify common salt from commercial sample by Crystallization.
- To construct a galvanic cell.
- To draw a group between (x, t)
- To find acceleration by drawing a graph between (v, t)
- To verify the laws of reflection
- To verify the laws of refraction
- To verify Ohm's law.
- To find b. p. of water on Celsius and Fahrenheit scale and to verify the conversion formula from one scale to the other.

- To study main constituent parts of hand lens, simple and compound microscope their setting, uses and precautions.
- To study and prepare temporary slide of plant cell (onion) animal cell (cheek cell) slide.
- Study of animal and plant cell with the prepared slide to observe differences between the two with the help of chart/model.
- To study different stages of cell division.
- To study the structure of aquatic, terrestrial and local available plants specially their adaptation stage.
- To study the structure of the body of Cockroach, toad, frog, birds and their adaptation.
- To study the structure of Yeast, fungus grown on various food stuffs.
- To study various types of pests of stored food grains.
- To test vegetable and pure ghee and butter for different contents.
- To test adulteration in turmeric powder.
- To test adulteration in chilli powder.
- To test adulteration in black pepper powder.

(B) Demonstrations of Practicals:

Demonstration by the teacher and observation by the students on a pre-designed questionnaire of the following:-

- Magnetic effect of current.
- Defects of eye and its correction
- Spectrum
- Convection current.
- Coupled oscillation
- Exothermic and endothermic reactions.
- Evolution of oxygen in photosynthesis
- Evolution of heat and CO_2 in respiration.
- Identification of pests.
- Diffusion and Osmosis.
- Dissection in a vertebrate and invertebrate and exposure of different systems.
- Preparation of blood film.

- Types of chemical reactions (combination, decomposition reactions).
- Preparation of gases like, H_2, O_2, NH_3, Cl_2 & CO_2.

(C) Development of teaching aids:

Innovation, improvisation and fabrication.

(D) Teaching of Lab Techniques and lab work:

- Maintenance of Science laboratory equipments, museum, herbarium and aquarium.
- Preparation of solutions and laboratory reagents.
- Use of first aid box and awareness of safety rules.
- Organization of science club and hobby club.
- Organization of science exhibition.

Suggested Readings:

1 Mittal, R.S., Mishra R.R. and Maheswari, S.C. : *Laboratory Manual in Science*, Arya Book Depot, New Delhi

2 .Goyal, M.M. Saxena, O.P., Chawla, A.K. and Charaya, M.U.: *Candid Science practicals*, Evergreen Publications, New Delhi.

3 Tripathi, R.B. and Yadav, P.S. : Nutan Practical Science, BPL Publishing, Bhopal.

FIRST YEAR

PAPER VII-MATHEMATICS PRACTICUM-I

Max. Marks: 50

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- *play* mathematical games and develop strategies to win.
- *organise* mathematics club activities.
- *identify* mathematics toys and solve the activity puzzles.
- *participate* in mathematics seminars.
- *construct* mathematics models.
- *setup* mathematics-laboratory.

1. **Mathematical games:**

   The following games will be discussed and played:

   (i) Nim

   (ii) Battle of Numbers-I

   (iii) Battle of Numbers-II

   (iv) Othello

   (v) L - Game

   (vi) Plot - Four

   (vii) Factor game

2. Setting up mathematics laboratory, construction of mathematics models (including paper folding and curve stitching) Mathematical club.

3. Mathematical Activity, puzzles, such as Rubic, Cube, Fifteen-Square puzzle, Brain vita, Map colouring activities, Tessellations and dominos.

4. **Mathematical Seminar :** Seminars on special topics assigned to the individual students on topics of Mathematics content.

प्रथम वर्ष

प्रश्न–पत्र V : हिन्दी भाषा की विषय वस्तु तथा शिक्षण – कार्यनीति

समय : 3 घंटे पूर्णांक : बाह्य 75, आंतरिक 25

नोट : प्रत्येक इकाई से प्रश्न पूछे जायेंगे।

उद्देश्य :

प्रशिक्षार्थी,

माध्यमिक स्तर पर व्यापक रूप से पढ़ाई जाने वाली हिन्दी भाषा और उसकी विषय–वस्तु को पूरी तरह जान–समझ सके तथा उनकी शिक्षण विधियों का कुशलता पूर्वक प्रयोग कर सके।

हिन्दी भाषा की मौखिक एवं लिखित अभिव्यक्ति के शिक्षण के लिए भाषा के आवश्यक अंगों–उपांगों का वैज्ञानिक विश्लेषण कर सके तथा हिन्दी भाषा के व्यावहारिक रूप का कक्षा–शिक्षण में प्रयोग कर सके।

भाषा के मौखिक एवं लिखित सौन्दर्य के कारक तत्वों यथा–छंद, अलंकार, लोकोक्ति–मुहावरे, उनके उपादानों का अध्ययन–विश्लेषण कर सके तथा छात्रों में सौन्दर्याभिरूचि के विकास के उपाय कर सके।

छात्रों में भाषा बोध के विभिन्न आयामों के विकास के लिए पढ़ाई जाने वाली विषय–वस्तु यथा–कविता, कहानी निबंध, नाटक तथा अन्य विधाओं के शैक्षणिक उद्देश्य और उनका अलग–अलग महत्व समझ सके तथा विभिन्न विधाओं की पाठ योजनाओं का विकास कुशलता पूर्वक कर सके।

छात्रों की भाषा सीखने विषयक कठिनाइयों एवं समस्याओं की पहचान कर सके एवं उनके निदान के उपाय खोज सके।

हिन्दी भाषा एवं साहित्य के विकास एवं उनकी प्रवृत्तियों से परिचित होकर भाषा के ऐतिहासिक–सांस्कृतिक स्वरूप का प्रसंगानुकूल कक्षा–शिक्षण में उपयोग कर छात्रों की सौन्दर्य–दृष्टि के उन्नयन तथा व्यक्तित्व के रचनात्मक विकास में सहायक हो सके।

अहिन्दी भाषा–भाषी छात्रों को हिन्दी भाषा सिखाने के उद्देश्य तथा उसकी शिक्षण विधियों का प्रयोग कुशलता पूर्वक कर सकें।

प्रथम इकाई–

(1) हिन्दी भाषा : उद्भव और विकास (संस्कृत के अब तक) तथा हिन्दी और उसकी बोलियाँ।

(2) भाषा–शिक्षण के अनिवार्य अंग

ध्वनि – हिन्दी भाषा की ध्वनियाँ तथा मुख–विवर में स्थान और प्रयत्न के अनुरूप उनका वर्गीकरण।

वर्ण – हिन्दी वर्णमाला–वर्ण के भेद। स्वर और व्यंजन।

वर्ण और अक्षर की संकल्पनाएं।

मात्राएँ – मात्राओं का प्रयोग। संयुक्त स्वर, अनुनासिक अनुस्वार तथा विसर्ग। रेफ के प्रयोग और प्रकार व्यंजन तथा संयुक्त व्यंजन। स्वर और व्यंजनों में संधि तथा उनके प्रकार। तथा शब्द रचना में उसका महत्व

(3) उपरोक्त (1) तथा (2) में दी गई विषय वस्तु के आधार पर हिन्दी भाषा–शिक्षण में उच्चारण की समस्याओं तथा अशुद्ध उच्चारण के कारणों की पहचान तथा निदानात्मक उपाय के लिए की जाने वाली कार्यनीतियों का विश्लेषण तथा चर्चा।

द्वितीय इकाई –

(1) शब्द और उसकी रचना विधि

शब्द और उसके भेद – अर्थ की दृष्टि से (एकार्थी, अनेकार्थी, पर्यायवाची, और विलोम)

– इतिहास की दृष्टि से (तत्सम्, तद्भव, देशज्, विदेशी)

– प्रयोग की दृष्टि से (सामान्य, तकनीकी, अर्ध तकनीकी)

– रचना की दृष्टि से (रूढ़, यौगिक और योग रूढ़)

शब्द रचना – उपसर्ग, प्रत्यय, संधि और समास की अवधारणा और शब्द–रचना में उनकी भूमिका उनके प्रकार और प्रयोग तथा शब्द–रचना में रूपान्तरण और महत्

शब्द शक्तियाँ – अभिधा, लक्षण और व्यंजना। भाषा शिक्षण में उनका महत्व और साहित्य व सौन्दर्यपरक व्याख्या में इनकी भूमिका।

पद विचार – शब्द और पद। पद–भेद। संज्ञा, सर्वनाम, विशेषण, क्रिया और अव्यय तथा पद परिचय

(2) भाषा–शिक्षण में शब्दार्थ शिक्षण की कार्यनीति तथा शब्द–रचना की प्रकृति और इसके प्रकारों का प्रयोग (उपसर्ग, प्रत्यय, संधि, समास, विलोम व्युत्पत्ति तथा वाक्य प्रयोग द्वारा शब्दार्थ–शिक्षण)

तृतीय इकाई

(1) हिन्दी वाक्यों का रचना विधान

वाक्यों के प्रकार – अर्थ की दृष्टि से

– रचना की दृष्टि से

पद बंध – संरचना एवं प्रकार

वाक्य विश्लेषण

(2) भाषा रचना तथा लेखन– पत्र लेखन, निबंध लेखन, तार तथा संवाद लेखन आदि की कुशलता के विकास के लिये की जाने वाली कार्य विधियाँ

(3) भाषा सौन्दर्य – छन्द की अवधारणा तथा प्रकार। छन्द – मात्रिक एवं वर्णिक

कुछ प्रमुख छन्दों का परिचय – दोहा, चौपाई, सोरठा, कवित्त, सवैया, घनाक्षरी, रोला आदि।

अलंकार – शब्दालंकार। अनुप्रास, यमक, श्लेष आदि

– अर्थालंकार – उपमा, रूपक, उत्प्रेक्षा अन्योक्ति, अतिशोक्ति आदि।

मुहावरे और लोकोक्तियाँ – अवधारणाएँ तथा उनके निर्माण की प्रकृति के द्वारा भाषा का सामाजिक सौ

(4) कविता शिक्षण के समय रस, छन्द और अलंकारों से उत्पन्न सौन्दर्य को स्पष्ट करने के विभिन्न उपाय त गद्य शिक्षण के समय मुहावरे तथा लोकोक्तियों का प्रसंगानुकूल उपयोग एवं भाषा की प्रभावोत्पादकता स्पष्ट करने के विभिन्न उपायों की चर्चा।

चतुर्थ इकाई

(1) पाठ योजना – भाषा शिक्षण में उसकी उपयोगिता तथा उसके सोपान। कविता, कहानी, निबंध, नाटक त अन्य विधाओं के शिक्षण के उद्देश्य और भाषा–शिक्षण में उनका महत्व और भूमिका।

(2) कविता, कहानी तथा निबंध के शिक्षण में मुखर वाचन तथा मौन वाचन का प्रयोग – उसके अलग–अलग उद्देश्य तथा भूमिका।

(3) कहानी – शिक्षण की विभिन्न कार्यविधियाँ

– शिक्षक द्वारा कहानी पाठ

– छात्रों द्वारा कहानी पाठ

– कहानी का मौन वाचन

– कहानी का कक्षा में विश्लेषण।

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(4) नाटक शिक्षण की विभिन्न शैलियाँ

– कक्षा में छात्रों द्वारा संवाद कथन

– पात्रों का विश्लेषण

– कथानक का विश्लेषण।

कक्षा कार्य – प्रत्येक विधा की निर्धारित पाठ्य पुस्तकों के आधार पर कम से कम दो–दो पाठों की पाठयोजना का प्रशिक्षार्थियों की सहायता से विकास।

पंचम इकाई

(1) हिन्दी सहित्य के इतिहास का संक्षिप्त परिचय। काल विभाजन एवं प्रत्येक काल की प्रमुख विशेषता।।

(2) आधुनिक हिन्दी गद्य के विकास का परिचय–निबंध, कहानी, नाटक, उपन्यास तथा अन्य विधाएँ

(3) हिन्दी साहित्य की समकालीन प्रवृत्तियाँ, स्वातंत्रोत्तर साहित्य, नयी कविता, नयी कहानी, उपन्यास और नाटक

संदर्भ पुस्तकें

1.	लक्ष्मी नारायण गुप्त	*हिन्दी भाषा–शिक्षण*
2.	रमन बिहारी लाल	*हिन्दी–शिक्षण*
3.	रजनी कान्त लहरी	*हिन्दी–शिक्षण*
4.	रघुनाथ सफाया	*हिन्दी–शिक्षण विधि*
5.	डॉ. सावित्री सिंह	*हिन्दी–शिक्षण*
6.	निरंजन कुमार सिंह	*माध्यमिक विद्यालयों में हिन्दी–शिक्षण*
7.	श्रीमती प्रकाशवती दुग्गल एवं श्याम जी गोकुल वर्मा	*हिन्दी–शिक्षण*
8.	राजेन्द्र प्रसाद श्रीवास्तव	*हिन्दी–शिक्षण*
9.	के. क्षत्रिया	*मातृभाषा–शिक्षण*
10.	आर.एस. श्रीवास्तव	*मातृभाषा–शिक्षण*
11.	महवीर सरन जैन	*अन्य भाषा शिक्षण*
12.	डॉ. भगीरथ मिश्र	*अच्छी हिन्दी कैसे लिखें*
13.	केन्द्रीय हिन्दी संस्थान, आगरा	*भाषा शिक्षण तथा भाषा–विज्ञान*
14.	डॉ. लक्ष्मीलाल के ओड़	*भाषा–शिक्षण की नवीन विधियाँ*
15.	डॉ. नीलमणि उपाध्याय	*हिन्दी भाषा–शिक्षण*

FIRST YEAR

PAPER V – CONTENT -CUM- METHODOLOGY – I
TEACHING STRATEGIES IN ENGLISH

Time : 3 hrs. Max. Marks : Ext.75, Int.25

Note : Questions will be set from each unit with only internal choice.

Objectives:

- To provide to the teachers adequate content enrichment in the area of basic English phonology essential practical grammer, different literary forms and essential English prosody.
- To prepare the teachers for developing among the students adequate communicative competencies in English language.
- To prepare the teachers of English for effective transaction of the secondary school curriculum.
- To prepare competent and effective teachers of English language and literature for the secondary level.
- To develop among the teachers adequate skills of listening with understanding in different situations.
- To develop among the teachers adequate skills of speaking with intelligibility.
- To develop among the teachers adequate various skills of reading with understanding of different types of texts.
- To develop among the teachers requisite skills of writing to enable them to communicate in different situations.
- To prepare the teachers to teach different forms of literature and to develop among the students suitable tools of appreciation for these.
- To prepare the teachers to use various techniques of comprehensive and continuous evaluation for the different language skills.

- To develop among the teachers an adequate competency in using the various techniques and activities in the class room.
- To develop among the teachers the skills of planning lessons in different forms of language and literature.
- To prepare the teachers in monitoring the learners progress and to adopt remedial measures to remove their difficulties in the process of learning.

UNIT-I : Phonetics & Spoken English

Organs of speech, vowels and consonants, articulation of English sounds, syllable, stress, word stress, sentence stress, strong and weak forms basic intonation patterns, getting pronunciation from a dictionary.

UNIT-II : Grammer & Usage

The noun phrase, nouns, determiners, articles, pronouns, adjectives and their degrees, the verb phrase, time and tense, use of various tenses, basic uses of the modals, adverbs and prepositional phrases, transformation of sentences – affirmative, negative, interrogative, exclamatory, direct and indirect, active and passive voice, phrases and idioms, clauses : noun adjective and adverb, finite and non-finite clauses.

UNIT-III : Writing

Writing telegrams, messages, telephonic messages, reports, diary, paragraphs, summaries, descriptions : of places, maps, graphs and pictures expansion of ideas, note - taking, invitations, accepting, declining letter writing : personal, official, formal, informal, letters of congratulation, thanks, condolences and complaints.

UNIT-IV: Literature & its appreciation

Forms of literature – poetry, drama, novel, essay, short story, travelogues, basic prosody, rhythm, meter, figures of speech, simile, metaphor, rhyme, alliteration, pun, onomatopoeia.

UNIT-V : Linguistics and the Strategies of Language Teaching

Nature & functions of second language, concepts of language, dialect, variety, and register, choice of variety in the Indian context, register and language use, code, code mixing. code switching, implications of socio-linguistics, for second language, implications of psycho-linguistics for second language, role; relevance and use of linguistics in language teaching, class room strategies.

Suggested Readings :

1.	Taylor, Grant	:	*English Conversation Practice.*
2	Spratt Mary	:	*English for the Teacher: A language Development Course.*
3	NCT English	:	*English for Today Book I at Home and School; II, III & IV*
4	Mudambadithya G.S.	:	*English Grammar and Composition*
5	Sebastain D.K.	:	*English Grammar and Composition*
6	Leech Geoffrey & Others	:	*English Grammar for Today.*
7	Mcmordie W.	:	*English Idioms and How to Use them.*
8	Collin Hey G.	:	*English Usage*
9	Macarthy Michael	:	*English Vocabulary in Use*
10	Lewis C.S.	:	*Studies in Words*
11	Crystal David	:	*What is Linguistics*
12	Wilkins D.A.	:	*Linguistics in Language Teaching*
13	Cartar Ronald	:	*Linguistics & the Teaching*
14	Savage John F.	:	*Linguistics for Teachers*
15	Cazden,John& Hymes	:	*Functions of Language in the Classroom*
16	Wolfgang Klein	:	*Second Language Acquisition*
17	Corder S. Pitt	:	*Erroranalysis and inter language.*
18	Abercrombie D.	:	*Problems and Principles in Language Study.*
19	Hill H.A.	:	*Note-taking Practice*
20	Longmans	:	*Programmeme in Linguistics and English Teaching Paper 1 to 10*
21	Richards Jack C.	:	*Error Analysis*
22	Dean Leonard Gimpson, Walker Wilson	:	*The Play of English*
23	Bansal	:	*The intelligibility of Indian English*
24	Barber Charles	:	*The Flux of Language*

25	Botton	:	*The English Language*
26	Krishnamurthy	:	*Introduction to Linguistics for Language Teaching*
27	Quirk Randolh	:	*The Use of English*
28	Daswani C.J.	:	*Adverbial of Time and Location in English*
29	Palmer H.E.	:	*The Principles of Language Study*
30	Gethin	:	*Remedial English (Punctuation)*
31	CIFL	:	*Errors in Spoken English, I,II,III, & IV*
32	Bansal & Harrison	:	*Spoken English for India*
33	Dept. of English osmania University	:	*Communication Skills in English*
34	Connor J.D.O.	:	*Better English Pronunciation*
35	Jones Daniel	:	*The Pronunctiation of English*
36	Stracey Allen	:	*How to Speak English Clearly.*
37	Lawley A.H.M.	:	*How to Spell and Punctuate*
38	Krtishnamurthy and Shivraman	:	*Teaching Spoken English & Communication Skills*
39	Maccarthy Peter	:	*The Teaching of Pronunciation*
40	Brown G & Yule G	:	*Teaching the Spoken Language*
41	Edinborough Course in Appl. Linguistics Vol.1,2,3.	:	*E.Allan & Pit Corder OUP.*
42	Sinclair MCH and oup Brazil.	:	*Teacher Talk*
43	Language Planning and Language Edn.	:	*El.Chris Kennedy, Allen & Mrwin*
44	Morton B.	:	*Communicating*
45	Bansal R.K.& Brasnet	:	*An English Phonetic Reader*
46	Harvey F.	:	*Speech & Hearing in Communication*
48	Scott A.F.	:	*Current Literary Terms*

49	Chaudhary Shreesh	:	*A New Course in Better Spoken English*
50	Fernald James	:	*Standard Book of Synonyms, Antonyms and Prepositions*
51	Quirk Randolph and Greenbaum	:	*University Grammar of English*
52	Huddleton	:	*Introduction to the Grammar of English*
53	Velayudhan	:	*General Composition for Junior Colleges*
54	CIFL	:	*A Remedial course in English for Colleges*
55	Sebastian	:	*English Grammar and Usage*
56	Moueton	:	*Prepositional Phrases and Prepositional Verba*
57	Ram S K & Manson J A	:	*Learning to Communicate*
58	Taylor Grant	:	*Conversation Practice*
59	Barnes Ronald	:	*Get Your Tenses Right*
60	Jupp T.C. and John Milne	:	*Guided Paragraph Writing*
61	Colinghey	:	*English Usage*
62	Treble H.A. & Wallins G.H.	:	*ABC of English Usage*
63	Arora V.N. and Chandra Laxmi	:	*Improve Your Writing*
64.	Clause F and G Casper	:	*Strategies in Inter Languages Communication.*

FIRST YEAR

PAPER V - CONTENT–CUM–MTEHODOLOGY–I
TEACHING STRATEGIES IN URDU

Time : 3 hrs. Max. Marks : Ext.75, Int.25

Note : Questions will be set from each unit with only internal choice.

Objectives:

The teacher-trainee will be able to:

1. provide the teachers adequate content enrichment in the area of basic urdu phonology, essential functional grammar and different Urdu literary forms
2. prepare the teachers for developing among the students adequate communicative competencies in Urdu language.
3. prepare competent and effective teachers of Urdu language and literature for the secondary level.
4. develop among the teachers adequate skills of listening, speaking, reading and writing.
5. prepare the teachers to teach different forms of literature and to develop among the students suitable tools of appreciation for these.
6. prepare the teachers to use various techniques of comprehensive and continuous evaluation for the different language skills.
7. develop among the teachers the skills of planning lessons in different forms of Urdu language and literature.
8. prepare the teachers to analyse the syllabus and text books and become aware od the qualities and qualification of a Urdu teacher.

