INTRODUCTION

The B.Ed. Special Education (Mental Retardation) is a necessity, keeping in view the need for special teachers at various levels. If we look at the scenario of educational services in the country, we have a large number of special schools, emerging trend towards integrated schools or special class in regular schools and special education programming in community based settings, where a child cannot reach a school for various reasons. The B.Ed. Special Education (Mental Retardation) programme is focused on training manpower who will be able to carry out the following tasks.

- Coordinator/In charge / Principal of special schools for children with Mental Retardation.
- Resource Room teachers in regular schools where slow learners and children with learning problems are found in the mainstream.
- Function as a Special Educator in a multidisciplinary team in various settings when the need arises.

The above functions are envisaged keeping in mind the National Policy on Education 1986, which states (1) children with milder disabilities will be in regular schools, (2) children with severe disabilities will be in schools, (3) vocationalization of education should be considered in school level, (4) teacher training programmes should be re-oriented to include children with special needs and (5) voluntary efforts must be encouraged. This being the case, the above programme will prepare teacher who can work effectively as resource room teachers in regular school and will have the competencies to teach children with milder disabilities. This may also help in having a wider scope of employment of the special education teacher in the regular educational setting to act as a resource teacher. The course content provides them for organization and administration skills, thus preparing them to be in the position of In-charge in special schools. The curriculum also covers pre-vocational level and involvement in community, thus preparing the teacher to plan for total programming for persons with mental retardation in the school going age. When such trained staffs are available, necessarily of the voluntary efforts will be further enhanced because of availability of teacher trained manpower.

Since this is a B.Ed, course, it also provides opportunity for higher studies to continue with M.Ed, and those interested to get into academics or research area will be able to do so.
1. ELIGIBILITY FOR ADMISSION INTO THE COURSE
   (i) The candidates should have passed the UG degree examination in the 10+2+3 stream, with the same main subject in Part III, for which he is seeking admission in the B.Ed., course.
   (ii) Candidates who have taken more than one main subject in part III (Double or Triple major) of the U.G degree have to choose only one of the main subjects and apply for that optional in B.Ed.,
   (iii) Candidates who have done their U.G degree in Applied Chemistry, Bio-Chemistry or Applied Physics can apply for Chemistry and Physics optional respectively in B.Ed., those who have done Environmental Science, Bio-technology and Micro-Biology can apply for Biological science optional in B.Ed., and similarly candidates with Applied Geography in UG degree can apply for Geography optional. B.Sc., (CS), BCA and B.Sc., (IT) can apply for the Optional Computer Science.
   (iv) a) Candidates passed with 45% of marks in U.G degree or P.G degree with minimum pass is required for admission
       b) In the case of candidates belonging to SC and ST communities, a pass in the relevant UG degree course is enough.
       c) In the case of handicapped (both physical and Visual) candidates, a minimum pass in the degree is required.
   (v) Candidates with P.G qualification alone will be considered for optionals: Economics, Commerce, Computer Science and Home Sciences.
4. COURSE OF STUDY

The course of study shall consist of the following subjects:

(i) **Core Subjects**
   a) Nature and needs of various disabilities – an introduction.
      a. Challenges in Indian Education
      b. Psychology in Education
      c. Evaluation, Research, Educational Technology and Innovation in Education.

(ii) **Optional subjects (Technology of Teaching)**
   a. General English Education
   b. Special English Education
   c. General Tamil Education
   d. Special Tamil Education
   e. Mathematics Education
   f. Physical Science Education
   g. Biological Science Education
   h. History Education
   i. Geography Education
   j. Social Science Education
   k. Home Science Education – Optional I
   l. Home Science Education – Optional II
   m. Commerce and Accountancy Education – Optional I
   n. Commerce and Accountancy Education – Optional II
   o. Computer Science Education – Optional I
   p. Computer Science Education – Optional II
   q. Economics Education – Optional I
   r. Economics Education – Optional II

(a) **Candidates must choose two Optional Subjects.**
   1. Candidates with Tamil / English Literature in their graduate course or post-graduate course may choose Tamil Education / English Education as Two optional.
   2. Other B.A / B.Sc graduates may choose 1st Optional subject relating to their major subject and the other optional from the subject studied at ancillary level or a language (General English Education / General Tamil Education)
   3. Post-graduates may choose either General Tamil or General English as one Optional subject and the other related to their course of study at M.A., / M.Sc., level or any other subject as in part (III) or Major subject at PG level as Optional I.

(b) **Elective (Specialisation papers)**
   1. Identification and assessment of mentally retarded persons.
   2. Mental retardation - its multidisciplinary aspects.
   3. Curriculum and teaching strategies.

Candidates must study elective subjects cited above compulsorily as specialization papers.

(c) **Teaching Competence**

Teaching competence consists of observation of lessons and teaching sessions.
There shall be an observation of at least three micro-skill teaching sessions in the colleges and 10 macro teaching sessions in each optional subject in the schools (Practical teaching) and
There shall be intensive teaching practice of 3 micro skill lessons and 20 macro teaching lessons for each optional subject.

(d) Other Practical Work

Practical shall include Practicals related to (a) Optional subjects (b) Projects and experiments: (c) Behavioral assessment – Psychology practicals (d ) Camp or community work and (e) Physical Education and Health Education

5. MEDIUM OF INSTRUCTION
The medium of instruction of the course may be either Tamil or English.

6. SCHEME OF EXAMINATION

The scheme of examination for REGULAR candidates shall be as follows.