UNIT I : Language

- Definition of language, origin of Urdu language; its different names, area and its importance.
- Urdu alphabets, borrowed from Arabic, Persian and Hindi; their sounds, shapes and nomenclatures, their organs of speech, vowels and consonents: *Shamsi* alphabets and *Qamri* alphabates.

Types of writing of Urdu - *Khat-e-Naskh; Khat-e-Nastaliq and Khat-e-Shikast.* Identification of problems of pronunciation of Urdu sounds, common effort in writing Urdu Script and ways of corrections and remedills thereof.

UNIT II : Writing

Urdu words, kinds of words - articulate and inarticulate, Divisions of articulate words- Structural (suffix and prefix), and lexical, semantic; synonyms, antonyms.

Idioms, proverbs, Urdu abbreviations: Urdu grammer - noun, verb and particles.

Sentence structure - sentence as a unit of expression, different modes of expressing ideas, punctuations; Syntax.

Identification of variations in the meaning of Urdu words, idioms and proverbs and techniques of formation of sentences in urdu.

UNIT III : Introduction of Urdu Literature:

- An outline history of Urdu literature in
  - i) Deccan
  - ii) Northern India
  - iii) Modern era and contemporary writings.
- Main schools of Urdu poetry
  - i) *Dabestan-e-Lucknow*
  - ii) *Dabestan-e-Delhi*
- Important literary movements
  - i) Aligarh movement
  - ii) Romanvi movement
  - iii) Progressive movement
- Identification of differences in *Dakhni* and *Shumali* (northern India) Urdu, Delhi and Lucknow poetry and study of impact of important literary movements of Urdu.

UNIT IV : Urdu Literature

Various forms of Urdu literature in

(i) Prose -*Dastan*, Novel, *Afsana, Drama, Khudnawisht, Inshayya, Mazmoon.*

(ii) Poetry - *Qasida, Marsia, Masnavi, Gahazal, Rubaee, Qataa, Nazm.*

An introduction of important writers and poets of each form of Urdu literature.

Differentiate among various forms of Urdu literature and identification of important writers and poets.

UNIT-V : Lesson Plan

- Importance of Lesson Plan in teaching and unit plan.
- Techniques of lesson plan, aims and objectives in:
  - (i) Fictional Prose
  - (ii) Non-fictional Prose
  - (iii) Poetry
- Teaching aids
  - Two model lesson plans in each form of literature to be developed in the classsroom with the help of the student teachers.

Internal Assessment

Some activities are suggested for the internal assessment. It can be changed and use as per requirement.

(i) Unit wise tests - oral and written - after teaching every unit a class room te will be held

(ii) Identification of common errors in pronunciation and remedial teaching.

(iii) Testing of fluency of reading of Urdu scripts particularly *Khat-e-Shikast.*

(iv) Identification of Urdu vowels and differentiate between long vowel and sho vowel.

(v) Different names of Urdu

(vi) Identify impacts of Indian languages and dialects on Urdu

(vii) Identify and illustrate *Qamri* and *Shamsi* alphabets

(viii) Preparing a list of classical writers & poets of Dakhni Urdu.

(ix) Preparation of list of writers of atleast one form of Urdu literature

(x) Preparation of chart of Urdu alphabets indicating the sounds and points articulation

(xi) Practice in class analysis of Urdu sentences.

Suggested readings :

1 Nazeer Hasan - *Taleem-e-Zaban ke Lissanyati Pehlu*

2 Dr Shaukat Sahwari - *Dastan-e-Zaban Urdu*

3 Abdul Qadir Sarwari - *Zaban aur ilme Zaban*

4 Giyan Chand Jain - *Lisani Mutalwe*

5 Nazir Hasan – *Qawaid - e – Urdu*

6 Maulvi Abdul Haque - *Urdu Qawaid*

7 Syed Aijaz Husain - *Mukhtasar Tareekh-e-Adab Urdu*

8 Gopi chand Narang - *Urdu Imla*

9 Rasheed Hasan Khan - *Urdu Kaise Likhen*

10 Rasheed Hasan Khan - *Insha aur Talaffuz*

11 Rasheed Hasan Khan - *Imla namah*

12 Khaliq Anjum, Qamar Rais - *Asnaf-e-Adab Urdu*

13 Masood Hasan Khan - *Muquddama Tareekh-e-Zaban Urdu*

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FIRST YEAR

PAPER VII - PRACTICUM IN URDU

Max. Marks : 50

- Some activities are suggested:

(i) Translation from any language to Urdu and *vice- versa.*

(ii) Write ups and reports

(iii) Abstracting and review of articles published in journals and news papers

(iv) Preparing a dictiorary of Urdu words from the text books of class IX & X

(v) Preparing an album of Urdu writers and poets showing date of birth and expiry if applicable.

(vi) Designing a short programmeme for learners who want to learn urdu.

(vii) Any assignment

प्रथम वर्ष

प्रश्न पत्र V : मराठी भाषा विषय व अध्यापन पद्धती

समय : 3 तास पुर्ण गुण : बाह्य 75, आंतरिक 25

नोट : प्रत्येक घटकावर प्रश्न विचारले जातील।

उद्देश : (माध्यमिक शिक्षक तयार करण्यासाठी)

- माध्यमिक स्तरावर होणा या मराठीच्या विषयाचे व अध्यापनाचे स्वरूप जाणून घेणे.
- मराठी भाषेच्या बोलण्यात आणि लेखनात असणारे अंतर जाणून प्रमाणित भाषेच्या अध्यायनाची आवश्यकता जाणणे.
- मराठी भाषा बोलताना तिच्यातील शुद्ध व स्पष्ट उच्चारांचा सराव करणे व मराठीतील ध्वनीचे शुद्ध उच्चार करणे.
- भाषेच्या उच्चारातून व लेखनातून अभिव्यक्त होणया सौंदर्याचा परिचय करून देने व विद्यार्थ्यांच्या ठिकाणी सौंदर्यदृष्टीचा विकास करणे.
- भाषेतील विविध वाङ्.मय प्रकारांचा परिचय करून देणे. या विविध वाङ्.मय प्रकारातून अभिव्यक्तीचे सौंदर्य कसे प्रकट होते हे स्पष्ट करणे.
- भाषेतील व्याकरणाचा अभ्यास केल्याने भाषेचे शास्त्रीय स्वरूप समजाऊन घेण्यास मदत करणे.
- मराठी भाषेचा ऐतिहासिक विकास कसा झाला व मराठी वाङ्.मयाच्या विकासाची व त्यातील प्रवाहाची रूपरेषा समजून घेणे.
- भोषेच्या अध्यापनातून उत्तम शिक्षक तयार होण्यासाठी कोणकोणत्या क्षमतांची आवश्यकता असते हे जाणून घेणे.
- अध्यापनाचे तंत्र अवगत झाल्यास अध्यापनात गुणात्मक वाढ होते व त्यामुळे शिक्षणाचा दर्जा उंचावण्यात मदत होते.

घटक I

(अ) ध्वनी (1) मराठी वर्णमाला परिचय,मराठीचे ध्वनी ध्वनींची मुखातील उच्चार स्थाने, ध्वनीचे वर्गीकरण, ध्वनी संयोग ध्वनीचे अर्थ, स्वर अणि व्यंजने, ध्वनीवरील आघात.

अध्यापन रीती– मराठी भाषेत उच्चारांची वैशिष्टये व समस्या अशुद्ध उच्चारांची कारणे. उच्चार प्रक्रियेचे प्रकार प्रमाणित उच्चार कोणते, शुद्ध उच्चारांचे अध्ययन व अध्यापनातील महत्व. 16

घटक – II (अ) शब्द व शब्दरचना

1. शब्दांना अर्थ कसा प्राप्त होतो, शब्दशक्ती व शब्दाचे सामर्थ्य व सौंदर्य.
2. शब्दशक्ती :– व्यंजना, अभिधा, लक्षणा, समानार्थी, विरूद्धार्थी, इ.
3. शब्दाचे प्रकार व जाती (नाम, सर्वनाम, विशेषण क्रियापद, क्रियाविशेषण, उभयान्वभी अव्यये, शब्दयोगी व केवल प्रयोगी अव्यये इत्यादी

घटक–III (अ) **वाक्य रचना व लेखन प्रकार**

1. वाक्य म्हणजे काये? वाक्याची रचना, वाक्याचे प्रकार, प्रयोग व त्याचे प्रकार.
2. मराठी भाषेतील वाक्प्रचार व म्हणी व त्याचे महत्व.

(आ) **मराठीतील अलंकार व छंदोरचना**

1. अलंकाराची व्याख्या व भाषेतील महत्व
2. अलंकाराचे प्रकार शब्दालंकार, अर्थालंकार
3. मुक्तछंद इत्यादी.

घटक– IV (अ) मराठी भाषेचे प्रादेशिक भेद कालीक भेद

मराठी साहित्याच्या इतिहासाची रूपरेखा 1850 ते आजपावेतो विशेषतः स्वातंत्र्योतर काळातील नव प्रवाहाच परिचय करून देण्यात यावा. साहित्यिक व त्यांच्या वाङ्.यीन कृतीचा अभ्यास अपेक्षित नसून ––– प्रवाहाच वैशिष्टयांचा परिचय व्हावा.

(आ) मराठी भाषा अध्यापनाचे शिक्षणात महत्व, भाषा शिक्षणाचे सिद्धांत, भाषिक, कौशल्य, भाषा शिक्षणात कौशल्याचे महत्व व परस्पर संबंध.

प्रथम भाष म्हणून मराठीच्या अध्यापनाची उद्दिष्टे त्रिभाषा सूत्राचे महत्व व मराठीचे स्थान 16

घटक – V

(अ) (1) पाठाची योजना आणि त्याची उपयोगीता निबंध, कविता, कथा, लघु निबंध, नाटक, व्यक्तीचित्रण इत्यादीची अध्यापन उद्दिष्टे व भाषा शिक्षणात त्याचे महत्व.

(2) वरील प्रकाराची पाठ योजना कशी करावी याचे स्थूल मार्गदर्शन, तसेच या पाठाच्या अध्यापनात प्रश्नाचे स्वरूप व त्याचे नियोजन करणे. 16

अध्यापन रीती :– इयता नववी व दहावीतील पाठयपुस्तकातील पाठांच्या आधारे अध्यायन करावे. यातील विषय वस्तू उदाहरणासाठी निवडावी. 16

अध्यापन रीती – इयता नववी व दहावीतील पाठय पुस्तकातील विषय वस्तु लक्षात घेऊन कविलेतील छंदाची लक्षणे कोणती यावर चर्चा करणे.

अलंकाराची योजना, व्याख्या व योजकता सौंदर्याला उपकारक कशी झाली हे जाणणे व चर्चा करणे वाक्य रचनेचे विविध नमुने तमार करणे.

अध्यापन रीति – (इयता नववी व दहावीतील मराठी पाठयपुस्तकावर आधारित पाठाचा प्रारूप असावा प्रत्येक वाङ्.मः प्रकाराचे दोन दोन पाठयोजना विद्यार्थ्याकडून करवूव घ्यावी)

पाठ अध्यापनात, आकलन, अभिव्यक्ती व सौंदर्यानुभूतीपर प्रश्नाचे लिखित स्वरूपं मूल्यांकनाच्या दृष्टिने कसे असावे याचा सराव करावा.

तोंडी प्रश्नाची रचना ही आकलन अभिव्यक्ति व सौंदर्यबोधात्मक अनुभूतीसाठी कशी असावी याचे चर्चा करणे

मूक वाचन व मुख वाचनाचे महत्व व त्याचे प्रात्यक्षित करावे

निबंध लेखन, पत्र लेखन, सारांश लेखन, कल्पनाविस्तार, वृत्तपत्र रिपोर्ट इत्यादीचा सराव व्हावा र साठी कृतीसत्राचे आयोजन करावे

तसेच कवितेचे भावपूर्ण वाचन, मध्यवर्ती कल्पना व तिचे रसग्रहण, संदर्भ लिहिणे अलंकार वृत व शैलीचे सौंदर्य यासाठीही चर्चा व कृतीसत्र घ्यावे.

आंतरिक मूल्याकन

गुण : 25

1. प्रत्येक घटकावर आधारित एक अशा एकूण पाच वर्गातर्गत परीक्षा घ्याव्यात.
2. ध्वनी, शब्द व जोडाक्षरे व 'च' वर्गातील व्यंजनाचा शूद्ध उच्चारांचा सराव करण्यासाठी प्रात्यक्षित घ्यावेत.
3. कोणत्याही एका साहित्य प्रकाराचा ऐतिहासिक आढावा लिहून घ्यावा.
4. मराठीतरील किमान 50 वाक्प्रचार व 25 म्हणी पाठ कराव्यात
5. किमान 2 कवितांचें रसग्रहण लिहावें.

प्रश्न पत्र 1 ला
अभ्यासासाठी संदर्भ ग्रंथ

1.	कृ. पा. कुलकर्णी ढवंळे प्रकाशन, मुंबई	*शब्द उद्गम आणि विकास*
2.	मो.स. मोने	*मराठी व्याकरण*
3.	वा. गो. आपटे	*मराठी वाक्प्रचार व म्हणी*
4.	ग. वि. अकोलकर – ना वि पाटणकर व्हीनस प्रकाशन, पुणे	*मराठी व्याकरण निबंधन, साहित्य*
5.	वि भि कोलते अरुण प्राकाशन, मलकापूर	*मराठी दीपिका*
6.	कृ. पा. कुलकर्णी	*मराठी भाषा उद्गम आणी विकास*
7.	संपादित, कान्टिनेंटल प्रकाशन, पुणे	*प्रदक्षिण खंड 9 व खंड 2*
8.	डॉ. अ. ना. देशपांडे व्हीनस प्रकाशन, पुणे	*आधुनिक मराठी वाड्.मनाचा इतिहास* भाग 1 व भाग 2
9.	वि. वा भिडे चित्रशाला प्रकाशन, पुणे	*मराठी भाषेचे वाक्प्रचार व म्हणी*
10.	ग.ह. केळकर, सिटी बुकस्टाल, पुणे	*मराठी व्याकरणाची मूलतत्वे*
11.	संपादित – मु. श्री. कानडे – विद्या प्रकाशन पुणे	*मराठीचा भाषिक अभ्यास*

FIRST YEAR

PAPER V - CONTENT -CUM- METHODOLOGY – I

TEACHING STRATEGIES IN GUJARATI

Time : 3 hrs. Max. Marks : Ext.75, Int.25

Note : Questions will be set from each unit with only internal choice.

Objectives:

The teacher-trainees will be able to :

1. provide the teachers adequate content enrichment in the area of basic Gujarati phonology essential functional grammer and different Gujarati literary forms.
2. prepare competent and effective teachers of Gujarati language and literature for secondary level.
3. develop among the teachers adequate skills of listening, speaking, reading and writing.
4. develop among the teachers the skills of planning lessons in different forms of Gujarati language and literature.
5. prepare the teachers to use various techniques of comprehensive and continuous evaluation for the different language skills.
6. prepare the teachers for developing among the students adequate communicative competencies in Gujarati language.

UNIT I : Language

(a) Origin and development of Gujarati language; its area and importance and Its relations to other dialects.

(b) *Dhwani* - different types of *dhwani*; their organs of speech, *swar* and *vyanjana*

- identification of problems of pronunciation of Gujarati sounds, common errors in pronunciation and ways of corrections.

UNIT-II: Word and Sentence

(a) Gujarati words, kinds of words, articulate and inarticulate, structural (suffix & prefix), lexical, semantic, synonyms, antonyms, Idioms and proverb.

(b) Sentence structure - sentence as unit of expression, different modes of expressing ideas, punctuations, syntex.

identification of variations in the meaning of Gujarati words and techniques of formation of sentences in Gujarati.

UNIT III : Grammer

(a) *Sandhi*, different types of *Sandhi, Swar sandhi, vyanajana sandhi* and *visarg sand samas*, different types of *samas.*

(b) Figure of speech, *upma, rupak, sajevaropan, anayokti, atishyokti, virodhabas.*

(c) Prosody, *Chhand, Doha, Chopai, Chhappa, Shikarini, Mandakrnta, Vasantilk Anushup.*

UNIT IV : Introduction of Gujarati literature

(a) History of Gujarati literature - general classification of different periods of Gujar literature; history of modern Gujarati from 1850 till date.

(b) Forms of Gujarati literature -

Mahakavya, Drama, Novel, memories, biographies, essays etc.

(c) An introduction of important writers and poets of each form of Gujarati

- identification of different forms of Gujarati literature and study of importa phases of development of Gujarati literature.

UNIT V : Lesson Plan

- Importance of lesson plan in teaching and unit plan
- Technique of lesson plan, aims and objectives
  - (a) Gujarati poetry
  - (b) Gujarati fiction
  - (c) Gujarati non-fiction.
- Teaching aids

  Two model lesson plans in each form of literature to be developed in the cla room with the help of the student teacher.

Suggested Readings :

1. Shankar Lal Trivedi - *Matraubhasnu Shikshan*
2. C.K. Ackruwala - *Matrubhasanu Shikshan*
3. Dr. Dhanavant Desai - -do-
4. K.K. Shastri - *Gujarati Bhasha Lekhan*
5. Kamala Shankar Trivedi - *Pathya Bruhat Vyakaran*
6. Anantray Rawal - *Gujarati Sahitya (Madhyaka aur Arvachin)*

FIRST YEAR

PAPER VI - CONTENT-CUM-METHODOLOGY - II
TEACHING STRATEGIES IN SOCIAL SCIENCES

ime : 3 hrs. Max. Marks : Ext. 75, Int. 25

Note : Questions will be set from each unit with only internal choice.

The paper will comprise the following components of Social Sciences-Geography, Economics, History and Civics in five units. The marks will be distributed as follows:

EXTERNAL

Social Sciences Unit I – (Introductory)		15 marks
Geography –	Unit II	15 marks
Economics-	Unit III	15 marks
History-	Unit IV	15 marks
Civics -	Unit V	15 marks

INTERNAL

(based on class tests and other measures of continuous and comprehensive evaluation) 25 marks

bjectives:

ıe teacher – trainees will be able to :

develop knowledge, understanding, skills and application of concepts in these areas,

realise the importance of natural resources and express the need of judicious and economical utilization of resources.

develop an ability to identify and express similarities and differences in different geographical regions and causes for their formation.

develop an ability to express the life patterns of man in major natural regions – occupation, food, housing, etc.

develop an ability to appraise natural environment of our country, its elements and their effect on human life.

develop an ability to appreciate favourable geographical conditions and express their role in economic activities, agriculture and industrialization and growth of the country.

- acquaint pupils with the contemporary economic problems and to help th appreciate the efforts being made to solve these problems at local, state and natio level.
- help them understand the various sectors of the Indian Economy to be develo simultaneously in a planned and co-ordinated manner.
- help them to understand the problem of poverty and to have a passion for so justice and an urge to resist exploitation in any form.
- help them understand the problem of unemployment and to create an urge effective participation in the task of nation building.
- develop an awareness about the composite culture and civilization of the Ind society.
- them to promote an understanding among the fellow students of the processes change and development through which human societies have evolved.
- develop an understanding about the foundation and spread of human civilizations.
- enrich their knowledge on those aspects of historical developments which are cruc to an understanding of contemporary culture and polity at global level.
- create an eagerness among themselves for effective participation in commun affairs.
- develop an understanding of the structure and working of the civic and politi institutions.
- develop an awareness and critical understanding of various social, economic a political challenges facing the country.
- appreciate the role and contribution of India and the United Nations in the promoti of international peace.

UNIT I

Meaning and concept of Social Sciences. Nature and scope of History, Geograph Economics and Civics.

Study of Maps, tables, charts, photographs, objects as aid to study of social sciences.

Basic components of maps, types, toposheet, thematic maps, graphs, bar & column, pie a wheel diagrams, dot maps, isopleth and charopleth maps.

Strategies for content enrichment of Unit-I

Social Science is the study of various kinds of social behaviours in temporal and spatial situations. The learners should develop abilities to appraise the structure and functioning of human behaviours. They should be able to draw maps and diagrams and use them in communicating the concept.

UNIT II

(a) Environment:

Components of environment: Lithosphere – changing face of the earth, structure, rocks, processes and the stage; Atmosphere – structure of atmosphere, heat balance, temperature zones, pressure and wind, factors affecting climate, evaporation, condensation, precipation, water cycle: Hydrosphere – importance tides, salinity; Biological environment – plants, animals, food chain, ecological balance.

b) **Human impact on environment:**

Human pressure on the earth-excessive use of resources, various renewable and non-renewable resources, conservation of resources and energy. Pollution of water, land and air; Protection of land, water and forests.

c) **Man and environment in natural regions of the world** : Major natural regions, with special reference to equatorial, monsoon, savanna, Mediterranean, desert, mid latitude grass land – taiga and tundra.

(d) **Natural resources of India:**

Physiographic regions of India – Himalayas, great plains, Deccan Plateau, Coastal plains, Islands, monsoon and seasonal changes, flora, fauna, soils, resources, power, minerals, multipurpose projects.

e) **Human activities in India:**

Human resources, urban and rural population, growth and distribution of population; agriculture – concepts, types, crops, green revolution; Industries – types, major industries – textiles, iron & steel, sugar, petroleum and cottage industries; Means of transport- Railways, road, airways; Trade and ports.

Strategies for content enrichment of unit II

a) Learners should develop competency to co-relate various elements of environment. They should be able to understand the process and product. Examples from various types of environment.

b) Emphasis on deteriorated conditions of forests, land, water, air. Examples from Chambal ravines, water problems of Malwa, coal burning in Jharia.

(c) Inter linkages of location, climate, vegetation, occupation and human life in different natural regions, with the help of rainfall and temperature graphs, photographs of vegetation and animal life's, house types, etc.

(d) Students should understand the environmental conditions in various physiographic regions, with emphasis on resources.

(e) Co-relation between physical conditions and economic activities. Examples from various areas. Emphasis on resource distribution and location of industries.

UNIT III

(a) Economy : Meaning. types and its central problems.

(b) Indian Economy: Basic features and it's main sectors and their significance in national output and productivity.

(c) Population: Its basic features and composition; problems of population growth - poverty, unemployment and food supply in India.

(d) Human Resource Development: Role of Education, Health and Environment.

(e) Infrastructure of Indian Economy: Meaning and significance. Social and economic infrastructures.

(f) Economic Planning: Need and objectives, economic liberalisation and reforms.

Strategies for content enrichment of Unit III

(a) Emphasis on the type of Indian economy, causes and consequences.

(b) Comparison and contrast with other developed and underdeveloped countries of the world.

(c) (i) Comparison of basic features and composition of population of India with the rest of the world.

(ii) Emphasis on population growth as a hindrance to economic development

(iii · Emphasis on the measures adopted by the Govt. of India to solve the problems of poverty, unemployment and food supply.

(d) Emphasis on (i) National Policy of Education (NPE) 1986 and (ii) the ideas of Noble Prize Winner Amartya Sen.

(e) (i) Social and economic infrastructure of India in comparison of other countries to the world.

Emphasis on (I) . Recent trends of monetary and fiscal policy of GOI with special reference to Bank Rate policy etc.

(II) Main import-export items & export promotion measures of the Govt. of India.

) (i) Emphasis on New Industrial Policy, 1991 and its impact on Indian Economy

(ii) Status of Indian economy in the world after liberalisation.

NIT IV

Bronze and Early Iron Age Civilisations:

Indus Valley and Ancient Indian Civilisations. The Chinese, the Egyptian, the Mesopotamian, the Greek, the Iranian and the Roman civilisations. Judaism and Christianity.

Early American and African Civilizations:

The Maya, Aztecs and Incas civilizations. Early African cultures and civilizations. The Kush, Sudanese and Kongo civilizations.

The Medieval World:

Feudalism in Europe. Role of Church Trade & Commerce. Culture and Science. The Arab civilization. Rise of Islam. India in Medieval Times. Medival China and Japan.

Beginning of Modern Age:

Disintegration of the Feudal system. Renaissance. Humanism. Reformation. Discoveries & explorations. Colonisation. Growth of nation - states.

Capitalism and Industrial Revolution:

Spread of industrial revolution. Consequences of capitalism and industrial revolution.

Imperialism:

Search for markets and raw material. Imperialist conquest of Asia and Africa. Effects of imperialism

Revolutionary and Nationalist Movements:

The American Revolution. The French Revolution. The Russian Revolution. Movements for democracy. Unification of Germany and Italy.

The First World War:

Struggle for colonies. Peace Treaties. Consequences. League of Nations.

The World from 1919 to Second World War:

Rise of fascism in Italy and Germany. Failure of the League of Nations. The Second World War. Defeat of the fascist forces.

The World after the Second World War:

Immediate consequences. Setting up of United Nations. The cold war. Recent developments. End of the cold war.

11. Indian Awakening:

India in the 18th century. Impact of British rule. Salient features of Indian renaissance. Social, cultural and religious reforms.

12. India's Struggle for Freedom:

Revolt of 1857. Rise of nationalism. Formation of Indian National Congress. Extremist movements. Swadeshi movements. Muslim League. Struggle for independence under Gandhiji.

Strategies for content enrichment of Unit IV

Regarding the chapters on World civilisations (chapters 1 and 2) their place and sites, period etc. would be explained. Then development in the field of socio-economic, life-style, society, agriculture, transportation, trade and commerce etc. in these civilisations would be dilated. As well as the contribution of these civilisations in art, architecture, painting , music and the religion they followed would be highlighted.

The establishment of relations with the people of different parts of the world through trade & commerce, expansions of political authority, expansion of religion and culture to the different parts of the world would be discussed. This will be done through the study of medieval world (chapters 3 & 4).

The conditions responsible for the rise of capitalism and the Industrial revolution would be explained by telling about their consequences and the changes that followed. These consequence included the imperialism and the nationalist movements in different parts of the world (chapters 5,6 & 7).

The economic rivalry following the expansion of colonies led to the outbreak of first world war. But this first world war instead of solving the problems, created new problems and led to the rise of fascist forces in Europe which pushed the world to second world war. These circumstances and events should be highlighted while teaching chapters 8, 9 and 10. The study of these chapters would also include, the developments after the second world war including UNO and cold war.

The events taking place in Europe had a direct effect on India also, which ultimately led to the establishment of British rule. However, the Indians awakened to resist this foreign rule and carried on a long freedom movement. The impact of British rule and the ultimate freedom achieved would be discussed in chapters 11 and 12.

NIT V

Man as a Citizen:

Man as a social being. Society. Human needs and inter-dependence. Man's relationship with family and community. Man as a citizen. Necesity and meaning of government

Government at Local Level:

Local self-government. Village panchayat. Muncipal committees and corporations.

Government at State and Central Level

(a) The State government. Power and function at different levels. Administration of Union Territories

(b) The Role of State government: law and order, supply of essential commodities, education and agriculture.

(c) Central government. Parliment. Supreme Court.

(d) Fundamental rights and duties.

(e) Directive principles.

(f) Election -parliament and state legislature.

Indian Democracy:

(a) Meaning and formation of democracy.

(b) Socialism. Secularism. National Integration. Unity in Diversity.

Challenges Facing Our Country Today

Socio-economic problems. Problems of regionalism, communalism, minority. casteism. Status of women. Law and social change. Anti-social practices (corruption, smuggling, criminalization)

India and World Peace

(a) India's foreign policy - Non -Alignment

(b) India and U.N.O.

(c) Human Rights.

tegies for content enrichment of Unit V

le discussing chapters 1 and 2, the emphasis should be on developing the ability to uss the matters by the students. For better understanding of the local self-govt. e.g. icipal council, village panchayats etc. the students should be encouraged to visit these bodies and to observe their functioning. The students should also be encouraged to meet lected representatives of these bodies and prepare a short report.

For chapters 3,4,5 and 6 the same strategy as discussed above may be adopted. However, for understanding better the challenges facing our country, a socio-economic survey may be conducted of the village and neighbourhood. After conducting the survey the students may be able to submit a report on the analysis and results of the survey. Regarding chapter 6, the latest developments in the world may be explained through the study of newspapers, magazines etc. and students should also be encouraged to go through the newspapers regularly.

Suggested Readings:

FOR UNIT I

1. Fielding, G.J. - *Geography as Social Science*, Harper & Row, New York, 1974.
2. Raisz, E - *General Cartography* McGraw Hill Book Company, New York, 1948.
3. Monkhouse, F.J. & Wilkinson, M.R., *Maps and Diagrams*, Methnen, London, 1972.
4. Singh, L.R. and Singh, R. *Map Work and Practical Geography*, Central Book Depot Allahabad, 1973.
5. Singh,R.L. and Rana, P.B.S., *Elements of Practical Geography*, Kalyani Publishers New Delhi, 1992.
6. Singh, Gopal, *Map Work and Practical Geography*, Vikas Publishing House, New Delhi, 1996.

FOR UNIT II

1. de Blij, H.J. & Muller P.O., *Physical Geography of the Global Environment* John Wiley & Sons, New York, 1993.
2. Hidore, J.J. & Roberts, M.C., *Physical Geography: A Laboratory Mannual* Macmillan Publishing Co., New York, 1985.
3. Strahler, A.M. & Strahler, A.N. *Modern Physical Geography*, John Wiley & Sons New York, 1992.
4. Monkhouse, F.J., *Principles of Physical Geography*, Hodder & Stroughton, London 1990.
5. Critchfield, H.J.- *General Climatology*; Prentice -Hall of India, New Delhi.
6. Rubenstein, J.M. & Bacon, R.S., *The Cultural Landscape*, Prentice- Hall of India New Delhi 1990.
7. Kuriyan, G. *India - A General Survey*, National Book Trust, New Delhi.

FOR UNIT III

1. Sharma & Varshney - *Bharitiya Artha Vyavastha*

2. Rudra Datta & Sundaram - *Bharitiya Artha Vyavastha*
3. M.L. Jhingan - *Vikas Ka Artha Sastra aur Niyojan*
4. Sharma & Varshney - *Vikas ka Artha Sastra aur Niyojan*
5. Alok Ghosh - *Indian Economy*
6. A.N. Agarwal - *Indian Economy*
7. M.L. Jhingan - *Economic Development and Planning*
8. O.S. Srivastava - *Economics of Development and Planning*
9. P.K. Dhar - *Economics of Development and Planning*
10. Mishra and Puri - *Indian Economy*
12. M.L. Seth - *Macro Economics*
13. M.L.Jhingan - *Macro Economics* (Hindi/English)

FOR UNIT IV

1. Swain - *History of World Civilization*
2. Rai, Dr Uday Narayan - *Vishwa Sabhyata Ka Itihas (Hindi)*
3. Davies, H.A. - *An Outline History of the World, OUP*
4. Basham, A.L. - *Wonder that was India*
5. Thapar, Romila - *Bharat ka Itihas, (Hindi)*
6. Rizvi, S.A.A. - *Wonder that was India,* part II
7. Tripathi, R.P. - *Rise and Fall of the Mughal Empire*
8. Lowe, N. - *Mastering Modern World History*
9. Sarkar, Sumit - *Modern India*
10. Chandra, Bipan et.al. - *India's Struggle for Independence*
11. NCERT Text books.

FOR UNIT V

1. Basu, Durgadas - *Bharat Ka Samvidhan – Ek Parichay*
2. Govt of India Publication - *Constitution of India*
3. Kuriyan, G. - *India – A General Survey NBT, New Delhi, 1976*
4. NCERT Text books

प्रथम वर्ष

प्रश्नपत्र VII – प्रयोगात्मक हिन्दी

पूर्णांक – 50

पेपर (1) – व्यावहारिक – (हिन्दी भाषा विषय वस्तु तथा उसके शिक्षण की कार्यनीति)

प्रत्येक प्रशिक्षार्थी अपने – शिक्षक के मार्ग–दर्शन मे सम्पूर्ण – सत्र के अंत तक कुछ ऐसा कार्य करके मूल्यांकन के ए प्रस्तुत करेगा। जो उसके विषय–वस्तु के व्यावहारिक क्षेत्र से संबंधित हो। सुझाव के रूप में निम्नलिखित कुछ संकेत ये जा रहे हैं। यह सूची अंतिम नही है। प्रत्येक प्रशिक्षार्थी अपना अपना व्यवहारिक कार्य अलग से चुनेगा।

पत्रकारिता संबंधी कार्य –

रचनात्मक लेखन–

पाठ्यपुस्तक में दिये गये पाठों में – (छंदों/अलंकारों आदि का अध्ययन और विश्लेषण)

समकालीन साहित्य की किसी प्रवृत्ति विशेष का अध्ययन ।

कविताओं, निबंधों तथा अन्य सामग्री का किसी विशेष दृष्टि अथवा उद्देश्य से चयन।

भाषा सर्वेक्षण

कोई विशिष्ट प्रायोजना – इत्यादि।

Unit Test Assignments

हिन्दी भाषा

प्रथम एवं द्वितीय वर्ष के आन्तरिक मूल्यांकन हेतु

पूर्णांक – 25

निर्देश संकेत

आन्तरिक मूल्यांकन हेतु निम्नलिखित कुछ कार्य सुझाये गये हैं। इन्हीं को आधार बनाकर उनमे समय–समय पर आवश्यकतानुसार परिवर्तन और सुधार किया जा सकता है तथा नई समस्याओं और नई चुनौतियों को ध्यान में रखकर अन्य नये–नये कार्य और प्रायोजनाएँ आदि पर विचार किया जा सकता। इतना ध्यान अवश्य रखें कि हर वर्ष एक ही तरह के कार्य न दें। उन्हें बदलते रहें।

सुझाव – संकेत : समय –समय पर विषय–वस्तु के संदर्भ में लिए जाने वाले इकाई परीक्षण के अतिरिक्त निम्नलिखित कार्य कराये जा सकते हैं

1. छात्रों की भाषा सीखने संबंधी कठिनाइयों और समस्याओं का अध्ययन विश्लेक्षण तथ निदान के उपाय।
2. ऐसे छात्र–समूहों अथवा किसी विशिष्ट छात्र की भाषा–सीखने–संबंधी समस्याओं कठिनाइयों का निदानात्मक उपचार जो सर्वथा विशिष्ट और भिन्न हो।
3. पाठ्य पुस्तक में दी हुई रचनाओं (कविता, कहानी, निबंध आदि) के अतिरिक्त छात्रों के समकालीन पत्र–पत्रिकाओं से पूरक सामग्री के रूप में चयन।
4. पत्र–पत्रिकाओं में प्रकाशित रचनाओं अथवा समकालीन साहित्य की पुस्तकों का अध्ययन– विश्लेषण और उनकी शैक्षणिक समीक्षा।
5. आसपास के क्षेत्र के किसी विशिष्ट समुदाय के लोगों का भाषा–सर्वेक्षण और उनकी शब्दावली का अध्ययन।
6. रचनात्मक रूप से प्रतिमा सम्पन्न छात्रों के विकास के लिए वर्ष भर में कक्षा–शिक्षण के अतिरिक्त किये गये उपाय और उनकी प्रमाण प्रगति सूचक रिपोर्ट।
7. सहायक शिक्षण सामग्री/चार्ट/मॉडल तथा शिक्षण विधि संबंधी अन्य और कोई प्रायोजना अथवा रिपोर्ट।

यह सूची अंतिम नही है।

FIRST YEAR

PAPER - VII – PRACTICUM IN ENGLISH

Max. Marks : 50

Some activities are suggested for the internal evaluation. Wherever required the list of these activities may be changed or amended including new problems and challenges in the field. However the same type of activities should not be repeated every year.

1. Study and analysis of the difficulties or problems faced by the learners in language learning.
2. Collection of extra reading materials from contemporary journals magazines, anthologies etc.
3. A critical review of a recently published book/article/poem of literature or language.
4. Original creative writing in English or translations of articles/poems etc. from other languages into English.
5. Survey or study of the structure/vocabulary of a particular language - community in the neighbourhood
6. A report of the activities on the nurturance programmeme carried out for the bright/gifted students of a class.
7. Projects under taken for the improvement of language abilities of the slow learners.
8. A report on the diagnostic and remedial activities for some group of students with special needs.
9. Designing a short programmeme for learning English, for the willing learners of the different groups in society.
10. A case study of vocal mal-adjustment resulting in faulty speech and the remedial measures.
11. Use of proverbs in teaching communicative skills.

Guidelines for Internal Assessment and Evaluation in the I & II Year

Internal Assessment

After teaching every unit a class test will be held in both I year and II year. However, for Phonetics and Spoken English two oral tests will be held in the I year only.

Two assignments in a year will be submitted by the trainees as given by the teacher. These assignments would be common for the whoe class.

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प्रश्न पत्र VII : मराठी प्रायोगिक

पुर्ण गुण : 5

प्रात्यक्षित कार्य

मराठी विषयाच्या अभ्यासा बरोबर प्रत्यक्षक भाषिक कर्याचा सराव व्हावा यासाठी पुढील अभ्यास कृमाची सूची दे आहोत.

1. हिन्दी अथवा अन्य भाषिकात मराठीच्या ध्वनीच्या उच्चारात येणा या अडचणीचे स्वरूप शोधणे त्याची कारण मिमांस सामाजिक व सांस्कृतिक संबंध शोधणे.
2. इयता नववी व दहावीतील मराठीच्या पाठय पुस्तकाच्या आधारे त्यातील वाक्प्रचार म्हणी, याची सूची करणे व त्या सामाजिक व संस्कृतिक संबंध स्पष्ट करावेत.
3. पाठय पुस्तकातील कवितेतील शब्दालंकार अर्थालकाराचा शोध घेणे व त्याच्या योजनेमुळे कवितेका सौंदर्य कसे प्राप्त झाले याची चर्चा करणे.
4. पाठ्य पुस्तकातील सामासिक शब्दाची यादी करणे व त्याचे प्रयोजन समजाऊन सांगणे.
5. मराठीतील प्रतिष्ठित पाच कवीच्या किमान 90 कविता पाठ करणे. व शुद्ध लेखनाच्या दृष्टीने त्यापैकी एक किवां दो कविता वळेवर लिहाणयास सांगणे
6. किमान 5 अपठित गद्य उतारे 3 पत्र लेखनाचे विविध नमुने, 3 कल्पनाचे विस्तार, 3 वृत्त निवेदन, 3 निबंध लेखनाचे लेखन करावे. शिक्षकाने त्यासाठी आंतरिक परीक्षा घ्यावी.
7. गद्य व कवितांचें मुखर वाचन (उच्चार शुद्धीसह) करावे

नोट : वरील उपक्रमा व्यतिरिक्त इतरही उपक्रम शिक्षकाने घ्यायला हरकत नाही सर्व उपक्रम प्रत्येक विद्यार्थ्याने करा असे बंधन नाही. विद्यार्थ्याचे गट पाडूनही करायला हरकत नाही

FIRST YEAR

PAPER VII - PRACTICUM IN GUJARATI

Max. Marks: 50

Some activities are suggested here

1. Designing a short programme for learners who want to learn Gujarati language
2. Translation from any language to Gujarati and vice-versa.
3. Write ups and reports
4. Abstracting and review of articles published in journals and newspapers.
5. Any other assignments

FIRST YEAR

Paper VII : Practicum in Social Sciences

Total Marks : 50

Practicum in Geography

One project out of the following:

1 Visits to a village, locality of a town, an industrial site, a hydel power project or a mining locality and preparation of a report on its geographical personality, development problems and measures for solution.

2 Conducting a field survey on structure of a market, layout, sphere of influence and planning.

3 Preparation of a project report on an industry, tourism, mining, crop, etc. using secondary data.

4 Geographical personality of a district, using secondary data.

Practicum in Economics:

One project out of the following:

1. Visits to local markets to find out and list the manners in which consumers are cheated and measures to protect the consumers.
2. A survey of a locality to find out the working and non-working women population ratio and the extent of women unemployment.
3. To conduct a survey of a locality to find out the co-relation between income and size of family.
4. To conduct a survey of the working and non-working educated and uneducated women in the locality and their impact on the socio-economic conditions of the family.
5. To conduct a survey of the educated women in the locality and its impact on the size/economic status of the family.
6. To conduct a survey of local industries to find out the sources of raw materials, labour, credits and finance and marketing of the products.
7. To conduct a study of price fluctuations of essential commodity in a local market.
8. To conduct a survey of a locality to find out the extent of un-employment, viz-à-viz working and non-working population.
9. To conduct a survey of child labour in the locality.

10. To conduct a survey of educational status of children in a nearby jhuggi-jhopdi basti.

Practicum in History:

One project report on one of the following

1. Visit to historical sites/monuments. A critical and analytical report on the visit.
2. To visit the National Archives/State Archives and write a term paper or report on the historical information available in any particular topic. For example - In the National Archives of India, Bhopal Region, lot of material/letters/documents etc. are available on the Revolt of 1857.
3. Visit to a museum and prepare a critical report on the material/object displayed there.
4. Visit to a museum, and preparation of an analytical and critical report on the coins available there.
5. A topic to be assigned for writing a term paper on the basis of sources, secondary books available in different libraries.

Practicum in Civics:

One project report out of the following:-

1. Visit to Vidhan Sabha/Municipal Council/Village Panahcyat and submit an analytical report on the functioning of the elected bodies.
2. To meet the elected representatives and submit a report on the basis of discussion/interview with him.
3. To visit the neighbourhood and conduct a socio-economic survey.

FIRST YEAR

PAPER VIII(i) - FIELD WORK WITH COMMUNITY

Max. Marks : 25

Objectives:

The Teacher – trainees will be able to :

- provide the teacher trainees with actual life experiences,
- bring in direct contact with community and develop the abilities and skills c interacting with it,
- make him/her understand and realize the complex socio-economic, cultural ar educational problems through actual work situations in the community, and
- develop insight and attitude towards social problems.

Course Content:

- Concept of Field Work with Community (FWWC).
- aims and objectives of FWWC.
- Methods of interacting with community & developing rapport
- Planning of community work by involving its members.
- Understanding the relationship between school & community.
- Identification of social, cultural, economic and educational problems of th community and preparing a comprehensive list. (Survey)
- Identification of major crops, and occupations of community.
- Identification of illiterate youths and organizing classes for them.
- Interacting with school teachers and students to find out their problems and he to overcome them.
- Interacting with the community members with reference to enrolment, academi achievement and drop out rate of children of the community.
- Organising enrolment drive with the help of local community.
- Prepare a report of the work done during the session.

FIRST YEAR

PAPER-VIII(i) - WORK EXPERIENCE-I

ELECTRONICS

Max. Marks : 25

Objectives : To impart training to teacher- trainees for pre-vocational course in (Electronic) area of Work Experience.