<table>
<thead>
<tr>
<th>Paper</th>
<th>Subject and paper</th>
<th>Duration</th>
<th>External Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Max</td>
</tr>
<tr>
<td>I</td>
<td>Nature &amp; needs of various disabilities</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td>II</td>
<td>Challenges in Indian Education</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td>III</td>
<td>Psychology in Education</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td>IV</td>
<td>Evaluation, Research, Educational Technology and Innovation in Education</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td>V</td>
<td>Optional Subject I</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td>VI</td>
<td>Optional Subject II</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Elective Subject Special Education papers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VII</td>
<td>Identification and Assessment of mentally Retarded persons</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td>VIII</td>
<td>Mental Retardation – its Multidisciplinary Aspect</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td>IX</td>
<td>Curriculum and Teaching strategies</td>
<td>3 hrs</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>900</td>
</tr>
</tbody>
</table>
## Distribution of marks for Practical:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Subject / Practical</th>
<th>Internal</th>
<th>External</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Max</td>
<td>Min</td>
<td>Max</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Min</td>
<td>Min</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max</td>
<td>Min</td>
<td></td>
</tr>
<tr>
<td>i)</td>
<td>Individualised Education Programme</td>
<td>20</td>
<td>10</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>ii)</td>
<td>Teaching competency in special schools</td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>(iii)</td>
<td>Teaching Competency in Regular Schools: Optional I</td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>: Optional II</td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>320</td>
<td>160</td>
<td>380</td>
</tr>
<tr>
<td></td>
<td></td>
<td>190</td>
<td>700</td>
<td>350</td>
</tr>
<tr>
<td>(iv)</td>
<td>Other Practicals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Observation in special schools</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>Preparation of records in special schools</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Preparation and use of instructional aids: Optional I</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>4</td>
<td>Preparation and use of instructional aids: Optional II</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>5</td>
<td>Test and Measurement – Optional I</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Test and Measurement – Optional II</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>7</td>
<td>Psychology Practicals</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>Audio –Visual Aids</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>9</td>
<td>Action Research / Project work</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>10</td>
<td>Physical Education and Health Education</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>11</td>
<td>CAI / PLM Package Development (both optional 20+20, Special 20)</td>
<td>40</td>
<td>20</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20</td>
<td>80</td>
<td>40</td>
</tr>
<tr>
<td>12</td>
<td>Camp / Community Service</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>13</td>
<td>Case Study</td>
<td>20</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>14</td>
<td>Socially Useful Productive Work (SUPW)</td>
<td>10</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>15</td>
<td>Participation in seminars/ workshops/ Symposia / Conferences</td>
<td>10</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>620</td>
<td>310</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>350</td>
<td>1300</td>
<td>650</td>
</tr>
</tbody>
</table>

Theory Total: 900 Marks. Practical: 1300 Marks.
Grand Total : 2200 Marks.

7. PRACTICAL EXAMINATION BY THE BOARD OF SUPERVISING EXAMINERS

The board of supervising examiners (Internal & External) appointed by the university will examine the teaching competency of a significant section of the candidates or all the candidates and the practical work of all the candidates. The supervising examiners shall report to the university the marks awarded to each candidate in two divisions of practical examination.

8. PASSING MINIMUM

(I) A candidate shall be declared to have passed in the B.Ed., Degree examination only if he/she has passed both the written and practical examination and in the written examination shall be permitted to appear again for the same and vice-versa.

(II) Every candidate should register for all the papers in the written examination and practical examination in the first attempt. A candidate who fails in one or more papers in the written examination shall be permitted to appear again only for those papers in which he/she fails.

(iii) A candidate shall be declared to have passed the written examination if he/she obtains not less than 50% in each paper in External Examination and aggregate of 50% in external examination.

(iv) A candidate shall be declared to have passed the practical examination if he/she obtains not less than 50% of marks in teaching competency in each of two optional subjects and not less than 50% marks allotted to other practical work.

9. CLASSIFICATION OF SUCCESSFUL CANDIDATES

All successful candidates shall be classified separately for written examination and practical examination. In each case, candidates who pass the examination and obtain not less than 60% of total marks will be placed in the first class; those who have obtained 50% to 59% of marks in the aggregate will be placed in second class.
10. PRACTICE TEACHING

Teaching competency programme for each student shall be undertaken at the Government recognized School including Matriculation Schools. Practice Teaching Training shall include Observation and Teaching. Practice both at Micro and Macro level. Micro teaching and Demonstration classes shall be conducted at the respective colleges of Education for 10 working days. Macro teaching and observation classes shall be at the schools under a qualified trained teacher (Guide teacher) for 30 working days.

For the purpose of teaching practice, each student shall work as an apprentice under a selected teacher and under the general supervision of the Principal and the lecturers of the college concerned.

He/ She shall also maintain the prescribed work books for observation of lessons and practice teaching (micro and macro) in each of his / her special subject. The work book shall contain records of at least 30 practice teaching lessons, 15 in each subject and 10 lessons observed, 5 in each optional subject. Out of the minimum of 15 lessons in each optional subject specified above, at least a minimum of three lessons may be utilized for developing teaching skills through micro teaching and less than 12 shall be macro lessons. Marks for teaching practice shall be based on reports of lessons in each optional subject and on the workbooks maintained.

However, students offering English/Tamil as the equivalent to two optional subjects will be required to maintain only one workbook relating to the paper on the teaching of English / Tamil as the case may be. The workbook shall contain records of at least 30 lessons in the teaching of English or Tamil as the case may be. Marks for teaching practice shall be based on the reports of lessons in the optional subjects and on the workbooks maintained. A separate workbook shall be maintained for recording the 10 lessons observed. This applies to all postgraduate teachers to opt for the same subject as 2 optionals.

Each teaching practice lessons shall be reported separately to the Principal by the lecturers or the teachers authorized for the purpose and the reports and the workbook shall be made available to the supervising examiners who will be appointed by the university. The final report of each student with the
work-book(s) shall be made available to the supervising examiners whose
decision on the marks to be awarded shall be final.

11. OTHER PRACTICAL WORK

*Preparation and use of Instructional aids*

Students shall prepare instructional aids in both the optional subjects. They may take five specific units from high school/ higher secondary school syllabus and prepare aids with reference to concept / ideas in the units, aids of different types (Charts, models, film strips, tapes, slides, transparencies)

*Test and Measurement*

The construction of tests must be made in both the subjects in the case of students offering two different subjects as optionals, In the case of students offering a subject as two optionals, the construction of tests should be made in teaching high school subjects and higher secondary school subjects. In both the cases interpretation of results should also be made and recorded. It is suggested that preparation and administration of the achievement test be completed during the intensive teaching practice.