Unit-I :

- Safety Precautions : First- aid treatment for electric shocks.
- Accessories : electrical, electronics
- Signs and symbols-their importance
- Tools: description, precautions, care and maintenance of tools
- Measuring instruments
- Colour code of Resistance.

Unit-II :

- Conducting / Insulating Materials
- Abbreviations
- Soldering Wire and Flux
- Relation between Current, Voltage and Resistance
- Basic : Electricity, Electron, Theory of Electricity, Effect of Electric Current,
- effect of Temperature on Resistance.

Unit-III :

- System of Wiring: I.E. Rules
- Earthing and its Importance
- Fuse-Melting point, current carrying Capacity importance.
- Electronic Components : method of their Testing
- Knowledge and practice for Sketching : Simple and Complicated circuits.

Unit-IV :

- Wattage for common domestic electrical appliances
- Electrical terms and definition
- Service Line
- Description of working tools of carpentory

Unit-V :

- Testing of supply through test lamp, Neon tester at Main Board, D.B. etc.
- Connection of one lamp and a switch
- Stair case connection
- Connection of 2, 3 & 5 Pins Socket with controlling device.

Suggested Readings:

1. *Elementary Electrical Engineering* – Reprint : 1988-89
2. J.S. Jakhar & P.S. Jakhar - *Basic Electronics throughout practical*
3. V.K. Mehta - *Fundamentals of Electrical Technology*

For Project Work:

Business Promotion Publication, 376, Lajpat Rai Market, Delhi-110 006, has been publishi very low priced booklet's like *"Existing Electronics Experiments"* etc. The same is availa with the local book sellers.

FIRST YEAR

PAPER-VIII(ii) - WORK EXPERIENCE –I

PHOTOGRAPHY

Max. Marks : 25

Unit-I : Introduction:

Brief history of photography as a pictorial medium.

Experiments and later development.

Unit-II : Camera

Different types of cameras, principle parts and their functions. Shutter, view finder, focusing system, Aperture. Handling of camera for different uses.

Unit-III : Elementary Photographic Optics:

Lenses, image formation, size of image, speed of lens, depth of field, defects of image combination of lenses.

Different types of lenses, single lens, simple achromatic lens, telephoto lens, wide lens, zoom lens.

Unit-IV : Studio & Dark Room Planning:

Lay out of a dark room and studio. Equipments for the studio & dark room, precautions to be taken in the dark room.

FIRST YEAR

PAPER VIII (iii) - WORK EXPERIENCE-I

AGRICULTURE

Max. Marks : 25

Unit-I : Horticulture (Floriculture, kitchen gardening and fruit preservation).

- Importance & scope of Floriculture.
- Designing & layout of a garden.
- Laying of lawn, preparation & its maintenance.
- Cultivation of seasonal flowers, shrubs, hedges, creepers ornamental trees & indoor plants.
- Aesthetic planning of college compound, hospital, public garden, religious place etc.

Unit-II : -Kitchen gardening – importance, lay out and crop rotation.

- Selection of soil – texture, structure, value and improvement
- Common manures, fertilizers, their uses and methods of application.
- Cultivation of fruit crops suitable for kitchen gardening viz, citrus, papay banana, grape & mango.
- Fruit preservation: preparation of some fruit products; Jam, Jelly, squash ketchup & picks.

Suggested Readings:

01 P.M. Naidu - *Poultry Keeping in India,* ICAR, New Delhi

02 Banerjee - *Text Book of Animal Husbandry,* OUP, Bombay

03 *Handbook of Animal Husbandry,*I CAR, New Delhi.

04 Singh & Moore - *Livestock and Poultry Production* , *Prentice –Hall of Ind., New Delh*

FIRST YEAR

PAPER VIII (iv) – WORK EXPERIENCE –I
ENGLISH TYPEWRITING WITH COMPUTER EXPOSURE

Max. Marks: 25

Unit – I : Typewriter and its maintenance:

Typewriter - use and importance, different categories and makes; various parts and their uses, Care and upkeep of machine; Changing Ribbon and its economy.

Unit – II : Typewriting operations-I

Furniture for typing, Sitting Posture, Insertion and removal of papers.

Practising second, third, first and fourth rows.

Unit- III : Typewrirint operations-II

Special signs and symbols-their uses and typing of special signs, symbols and punctuation's marks.

Practising words, sentences, paragraphs and passages.

Unit – IV : Display in Typewriting:

Centring - horizontal and vertical; Typing headings; Setting margins - left, right, top and bottom; Drills for typing.

Typing of passages with a seppd of 20 words per minute.

Unit – V : Computer Exposure:

Computer System - its' components; input,output and storage media; software and hardware; P.C. and its' use; Computer keyboard similarities and dis-similarities with typewriter keyboard.

Suggested Readings:

1. A.H. Mehta-*Typewriting Complete Course*
2. Lessenherry & Craf - *Twentieth Century Typewriting*
3. M.S. Khan - *Fundamentals of Typewriting*
4. *Typewriting Drills for Speed and Accuracy*

FIRST YEAR

PAPER VIII (iii) - PHYSICAL EDUCATION (Practicals)

Max. Marks: 25

Objectives: The teacher-trainees will be able to:

- promote amongst the trainees awareness, attitudes and competency in physic education and sports through participation.
- enable the trainees to organise selected physical education and sports activiti schools
- develop specific skills of major games and sports.

Unit-I:

Physical fitness programmes through sports activities.

Unit-II:

Warming up and conditioning exercises (General and specific), ci training.

Unit-III:

Fundamental skills (Running, Jumping and Throwing) - technic equipments and play areas.

Unit-IV:

Indigenous activities - *Dunds, Baithaks, Asanas* and *Suryanamaskar*.

Unit-V

Major games – (Basketball, Badminton,Criciet, *Kho-Kho* and Volley shall be dealt under the following heads:

- Instructions & demonstration of basic skills.
- Equipments and ground dimensions
- Common rules with interpretations
- Organisation and conduct of tournaments/competition.

FIRST YEAR

PAPER VIII(iv) - AESTHETIC EDUCATION

Max. Marks : 25

jectives: The teacher-trainees will be able to:

- inculcate appreciation of beautiful things among trainees. They will be sensitized respond to the beauty of line, colour, form, movement and sound through pictorial, decorative, plastic and performing art forms.
- develop observation, imagination and self expression and relate the same to the surroundings through different modes of expressions.
- develop awareness of aesthetic elements in traditional arts and love for beauty in nature and environment.
- help achieve a balanced development as a social being in tune with the culture and cultural heritage.
- develop awareness of locally available art forms.
- develop sense of patriotism and pride in being Indian.
- organise art displays, field trips, interaction with known artists, dramatists, musicians, dancers, tribal and folk artists.

Course Content -

- Nature of aesthetic education :

(i) Importance of art in everyday life.

(ii) Objectives of Aesthetic education

- Types of art forms:

(i) Visual.

(ii) Performing.

(iii) Literary.

- Eminent artists of Madhya Pradesh, Maharashtra ,Gujarat and Goa in different fields of arts and their contribution in their respective fields.
- Basic elements of arts.
- Undertaking project work in Aesthetic education:

i) Undertaking practical experiences in visual, performing and literary a through project work.

- Participation in arts:

(i) Participation in local and national festivals.

(ii) Organisation of displays and exhibitions on art and craft.

(iii Witnessing live performances in Music, Dance, drama and atte workshops of painting, sculptures, graphics, ceramics etc.

(iv) Visiting museums, art exhibitions, theatre and other places of cultu importance.

FIRST YEAR

PRE-INTERNSHIP

Max. Marks : 150

Objectives: On the completion of pre-internship the teacher - trainees will be able to:

- develop core - teaching skills.
- manage classroom activities and co-curricular activities.
- develop insight in the intricacies of teaching - learning process.
- understand roles and responsibilities of teacher as a professional.
- develop various teaching competencies.
- acquaint themselves with school environment and facilities.

Regional Institute of Education LIBRARY Bhopal

Distribution of marks: Total 150, Pass marks 60

*	Core teaching skill lessons (atleast 10 lessons)	50
*	Observation of co-operating Teacher's lessons	10
*	Delivery of atleast 10 lessons (5 in each subject)	50
*	Preparation of Achievement test	05
*	Preparation of Diagnostic test	05
*	Preparation of Report on School Activities and facilities	05
*	Textbook Analysis	05
*	Practice of Unit Planning(5 units)	10
*	Practice of Lesson Planning(2 lessons) (during pre-internship training in the College of Education)	10

Duration:

1 Training in simulated situation in the College of Education for Six weeks.

2 School attachment for Two weeks.

Activities:

* Supervisors/Teacher Educator's Orientation, and Cooperating School Principal's alongwith atleast two subject cooperating teachers' meeting (4+2 days)
* Induction of Interns/Prospective Teachers for professional training.
* Orientation in relation to teaching technology, interns roles and responsibilities
* Training In Core Teaching Skills in simulated situation. Skills like; (1) Class Management, (ii) Set Induction/Introduction; (iii) Questioning and Reinforcement, (iv) Explanation and Illustration, (v) Stimulus Variation (vi) Closure or Recapitulation and (vii) Integration of Skills/Marlesson etc. (Demonstration of Micro lessons by Teacher). Educator/Trainer and practice by the trainees. Feedback by the peer group and the educator). (Total marks for Micro lessons - 50)
* Training and practice of preparation of teaching aids and black board work.
* Demonstration lessons by the teacher educator, atleast two lessons (one in each subject) in real classroom situation. Observation by the trainees followed by discussion.
* Training on Guidance, Counselling and Remedial teaching.
* Attachment to co-operating schools (atleast for two weeks). Observation of school activities and classroom teaching by the trainees. Preparation of report on school activities and facilities including laboratories, library, sports & games, cultural etc (5 marks).
* Observation of Co-operating Teachers lessons, atleast 5 lessons on each subject (Marks 5+5=10) .
* Preparation and administration of atleast 2 achievement tests (one in each subject), and 2 diagnostic tests (one in each subject. (Marks 5+5 = 10).
* Textbook analysis (one text book in each subject) and preparation of report. (5 Marks)
* Training and practice of Unit planning (5) marks = 10, and Lesson Planning (2), (5 marks).
* Orientation to Case Study, School Records, Admission and Examination procedures, Result Preparation, Fee collection. (Report to be submitted in the Second Year after the completion of internship).

SECOND YEAR

PAPER I - SECONDARY EDUCATION IN INDIA: STATUS, PROBLEMS & ISSUES

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- understand the concept, status and objectives of secondary education.
- examine the development of secondary education in India.
- analyze the causes for stratification due to socio-economic and cultural factors.
- understand the typology of schools and their related issues.
- Identify the problems and issues of secondary school teachers.
- Identify the issues and problems of secondary education.

Course Content -

UNIT-I: CONCEPT & OBJECTIVES OF SECONDARY EDUCATION

- Concept of secondary education. Its place in education system, linkages of secondary education with elementary and senior secondary education.
- Aims and objectives of secondary education.
- Recommendations of different commissions including NPE, 1986, POA, 1992 on various aspects of secondary education.

UNIT-II: STATUS AND CONCERNS OF SECONDARY EDUCATION

- Quantitative and qualitative development of secondary education during post independence period with reference to schools, students, teachers and educational supervisors.
- Enrolment and equity perspectives – Gender, Class, Caste, Religion, Habitation and Occupation.
- Poverty and Inequality – Employment, Environmental degradation and explosion of population.
- Intergenerational Issues – Social conflict, value crisis etc.

UNIT-III: TYPOLOGY OF SCHOOLS AND RELATED ISSUES

- School as sub-societal system, functions of the secondary school in a demo: interdependence of school and community.
- Types of schools and related issues like selection of students and teachers, physica financial resources, autonomy, medium of instruction, cocurricular activities, s stratification and social mobility.

UNIT-IV: THE SECONDARY SCHOOL TEACHER

- Status and role of secondary school teacher, professional preparation of compe based and commitment oriented teachers through pre-service and in-service progra professional organizations.
- Role of teacher in development of curriculum, text books, instructional mate transactional strategies and evaluation.
- Teachers and education al standards.

UNIT-V: CHALLENGES AND PROBLEMS OF SECONDARY EDUCATION

- Problems and challenges in relation to infrastructure in schools, access, duration, dro and stagnation.
- Vocational preparation at school level.
- Education of special groups- under- privileged, minorities and disabled.
- Language controversies.
- Regional imbalances in educational standards
- Alternative schooling.
- Quality improvement in secondary schools.

Sessional work:

Note: A few sessionals are suggested below. More assignments may be created from unit by the teacher.

- Analyze recommendations and views of different commissions for quality seco school education.
- Visits of different types of schools and preparation of school profiles.
- Observation of in-service teacher education programmeme and preparation of report.

ıggested Readings:

Ayyar, R.V.V. (1996). *Educational Policy, Planning & Globalization.* Elserjer Sc. Ltd. Britain.

Govt. of India – National Policy on Education, 1986 (with modifications undertaken in 1992) MHRD, Dept. Of Education.

R.P. Singh (Ed.). *Teacher Training in India- Looking Ahead,* Federation of Management & Educational Institutions, New Delhi.

Brook, Colin (Ed.). 1997. *Global Perspectives on Teacher Education.* Trainglo Book, Willingford, U.K.

Kundu, C.L. (Ed.), (1984). *Indian Year Book on Teacher Education,* Sterling Publishers Pvt. Ltd., New Delhi,

Chopra, R.K. (1993). *Status of Teachers in India,* NCERT, New Delhi,

Murthy, K. Sachidanand, (1991). *Ethics, Education, Indian Unity and Culture,* Ajanata Pub., Delhi,

Peters, R.S. (1971). *Ethics and Education.* George Allen Unwin Ltd. London,

NCERT, (1997). *Code of Professional Ethics for Teachers,*

NCERT, (1992). *Fifth All India Educational Survey,*

MHRD Secondary Education Commission Report, GOI, New Delhi. 1953.

MHRD Indian Education Commission (1964-66) Report, GOI, New Delhi. 1966.

NCTE, *Competency Based and Commitment Oriented Teacher Education for Quality School Education.*

NCTE, (1998). *Pre-service and in-service programmeme,*

NCTE, (1998). *Policy Perspectives in Teacher Education*

SECOND YEAR

PAPER II - SCHOOL MANAGEMENT

Time: 3 hrs. Max. Marks: Ext. 75, Int.

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- know the meaning, scope and purpose of educational management.
- understand the processes of educational management and supervision.
- Understand and appreciate the techniques of public relation and working w groups.

Course content

Unit-I : School Management, Administration and Orginisation :

- Meaning, Nature and Scope of Educational Administration, Management a Organization
- Educational Administration in India with future perspectives.
- Areas of School Organization and Role of the Head of the Institution.
- Democratic Educational Administration and Management.

Unit-II : Recent Trends in Educational Administration and Management.

- Organizational climate.
- Decision Making.
- Organizational Development.
- Management by Objectives.
- CPM
- PERT
- Organizational Compliance.

Unit-III : Institutional Planning:

Unit-III : Institutional Planning:

- Institutional Plan, School Calendar, House System and Organization of Student Activities, Time Table
- School records and their maintenance.
- Organization of School Based In-service Training Programmes, School Complex, Subject Groups.
- PTA, Community Participation.

Unit-IV : Educational Planning, Financing and Monitoring

- School Mapping.
- Kinds of Educational Planning: Short Term Planning, Grass Roots Level Planning, Area Planning.
- Financing of Education: Factors Influencing Educational Financing.
- Education Expenditure: Grant in Aid System.

Unit-V : Educational Supervision and Teacher Development.

- Educational Inspection and Supervision, Creative Supervision, Group Supervision, Institutional Supervision, Supervision of School Activities, Field Works, and Office work.
- Supervision of Academic Activities.

Sessional Work:

Any one of the following -

(1) Prepare a report on school based programme of a secondary school during the session.

(2) Prepare a report on the supervision of the Internship/Practice Teaching/SEP of a Secondary School.

Suggested Readings :

Bhatnagar, R.P., and Verma, I.B. (1978), *Educational Administration*. Loyal Book Depot, Meerut.

Bhatnagar, R.P., and Agrawal, V. (1986), *Educational Administration and Management*. Loyal Book Depot, Meerut.

Bhatnagar, R.P., and Verma, I.B. (1978), *Educational Supervision*. Loyal Book Depot, Meerut.

4 Campbell, R.F., Corbally, J.E., and Nystrand, R.O. (1983). *Introduction to Educat Administration*,(6th Ed)., Allyn and Bacon, Inc. Boston.

5 Gupta, S.K., and Gupta, S. (1991), *Educational Administration and Management*. Mano Prakashan, Indore.

6 Kochhar, S.K., (1978), *Secondary School Administration*, Sterling Publication, New De

7 Mukherjee, S.N. (1963), *Secondary School Administration*, Acharya Book Depot, Baroda

8 Shrivastava, G.N.P. (1999), *Management and Supervision under ASEs and CTEs*, R Bhopal.

9 Safaya R. and Shaida B.D. (1977), *Administration and Organization*. Dhanpat Rai Sons, Delhi.

10 Siddhu, S.K. (1982), *School Organization and Administration*, Sterling Publishers, Delhi.

SECOND YEAR

PAPER III & IV (i) - GUIDANCE & COUNSELLING

Time : 3 hrs. Max. Marks: Ext. 75, Int. 25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- understand the concept of Guidance and Counselling.
- identify and assess the strength and learning difficulties of pupils.
- help pupils in selecting subjects for future study.
- collect data by using various tools and techniques.

Course Content:

Unit-I: Basics of Guidance and Counselling

- Nature of Guidance and Counselling.
- Types of Guidance and Counselling.
- Functions of Guidance and Counselling.

Unit-II: Personnel Associated with Guidance and Counselling

- School Counsellor
- Career Master/Vocational Guidance Teacher.
- Teacher as Guidance Worker/Counsellor

Unit-III: Tools and Techniques of Guidance and Counselling:

- Intelligence, Aptitude and Achievement Tests and their use
- Non-testing Techniques like Case study, Group Guidance, Career Talks, Counselling, Pupil Appraisal and Cumulative Record.
- Selection Tests for placement in Educational and Professional Institutions.

Unit-IV: Career Guidance in Secondary School

- Career Awareness Skills/Career Information
- Career Decision Making Skills (Selection of School subjects, future training course and future career).
- Career Bulletin, Career Corner and Career Conference.
- Organising Guidance and Counselling Services in Secondary School.

Unit-V: Guidance and Counselling for children with special needs:

- Gifted children
- Children with Disabilities
- Disadvantaged children

Sessional Work: Any one of the following:

1 Developing a plan for organizing guidance services in a school

2 Documentation of career information on any one vocation

3 Administration of intelligence/creativity tests.

Suggested Readings:

1. Abramson, Theodore et.al (Ed.) (1979). *Handbook of Vocational Education Eva* London: Sage Publications,
2. Ball, Ben. (1984). *Career Counselling Practice.* London: Palmer Press,
3. Blum, Milton L. (1963). *Counselling and Psychology: Vocational Psychology Relation to Educational and Personal Counselling.* Tokyo: Prentice Hall,
4. Brown, Duane. (1984). *Career Choice and Development.* San Francisco: Jersy Publish
5. Central Institute for Research and Training in Employment Services (CIRTES). *Careers for Arts and Commerce Graduates.* New Delhi, D.G.E. & T, GOI, Mir Labour,
6. CIRTES, (1975). *After Intermediate What ?* New Delhi: DGE & T GOI, Ministry of
7. Crites, John. O. (1969). *Vocational Psychology. The Study of Vocational B Development,* New York: McGraw Hill,
8. Dave, Indu, (1989). *The Basic Essentials of Counselling.* New Delhi. Sterling Publis Ltd.,
9. Gibson, Ropbert L. and Mitchell, Marinna, H. (1981). *Introduction to Guidance.* Colliar Macmillan Publishers
10. Gupta, S.K. (Ph.D. Thesis). (1990). *A Study of the Impact of Training in Career A and Career Decision Making Skills upon Occupational Aspirations, Vocational Atti Guidance Needs of Sec. School Students,* B.U. Bhopal,
11. Kochar, S.K. (1989). *Guidance and Counselling in College and Universities.* Ne Sterling Publisbhers Pvt. Ltd.

12. Marland, Sidney P. (Jr.) (1974). *Career Education: A Proposal for Reform.* New York: McGraw Hill Company.

3. Anand, S.P. (1994). *ABC's of Guidance in Education,* Pathankot: Unique Publishers.

14. Pasricha, Prem. (1976). *Guidance and Counselling in Indian Education.* New Delhi: NCERT.

15. Asha Bhatnagar, Nirmala Gupta, (1999). *Guidance and Counselling: Theoretical*

6. Mathur *Perspective,* Vol.I, New Delhi: Vikas Publishing House Pvt Ltd. (NCERT sponsored)., Kiran. (1997). *Vocational Guidance Services in Vocational Schools upto + 2 level.* Bhopal: PSSCIVE.

SECOND YEAR

PAPER III & IV (ii)-EDUCATION OF CHILDREN WITH SPECIAL N

Time: 3 hrs. Max. Marks: Ext. 75, I

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- explain the meaning of special education and recognize the inci disabilities.
- familiarize with identification, assessment and placement procedures for with special needs.
- differentiate between different types of settings of education for chil special needs.
- familiarize with various processes of curriculum adaptation.
- develop understanding about accommodating special needs in regular clas

Course Cont ent -

UNIT I: Special Needs and Education-

- Concept and range of special needs
- Special need and its implication for universalization of elementary educati
- Trends of education for children with special needs in India.