*Psychology Practical*

The primary objective of psychology practical is to expose the student teachers to the procedures of conducting various experiments in psychology directed towards the study of behavioral changes of the pupils. Each student teacher is expected to do at least 10 experiments covering all focal areas of Educational Psychology and all types of psychological tests. For list of experiments refer the practical in core paper: Educational Psychology

*Audio-Visual Aids*

Student’s teachers should know about the audio-visual aids that can be used in the classroom teaching learning process. Detailed instruction on the use of audio-visual aids in teaching is given by the optional teachers. In terms of record writing, a minimum of ten audio-visual aids must be described with illustration and pictures.

*Action Research and project work*

The purpose of the project work is to give work experience in the respective method subject of the student teachers. Every student teacher is expected to have discussion with the faculty to choose the project work to be
undertaken by him. The concerned optional II teacher may give either individual or group project work.

**Physical Education and Health Education**

This record should contain descriptions of at least five minor games and three major games. Description of each game should include the theory, rules and ground layout of the game. The pictures, diagrams, cutouts, etc., depicting the health education activities should be given in the record. Preparation of an album on health and physical education is must.

**CAI / PLM Package Development**

All student teachers are exposed to computer applications. They are expected to prepare a record on various learning experiences in this aspect. They should describe how the different software mastered by them could be used in school to promote computer literacy among students.

**Camp / Community Service**

Each teacher trainee must participate in a camp for seven/ten days during the academic year to share in community life. The camp activities may include NSS Programme / Scouting / Guiding / First aid/ Citizenship camp. The camp may be held outside the college preferably in a rural setting.

**Case Study**

Case study is considered as a diagnostic technique. During the teaching practice programme, each student teacher should do three case studies of those who have notable problems either in learning or in their adjustment to the environment. The information for the case study should be collected in such a way that it will suggest an intervention programme for the pupil to overcome his/her problems. A perfect record should be maintained for this purpose.

**Socially useful productive work**

Some productive work that is useful to society, like basket making, book binding, making covers, files and pads. Woodwork, making of soap and soap powder, food preservation, shall be made and recorded.

**Participation of seminars / workshop and symposia**

The assessment under this head shall include evaluation of leadership role played as well as participation made in follow up discussions, initiative,
contribution of ideas, critical thinking and respectively. The seminars, workshops and symposia will relate to the core, optional and elective subjects.

### PAPER 1
**NATURE AND NEEDS OF VARIOUS DISABILITIES-AN INTRODUCTION**

**Objective**

The student teacher is expected to acquire a basic knowledge on identification and characteristics of various disabilities such as
- 1. Blindness and Low Vision
- 2. Hearing Impairment
- 3. Mental Retardation and Mental Illness
- 4. Loco motor, Neurological and Leprosy Cured
- 5. Biogenic and other disorders
- 6. Multiple Disabilities

#### Unit 1: Blindness and Low Vision

- 1.1 Definition and Identification
- 1.2 Incidence and Prevalence
- 1.3 Characteristics
- 1.4 Causes and Prevention
- 1.5 Intervention and Educational Programmes

#### Unit 2: Hearing Impairment

- 2.1 Definition and Identification
- 2.2 Incidence and Prevalence
- 2.3 Causes and Prevention
- 2.4 Types of Hearing Loss and Characteristics
- 2.5 Intervention, Communication Approaches and Educational Programmes

#### Unit 3: Mental Retardation

- 3.1 Definition and Identification of Mental Retardation and Mental Illness
- 3.2 Incidence and Prevalence, Causes and Prevention
- 3.3 Characteristics-Mild, Moderate, Severe, Profound
- 3.4 Types and Classification of Mental Retardation and Mental Illness
- 3.5 Intervention and Educational Programmes

#### Unit 4: Leprosy Cured, Neurological and Locomotor Disabilities

- 4.1 Definition and Classification
- 4.2 Incidence and Prevalence
- 4.3 Causes and Prevention
- 4.4 Types, Classification and Characteristics
- 4.5 Intervention and Educational programmes
Unit 5: Learning Disabilities, Autism and other Associated Disorders  10Hrs

5.1 Definition and Identification of Learning Disabilities, Autism and other associated disorders - epilepsy, behavioural disorders and emotional disorders.
5.2 Incidence and Prevalence
5.3 Causes and Prevention
5.4 Types and Characteristics
5.5 Intervention and Educational Programmes

Unit 6: Various Combinations of Disabilities 10 Hrs

6.1 Definition and Identification
6.2 Incidence and Prevalence
6.3 Causes and Prevention
6.4 Characteristics
6.5 Intervention and Educational Programmes

References


CORE PAPER – II
CHALLENGES IN INDIAN EDUCATION

Objectives:
On successful completion of the course the student-teachers should have:

1. Understood the history of Indian education in different periods of time.
2. Learnt the role of teachers and various systems in education.
3. Realized the problems of school education, higher education, women education and teacher education in India.
4. Gained the knowledge of school health programmes, nutritional requirement, population education, physical education and environmental education.
5. Appreciated the divergent philosophies behind education and their differential implications.

UNIT I: History of Indian Education

1.1 Gurukula system of education, Buddhist and Jain system of education, Education by Christian Missionaries
1.2 The progress of education in Free India with special emphasis on vocationalisation community and Social service – Socially Useful Productive Work (SUPW)
1.3 Directive Principles – Article 45 – Responsibilities of State and Central Governments on Education
1.4 India’s Secular Policy – Religious and Modern Education
1.5 Regional Educational Development in India – Imbalances and Variations in different environment
UNIT II: Role of Teachers and System of Education

2.1 Inculcation of Socialism, Secularism and Democracy through Indian Education

2.2 Teacher’s role towards: (a) Pupils’ development, (b) Community development, (c) National integration and reconstruction, (d) International understanding, and (e) Elimination of Social tensions and conflicts

2.3 Educational Influences of Home, School, Community and Mass Media

2.4 Formal and Non-formal systems of education

2.5 Continuing Education and the concepts of Open University

UNIT III: Current problems in Indian Education

3.1 Primary Education: Education for all, Wastage and Stagnation

3.2 Secondary Education: Co-education, Examination reforms, New evaluation procedures, Inspection and Supervision

3.3 Higher Secondary Education: Curricular needs and Vocational needs of Rural India, Social Impact

3.4 Women’s Education: Status of Women in Higher Education

3.5 Teacher Education: Training teachers for all levels of education – Pre-service and In-service facilities, Code of conduct for teachers

UNIT IV: Health and Nutrition Education

4.1 School Health Programme, Common ailments of children, Communicable diseases – Preventive measures, First Aid, Sex-education

4.2 Nutritional deficiencies, Preservation of nutrients, Balanced diet, Healthy Food Habit

4.3 Population Education: (a) Impact of population growth on Social, Economic and Educational development; (b) Family welfare policies of Government-Small family norms; and (c) Correlating school subjects with population problems

4.4 Physical Education: Importance of physical education and role of teachers

4.5 Environmental Education: Types of environment, Teacher’s role

UNIT V: Philosophical Foundation of Education
5.1 Idealism, Realism, Naturalism and Pragmatism – Aim, curriculum and teacher’s role

5.2 Educational philosophies of Swami Vivekananda, Mahatma Gandhi, Tagore

5.3 Curriculum Construction: Principles – flexibility and sensitivity to the need and differences of pupils; Curriculum and national goals – improvement of teachers in curriculum planning and implementation

5.4 Promotion of scientific outlook and attitude among students

5.5 Institutional planning: Human relationships and application of modern management techniques in educational institutions.

REFERENCE


CORE PAPER – III
PSYCHOLOGY IN EDUCATION

Objectives:
1. To enable the trainees to understand the basic concepts of education and psychology as the science of behaviour
2. To enable the trainees to know the concept of growth, development and adolescents needs and special needs.
3. To enable the trainees to understand the general nature of learning and the learning process.
4. To help them to acquire competence in their teaching using motivation.
5. To help them to acquire knowledge of higher level mental process – thinking, reasoning and problem solving
6. To enable them to gain knowledge about personality and adjustment
7. To enable them to gain a knowledge about intelligence, and Multiple intelligence.
8. To enable them to gain knowledge about creativity, mental health and mental hygiene.
9. To enable them to gain the knowledge about counseling and guidance.
10. To help them apply these knowledge in classroom teaching-learning process effectively.

UNIT I : INTRODUCTION TO EDUCATIONAL PSYCHOLOGY AND CONCEPT OF GROWTH AND DEVELOPMENT

1.1 Definition, meaning, nature and focal areas of educational psychology – Psychological aspects of teaching – Bases of effective Teaching.
1.2 Methods of educational psychology – introspection method, Observation Method, Experimental method, Differential method, Psychoanalysis method, and Case study method.
1.3 Concepts, principles, stages and characteristics of human growth and development concept of maturity
1.4 Factors influencing growth and development – Piaget’s stage of cognitive development.
1.5 Characteristics of adolescence and their special problems- influence of group behaviour

UNIT II: ATTENTION AND MOTIVATION
2.1 Sensation, perception and concept formation.
2.2 Attention – Meaning, Nature, Distraction and Span of attention – Classroom conditions for attention.
2.3 Motivation – Types of motivation – Motivation cycle
2.4 Maslow’s need hierarch theory
2.5 Role of reward and Punishment – Achievement motivation

UNIT III: LEARNING AND MEMORY
3.1 Nature and importance of learning – Types of learning
3.2 Theories of learning – Trial and Error learning – Thorndike – Classical Conditioning Pavlov – Operant conditioning Skinner’s
3.3 Difference between S-R theory and Insight theory
3.4 Meaning and nature of memory - types of memory – factors/ stages of memory
3.5 Meaning and nature of forgetting- forgetting curve – measures to promote memory.

UNIT IV: PERSONALITY, INTELLIGENCE AND CREATIVITY
4.1 Meaning and nature of personality – Theories of personality (type and trait)
4.2 Assessment of personality – Subjective, Objective, Projective ways of assessment.
4.3 Factors influencing personality – Integrated personality – Teachers role in developing personality.
4.4 Intelligence – Multiple intelligence – assessment of intelligence
4.5 Definition, nature and meaning of creativity – assessment of creativity.

UNIT V: MENTAL HEALTH AND MENTAL HYGIENE
5.1 Definition of mental health – Importance of mental health
5.2 Conflicts and frustration – Adjustment – Defense mechanism
5.3 Meaning of Mental Hygiene – The objective of Mental Hygiene – The scope of mental Hygiene
5.4 Meaning of Guidance – Need for Guidance – The purpose of Guidance –
Educational and Vocational Guidance.


Practicals

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Focal Area</th>
<th>Title of the experiment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learning</td>
<td>Transfer of Training (Mirror – Drawing)</td>
</tr>
<tr>
<td>2</td>
<td>Learning</td>
<td>Maze Learning (systematic – nonsystematic)</td>
</tr>
<tr>
<td>3</td>
<td>Attention</td>
<td>Span of Attention</td>
</tr>
<tr>
<td>4</td>
<td>Attention</td>
<td>Distraction of attention (using cancellation sheet)</td>
</tr>
<tr>
<td>5</td>
<td>Memory</td>
<td>Power of recall for Meaningful and Meaning less stimuli</td>
</tr>
<tr>
<td>6</td>
<td>Memory</td>
<td>Span of memory – Auditory stimuli</td>
</tr>
<tr>
<td>7</td>
<td>Habit</td>
<td>Habit Interference</td>
</tr>
<tr>
<td>8</td>
<td>Interest</td>
<td>Kuder Preference Record</td>
</tr>
<tr>
<td>9</td>
<td>Aptitude</td>
<td>Differential Aptitude Test</td>
</tr>
<tr>
<td>10</td>
<td>Attitude</td>
<td>Teacher Attitude Scale</td>
</tr>
<tr>
<td>11</td>
<td>Thinking</td>
<td>Sentence construction</td>
</tr>
<tr>
<td>12</td>
<td>Intelligence</td>
<td>A Battery performance Test of Intelligence By – Bhatia</td>
</tr>
</tbody>
</table>

Reference

CORE PAPER IV
EVALUATION, RESEARCH EDUCATIONAL TECHNOLOGY AND INNOVATIONS IN EDUCATION

Objectives
1. To enable student teachers understand the basic concepts of testing and evaluation.
2. To help them understand the taxonomy of educational objectives and write various types of test items.
3. To help them understand the basic statistical concepts and their applications in testing and evaluation.
4. To help them understand the basic concepts of research as applied to education.
5. To enable them have the knowledge in different types of research applicable to education.
6. To understand the concept of educational Technology.
7. To appreciate the growing trends in the system of educational communication.
8. to become aware of the techniques of improving teacher behaviour.
9. To understand the innovative practices in education.