UNIT II: Nature, Prevalence, Classification and Characteristics of Children wi needs.

- Nature and Prevalence of Children with Special Needs.
- Classification and Characteristics of Children with Special Needs:
  - Visually handicapped
  - Hearing handicapped
  - Mentally handicapped
  - Locomotor handicapped
  - Learning disabled.

UNIT III: Identification and Assessment of Children with Special Needs

- . Standardized tests for identifying children with special needs
- Adaptation in Assessment and Evaluation for children with special needs
- Implication of Assessment information for Instructional Planning and Curriculum.

UNIT IV: Educational Settings and Curriculum Adaptation.

- Educational Settings – Integrated Education and Special School.
- Curriculum adaptation in general classroom for children with special needs.

UNIT V: Role of Teacher in Integrated Education and Classroom Management

- Role of classroom teacher in integration of children with special needs in regular classroom.
- Classroom Management and other needed adaptation for IED.
- Assistance to children with special needs under IED scheme.

Sessional Work: Internal Assessments/Assignments

Suggested Readings:

1. Ainscow M. (1990). *Special Need in Ordinary Schools: Children with Learning Difficulties,* Cassell Edn. Ltd. London.
2. Gearheart Bill R., De Ruiter, JA, Sileo Thomas W. (1988). *Teaching Mildly and Moderately Handicapped Students.* New Delhi: Prentice Hall of India Pvt. Ltd.
1. Hallahan DP and Kaufman JM (1990), *Exceptional Children: Introduction to Special Education.* Eagle wood cliffs. N J : Prentice Hall.
2. Haring N.G. (1986). *Exceptional Children and Youth.* Ohio: Columbus, Charles E. Merril Publishing Co. A Bell and Howell Co.

IED Scheme (1992). MHRD. New Delhi

Sharma P.L. (1988). *Adhyapak Ke Liye Samekit Shiksha,* NCERT, New Delhi.

Mukhopadhyay S., Jangira NK, Mani MNG and Ray Choudhry M. (1987). *Source Book for Training Teachers of Visually Impaired.* NCERT, New Delhi

Sharma P.L., Jangira NK (1988). *Source Book for Training Teachers of Hearing Impaired.* NCERT, New Delhi.

Montgomery D (1990). *Special Needs in Ordinary Schools.* Cassell edn. Ltd. London.

SECOND YEAR

PAPER III & IV (iii) - INFORMATION TECHNOLOGY LITERACY

Time: 3 hrs. Max. Marks: Ext. 75, Int. 25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- develop knowledge and understanding about information technology
- develop knowledge of fundamentals of computer, its languages and softwa packages.
- develop skills of simple programming and handling of computer.
- develop awareness in utilization of information technology in education.

Course Content:

Unit-I : Introduction to Information Technology:

- Concept & History of Information Technology.
- Need & Importance of Information Technology in Education.
- Different facets of Information Technology and their use in Education.

Unit-II : Introduction to Computer:

- History of Computer Development and Generation of Computers.
- Uses and Scope of Computers.
- Computer Languages.

Unit-III : Hardware and Software of Computers:

- Concept of Hardware
- Basic Hardware Unit – Input unit, Memory auxillary, CPU, Output units.
- Concept of Software
- Application softwares, MS Word, MS Excel, MS Access, Multimedia.

Unit-IV : Computer Programming:

- Concept of Computer Programming.
- Algorithms and Flow Charts.

- Programming Languages LOGO & BASIC.

Unit-V: Use of Computer in Education:

- Computer Assisted Instruction (CAI) Computer Management Learning (CML), Use of Multimedia.
- Creating Data Base on Staff and Students, Use of Computer in Admission, Developing Question Bank, Time, Space and Personnel Management.
- Use of Internet for acquiring Information.
- Problems and Issues in Computer Education. Practical on (i) handling of Computer, (ii) Preparation of Flow Chart, (iii) use of MS Word, Excel, Access, (iv) Use of Computer in Data Base Management, (v) Use of CAI Packages and Multimedia, (vi) Use of Internet.

Sessional work:

Internal Assessment / Assignments

Suggested Readings:

1	Adams, D.M.	:	*Computer and Teacher training*
2	Bhatnagar, S.C. & Ramani, K.V.	:	*Computers & Information Management*
	Desai, B.	:	*Database Management System.*
	Korth	:	*Data Base Management System.*
	Forester, T.	:	*The Information Technology Revolution.*
	Mosley, L.E. & Boody, D.M.	:	*Mastering M.S. Office.*
	O' Shea T. & John S	:	*Learning and Teaching with Computer*
	Rajaraman, V.	:	*Fundamentals of Computer*
	Sinha, P.K.	:	*Fundamentals of Computer*
O	Tawney, D.A.	:	*Learning through Computer*

SECOND YEAR

PAPER – III &IV (iv) - VOCATIONAL EDUCATION

Time : 3 hrs. Max. Marks: Ext. 75, Int. 25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- develop specific vocational skills in students giving primary attention application (transfer) of learning to actual work-situation.
- Promote good work habits in students.
- elucidate the relationship between theory and practice.
- promote competency in some vocational skills including speed and accuracy.
- promote positive attitude towards work and workers.

Course Content-

Unit-I: Foundations of Vocational Education:

- Nature and Concept of Vocational Education.
- Various systems of Vocational Education and Training in India.
- Objectives of Integrating Vocational and General Education.
- Need and justification of Vocational Education at Secondary level (Social, e: and Psychological).

Unit-II: Planning And Management Of Vocational Education:

- Micro and Macro level planning of facilities, curriculum, human and mate resources.
- Management structure at National, Regional, State, District and Instituti: level.
- Manpower Planning for Vocational Education.

Unit-III: Emergence Of Vocational Education In India:

- Social structure of Indian Society and transfer of learning trades.
- Educational Policies wrt. Basic Education, Secondary Education Commiss 1952; Education Commission-1964; Adishesiah Committee Report; Ach

Ram Murthy Committee; NPE-1986 and POA-1992. Present Status of Vocational Education.

- Entrepreneurship Development and problems of Vocational Education.

Unit-IV: Curriculum And Methods Of Teaching Vocational Education.

- Areas of Vocational education- Curricular Design and Development
- Vocational Teachers and their competencies.
- Methods of teaching – (Activity based participatory learning, salf-paced learning, Mastery learning, learning by doing with focus on transfer).
- Integration of theory and practice, Development of Instructional material.
- School-Industry Linkages and on-the-job training.

Unit-V: Assessment And Evaluation Of Vocational Education:

- Assessment by observation, Interest and Aptitude.
- Immediate and Comprehensive feedback to students.
- Evaluation by organizing performance based utility exhibitions.
- Criterion referenced pre-tests and post-tests (Results shown as competencies attained).
- Maintenance of Assessment Records.

NOTE: Internal Assessment will be done on the basis of the class-room tests/assignments given by the teachers.

Suggested Reading:

1. Government of India, *Scheme of Vocationalization of Secondary Education*, Ministry of HRD (Dept. of Education) – (1988).
2. NCERT (1980). *Vocationalization of Post-Secondary Education* (A Critical Study of Implementation in the States), New Delhi .
3. NCERT (1979). *Socially Useful Productive Work-Sample Curriculum Units*, New Delhi.
4. NCERT (1970). *The Concept of Work-Experiences*, New Delhi .
5. NCERT (1984). *Vocational Education at the +2 stage*, New Delhi .
6. Anand, C.L. et. Al. (1983). *Teacher and Education in Emerging Indian Society*, New Delhi.
7. Pritam Singh, (1983). *Criterion Referenced Testing – A Monograph*, NCERT, New Delhi.

8. Government of India; (1992). *National Policy on Education – (1986)* Programme of Action (1992); MHRD, New Delhi.

9. Sen Gupta, M. (1994). *On Teacher and Teacher Preparation – Guidelines,* NCERT New Delhi.

10. Salooja, M.K. (1997). *A Hand book for Vocational Survey Worker*, PSSCIVE NCERT New Delhi.

11. NCERT; (1976). *Higher Secondary Education and its Vocationalization.*

12. Government of India , (1978). *Learning to Do,* Adishesiah Committee Report.

SECOND YEAR

PAPER- III & IV (v) - POPULATION EDUCATION

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

ote: Questions will be set from each unit with only internal choice.

bjectives:

The teacher – trainees will be able to :

- develop understanding about the concept, need, objectives, nature and scope of population education.
- develop understanding of the causes of population explosion, its impact and consequent environmental hazards in the world, especially in India.
- develop an understanding about the need of integrating population education elements in different subjects.
- develop skill of organizing co-curricular activities related to population education.
- develop the skill of comparing the census figures of different countries.

nit I : Concept of Population Education and Curriculum:

- Population Education: Concept, need, objectives, nature and scope.
- Reconceptualized framework of population education.
- Integrated / separate subject approach.
- Curricular and co-curricular activities of Population Education , organizing competitions in schools : quiz, essay writing, debates and preparing posters etc.

it II : Concept of Population Education and Curriculum:

- Determinants of population change.
- Family size norms, computation of birth and death rates.
- Population density and vital statistics, population situation in India during 20th century and population projections for 21st century.

Unit III : National and International efforts in population Education:

- Role of National Bodies: Governmental and Non-Governmental agencies (NCERT, SCERTs, Boards of Secondary Education and FPAI).
- Role of International Agencies: (UNFPA, UNESCO, UNICEF.)

Unit-IV : Adolescent Reproductive health (Adolescence education)

- Adolescence education: Concept, scope, and objectives.
- Human sexuality: Concept and stages of sexuality. Physical, social and e- development and conflicts during adolescence.
- STDs and AIDS, Drug Abuse
- Counselling of adolescents for socio-psycho problems.

Unit-V : Population and Sustainable Development

- Promotion of social justice, eradication of poverty and population stabiliz-
- Impact of population growth: Environmental pollution and quality of life
- Sustained Economic growth and status of women.
- Socio-economic dimension of sustainable development: poverty, cons- styles, human health & human settlements.

Suggested Reading:

1 Basu, D. *Environment and Ecology: The global challenge*. Jaipur Print Cell, 1995.

2 Bhargava, G. *Environmental Challenges and Ecological Disaster*. New Delhi: Mittal Publication 1992.

3 Heer, D.M. *Society and Population*, New Delhi: printice Hall Pvt. Ltd., 1987.

4 Premi, M.K. *India's population: Heading towards A Billion*. New Delhi: BR Publishing Corporation 1991.

5 Reddy M.V.L. *Population Education*, New Delhi: Ashish Publishing House 1994.

6 Salkar, S.R. *Population Education for Developing Countries*. New Delhi: Sterling Publishers, 1981.

7 Seshadri, C. And Pandey J.L.(eds.) *Population Education: A National Source Book*. (Vol.1.) New Delhi : NCERT 1991

8 Shah, K.S. *Population Explosion: A Different View.* Jaipur: Subline Publications.

9 Yadav, Saroj *Population Education: New Policy Perspective.* New Delhi: Shree publishing House, 1988.

SECOND YEAR

PAPER III &IV (vi) - ENVIRONMENTAL EDUCATION

Time : 3 hrs. Max. Marks: Ext. 75, Int. 25

Note: Questions will be set from each Unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- To develop knowledge and understanding related to concepts of environme human influence on environment & environmental education.
- To familiarize with conservation of resources, value and ethics related environment.
- To acquaint with teaching methodology, curriculum development and evaluati in environmental education.

Unit-I: History And Concept Of Environmental Education (EE)

- History and concept of Environmental Education.
- Need and Importance of Environmental Education.
- Philosophy, goals and objectives of Environmental Education.

Unit-II: Environment, Earth And Biosphere

- Environment, Earth and Biosphere.
- Biotic and Abiotic Components.
- Ecosystem, Food chain and Food web and Ecological Pyramid.
- Biotic and Abiotic Resources and their Conservation.
- Waste Management.

Unit-III: Human And Environment

- Human as a part of Environment, human influence on Environment (pollut and population).
- Socio-Cultural System (Economic, Socio-Political, Culture and Religion).
- Environmental Action (Environmental Sanitation, Health and Nutrition, So Forestry).

Regional Institute of Education LIBRARY Bhopal

SECOND YEAR

PAPER III & IV (vii) - PRE-SCHOOL EDUCATION

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- understand the growth and development of pre-school children.
- understand the policy recommendations, programmemes and schemes related to pre-school education in India.
- acquaint with pre-school curriculum, daily schedule, equipment and materials, methods and evaluation of pre-school children.

Course Content-

UNIT-I : Growth and Development of Pre-school Child

- Child development : Introduction, principle and stages, aspects.
- Socio-emotional development, physical and motor development, language development, cognitive development, development of creative expression and aesthetic appreciation.
- Simple methods and techniques of child study.

UNIT-II : Role of Home, School and Neighbourhood for the Development of Pre-school Child

- Role of house and family,. role of school, neighbourhood, community, society and mass media in the development of pre-school child.
- Role of international agencies – UNICEF, UNESCO, WHO, CARE, etc.
- Significance of play in the development of child.

UNIT-III : Health and Nutrition of Pre-school Child

- Concept of health and nutrition, factors affecting health of pre-school children, concept of balanced diet and nutritional needs of pre-school child, health and hygiene programmes in pre-schools.

- Identification, prevention and remedial measures, medical check up a maintenance of health record.

UNIT-IV : Pre-school Education in India

- Pre-school education: meaning, nature, aims and objectives, major programm and schemes of pre-school education in India, policy recommendations on p school education, innovations in pre-school education in India.

UNIT-V : Programme Planning and Implementation

- Pre-school curriculum, principles of pre-school programme planning, stages planning.
- The pre-school method – Planning and implementation. The pre-sch environment, classroom, the equipment and materials.
- Evaluation of pre-school children, maintenance of reports and records.
- The pre-school teacher's role and qualities, working with parents of pre-sch children.

Suggested Readings :

1. Abramson, P. (1970), *School for Early Childhood: A Report from Education Facilit Laboratories, Profiles of Significant Schools,* New York.
2. Aggarwal, J.C. (1986), *History and Philosophy of Pre-primary and Nursery Educat* Doaba House, New Delhi.
3. Day, B. (1983), *Early Childhood Education: Creative Learning Activities* (2nd editi MacMillian Publishing Co., New York.
4. Grewal, J.S. (1984), *Early Childhood Education; Foundations and Practices*, Nati Psychological corporation, Agra.
5. Hildebrand, V. (1971), *Introduction to Early Childhood Education*, The MacMillan C New York.
6. Kaplan-Sanoff, M. and Yablans– Magid, R. (1981), *Exploring Early Childh Readings in Theory and Practice*, Macmillan Publishing Co. New York.
7. Kaul, V. (1991), *Early Childhood Education Programme,* NCERT, New Delhi.
8. Watrin, R and Furfey P.H. (1978), *Learning Activities for the Young Pre-school C* DVan Nostrand Company, New York.
9. Spodek, B (1978),*Teaching in the Early Years*, Prentice Hall Inc. Englewood cliffs, Jersey.

0 Spodek, B and Walberg, H.J. (1977), *Early Childhood Education , Issues and Insights*, M.C. Cutchan Publishing Corporation, California.

1 Stanley, J.C. (Eds.) (1972), *Pre-school Programme for the Disadvantages: Five Experimental Approaches to Early Childhood Education.* The Johns Hopkins University Press, Baltimore.

2 Thakkar, A. (1980), *Perspectives in Pre-school Education*, Popular Prakashan, Bombay.

SECOND YEAR

PAPER III & IV (viii) -ELEMENTARY EDUCATION

Time : 3 hrs. Max. Marks: Ext. 75, Int. 25

Note: Questions will be set from each Unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- understand nature of Elementary Education with philosophical and sociolo considerations.
- understand the emerging policy and programmemes of Elementary Education after independence in India.
- understand pre-service and in-service Elementary Teacher Education in India.
- understand nature of Elementary School Curriculum.
- understand evaluation strategies used at Elementary level.

Course content -

Unit-I: Elementary Education – Foundations and Policy

- Meaning, scope and objectives of Elementary Education vis-à-vis Pri Education.
- Patterns of Primary/Elementary Education.
- Philosophical and Sociological Foundations of Elementary Education.
- Development of Elementary Education Policy in India after Independence.

Unit-II: Emerging Problems and Approaches in Elementary Education.

- Early childhood Education and care.
- Universal access, enrolment, retention and achievement.
- Emerging Approaches and Programmemes to problems in Elementary Educa
- National and Regional)
- Supportive Adult Education/Literacy.
- Supportive Community Participation.

Unit-III: Elementary Teacher Education.

- Pre-service Elementary Teacher Education.
- In-service Elementary Teacher Education.

- In-service Elementary Teacher Education.
- Problems of Teachers and Elementary Teacher Education.
  - Multigrade context
  - Large size class context
  - Children with special needs.
- Role of DIET, SCERT, NCERT, NIEPA and NCTE, in quality improvement of Elementary Education.

Unit-IV: Curriculum and its Transaction at Elementary Stage

- Objectives, issues and problems of Elementary Stage curriculum.
- MLLs and Competency based instruction and strategies.
- Curriculum Need of Non-scholastic subject areas - importance and transaction.
- Methodologies for Activity based Joyful learning.

Unit-V: Evaluation at Elementary Stage.

- Formative and Summative Evaluation.
- Preparation and use of MLL based tests
- Assessment of non-scholastic areas.
- Recording and Reporting Pupil's Progress.

Sessional Work- Any one of the following:

(i) Preparation of a status report on Elementary Education in a chosen state/district with reference to access, enrolment, participation and achievement.

(ii) Development of a MLL based unit test.

(ii) Content analysis of one subject at elementary stage.

Suggested Readings:

1. Arora G.L., (1988). *Curriculum and Quality in Education*, NCERT, New Delhi.
2. Bhatia and Bhatia (1989). *The Philosophical and Sociological Foundation of Education*, Delhi.
3. Gronlund Norman E. (1981). *Measurement and Evaluation in Teaching.*
4. Lovatelli C.S., Moore W.J. *et. al.* (1972).*Elementary School Curriculum*, New York. Holt Rinchart & Winston.
5. MHRD, Govt. of India (1993-94). *Development of Education in India.*
6. Mukherjee S.N., (1968). *Education of Teacher in India.*
7. NCERT; (1995). *Minimum Levels of Learning at Primary Stage*, New Delhi.

8. Naik J.P. (1975). *Elementary Education in India; A Promise to Keep.*

9. NCERT, (1971). *What is Curriculum: Some Selected Definitions,* New Delhi.

10. NCERT, (1989). *The Teacher and Education in Emerging Indian Society,* New Delhi.

11. Siela M. Haggis, (1992). *Education for All Purpose and Context,* UNESCO.

12. Singh R.P. *Teachers Education in Year 2000.*

13. Singh P. (1989). *Handbook of Pupil Evaluation.* New Delhi: Allied Publishers Ltd.

14. *The Treasure Within*, UNESCO.

15. *The Primary years: Towards a curriculum framework.*

16. Yadav, M.S. and Govinda R. (1977). *Educational Evaluation.*

17. Rajiv Gandhi Shiksha Mission, (1996). *Dakshata Adharit Prashikshan*: Bhopal

SECOND YEAR

PAPER III & IV (ix) - EDUCATIONAL TECHNOLOGY

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- define and explain the role and scope of Educational Technology.
- understand its potentials and limitations,
- develop knowledge and skills of multiple usage and,
- acquire required competencies for actual application of Educational Technology in day to day school setting.

Course Contents -

UNIT-I

- Concept of Educational Technology
- Meaning and Development of Educational Technology,
- Approaches of Educational Technology, hardwares and softwares.
- Advantages and Disadvantages of Educational Technology.
- Limitations
- Scoio-Academic Relevance of Educational Technology in India.

UNIT-II

- Models of Teaching
- Concept of Models of Teaching : Definition and characteristics.
- Families of Models of Teaching.

(i) Information Processing Models of Teaching

(a) Richard Suchman's Inquiry Training Model

(b) J. Bruner – Concept Attainment Model

(c) D. Ausubel – Advance organizer Model.

(ii) Behaviour Modification Model

(a) Programmeme Learning Model

UNIT-III

Communication Technology

- Concept of Communication
- Progress of Communication
- Types of Communication : Verbal, Non-verbal

(i) Print Media

(a) Self instructional materials

(b) Other reading materials (News-papers, Journals, Workbooks, Dictionary, At Encyclopedia)

(ii) Non Print Media

(a) Audio : Radio, Tape Recorder

(b) Visual : Charts, maps, Models, Slide and Film Strip Projector, Over h Projector, Epidiascope

(c) Audio – visual : Television, Computer, Videodisc, Videotext, Teleconferencir

UNIT-IV

Systems Approach

- Concept of Systems and Sub-Systems
- Close and Open System
- Cybernetics
- System Dynamics

(a) System Design

Job description and analysis, goal specification, task specification, identific of system component, integration of system component.

(b) System Operation

Interaction System components

(c) System Evaluation

Performance, cost, utility, time.

(d) Feedback and Redesigning .

Advantages of systems approach to education: Effective planning, increased control and coordination, optimum utilization of resources, quality control.

- Education as System.

UNIT-V

Distance Education

- Meaning, Aims, Need and Importance of Distance Education.
- Growth of Distance Education.
- Educational Practices
- Student Support Services
- Open School and Open University

Sessional Work-

1. Assignments on:
   (i) Pre-requisites of the use of Educational technology.
   (ii) Agencies of Educational technology
   (iii) Educational Technology and National Policies.
   (iv) Preparing an abstract of any recent article on above studied topics.
2. Preparation of lessons on three models of teaching.
3. Critical review of T.V. or Radio programmes of NCERT, NOS, IGNOU, UGC etc.
4. Preparation of script of Radio or TV programme.
5. Preparation of Self instructional materials.
6. To study and prepare a report on any given education system at micro or macro level.
7. To study and prepare a flow chart on any given school system

   On the basis of field experience of open system of learning students are required to prepare a write up on any given topic.

Note :Many more activities can be taken-up by the teacher on any topic from above units.

Suggested Readings:

Banghart, F.W. *Educational System Analysis*, London : MacMillian.

Budgett, R. and Leednum, J. *Aspects of Educational Technology* (Eds.) London. Pitman.

Bajpai. A.C. and Leedham J.F. *Aspects of Educational Technology*, Part IB. Pitman Publishing Co., New York.

Buch. M.B. and Santhasnam, M.R. *Communication in Classroom*, CASE, Baroda.

5 Dececco, John, P. *The Psychology of Learning and Instruction*, Prentice Hall. India.

6 Joyce. B., Weil, M. *Models of Teaching*, Prentice Hall, New Jersey.

SECOND YEAR

PAPER III & IV (x) - WOMEN EDUCATION

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- develop understanding about the concept of women education, its importance and scope
- develop knowledge about the objectives of women education
- acquaint students with barriers responsible for the low status of women
- promote awareness about action based programmemes related to different problems of women.
- develop understanding about gender equality and equity.

Unit I : Concept of Women Education

- Women Education: Concept, Importance and Objectives of Women Education
- Issues related to Women Education
- Education of Women in Post Independence Period.

Unit II : Status of Women

- Status of Women in India. Causes of their backwardness – Social, Cultural and Economic
- Violence against women : Myth & Reality.
- Status of Girl Child in different classes and cultures.

Unit-III Women Empowerment

- Equality and equity for harmonious partnership between man and woman in different aspects of life
- Education, health care, skill development for optimum development of women's potential for making them self reliant.
- Empowerment & improvement of their status in decision making process at different levels

Unit IV : The Girl Child

- Change in the perception about the social worth of the girl child.
- Education for equal treatment of girls and boys
- Role – stereotypes and discrimination within the family. Female infanticide higher rate of girl child mortality.
- Strengthening the self image + self esteem of the girl child and recognition special needs of the girl child.

Unit V: Plans & Programmes for Women Empowerment

- Role of national and International agencies in the education of girl child women.
- Programmes for the development of women in the country.

Suggested Readings:

1	Aggrwal, S.P.& Aggarwal J.C.	:	*Women's Education in India:* Historical Review Present status Perspective plans with Statistical medicators, New Delhi; Concept Publishing Co., 1992.
2	Devsia, Leelamma & Devasia V.V.	:	*Women's Issues: An Indians perspective*, New Delhi : Northern Book Centre(1992).
3	Her Mighness The Haharani of Baroda and Mitra, S.M.	:	*The Position of Women in Indian Life*, Delhi: Neeraj Publishing House, 1984.
4	International Labor Organization	:	*Women at Work, Geneva*: ILO, 1980.
5	Jha, U.S et.al (Eds.)	:	*Status of Indian Women,* Vol. I, II & III, New Delhi: Kanishka Publishers, Distributors 1998.
6	Kulshreslha, Indira	:	*Indian Women: Images & Relections*, New Delhi: Blaze Publications & Distributors

Pvt. Ltd. 1992.

7 MHRD : *National Perspective Plan for Women 1988-2000 AD*, New Delhi: MHRD, 1988.

8 Mishra, Lakshmi (ed.) : *Woman's Issues: An Indian Perspective*, New Delhi: Northern Book Centre, 1992.

9 UN : Fourth World Conference on Women Beijng: UN, 1995

10 Ward, Barbara, E.(ed.) : *Women in the New Asia*, : Paris UNESCO, 1963.

SECOND YEAR

PAPER V - CONTENT-CUM-METHODOLOGY-I

SCIENCE - I

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- teach effectively the facts, concepts, and principles related to tenth class science syllabi.
- acquainted with different development related to science syllabi.
- trained in the skills of planing, management and safety measures related to science lab.
- prepare question papers and test items for evaluation of science syllabi.

The contents of Units – I, II, and III may be transacted with special emphasis on and demonstration of specific teaching methods/strategies for optimization of learning out comes. It will also include pedagogical analysis of the subject.

UNIT-I

- The Sun and its Energy: Sources of energy; Sun, Wind, Water, (Ocean), Fuels, Biomass etc. nuclear energy, renewable and non-renewable sources of energy, energy crisis, various forms of energy, conversion of heat into mechanical energy, Principle of heat engine and its efficiency, Internal combustion engine.
- Energy: Sun as the natural source of energy, structure of Sun, source of Sun's energy, thermonuclear reactions, nuclear fission and fusion, the chain reactions. The nuclear reactor, composition of sunlight, solar heating device, solar heaters, solar cells, solar batteries.
- Our earth : Earth as life supporting planet, organization and structure of earth. The crust, the mantle and the core, land and sea/ocean. The atmosphere and its composition, environmental pollution. Depletion of ozone layer Moon as satellite of earth.

- Universe : Earth as a member of solar system, stars, galaxies (milky way) and constellations ursa major and ursa minorpolestar, Birth and evolution of a star, Black hole, astronomical unit, light year and parsec, doppler effect in light and sound.

UNIT II : Nutrition, Food Production, Management of Food Resources:

- What is Nutrients
- Major and Minor Nutritients.
- Energy/Calorie requirements of the body.
- Mal nutrition – remedies.
- Balanced diet.
- Components of food.
- When do you need more food.
- Deficiency diseases.
- Causative factors for Deficient nutrients
- Excessive intake – Obesity
- Food Adulteration.
- **Agricultural Tasks:**
- Different kinds of food production.
- Types of food Animals.
- Types of food plants
- Animal Husbandary
- Fish and its types – A source of animal food.
- Trends in food production from animals.
- **Management of Food Resources:**
- Types of soil.
- Kinds of agricultural practices.
- Appropriate planning and execution.
- Pre & Post Harvest Management of crops.
- Types of safe storage and its need.
- Essential features of storage structures.
- Modes of Storing.
- Control of different types of pests.
- Types of food processing and preservation.
- Management of food in Family/Community/State/National/Global

- **Man & His Environment:**
- Man & His activities – impact on environment.
- Abiotic or physical environment that makes earth's atmosphere.
- Biotic and socio-cultural environment – Man
- Inter-relationship between Man and his environment.
- Management and replenishment of living Resources – its need.
- Industrialization and over exploitation and its effects on Man & environment.
- Waste materials and Recycling for the balance of Ecology.

UNIT-III

- Metals and non-metals; characterization of metals and non-metals, metallurgies of copper, iron and aluminum , compounds of metals: washin soda, bleaching powder occurrence, preparation and properties of phosphoru sulphur and silicon.
- Carbon and its compounds: allotropes of carbon (with special reference t diamond and graphite), alkenes, alkanes, alkynes, isomers, alcohol' carboxylic acids, esters.
- Air and water: Water as solvent, suspensions and colloids, air and wate pollutions.

UNIT-IV (a) **Curriculum Development and Evaluation in Science**

Concept of curriculum, science curriculum, its position in total scho curriculum. Syllabus and curriculum, various approaches in scien curriculum development- Spiral, Linear, Process based, content based et Recent curricular Reforms in science in India and abroad – N.C.E.R. Experiments. Curricular reforms in Biological Science (Krishna Swa American curricular Reforms – Physical Science study committee (PSS Harvard Project Physics (HPP). Chemical Education Material Study (Che Study) Chemical Bond Approach (CBA) Biological Science Curriculu Study (BSCS), British Curricular Reforms – Nuffield programme, Scho science projects.

(b) **Evaluation:**

Concept of Evaluation, How it differs from measurement, Inter-relation between objectives, learning experiences and evaluation, Distinguish features of a good Evaluation programme, Tools and Techniques

Evaluation. Continuous and comprehensive evaluation. Classroom tests and standardized tests and their construction, Types of test items – objective type, true – false type, Matching type, fill in the Blank type, recognition type, completion type, Multiple choice type, Essay type, short answer type, One word answer type, their merits and demerits, blue print; preparation, Characteristics of a good test item – Reliability Validity, usability, Discriminating ability.

UNIT V : Science Laboratory:

Importance of Lab. Work in Science, Teaching. Essentials needed in Science Laboratory – Electricity, gas, water etc. various designs of science laboratories. Purchasing and stocking science equipments, Preservation and maintenance of living organism. Repair and maintenance of Science equipment's, setting of experiments and project work. Safety rules to be observed in science laboratories.

Suggested Readings:

1 Science: *A Text Book for Class X* : NCERT, New Delhi

2 Singh, A.K. *et.al.*: *Science for class X*, Bharati Bhavan Publishers, Patna

3 Sharma, R.C. : *Science Teaching*

4 Das, R.C. : *Science Teaching*

5 Nair C.P.S.: *Teaching Science in our schools*

6 *New Trends in Biology Teaching* UNESCO, Paris

7 Duggal S.P. : *Chemistry Teaching.*

8 Bybee and Benzvi : *Science Curriculum : Trasnforming goals to practices.* In Fraser and Tobin. (Eds.) *International Handbook on Science Education* – Part I.

SECOND YEAR

PAPER V - CONTENT-CUM-METHODOLOGY - I

MATHEMATICS-I

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- *write* specific objectives in behavioural terms (for teaching matehmatics).
- *write* unit/lesson plan on various units/topics of matehmatics.
- *construct* various types of test items in mathematics.
- *prepare* and *use* Teaching aids in mathematics.
- *appreciate* the heuristic approach in mathematics.
- *apply* Polya method for problem solving.
- *solve* problems in various topics that are included in this paper.

UNIT I : Planning in Mathematics Teaching:

Writing specific objectives for teaching of Mathematics in behavioural terms, Unit and lesson planning, Constructing test items in Mathematics for Essay type, Short answer type, Very Short answer type and Objective type. Teaching aids in Mathematics.

UNIT II : Problem solving in Mathematics

Heuristic approach in Mathematics, Polya method, Mathematical discovery (as discussed in Polya's Mathematical discovery volume I & II).

UNIT III : Algebra:

Linear equations in two unknowns, G.C.D. and H.C.F. of polynomials, Quadratic equations.

Teaching Strategies:

Linear equation in two unknowns should be dealt by motivating the students to search for a way to somehow transform the given equations into an equation with only one unknown. For G.C.D. and HCF of polynomials, the analogy with the

HCF and LCM of the numbers may be given. For dealing with quadratic equation, both factorization and whole square method may be discussed with comparison, by first starting with the equation of the type $x^2 \quad a^2$.

UNIT IV : Mensuration and Geometry:

Area, Volume and Surface of Cone, Cylinder and Sphere. Circles and their properties, Tangent to a Circle.

Teaching strategies:

The formula for surface area of cylinder and cone may be arrived at through paper folding activities. For the volume of a cylinder a pile of large number of circular discs of the same size may be used. For the formula of the volume of the cone and sphere liquid replacement activities may be used. besides that sand filling activity. For circles and their tangents, appropriate Geo-board may be used.

UNIT V: Trigonometry, Computing and statistics:

Trigonometrical Ratios of complementary angles. Heights and Distances, Algorithms, flow chart involving loops, Mean, Median, Vital Statistics and Index numbers.

Teaching Strategies:

For trigonometriacal formulae, appropriate mnemonics may be used. For algorithms and Flow Charts, examples from life may be taken and its importance may be highlighted. For Vital Statistics, students may also be encouraged to visit hospitals, municipal, corporation offices to collect vital statistics. For Index numbers items in news paper, dealing with financial aspects like Financial Express, Economic Times may be shown.

Note: The contents for the units III,IV and V will be covering the contents of NCERT Text Books for Class-X.

Suggested Readings:

1 Polya G. : *Mathematical Discovery*, Vol. I & II (1962), John Wiley & Sons.

02 Wilder R.L. : *Foundations of Mathematics* (1952) John Wiley &Sons.

3 Courant R., Robbins H. : *What is Mathematics?* (1963), Oxford University Press.

4 King P.P. *The Art of Mathematics* (1993)
Plenum Press

5 Bell E.T *The Development of Mathematics* (1940),
McGraw Hills

6 Butler G.H., : *The Teaching of secondary mathematics* (1965)
Wren F.L. McGraw Hill Book Company.

SECOND YEAR

PAPER VI - CONTENT-CUM-METHODOLOGY-II

SCIENCE-II (For Maths Group)

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- teach effectively the facts, concepts and principles related to VI, VII, VIII class science syllabi.
- acquainted with different developments related to science curriculum.
- prepare question papers and test items for evaluation of science curriculum.

The contents of Units-I,II & III may be transacted with special emphasis on and demonstration of specific teaching methods/strategies for optimization of learning outcomes. It will also include pedagogical analysis of the subject.

UNIT-I

- Refraction of light and its laws, refractive index and its significance, relation with velocity of light, passage of light through a prism, dispersion and deviation, spectrum, refraction of light through lenses: formation of images, ray diagrams, microscopes and telescopes, eye and defects of vision,
- Concept of pressure and its units, pressure exerted by liquids, atmospheric pressure, Meaning of Vacuum, measurement of pressure, barometer, buoyancy, Archimedies' principle with illustrative examples.
- Magnetism: properties of a magnet, idea of magnetic domains, temporary and permanent magnets, magnetic effects of an electric current, an electric bell
- The concept of electric current as flow of charges, Leclanche's cell and Daniel cells, A dry cell, storage batteries, solar cells dynamo, conductors and insulators, effects of electric current, D.C. and A.C.
- Typical numerical problems related to above topics

UNIT-II

- Nutrition and its modes: Autotrophic and heterotropic
- Digestive system and process of digestion
- Respiratory system and significance of respiration
- Transport of materials in animal and plant body
- Structure and functioning of heart
- Removal of waste materials
- Control and co-ordination in animals and plants
- Asexual and sexual reproduction in animals and plants
- Constituents of food and balanced diet.

UNIT-III

- Carbon: Graphite and diamond and carbon compounds, hydrocarbons fuels.
- Rocks, minerals and metals:- Different types of rocks, identification of minerals, metallic minerals, extraction of metals, iron, copper, aluminium, alloys and their properties.
- Metals: Physical & chemical properties
- Man made materials: cement, glass fibers, ceramics, polymers and plastics, soaps & detergents, fertilizers, and pesticides.

UNIT IV :Curriculum Development in Science:

Concept of curriculum, science curriculum, its position in total school curriculum. Syllabus and curriculum, various approaches in science curriculum development – Spiral, Linear, Process based, content based etc. Recent curricular Reforms in science in India and abroad – NCERT Experiments. Curricular reforms in Biological sciences (Krishna Swami) American curricular Reforms –ESS(Elementary Science Study), Science-A Process Approch, British curricular Reforms – Science 5/13 curriculum.

UNIT V : Evaluation:

Concept of Evaluation, inter-relationship between objectives, learning experiences and evaluation. Tools and Techniques of Evaluation. Continuous and comprehensive evaluation. Classroom tests and standardized tests and their construction, Type of test items – objective type true – False type Matching type, fill in the blank type, recognition type, Completion type Multiple choice type. Essay type, short answer type, One word answer type

their merits and demerits, Blue Print; preparation, Characteristics of a good test item.

Suggested Readings :

1 *Science: A text book for class VI*, NCERT, New Delhi.

2 *Science: A text book for class VII*, NCERT, New Delhi

3 *Science: A text book for Class VIII*, NCERT, New Delhi

4 Sharma, R.C.: *Science Teaching*

5 Das R.C.: *Science Teaching in Schools*

6 Nair C.P.S.:*Teaching Science in our Schools*

7 *New Trends in Biology Teaching* UNESCO, Paris

8 Miller, D.F. and Bangladesh C.N.: *Methods and Materials for Teaching the Biological Sciences.*

9 Duggal, S.P. : *Chemistry teaching.*

10 *Elementary Science Study (U.S Project)*

11 *Science – A Process Approach (-do-)*

12 *Science 5/13- School Science Project (British)*

13 Bybee and Ben – zvi : *Science Curriculum : Transforming goals to pratices*, In Fraser and Tobin (Eds). *International Hand book on Science Education* – Part I

Regional Institute of Education LIBRARY Bhopal

SECOND YEAR

PAPER VI- CONTENT-CUM-METHODOLOGY -II

MATHEMATICS II (For Science Group)

Time: 3 hrs. Max. Marks: Ext. 75, Int.25

Note: Questions will be set from each unit with only internal choice.

Objectives:

The teacher – trainees will be able to :

- *write* specific objectives in behavioural terms (for teaching mathematics)
- *write* unit/lesson plan on various units/topics of mathematics.
- *construct* various types of test items in mathematics.
- *prepare* and *use* Teaching aids in mathematics
- *appreciate* the heuristic approach in mathematics
- *apply* Polya method for problem solving
- *solve* problems in various topics that are included in this paper.

UNIT I : Planning in Mathematics Teaching

Writing specific objectives for teaching of mathematics in behavioural terms. Unit and lesson planning, constructing test items in mathematics for Short Answer type, Very Short Answer type and Objective type. Teaching-aids in mathematics.

UNIT II : Problem solving in Mathematics.

Polya Method,(as discussed in Polya's How to Solve it?)

UNIT III :

Laws of indices, factorization of algebraic expression. Compound Interest Equations in one unknown and of the form

$$\frac{ax+b}{cx+d} = k$$

Teaching strategies:

While dealing with factorization of alegebraic expressions, the anology with the factorisation of numbers, be judiciously given, and while dealing with the equation of the type

$$\frac{ax+b}{cx+d} = K,$$

suitable examples from life situations may be taken which readily form the equations of this type. For compound interest the idea of reinvestment may be emphasised. Also some simulation activities can be used. Simple idea of mathematical modelling can also be given a glance.

UNIT IV :

Construction of quadrilateral, chords or a circle. Angle property of circle. Tangents to a circle. Area of triangle - Hero's formula. Area of a circle.

Teaching Strategies

While dealing with the construction of quadrilaterals it may be clearly pointed out that while three sides uniquely determine a triangle but four sides does not uniquely determine a quadrilateral. The angle property of circle may be demonstrated with the help of models prepared by card boards and threads. For tangent to a circle appropriate Geo-board may be used. Hero's formula may be dealt without proof but with adequate verification. Formula for area of circle may be arrived at by splitting it into large number of sectors (small enough to appear like triangle) and then arranging them in the form of rectangle.

UNIT-V Volume, surface area of cylinder, cone and sphere, Arithmetic mean, Frequency Distribution and Histogram.

Teaching strategies:

The formula for surface area of cylinder and cone may be arrived at through paper folding activities. For the volume of a cylinder a pile of large number of circular discs of the same size may be used. For the formula of volume of the cone and sphere, liquid replacement activity may be used, besides that sand filling activity. For the idea of Arithmetic mean analogy with centre of gravity may be given. For Frequency Distribution, students may be encouraged to collect actual data and classify them and finally tabulate them using tally marks. The advantage of tallying process may be highlighted. While dealing with histograms, it maybe clearly pointed out that it is not the height but the area of the rectangles that are proportional to the frequency.

Suggested Readings:

1 Polya G. : *Mathematical Discovery*, Vol. I & II (1962), John Wiley & Sons.

2 Courant R., : Robbins H. *What is Mathematics?* (1963), Oxford University Press.

3 King P.P. *The Art of Mathematics* (1993) Plenum Press

4 Buttler G.H., : Wren F.L. *The Teaching of Secondary Mathematics* (1965) McGraw Hill Book Company.

5 NCERT, Text Books on Mathematics Class VIII.

SECOND YEAR

PAPER VII - SCIENCE PRACTICUM

Max. Marks : 50

Objectives:

- acquire knowledge of lab work and lab techniques
- prepare different types of teaching aids and practice innovation and improvisation.
- develop skill of demonstration of practicals
- develop the skills of manipulation of materials and apparatus, observation, reporting analysis, interpretation and drawing conclusions.

Course Content :

(A) Training on Prescribed Practicals:

1 Find out the least count of a given thermometer and measure the temperature of the atmosphere during the day time in the shade and the sun,

2 Construct a Model of solar cooker and demonstrate its use.

3 To test the products of combustion of different types of fuels (candle, kerosene etc.)

4 Test the presence of sugar, starch, protein and fat in food stuffs.

5 Study of Culture of Baker's yeast and moulds occurring on different food items.

6 Study of bacteria from curd under microscope.

7 To identify various types of deficiency diseases using charts, models, figures and to comment on them.

8 Arrange the provided specimens/pictures/discs bearing the names of organisms in sequence to represent 4-step food chains in such a way that at least one number is common in two food chains.

9 To provide missing link in various mineral cycles.

10 Experiment to show that the green plants synthesize carbohydrates.

11 Dissolve given materials (copper sulphate, common salt, milk) in water. Classify them into true solution and suspension.

12 To distil salt solution for preparing pure water.

13 To identify hard & soft water in the samples collected from different sources.

14 Sterilization of water with bleaching powder.

15 Study of oxalate ions in Gauva fruit

16 Determination of Refractive Index of Glass in the form of a slab using Traveling Miscoscope.

17 Reflex actions and its types with appropriate demonstration.

18 Blood, Blood-grouping – Blood transfusion and society health Rh-factor.

(B) Demonstration of Practicals:

Demonstration by the teacher and observation by the students on a pre-designed questionnaire of the following:-

(a) Magnetic effect of current.