UNIT I TAXONOMY OF EDUCATIONAL OBJECTIVES & EVALUATION
1.1 The purpose and place of Evaluation in education – Cognitive domain, Affective Domain and Psychomotor domain.
1.2 Purpose and place of Evaluation- Types of Evaluation- Formal, informal, oral written, formative and summative.]
1.3 Tools of Evaluation – observation, Interviews, Rating Scales, Questionnaires & testing.
1.4 Different types of Testing –Diagnostic, Prognostic Achievement and Psychological tests; Norm reference and Criterion reference tests. Types of test items .
1.5 Characteristics of a good test item – Objectivity, Reliability, Validity and Feasibility – Steps in test construction – Preparation of Blue Pint, writing and editing – pre testing – item analysis - Difficulty level and Discriminating Power – administration - scoring- interpretation.
UNIT II: STATISTICAL CONCEPT
2.1 Tabulation- Frequency table, measures of central Tendency – Arithmetic Mean, Median, Mode, Quartiles and Percentiles.
2.2 Measures of Variability – Range, Quartile Deviation and Standard deviation.
2.3 The normal distribution and its properties- Concept of skewness and kurtosis.
2.4 Correlation-definition, meaning and uses, computing the coefficient of correlation by Rank difference method.
2.5 graphical representation of data- Bar diagram – Histogram, frequency polygon & cumulative frequency curve.

UNIT III: RESEARCH AND TYPES OF RESEARCH
3.1 Need and Scope for Research in Education – Selection and statement of the problem- review of related literature.
3.2 Types of Research – Basic, Applied research, Action research-definition and scope – steps in action research.
3.3 Hypothesis and its place in research – outline of a research Design – Research proposal.
3.4 Research methods – Survey, case study Experimental and Historical.
3.6 Research Report.

UNIT IV: EDUCATIONAL TECHNOLOGY AND COMMUNICATION
4.1 Definition, need scope and role of Educational Technology.
4.3 Teacher Behaviour – interaction analysis – meaning and scope – Tools and methods of interaction analysis. Flander’s system of interaction analysis
4.4 Modern Communication technology in education: Meaning, scope and choice – Projected and non-projected media
4.5 Models of teaching- Definition, fundamental elements – glascers’s basic teaching model and concept attainment model.

UNIT V: INNOVATIONS IN EDUCATION
5.1 Innovative practices in Education – Nature, meaning and scope
5.2 Micro teaching – Descriptive analysis of skills and practice in classroom – programmed learning techniques.

5.3 Audio video technology – language laboratory- teaching machine, CAI and CAL interactive Video teleconferencing

5.4 Distance Education. Education through satellite- open universities, Floating Universities

5.5 Community schools and Polytechniques school complex programs and Navodaya Schools.

Reference


PAPER V

IDENTIFICATION AND ASSESSMENT OF PERSONS WITH MENTAL RETARDATION

Objectives:
After studying this paper, the student teachers are expected to realize the following objectives

1. Define mental retardation and its characteristics and classification.
2. Comprehend the nature, and needs of persons with mental retardation, historical perspectives, causes, prevention, screening and identification.
3. Describe various assessment procedures, assessment tools, and evaluation techniques,
4. Analyze the psycho-social implications of mental retardation.
5. Relate psycho-social implications appropriate to the issues pertaining to family and community.

Unit I: Mental Retardation-Nature, needs and Identification

1.1 Historical perspective of the concept of mental retardation.
1.2 Definition of mental retardation-AAMR, WHO (ICD), Legal definition in India used for certification; incidence and prevalence.
1.3 Classification of mental retardation- medical, educational, psychological and characteristics.
1.4 Screening and identification of mental retardation in pre-natal, infancy, childhood, adolescence and adulthood.
1.5 Causes and Prevention; Pre-conceptional, pre-natal, perinatal, and postnatal.

Unit II: Additional impairments

2.1 Introduction to associated conditions and educational implications.
2.2 Sensory impairments-vision, hearing.
2.3 Motor impairments-cerebral palsy, congenital deformities, muscular dysfunction.
2.4 Epilepsy.
2.5 Emotional disorders and Autism.
Unit III: Assessment and Evaluation

3.1 Definition of assessment and evaluation, concept, scope.

3.2 Types Continuous and periodic assessment, formative and summative evaluation.

3.3 Types of assessment-psychological, educational, behavioural and clinical assessment for varied ages and severity levels.

3.4 Norm Reference Test (NRT) and Criterion Reference Test (CRT) and curriculum based assessment.

3.5 Interpretation of assessment results and Programme.

Unit IV: Assessment of Adaptive Behavior


5.2 Assessment tools with reference to Indian context.

5.3 Assessment of adaptive and maladaptive behaviour.

5.4 Documentation and recording.

5.5 Evaluation.

Unit V: Mental Retardation-Social Perspective

5.1 Mental Retardation and Mental Illness-Differences.

5.2 Mental retardation and its Psycho-social aspects-sexual problems/exploitation, delinquency Child Labour, child abuse, rights and advocacy.

5.3 Misconceptions and social practices.

5.4 Constitutional provisions and their implications.

5.5 Legislation relating to services for mentally retarded children. Schemes and benefits provided by Government.

Unit VI: Working with parents, Family and Community

6.1 Impact on parents and parental attitudes.

6.2 Guidance and Counselling for parents and family members of mentally Retarded children.

6.3 Family intervention.

6.4 Empowering families-mobilizing resources and supports.

6.5 Community awareness and cooperation.
References

17. Myreddi, V.& Narayan,J. FACP-PMR, Secunderabad, NIMH
18. Narayan, J.Graduate Level Assessment Device for Children with Learning Problems in Regular Schools, Secunderabad, NIMH.
PAPER VI
MENTAL RETARDATION – ITS MULTIDISCIPLINARY ASPECTS

Objectives:

After studying this paper, the student teachers are expected to
Realize the following objectives:
1. Comprehend the physiological and physiological aspects of
   mental retardation.
2. Enumerate the motor developmental aspects of mental retardation.
3. Narrate the nature of the communicative aspects associated with
   mental retardation.
4. Demonstrate competency in working with multi-disciplinary team.
5. Narrate the procedures to provide referral, networking as well as
   services to mentally retarded students.

Unit 1: Physiological Aspects

1.1 Neurological aspects- Autonomous Nervous System, Central Nervous System, Peripheral Nervous System.
1.2 Associated Impairments-Cerebral Palsy, Epilepsy, ADD, ADDH, Autism.
1.3 Genetic aspects.
1.4 Endocratic influences.
1.5 Other associated problems related to mental retardation

Unit:2 Developmental and Behavioural Aspects in Relation to Mental Retardation

2.1 Developmental stages- Physical, social, cognitive, language, emotional and moral.
2.2 Developmental delays and their implications in the life cycle.
2.3 Adaptive deficits-self-help areas, emotional, social cognitive and language areas.
2.4 Maladaptive (problem) behaviors-functional analysis.
2.5 Ethical issues in strategies for management, management of maladaptive behaviour in home and classroom settings.
Unit 3: Communication Aspects

3.1 Development of Speech and Language

3.2 Functional communication; receptive and expressive language for children with mental retardation.

3.3 Hearing and speech disorders-classroom management.

3.4 Home training-role of parents.

3.5 Activities to enhance communicative skills of children with mental retardation.

Unit 4: Motor Aspects

4.1 Gross motor fine development and impairments.

4.2 Neuromotor, eye-hand, sensory motor, perceptual motor difficulties.

4.3 Locomotor/mobility related problems.

4.4 Physiotherapy, occupational therapy-their implications and adaptations in classroom management.

4.5 Activities to enhance motor functions in children with mental retardation.

Unit 5: Working with multi-Disciplinary Team

5.1 Personnel involved in multi-disciplinary team.

5.2 Nature of coordination with multi-disciplinary team.

5.3 Referral agencies, linkages, networking and follow-up.

5.4 Assessment of the abilities of mentally retarded children.

5.5 Need for inter-departmental linkages at State and national levels in the services for mentally retarded children.

Unit 6: Community Based Rehabilitation

6.1 Definition and scope.

6.2 Education for independent living.

6.3 Strengths and limitations of CBR.

6.4 Role of special educator in CBR.

6.5 Challenges and implications.
References:

Objectives:

After studying this paper, the student teachers are expected to realize the following objectives:

1. Develop curricular guidance and instructional methods for children with mental retardation.
2. Select the appropriate content area for various age levels and severity levels.
3. Formulate the IEP and apply suitable strategy for the given group of children with mental retardation.
4. Demonstrate competency to train children with retardation in different co-curricular activities.
5. Describe resource educational provisions available for mentally retarded children.
6. Organize resource room and teaching children with learning problems in regular classroom in the resource room, coordinating with the regular class teacher.

Unit 1: Curriculum Development

1.1 Aims, concept, principals and approaches (clinical teaching, diagnostic, prescriptive teaching, multi-sensory, ecological approach and Computer Assisted Instructions).
1.2 Steps in development of curricular guidelines for children with mental retardation
1.3 Individualized educational Programme
1.4 Group educational Programme in special and inclusive set ups.
1.5 Emerging trends in Curriculum Development.

Unit 2: Introduction to Instruction

2.1 Theories of instruction-Skinner, Gagne, Burner.
2.2 Approaches to instruction.
2.3 Models of Teaching.
2.4 Simulated techniques of microteaching.
2.5 Skills of microteaching and their relevance in special education.
Unit 3: Curriculum Content-Various Stages

3.1 Pre-school (early intervention)/ Early Childhood Years-infant stimulation, sensory motor training, self-help, communication, pre-academic and social skills.

3.2 Primary age level-self-help, concepts, functional communication, functional academics, pre-vocational skills, domestic skills and social skills- Severely and Profoundly retarded.

3.3 Secondary age level and pre-vocational level-concept, functional academics, possibility of academic integration, concept of National Open Schools, functional communication, pre-vocation skills, social competency skills, pre-employment and occupational skills, domestic skills-Severely/Profoundly retarded.

3.4 Strategies for teaching-task analysis, acquisition, maintenance and generalization, modeling, shaping, chaining, prompting, fading reinforcement.

3.5 Record maintenance and monitoring progress.

Unit 4: Teaching children with learning problems in Resource room setting

4.1 Characteristics of children with learning problems in regular schools-borderline intelligence, specific learning disabilities, scholastic backwardness due to other reasons.

4.2 Assessment of children with learning difficulties.

4.3 Organization of resource room.

4.4 Adapting teaching strategies.

4.5 Coordinating with regular school teachers.

Unit 5: Co-Curricular Activities

5.1 Relevance and Importance.

5.2 Visual Arts (arts and crafts) and stimulation material.

5.3 Performing Arts (dance, music, drama, mimicry, etc).

5.4 Physical education, yoga, play, sports and games, Leisure skills and recreational activities.

5.5 Emerging trends and activities-Special Olympics, very special arts, special youth festivals, special national and international days.
Unit 6: Educational Provisions

6.1 Concept of normalization, integration, mainstreaming and inclusive education their implications in educational provision.

6.2 Special schools, Residential schools.

6.3 Special class in ordinary school, consultant and itinerant teacher, resource room, Community Training and Rehabilitation.

6.4 Vocational Training and Rehabilitation.

6.5 Social benefits and schemes-State and Central governments, NGOs.

References

OPTIONAL PAPERS

OPTIONAL –I GENERAL ENGLISH EDUCATION

Objectives:
To enable the trainees to
Understand and appreciate the importance of English
Learn the different methods, techniques and strategies of ELT
Develop the habit of examining syllabus and teaching materials critically
Learn to frame general and specific objective before planning the lessons.
Prepare and use appropriate teaching aids to make teaching more effective.