(b) Defects of eye and its correction.

(c) Spectrum

(d) Convection current.

(e) Couple oscillation

(f) Exothermic and endothermic reactions.

(g) Evolution of oxygen in Photosynthesis

(h) Evolution of heat and CO_2 in respiration.

(i) Identification of pests.

(j) Diffusion and Osmosis.

(k) Dissection of vertebrate and invertebrate and exposure of different systems.

(l) Preparation of blood film.

(m) Types of chemical reactions (combination, decomposition reaction)

(n) Preparation of gases like, H_2, CO_2, NH_3, Cl_2 & CO_2.

(C) Development of teaching aids:

Innovation, improvisation and fabrication.

(D) Training of lab techniques and lab work:

(i) Maintenance of Science laboratory equipments, museum, herbarium and aquarium.

(ii) Preparation of solutions and laboratory reagents

(iii) Use of first aid box and awareness of safety rules.

(iv) Organization of science club and hobby club.

(v) Organization of science exhibition.

Suggested Readings:

1 Mittal, R.S., Mishra, R.R. and Mahwswari, S.C. : *Laboratory Manual in Science*, Arya Book Depot, New Delhi.

2 Goyal, M.M., Saxena, M.U. : Chanda, A.K. and Charya, M.J: *Conduct Science Practicles*, Evergreen Publications, New Delhi.

3 Tripathi, R.B., and Yadav, P.S.: *Nutan Practical Science*, BPL Publications, Bhopal.

SECOND YEAR

PAPER VII - MATHEMATICS PRACTICUM - II

Max. Marks: 50

Objectives: The Teacher-Trainees will be able to :

- *write* BASIC computer programmes for mathematics
- *take up* mathematics project and *write* a report for the same

1. **Computer Programming for Mathematics**

   BASIC programming on the following:

   1. Quadratic equations
   2. G.C.D. and L.C.M. of numbers
   3. Factorization of Quadratic polynomials
   4. Construction of Frequency tables.
   5. Ordering of Numbers
   6. Construction of Trigonometric and Logarithmic tables.
   7. Statistical graphs.
   8. Mathematical games like Nim, Plot-4, Battle of Numbers, Factor game Fifteen - Square puzzle, L-Game.

2. **Mathematics project :**

   Each student will take up a Project on a topic in mathematics (content) assigned to him/her and a well written report to be presented and submitted at the end of session.

द्वितीय वर्ष

प्रश्न पत्र V – हिन्दी भाषा शिक्षण विधियां

समय : 3 घंटे पूर्णांक : बाह्य 75, आंतरिक 25

नोट : प्रत्येक इकाई से प्रश्न पूछे जायेंगे।

प्रथम इकाई

(1) भाषा – परिभाषा, स्वरूप तथा भूमिका

शिक्षण में मातृभाषा का महत्व। शिक्षण के माध्यम के रूप में मातृभाषा तथा मातृभाषा शिक्षण। भाषा शिक्षण के प्रमुख सिद्धान्त। भाषा के चार कौशल तथा उनका अन्योन्याश्रय संबंध। मातृभाषा तथा द्वितीय भाषा के रूप में हिन्दी भाषा–शिक्षण के उद्देश्य तथा शिक्षण विधियों में अन्तर।

(2) भाषा–शिक्षण का मनोविज्ञान। मूल भाषा अथवा मातृभाषा और द्वितीय भाषा की भाषिक संकल्पना। भाषा और समाज। भाषा के सामाजिकता सरोकार तथा शिक्षण के संबंध में समाज की भाषिक अपेक्षाएँ।

शिक्षण में त्रिभाषा सूत्र का आधार और हिन्दी की स्थिति। सम्पर्क भाषा के रूप में हिन्दी का महत्व और भूमिका।

द्वितीय इकाई

(1) **गद्य–शिक्षण**

माध्यमिक स्तर पर गद्य–शिक्षण के उद्देश्य। गद्य की विभिन्न विधाओं की भाषा–शिक्षण में भूमिका।

(क) निबंध (ख) कहानी (ग) नाटक तथा (घ) संस्मरण आदि के माध्यम से गद्य शिक्षण के उद्देश्यों में अंतर तथा उनकी शिक्षण–विधियों की विशिष्टता। गद्य–शिक्षण की मौखिक तथा लिखित अभिव्यक्ति में अर्थग्रहण, सराहना तथा रचनात्मक प्रश्नों का स्वरूप।

(2) **कविता–शिक्षण**

माध्यमिक स्तर पर कविता–शिक्षण के उद्देश्य। गद्य–भाषा एवं काव्य–भाषा के स्वरूप में अंतर।

जीवन दृष्टि, भाव सौन्दर्य तथा सौन्दर्य बोध के विकास में कविता–शिक्षण की भूमिका और स्वरूप। कविता का पाठ और पठन तथा उसके विभिन्न स्तर। सृजनात्मक अभिव्यक्ति के विकास में कविता शिक्षण का महत्व कक्षा शिक्षण के अतिरिक्त छात्रों की भाषागत रचनात्मकता के विकास के लिए की जाने वाली अन्य क्रियाओं का स्वरूप। रचना की कार्यशालाएँ और उनका महत्व है।

तृतीय इकाई

गद्य तथा काव्य के व्याकरण की शिक्षा

(1) भाषा शिक्षण में आगमन तथा निगमन विधियों का प्रयोग और उद्देश्य। भाषा–शिक्षण में व्याकरण के अंगों के ज्ञान का महत्व और उनके शिक्षण की विधि में निगमन प्रणाली का महत्व और प्रयोग

(2) छंद, अलंकार तथा रस की काव्य–सौन्दर्य में भूमिका और महत्व तथा उनकी शिक्षण विधियों में निगमन प्रणाली का महत्व और प्रयोग।

(3) भाषा और साहित्य–शिक्षण में संदर्भ ग्रंथों तथा स्त्रोत सामग्री का उपयोग। शिक्षण सामग्री (सहायक तथा पूरक) तथा पाठयोजनाओं के निर्माण में इसके प्रयोग की चर्चा।

हिन्दी भाषा शिक्षण में मूल्यांकन

(1) भाषा के मौखिक और लिखित रूप के मूल्यांकन का स्वरूप और उद्देश्य। मौखिक एवं लिखित प्रश्नों के स्वरूप और अभ्यास।

(2) वस्तुनिष्ठ, लघुत्तर तथा निबंधात्मक प्रश्न। भाषा शिक्षण में प्रश्नपत्रों का आधार तथा उनके स्वरूप का विश्लेषण

(3) मूल्यांकन के प्रश्नपत्रों में विषय–वस्तु, अर्थग्रहण, भाविव्यक्ति की कुशलता तथा सृजनात्मकता के लिए अंकों तथा प्रश्नों का समुचित आनुपातिक विभाजन।

(1) माध्यमिक स्तर पर हिन्दी पाठ्यक्रम और उसका आलोचनात्मक अध्ययन। हिन्दी भाषा का अन्य पाठ्यविषयों से सहसंबंध तथा आदर्श हिन्दी शिक्षक के अनिवार्य गुण।

(2) हिन्दी शिक्षण में दृश्य और श्रव्य सामग्री की भूमिका और उसका स्वरूप।

(3) हिन्दी भाषा शिक्षण में पाठ्य सहगामी क्रियाओं का स्वरूप और भाषाभिव्यक्ति के विकास में उनका महत्व और योगदान।

संदर्भ पुस्तकें

1. राम चन्द्र शुक्ल — *हिन्दी साहित्य का इतिहास*
2. सं. डा. नगेन्द्र — *हिन्दी साहित्य का इतिहास*
3. डा. बच्चन सिंह — *हिन्दी साहिध्त्य का दूसरा इतिहास*
4. डा. भोला नाथ तिवारी — *भाषा विज्ञान*
5. रामचन्द्र वर्मा — *अच्छी हिन्दी*
6. हरदेव बहारी/ज.म. दीपशिखा — *हिन्दी व्याकरण की रूपरेखा*
7. डा. भोला शंकर व्यास तथा डा. भोला नाथ तिवारी डॉ. रवीन्द्रनाथ श्रीवाव्त व (रा. शै. अनु.प्र. परिषर प्रकाशन) — *हिन्दी व्याकरण और रचना*
8. कामता प्रसाद गुरू — *हिन्दी व्याकरण*
9. डा. कान्ति कुमार जैन — *नयी कविता*
10. डा. शिवकुमार मिश्र — *नया हिन्दी काव्य*
11. भगवत रावत — *कविता का दूसरा पाठ*
12. डा. जयनाथ नलिन — *हिन्दी नाटककार*

13. डा. जयनाथ नलिन — *हिन्दी निबंधकार*

14. डा. बच्चनसिंह — *हिन्दी नाटक*

15. डा. सुषमा धवल — *हिन्दी उपन्यास*

16. डा. सुरेश सिन्हा — *हिन्दी कहानी उद्भव और दिशाएं*

17. सुरेन्द्र — *नयी कहानी प्रकृति और पाठ*

18. डा. नामवरसिंह — *कविता के नये प्रतिमान*

19. डा. नामवरसिंह — *कहानी नयी कहानी*

20. अशोक वाजपेयी — *फिलहाल*

SECOND YEAR

Paper V – Content–cum–Methodology – I
Methods of Teaching English

Time : 3 hrs. Max. Marks : Ext.75, Int.25

Note : Questions will be set from each unit with only internal choice.

UNIT-I : General Consideration

- Place of English in India, yesterday & today
- English in school curriculum - its objectives and prospective.
- Principles and problems of second language teaching
- Qualities and role of the teacher of English

UNIT-II : Methods and approaches

- Grammar Translation Method
- Direct Method
- Structural Approach
- Communicative Approach
- Billingual Approach
- Electic Method

UNIT-III : Teaching Aural/Oral Skills

Teaching Prose

Teaching Poetry

Teaching Grammar

Teaching Silent Reading

Teaching Writing Skills. Spellings and Punctuation Mark

UNIT-IV : Lesson Planning

Format of a Prose lesson

Format of a Poetry lesson

Format of a Grammar lesson

Format of a Eonposition !esson

Production and use of Instructional materials

UNIT-V : Evaluation & Testing

Principles of language evaluation

Kinds of test items

Criteria of a balanced language test

Preparing and administering tests

Organising remedial teaching.

Suggested Readings:

1	Tarinyya, M.	:	*English Language Teaching*
2	Nagarj, Greet	:	*English Language Teaching*
3	Arnold, F.F.& Gimson, A.C.	:	*English Pronunciation Practice*
4	Baruah, T.C.	:	*English Teachers Handbook*
5	Krishnamurthy, N.K.		
	Sri Raman, T.	:	*English Teaching in India*
6	Shore, M.C.	:	*Individual Differences in Language Development*
7	Verma, Ravi & Satsangi	:	*Essentials of Communication Techniques.*
8	Mohan, Krishna &		
	Banerjee, Meera	:	*Developing Communication Skills*
9	Cummins, Jim &		
	Swain Merrill	:	*Billingualism in Education*
10	Ed.by. Valarie, K.	:	*Survey I & II*
11	Johnson Keith	:	*Communicative Syllabus Design & Methodology*
12	Lado, Robert	:	*Language Testing*
13	Wallis, Michael J.	:	*Study Skills in English*
14	Littlewood, William T.	:	*Foreign and Second Language Learner*
15	ed.by. Annamalai	:	*Language Planning*
	Jernudd B.H., Reuben, Joan		

16	Fowler, Mary Elizabeth	:	*Teaching Language Composition and Literature.*
17	Hill, Macrew	:	*Spellings Made Easy*
18	Maccarthy , Peter	:	*The Teaching of Pronunciation*
19	Brown, G. & Yule G.	:	*Teaching the Spoken Language*
20	Ed.by Chris Kennedy Allen and Mrwin	:	*Language Planning & Language Education*
21	Haycraft, B.	:	*Teaching of Pronunciation*
22.	Thirumalia & Gayatri	:	*Speech of the Hearing impaired*
23.	Maley, Alan & Duff	:	*Drama Teaching &Language Learning*
24	Malcolm C.	:	*Introduction to Discourse Analysis*
25	Ed.by. J. Charles Alderson and Urguhard A H.	:	*Reading in a Foreign Language*
26	Ed.by.Aviva F,Eian, Pingle & Janis Y.	:	*Learning to Write Ist Language IInd language*
27	Mcarthur, Tom	:	*A Foundation Course for Language Teacher*
28	Percival & Bryan	:	*A Course in Spoken English for Secondary Schools*
29	Sister M.S.I. Martin	:	*Power Tools of English Vol.6*
30	Wells, Gordon	:	*Learning through Interaction*
31	Charlton, James	:	*Test Papers in English*
32	Hornby, A.S.	:	*Teaching of Structural Words and Sentence Practice.*
33	Dickson, R.J.	:	*A Complete Course in English*
34	Schnonell F.J.	:	*Essentials in Teaching Testing Spelling*
35	Appleton, Century & Crofts	:	*The Diction & Correction of Reading Difficulties.*

SECOND YEAR

Paper V – Content–cum–Methodology- I

Methods of Teaching Urdu

Time : 3 hrs. Max. Marks : Ext.75, Int.25

Note : Questions will be set from each unit with only internal choice.

UNIT-I

(a) Role and importance of mother tongue in teaching - aims and objectives of teaching Urdu as - (i) First language (ii) Second language (iii) Third language

(b) (i) Listening - Listening with concentration. Understanding the ideas and variations of expressions

(ii) Speaking - Speaking clearly with correct pronunciation. Proper expression with stress and intonation. Formal and non-formal speaking.

(iii) Reading - Principles of reading, types of reading silent and loud. intensive and extensive reading. Stages of reading - Simple reading, reading with comprehension, critical reading, imaginative or creative reading.

(iv) Writing - Formal and non-formal writings with correct spellings. Proper usage of words and punctuations. Good hand writing. Common errors in writing and ways of its remedy.

UNIT II : Methods and approaches of teaching

(a) Different methods and approaches of teaching Urdu.

(i) Translation method (ii) Direct method (iii) Bi-lingual method (iv) Discussion method (v) Play way method (vi) Story-telling method, (vii) Structural method, (viii) Situational approach (ix) Question answer methods, (x) Communicative approach and Dramatised approach.

UNIT-III : Lesson Plan

(a) Teaching Plan on -

(i) Poetry (ii) Fictional prose (iii) Non-fictional prose (iv) Grammar (v) Composition

(b) Skills of questioning

UNIT-IV : Evaluation in Urdu language teaching

(a) (i) Evaluation - its concept and meaning (ii) Examination & evaluation.

(b) Essential of question paper

(b) Different types of question in evaluation (i) oral and written form of questions (ii) objective (iii) Short answer (iv) Essay

(d) Preparation of objective type tests to evaluate language skills.

(e) Qualities of good language tests.

(f) Analysis of common errors in language and remedial exercises.

UNIT V : Text Books & Co-curricular activities

(a) Characteristics & utility of text books

(b) Study of Urdu syllabus at upper primary and secondary level.

(c) Weightage of forms of literature and text material

(d) Qualities of a good Urdu teacher

(e) Co-curricular activities

Suggested Readings :

1. Rafiqa Kareem - *Urdu Zaban Ka Tariqae Tadress*
2. Moinuddin - *Hum Urdu Kaise parhahen*
3. Ahmad Husain - *Tadrees-e-Urdu*
4. Salamat Ullah - *Hum Kaise Parahen*
5. Salamat ullah - *Buniyadi Ustad ke liye*
6. Saleem Abdullah - Urdu kaise Parhahen
7. Jalees Abidi - Ibtidayee Iskool mein Taleem Ke Tariqey
8. Dr. Faruq Ansari – Instructional material for teachers on the new Techniques and Approaches of Teaching Urdu at Secondary level.
9. Her Majesty's publication - *Teaching the Mother Tongue in Secondary Schools* (English)
10. P.B.Ballard - *Teaching of Testing*

द्वितीय वर्ष

प्रश्न पत्र– V मराठी भाषा अध्ययन पद्धती

समय : 3 तास पुर्ण गुण : बाह्य 75, आंतरिक 25

नोट : प्रत्येक घटकावर प्रश्न विचारले जातील।

घटक –I मात्र भाषेचे शिक्षणात महत्व व स्थान

मात्रभाषा मराठीचे शिक्षणात महत्व, भाषेचे जीवनात व समाजात स्थान, भाषा व मनोविकास, लहान मूल भाषा शिकते, भाषा शिकण्याचे सिद्धांत, प्रथम द्वितीय तृतीय भाषेची उद्दिष्टे, प्रथम भाषेपेक्षा कोणत्या बाबतीत वेगळे, त्रिभाषा सूत्र माध्यम मराठीचे महत्व. 16

घटक – II मराठीच्या अध्यापनाची उद्दिष्टे

मराठीच्या अध्यापनाची प्रथम भाषा म्हणून उद्दिष्टे, उद्दिष्टावर आधारित अभ्यास क्रमाची रचना, तत्वे व अडचणी, पाठ्य पुस्तकाची रचना, संपादन इत्यादी. मराठीचा शिक्षक – त्याचे व्यक्तीमत्व व अध्यापन, कौशल्यासाठी आवश्यक गुण. अध्यापन कला की शास्त्र.

घटक – III भाषिक कौशल्याचा विकास व अध्यापन रीती

भाषेची मूलभूत उद्दिष्टे, श्रवण, भाषण, वाचन व लेखन कौशल्याचा विकास, त्यासाठी दैनंदिन अध्यापनातून साध्य करावयाच्या सरावाच्या गोष्टी, कौशल्य विकासासाठी पूरक अभ्यासाचे उपक्रम, अवांतर वाचन पूरक वाचन शालेय उपक्रम इत्यादी.

घटक – IV अध्यापन पद्धती व पाठयोजनाचे प्रारूप

1. इयता नववी व दहावीतील पाठ्यपुस्तकावर आधारित पाठाचा प्रारूप असावा
2. वैचारिक निबंध, ललित निबंध, कविता, कथा, स्वभावचित्र, प्रवासवर्णन, इ. पाठाच्या अध्यापनाची तत्वे, उद्दिष्टे, अध्यापन रीती यासाठी पाठाचा प्रारूप तयार करणे.
3. व्याकरणाच्या अध्यापन पद्धती, त्यानूसार पाठाचा प्रारूप.

घटक – V मूल्यमापन

1. मूल्यमापनाचे वर्तमान स्वरूप, अपेक्षा व उद्दिष्टे वर्तमान मूल्यमापनातील, उणीवा, परीक्षा पद्धती व तीच्यातील गुण–दोष
2. प्रश्नाचे प्रकार, निबंध, लघु, लघुतम, वस्तुनिष्ठ इत्यादी त्याचे स्वरूप व गुण–दोष चर्चा.
3. मराठीच्या प्रश्नपत्राची रचना, तत्वे व प्रारूप निश्चित करणे, उद्दिष्ठानुसार गुण विभाजन करणे.
4. मूल्य मापनात वस्तुनिष्ठता आणणे.

अध्यापन रीती

1. मराठीच्या अध्यापनासाठी जे सरावाचे पाठ निवडायचे ते इयता नववी व दहावीतील मराठी विषयाच्या पाठ्यपुस्तकातून घ्यावेत.
2. प्रश्नाचे प्रकार शिकविताना विद्यार्थ्याकडून प्रश्न रचनेचा सराव करून घ्यावा हे प्रश्न ही पाठ्यपुस्तकातील, विषय वस्तुवर आधारीत हवेत.
3. मात्रभाषेच्या अध्यापनाची उद्दिष्टे (उदा ज्ञान, आकलन, अभिव्यक्ती, सौंदर्यात्मक रसग्रहणात्मक, इत्यादी) पाठातून कशी व कुठे कुठे वाक्य होतात यासाठी सरावाचे अध्ययन करावे.

अंतर्गत मूल्यांकन

पुर्ण गुण : 25

1. प्रत्येक घटकावर आधारित एक अशा एकूण पाच वर्गातर्गत परीक्षा घ्याव्यात 5
2. इयता नववी व दहावीतील मराठीच्या पाठय पुस्तकाचे (कोणत्याही एकाचे) सविस्तर परिक्षण करावे 5
3. कोणात्याही एक इयत्त साठी प्रश्न पत्राचा प्रारूप तयार करून घ्यावा 3
4. किमान दोन शैक्षणिक साधनाना मूल्यांकनासाठी सादर करील 2
5. उच्चारात व लेखनात विद्यार्थ्याकडून होणा या सर्वसामान्य चुकाची यादी तयार करून त्या चुका होण्याची कारणे व त्याच्या निराकरणाचे उपाय लेखनाद्वारे सुचविल 5

अभ्यासासाठी संदर्भ ग्रंथ

1. अकोलकर व पाटणकर — *मराठीचे अध्यापन*
2. म. बा. कुंडले श्री विद्याप्रकाशन, पुणे — *मराठीचे अध्यापन*
3. वि. पां बोकील चित्रशाळा प्रेस प्रकाशन, पुणे — *शिक्षणाचे तत्वज्ञान*
4. लिला पाटील श्री विद्या प्रकाशन, पुणे — *आजचे अध्यापन*
5. ल. रा. गदे, माडर्न बुक, डेपो पुणे — *सर्वसामान्य अध्यापन पद्धती*

SECOND YEAR

PAPER V - CONTENT – CUM – METHODOLOGY – I
METHODS OF TEACHING GUJARATI

Time : 3 hrs. Max. Marks : Ext.75, Int.25

Note : Questions will be set from each unit with only internal choice.