UNIT I BASIS, METHODS AND APPROACHES TO ELT
1.1 The scene of ELT in India at present
1.2 The study of the skills to be attained at the end of secondary school and higher secondary school courses as outlined in the syllabuses.
1.3 Factors affecting ELT in India- Teacher – student relationship – Motivation – Student attitude – Mother tongue interference - Mixed ability classes.
1.4 Grammar – Translation method – Structural-oral-situational method – Communicative approach
1.5 Direct method – Bilingual method – Humanistic approach

UNIT II LESSON PLAN WRITING
2.1 Motivation – Content – learning experience – evaluation
2.2 Asking questions – teaching aids – recapitulation
2.3 Prose – poetry –
2.4 Grammar– non-detailed text
2.5 Composition – need for a carefully graded course in writing- controlled, guided and free composition – role of questioning, group discussion and pair work in a composition class – correction of composition note books – reformulation.

UNIT III READING, REFERENCE AND STUDY SKILLS
3.1 Abilities of a skilled reader – Silent reading – intensive and extensive reading
3.2 Intensive and extensive reading – reading comprehension Questions types
3.3 Expansion of vocabulary through intensive reading – teaching of passive vocabulary through extensive reading
3.4 Uses of dictionaries – uses of Encyclopedia – Skimming and Scanning

3.5 Note making, summarizing, précis writing – SQ3Rs

UNIT IV TEACHING, LISTENING AND DEVELOPING ORAL FLUENCY

4.1 Using prescribed text books for reading loud reading

4.2 Using pictures and objects – Short speeches and lectures

4.3 Role play and dramatization – Group work and pair work, debates, Story telling, narrating events – Dictation.

4.4 Phonetics – Sounds of English – Vowels – Consonants

4.5 Diphthongs – Features of connected speech – difficulties of connected speech- Devising exercises like minimal pairs to improve the pronunciation of learners.

UNIT V WRITING SKILLS AND TESTING

5.1 Writing skills – Mechanical skills – Grammatical skills

5.2 Discourse skills – judgment skills

5.3 characteristics of a good test – Backwash effects – Testing of grammar

5.4 Testing of Vocabulary – Testing of Writing skills –

5.5 Testing reading comprehension – Testing listening skills.

Reference:


4. About Language: Tasks for Teachers of English CUP (1997), Scott Thornbury


6. The communicative approach to language teaching, OUP(1979)

7. The communicative approach to language teaching, OUP (1979) EJ. Brumfit and K. Johnson.


15. The textbook of English phonetics for Indian students, Macmillan (1990), T. Balasubramaniam.


OPTIONAL II
SPECIAL ENGLISH EDUCATION

Objectives
To enable the teacher to

1. Improve the spoken English, reading ability and writing ability in English.
2. Acquire knowledge of the basics of linguistics.
3. Acquire a working knowledge of various aspects of grammar at the higher secondary level.
4. Get acquainted with materials and modern teaching strategies and techniques appropriate to advanced students of the language.

UNIT I: READING, INTENSIVE READING AND RELATED ACTIVITIES

1.1 Practice in the use of dictionary (long words, syllabic division, spelling, word-formation, pronunciation, usage, selecting required meaning etc.) Examining different dictionaries.
1.2 Referring to books-use of index-table of contents, sub-headings—surveying contents-various study techniques—quoting from sources.—using a library.
1.3 Pertaining the overall organization of matter in a written text-so that the main ideas, their relationship and their sequence and the overall meaning of the text are understood.
1.4 Reading with detailed understanding to extract the surface meaning, literal or explicit meanings, (The suggestions and implications of the text, the writer’s unstated conclusions, bias or slant and particular expressions like idioms, etc.
1.5 Reading for specific purpose-skimming and scanning.

UNIT II: SOUND SYSTEM AND EXTENSIVE READING

2.1 Speech organs and their role—the concepts of the phoneme and allophones, the phonemic systems of Tamil and English compared and contrasted.
2.2 Varieties and standards of pronunciation of English—
2.3. The individual sounds—Consonants clusters—Sounds difficult for Tamil speakers.
2.4 Trainees are expected to read a number of novels and short stories as well as simple books written for the layman in a wide variety of subjects. An absolute minimum of 5 full length books should be read during the academic year.

2.5 Trainees are expected to write book reviews on any 5 of the books they read.

UNIT III: WRITING AND GRAMMAR

3.1 Note-taking from reading practice will be given in note-taking. Summary writing – assignment will be given on summary writing.

3.2 Practice will be given in the use of abbreviations, symbols, word-compression and word omissions, in picking out salient points while omitting examples and in the ordering the points in such a way as to show the relationship between them and their sequence.

3.3 Grammar: Noun phrase – verb phrase – Basic sentence patterns

3.4 Concord – Subordinate clauses – Co-ordinate clauses

3.5 Relative clauses – Transformation of sentences.

UNIT IV: LINGUISTICS, STRESS AND INTONATION

4.1 Definition of language – Definition of linguistics

4.2 A brief history of linguistics – Various branches of linguistics

4.3 Language variations – Transformation- generative grammar.

4.4 The nature of word stress and sentence stress. English as a stress-timed language- Stress-timed language

4.5 Intonation and meaning – Using tape-recorders and cassettes. – Using computers for learning the pronunciation.

UNIT V: LITERATURE TO TEACH LANGUAGE  DIAGNOSTIC TESTS AND REMEDIAL TEACHING.


5.2 An overview of literary forms-epic-lyric-ode-sonnet-elegy

5.3 Meaning of diagnostic and remedial teaching- errors –common errors.

5.4 Language spoken and written –disabilities and handicaps

5.5 Remedial teaching –motivation- teaching pupils at their own level.
Reference:
2. A training course for TEFL,ELBS and OUP (1976), Peter Hubboard Hywel Jones, Barbara, Thornton &Ro Wheeler.
3. Developing reading skills, CUP(1986), Francoise Grellet.
4. The oxford guide to writing and speaking, OUP (1998) john seely
10. Teaching language as communication OUP (1978), H. Widdowson.

OPTIONAL PAPERS

OPTIMAL : MATHEMATICS EDUCATION

Objective :

To enable the teacher trainees
1. To acquire knowledge of the nature of mathematics and its development.
2. To know and understand long term and short term goals of teaching mathematics.
3. To develop skill in the formulation of general instruction objectives (GIO) and specific learning outcomes(SLO)
4. To understand and practice the different methods and techniques of teaching and develop competency in teaching.
5. To develop ability to prepare and use develop competency in teaching.
6. To develop the competency to construct and administer diagnostic and achievement tests, to develop competence in evaluation techniques applied to mathematics.
7. To understand the principles of curriculum construction with emphasis on content and organization
8. To Acquire knowledge of the recent trends in mathematics.
9. To acquire elementary knowledge of computers,
10. To understand the need for research in mathematics education.
UNIT I: NATURE, SCOPE, DEVELOPMENT AND GOALS OF TEACHING MATHEMATICS.