UNIT-I

(a) Role and importance of mother tongue in teaching - aims and objectives of teaching Gujarati as first language, second and third language

(b)
- (i) Listening
- (ii) Speaking
- (iii) Reading
- (iv) Writing

UNIT II : Methods and Approaches of Teaching

(a) Different methods and approaches of teaching Gujarati

- (i) Translation method
- (ii) Direct method
- (iii) Bilingual method
- (iv) Discussion method
- (v) Playing method
- (vi) Story telling method
- (vii) Structural method
- (viii) Situational approach
- (ix) Question - answer approach
- (x) Communicative approach
- (xi) Dramatised approach

UNIT-III : Lesson Plan

Teaching plan of

- (i) poetry
- (ii) Fictional prose

(iii) non-fictional prose

(iv) Grammar

(v) Composition

UNIT-IV : Evaluation in Gujarati Language Teaching

(a) Evaluation (i) its concept and meaning

(ii) Examination and evaluation

(b) Essentials of a good question paper

(c) Different types of questions in evaluation

(i) Objective

(ii) Short answer

(iii) Essay

(d) Preparation of objective tests to evaluate language skills

(e) Qualities of good language tests

(f) Analysis of common errors in language and remedial exercises

UNIT-V : Text books and co-curricular activities

(a) Characteristics and utility of text books

(b) Study of Gujarati syllabus at upper primary and secondary level.

(c) Weightage of forms of literature and text material

(d) Qualities of a good teacher

(e) Co-curricular activities

Sessional Work

Some activities are suggested for the internal assessment. It can be changed and used as per requirement

(1) Unit-wise test - oral and written

(2) Evaluation of Gujarati text books

(3) Preparation of a model question paper

(4) Framing suitable exercises on certain topics of teaching material

(5) Preparation of teaching aids

Suggested Readings :

1. Dhavani Desai - *Gujarati Adhyapanna panna*

2 R.S. Trivedi - *Matru Bhashanu Shikshan*

3 Vidya Vachaspati - *Matru Bhasha Shikshan*

4 I.P. Dave - *Kavyanu Shikshan*

5 Her Majestry publication - *Teaching the mother tonguein secondary school*

6 P.B. Ballad - *Teaching of testing*

Regional Institute of Education LIBRARY Bhopal

SECOND YEAR

PAPER VI - CONTENT – CUM- METHODOLOGY –II
METHODS OF TEACHING SOCIAL SCIENCES

Time : 3 hrs. Max. Marks : Ext.75, Int.25

Note : Questions will be set from each unit with only internal choice.

Objectives:

The teacher-trainees will be able to :

- develop an understanding of the social sciences in inter-disciplinary approach.
- help the students to learn and appreciate the use of qualitative text-books and other supplementary materials, subject magazines, newspapers and journals
- help the students to develop objectives of teaching social science in cognitive affective and psychomotor domain.
- help the students to develop instructional objectives of a unit, topic, lesson etc.
- help the students to understand and use variety of methods, approaches and techniques of teaching.
- help the students to use different types of teaching aid
- help the students to understand and use different concepts of educational statistical tools of evaluation etc.
- help the students to use statistical data in the subject and also to explain it diagrammatically.
- help the students to make surveys, to collect and utilise the economic and social data in the form of tables, charts and graphs.
- help the students to develop the ability of research work in the subject.

UNIT I : Nature and scope of Social Sciences. Values of teaching Social Sciences in context of emerging concerns and needs of Indian society. Inter-disciplinary approach in explaining the past and current events.

UNIT II : Curriculum construction in Social Sciences. Need and qualities of a good text book in Social Sciences. Collateral reading material - fictions, journals, newspapers, travelogue; use of teacher guide and source books.

UNIT III : Objectives of teaching Social Sciences - History, Geography, Civics, Economics. General and specific objectives in cognitive, affective, psychomotor domains. Instructional objectives of a particular topic or lesson. Major ideas and minor ideas, concepts, facts in developing a lesson plan, unit and lesson plans.

UNIV IV : Method of teaching Social Sciences; emphasis on subject-wise teaching. Lecture, conversation, seminar discussion, demonstration, sources, problem solving and project methods. Survey of socio-economic issues. Techniques: Questioning, using blackboard, dramatisation, role playing etc. Collection & interpretation of data. Use of audio-visual and community resources in teaching Social Sciences - Specimen, pictures, models, graphs, charts, maps, slides, film-scripts, tape recorders, radio, TV, VCR etc. Diagrams, tables.

UNTI V : Concepts of Education:

Knowledge, understanding, comprehension, application, skill. Continuous and comprehensive evaluation, peculiarities of evaluation, tools of evaluation. Unit tests - their construction and uses in Social Sciences.

Suggested Readings:

1 Taneja V.R. - *Fundamentals of Teaching Social Studies*

2 Halayy M. - *Social Sciences*

3 Institute of Goe. USSR. - *Man, Society and Environment*

4 Kuriyan G. - *India - A General Survey*

5 Desai D.M. - *Recent Concepts of Social Studies*

6 Binning and Binning - *Teaching Social Studies in Secondary Schools*

7 Lumsden - *New Developments in Teaching of Economics*

8 Sharma A.P. - *Teaching of Economics*

9 Singh R.P. - *Teaching of Economics*

10 Lewis, N.M. - *Teaching History in Secondary Schools,* Evans Brothers Ltd. London

11 Kochhar, S.K. - *The Teaching of History*, Sterling Publishers, New Delhi 1967

12 Graves, N.J. - *New UNESCO Source Book forGeography Teaching,*Longman/UNESCO Press, Harlow, 1982

13. Rao, M.S. - *Teaching of Geogrpahy*, Anmol Publications, New Delhi 1993

SECOND YEAR

PAPER VIII (i) - FIELD WORK WITH COMMUNITY

Max. Marks: 25

Course contents :

- Explore the possibility of generating human as well as physical resources from the community for improving the schools.
- Determine the role of local self-government institutions such as Village Education Committee (VEC), Gram Petc. and voluntary organizations working in the area of elementary education.
- Arrange meetings talks demonstration exhibition to develop awareness about the problems of the community.
- Utilisation of community resources for securing books, stationary, medicines, mid-day meals etc.
- Organization of social cultural and physical activities by involving community members.

Participating in a two day camp organised with the community and actively involve in the following activities.

a) Survey of nutritional status, health and hygiene and way of living of villagers.

b) Interviewing village craftmen, outisan and farmers regarding their work and related problems.

c) Participation in cleaning the surroundings repairing roads of the village, tree plantation (by involving community members)

Prepare a report of work done during the session.

Suggested Readings:

1 Mistry, S.P.- *Non Formal Education: An Alternative Approache to Education for all,* Radha Publications, New Delhi, 1998.

2 Sen Gupta, M. - *Community Work and Social Science-Exemplar Instructional Materials in Work Experience,* NCERT, New Delhi, 1989.

3 Grewal, J.S. & Gupta, B.S. *Working with Community and Teacher Education.,* Ram Prasad & Sons, Agra, 1989.

SECOND YEAR

PAPER VIII(i) - WORK EXPERIENCE-II

ELECTRONICS

Max. Marks: 25

Unit-I

- Decoration light: Simple and on Rotation.
- Connection of Volt-Watt-Am- and Energy Meters with the provision of loads.
- Two lamps with a Switch in series and parallel, measuring current and voltage.
- Connection of Tube Light, checking of voltage, drop in Choke and Rod.
- Soldering Practice.

Unit-II

- Testing and repairs of domestic appliances.
- Construction of battery eliminator for half and full wave rectification.
- Assembling of Simple Circuit on Printed Board.
- P.A. system.
- Connection diagram of a covering table required in the lab .

Unit-III

- Connection of Ceiling fan with regulator finding of faults.
- To make a dynamic test so as ascertain whether transistor amplifier is working properly.

Unit-IV

- To construct the following:

  Timer, Water level indicator, Regulated Power Supply, Lamp Socket & Fluorescent tube, Simple Receiver, Record Player etc.
- Testing of Transistor – Recognition of PNP/NPN Transistors.

Unit-V Testing of Transistor on Transistor.

- **Project Work:**

  Every student will complete one project individually in area of Electrical or Electronics.

  Testing/Repairs of loud speakers.

Suggested Readings:

1. M.L. Gupta - *Elementary Electrical Engineering* , Reprint : 1988-89.
   Available in Hindi and English.
2. J.S. Jakhar - *Basic Electronics through practicals* ,
   Available in Hindi and English
3. V.K. Mehta.- *Fundamental of Electrical Technology*
4. **For Project Work:**
   Business Promotion Publication, 376, Lajpat Rai Market, New Delhi-110006, has been publishing very low priced booklet's like *"Existing Electronics Experiments"* etc. The same is available in the local book sellers.

SECOND YEAR

PAPER-VIII (ii) - WORK EXPERIENCE-II

PHOTOGRAPHY

Max. Marks: 25

Unit-I Elements of Photographic Process:

Types of photographic emulsion; grain size & its effect on Image, speed of emulsion. Various constituents of the developer and their actions, developing techniques for films and paper.

Unit-II Sensitizing material :

Films and their types, speed, graininess colour sensitivity. Printing papers – Their emulsion types, contrast grades surface, thickness, sizes.

Unit-III Exposure :

Correct exposure and its determination, exposure meter, exposure table, colour filters and their uses filter factor.

Unit-IV Printing:

Contract printing, selection of papers exposure, developing, fixing d drying.

Projection pronting – Types of enlargers, determination of exposure, control of image.

Unit-V Project Work:

SECOND YEAR

PAPER VIII (iii) - WORK EXPERIENCE-II

AGRICULTURE

Max. Marks: 25

Poultry Management :

- Poultry industry in India.
- Poultry breeds – characteristics of each breed, selection of appropriate breed for starting a poultry unit.
- Raising of day-old sexed chicks, starters, growers, finishers and broilers and their care, feeding and management.
- Poultry diseases and their control.
- Different poultry systems.
- Poultry housing and equipment
- Poultry productions – egg., meat and their marketing.

Dairy Industry in India :

- Different breeds of cattle and buffalo.
- Production practices for wholesome milk.
- Urban supply of milk.
- Feeds and feeding.
- Some important diseases and their control.

Suggested Readings :

01 P.M. Naidu - *Poultry Keeping in India*, ICAR, New Delhi

02 Banerjee - *Text Book of Animal Husbandry* (OUP, Bombay)

03 *Handbook of Animal Husbandry* - ICAR, New Delhi.

04 Singh & Moore - *Livestock and Poultry Production*, Prentice – Hall of Ind., New Delhi

SECOND YEAR

PAPER VIII(iv) -ENGLISH TYPEWRITING WITH COMPUTER EXPOSURE

Max. Marks : 25

Unit – I : Typing Tabular Statements:

Arrangement and use of Tab. Set and Tab Release keys. Typing practice of simple four column tables with a maximum of eight rows.

Unit –II : Typing Letters:

Typing practice of applications, Official and Business letters with different styles and proper display. Typing addresses on envelops.

Unit – III : Speed Typing:

Typing practice of passages with a minimum speed of thirty words per minute.

Unit : IV : Carbon copying:

Carbon papers and their uses for taking extra copies. Economy in the use of carbon papers. Making corrections in types matter.

Unit – V : Computer Exposure;

Word-processing: Feeding a passage on computer and editing it; Copying, cutting, pasting and replacing text, spell check and other similar simple operations.

Practical Test for External Examination: One Hour

1. Typing a tabular statement containing four columns and eight row.
2. Typing a business letter or application containing not more than 200 words.
3. Typing a passage containing three hundred words in ten minutes.

Suggested Readings:

1 A.H. Mehta -*Typewriting Complete Course*

2 Lessenherry & Craf.-*Twentieth Century Typewriting.*

3 M.S.Khan - *Fundamentals of Typewriting*

4 *Typewriting Drills for Speed and Accuracy* - Grogg. Publishing Corp., U.S.A.

SECOND YEAR

PAPER VIII(iii) - PHYSICAL EDUCATION (Practicals)

Max.Marks: 25

Objectives: The teacher-trainees will be able to:

- promote habit/culture of exercise and sportsmanship.
- develop basic skills and understanding (rules) of major popular games and sports.
- familiarise with specific teaching- patterns of games and sports.

Unit I : Programmes for physical fitness and muscular development (Freehand exercises; circuit training and weight training).

Unit II : Athletics; Sprints and distance running- starts, strides, curve running and finish. Jumps - approach run, take- off, clearance and landing.
Throws - hold/placement, stance, delivery and reversal.

Unit III : Layout and markings of track and field.

Unit IV : Major games - Cricket, Football, Handball, *Kabaddi*, Table - tennis, and Lawn tennis.

- Instructions and demonstrations of basic skills
- Equipments and diamensions
- Common rules and interpretation
- Organisation and conduct of tournaments/competition.

Unit V : Teaching/lessons in physical education and sports (skills).

SECOND YEAR

PAPER VIII (iv) -AESTHETIC EDUCATION

Max. Marks: 25

Course Content -

- Indian art & culture:

(i) Knowledge of Indian art and culture

(ii) Eminent artists of India in different fields of arts and their contribution.

- Relationship of arts with other subjects:

(i) Art & Science

(ii) Art & Language

(iii) Art & Maths

- Undertaking practical experience in visual, performing and literary arts through project work:

(i) Exploring traditional art forms available in the community and neighbourhood.

- Participation in Arts:

  (i) Participation in local and national festivals.

  (ii) Organisation of displays and exhibitions on art and craft

  (iii Witnessing live performances in music, dance and drama.

  (iv) Writing critical appreciation of any one art event attended.

  (v) Visiting museum art exhibitions, theatre and other places of cultural importance.

  (vi) Organising Inter group, Inter collegiate art activities.

  - Evaluation of arts:

  (i) Understanding the approach to aesthetic education.

  (ii) Appreciation of work executed or performed in different media of expression.

  (iii Development of understanding on the basis of participation in different art related activities. Sample of art works and write ups produced or spoken.

SECOND YEAR

INTERNSHIP

Max. Marks : 350

Objectives:

The Interns will be able to:

- practise the teaching skills,
- develop competencies in subject teaching,
- develop insight in teaching and learning,
- have a comprehensive school experience,
- develop high level of competency in all aspects of teacher's work,
- have acquaintance with the school and community.

Duration

1	Pre-placement orientation	01 (one) week.
2	School Attachment	10 weeks.

Placement of Interns in Cooperating Schools:

The interns will be placed in cooperating schools in their respective States for Internship in Teaching as they would be required to teach in their mother tongue and deal with the curriculum of their State when they take up job. As far as possible uniformity be maintained in the selection of cooperating schools. More or less they should be of same standard.

Distribution of Marks:

		Max. Marks	Pass marks
		350	140
(a)	**Internship:**		
	Regular lessons		120
	Peer observations (atleast 20 lessons, 10 in each subject)		20
	Criticism lessons -2 (one in each subject)		40

Final lessons - 2 (one in each subject)	60
Marks by Cooperating Teachers/Principal	20
Unit Tests (2 units)	10
Organisation of School Activities	10
Achievement Test & Diagnostic Test	10
Remedial Teaching (2 students)	10

(b) Post Internship

Content - cum - methods-I Content – cum - Methods-II Education	50

Activities:

i) Internship

* Orientation for field assignments and projects etc. (one week).
* Organisation of meetings of interns, cooperating teachers and Principal in the respective cooperative school.
* Job and time table distribution.
* Practice Teaching (atleast 25 lessons in each subject Total 50- lessons) (Repetition of lessons should be avoided).
* Supervision of lessons, providing feed back discussion on lessons (daily by the supervisors).
* Peer supervision on observation schedule atleast 20 lessons (10 in each subject)
* Two Criticism lessons (one in each subject)
* Two Final lessons (one in each subject)
* Evaluation by cooperative teachers/Principal
* Preparation of Unit tests and administerting them.
* Preparation of process cards/records of students.
* Orientation in conducting Parent - Teacher meeting.

* Organisation of co-curricular activities (i.e., Quiz, Exhibition, Subject club)
* Completion of field assignments under the guidance of the supervisor /cooperacting teacher.
* Participation in working with community / other programmes of the school
* Preparation of atleast two Case Study Reports.
* Preparation of School Calendar

ii) **Post Internship**

* Post Internship meeting of Interns and Supervisors to share internship experiences.
* Exhibition of teaching aids.
* Post Internship subject wise seminars and discussions.
* Inviting feedback from cooperating schools.
* Preparation of brief report by each Intern on his/her internship experiences.
* Viva-Voce on SEP by a board comprising of Science/Languages and Social Sciences and Education faculty members.

Scheme of Examination/Evaluation

-	Regular Lessons	-	by supervisors & cooperating teachers
-			Criticism Lessons - by a board comprising supervisors and subject teacher
	Final Lessons	-	by a board comprising teacher – educators/ supervisors and cooperating teachers/Principal
-	Post Internship	-	by a board comprising Science/Languages and Social Science and Education faculty members.

List of Experts

1. Prof. G Ravindra,
   Principal, RIE, Bhopal

2. Prof. M. Sen Gupta
   Dean of Instruction
   RIE, Bhopal

3. Prof. O.S. Deol
   Professor, NCTE, New Delhi.

4. Prof. J.K. Sood
   Professor of Science (Rtd.), RIE, Ajmer

5. Prof. J.S. Grewal
   Professor of Education (Rtd.), RIE, Bhopal

6. Prof. G.K. Lehri
   Professor of Science, RIE, Ajmer

7. Prof. R.K. Dixit
   Professor of English, NCERT, New Delhi.

8. Dr J.P. Kaushal
   Professor of English (Retd.)
   E.L.T.I., Bhopal

9. Prof. J.K. Mohapatra
   Professor of Science, RIE, Bhopal.

List Of Core Group (Science And Mathematics)

1	Dr S.P. Sharma	Reader In Physics
2	Shri O.P. Arora	Reader In Physics
3	Dr S.A. Shaffi	Readher In Zoology
4	Dr I.P. Agrawal	Reader In Chemistry
5	Dr R.S. Sindhu	Reader In Chemistry
6	Dr B.K. Tripathi	Reader In Zoology
7	Dr K.B. Subramaniam	Reader In Mathematics
8	Dr V.P. Singh	Sr. Lecturer In Mathematics
9	Dr V.K. Kakaria	Sr. Lecturer In Zoology
10	Dr (Mrs.) Reeta Sharma	Sr. Lecturer In Botany
11	Dr Praveen Kulshreshtra	Sr. Lecturer In Botany

List of Core-Group (Languages & Social Sciences)

1.	Sh. B. N. Rawat	Reader in Hindi
2..	Dr J.P. Singh	Reader in Geography
3.	Dr Iqbal Ahmad	Reader in English
4.	Dr (Mrs.) Sandhya Khullar	Reader in English
5.	Sh. Ramakar Raizada	Sr. Lecturer in Commerce
6.	Dr Mohd. Faruq Ansari	Lecturer in Urdu
7.	Dr Mohd. Siraj Anwar	Lecturer in History
8.	Sh. Sudhakar G. Wadekar	Lecturer in Marathi
9.	Sh. G.L. Prohit	P.G.T., English, DMS
10.	Smt. Veena Vyas	P.G.T. ,History, DMS
11.	Smt. Sushma Shrivastava	P.G.T., Fine Arts, DMS.
12.	Dr. S.C. Chauhan	T.G.T., Social Studies, DMS.
13.	Smt. Asha Sinha	T.G.T., Social Studies, DMS
14.	Smt Usha Jaiswal	T.G.T., Hindi, DMS

List of Core-Group (Education)

1.	Dr G.N. Prakash Srivastava	(Task coordinator)
2.	A.C. Pachauri	Reader
4.	Dr I.D. Gupta	Reader
5.	Dr (Mrs) A. Grewal	Reader
6.	Dr S.K. Gupta	Reader
7.	Dr (Ms) S.P. Patnaik	Reader
8.	Dr N.D. Jain	Reader
8.	Dr S.P. Mistry	Reader
9.	Dr K.R. Sharma	Sr. Lecturer
10.	Sh. I.B. Chughtai	Sr. Lecturer
11.	Sh. K.K. Khare	Sr. Lecturer
12.	Dr R.B.L. Soni	Sr. Lecturer
13.	Sh. Hassoo Khan	T.G.T.,(Physical Education)

List of Resource Persons (Languages and Social Sciences)

1. Dr Vinay Dube
   Head, Dept. of Hindi
   Saifia P.G. College, Bhopal

2. Dr M.C. Pandya
   Reader in Gujarati (Retd.)
   RIE, Bhopal

3. Mr Rajesh Mishra
   Lecturer in Urdu
   RIE, Ajmer

4. Dr C.P. Pandharipande
   Reader in Marathi (Retd.)
   RIE, Bhopal

5. Prof. Syed Haider Abbas Rizvi
   Prof of Urdu (Retd)
   Saifia PG College, Bhopal

6. Prof. Ijlal Majeed
   Professor of History (Retd.)
   Saifia PG College, Bhopal

7. Prof. (Mrs) Pramila Kumar
   Prof. of Geography (Retd.)
   Sagar University, Sagar

8. Dr (Smt.) Snehlata Srivastava
   Dept. of Economics
   Govt. Sarojni Naidu PG College for Girls
   Bhopal