1.1 Nature of mathematics – Precision, logical structure Abstractness, symbolism.
1.2 Mathematics and its relationship with other disciplines.
1.3 History of mathematics – contribution of some Indian mathematicians.
1.4 Aims-practical, social disciplinary and cultural.
1.5 Objectives – GIO’s and SIO’s related to cognitive, affective and psychomotor domains.

UNIT II: METHODS OF TEACHING AND LEARNING MATHEMATICS.

2.1 Lecture, demonstration, heuristic and project. Inductive, deductive, Analytic Synthetic and problem solving method.
2.2 Importance of teaching aids – Projected and non-projected aids – improvised aids (paper folding and paper cutting) - its specific uses in teaching mathematics.
2.3 Lesson plan – need, components, uses of lesson plan and unit plan.
2.4 Cooperative learning, individualized instruction- programmed learning and computer assisted instruction, Dalton plan.
2.5 Seminar, group discussion, team – teaching and guided discovery

UNIT III: CURRICULUM AND RESOURCES

3.1 Curriculum – Principles of selection, organization – logical and psychological, spiral and topical.
3.2 Text books, reference books and workbooks –importance and qualities
3.3 Mathematics teacher- Qualification – special qualities required to a mathematics teacher
3.4 Library, Mathematics club and its activities.
3.5 Analysis of content prescribed for mathematics in standard VIII of Tamil Nadu Text book committee.

UNIT IV COMPUTER EDUCATION
4.1 History of computers – Block diagram of digital computer
4.2 Computer languages – (low-level, high level, assembly, machine)
4.3 Elementary ideas of flow charts and BASIC Programming.
4.4 The use of application software packages – Ms office work, excel and foxpro, Access, Power point.
4.5 The uses of multimedia and internet and their applications in learning mathematics

UNIT V : EVALUATION AND RCENT TRENDS IN MATHEMATICS

5.1 Construction and importance of achievement and diagnostic tests.
5.2 Diagnosis and remediation of student difficulties in learning mathematics.
5.3 Individual difference in mathematical ability - factors contributing – ways of meeting their needs.
5.4 Contributions of Piaget, gagne and Bruner to the teaching of mathematics.
5.5 Recent trends in mathematics education.

Reference
6. Vedanayagam.EG. ‘Teaching Technology for college Teachers’ Sterling Publishers (p) ltd New Delhi
OPTIONAL PAPERS

OPTIONAL : PHYSICAL SCIENCE EDUCATION

Objectives

1. To acquaint the student teachers with the objectives of teaching physical science in secondary and higher secondary schools and help them to plan learning activities according to these objectives.

2. To give practice to the student teachers in the use of hard and software relating to technology of teaching.

3. To guide the student teachers in acquiring specific skills relating to the teaching of physical science, planning the lessons and presenting them effectively.

4. To help the student teachers to understand the principles of curriculum construction and examine critically the syllabi in physical science of the secondary and higher secondary classes.

5. To help the student teachers to understand the evaluation techniques and prepare objectives based items to assess the achievement and progress of pupils.

6. To acquaint them with the knowledge of development of intelligence through science and steps put forward by Piaget.

7. To guide the student teachers in maintaining the science laboratory effectively and the method of purchasing equipments and chemicals to the physical science laboratory.

8. To develop teaching and organizational skills in physical science.

9. To expose the impact of physical science in modern world.

UNIT I: INTRODUCTION

1.1 Nature and scope of physical science : a body of knowledge and method of enquiry physics and chemistry as process and product- Interdisciplinary app

1.2 Physical science and environment – values of physical science in relation to environment.

1.3 Aims and objectives of teaching physical science- cognitive, affective and psychomotor Domains-

1.4 Specifications and Instructional objectives and behavioral objectives

1.5 Objectives –knowledge –attitude – good habits and skills.
UNIT II METHODOLOGY AND LESSON PLAN WRITING


2.2 Heuristic methods- Historical and biographical method. Modern methods of teaching physical science,

2.3 Illustrated lectures by students guided by the teacher – Discussion method – Seminar – symposium –workshop – assignment method.

2.4 Supervised study team teaching- teaching for creativity.

2.5 A course in physical science- principles of lesson planning- Importance of lesson planning- planning for specific behavioral change- herbatian steps – preparation and analysis of some lesson plans.

UNIT III AUDIO-VISUAL AND ENRICHMENT OF MATERIALS

3.1 Importance of Audio Visual aids – Principles of Selection and uses- hardware and software – audio aids, Visual aids their uses in education.

3.2 Importance of self-learning devices – programmed learning-

3.3 Principles & styles role of computer in teaching physical science.

3.4 Content enrichment in laws of motion & sources of energy, radioactivity and artificial nuclear Transformation

3.5 Acid, Base, Salts, concept of oxidation and reduction Atomic structure.

UNIT IV: CURRICULUM DEVELOPMENT AND LABORATORY

4.1 Definition – principles of curriculum development – organization psychological, spiral, Concentric and Unitary methods.

4.2 curricular models – PSSC and chem.. Study- curriculum for IX, X, XI and XII standard – content portion.

4.3 Physical Science Laboratory – selection of physical facilities and planning and equipping – organization and maintenance of laboratory –

4.4 Storage and chemicals – Records to be maintained –

4.5 Improvisation of apparatus – accidents and first aid.

UNIT V: ACHIEVEMENT TEST, PROFESSIONAL TEACHING AND PERSONALITY OF PHYSICAL SCIENCE TEACHER

5.1 Achievement test in physical science- Essay and objective tests – construction and uses of tests –
5.2 Hall marks of a good test – different forms of tests – Multiple choice Matching, completion, grouping, true or False. Tests involving figures.

5.3 Academic qualification- professional teaching- clarity of thought – and expressions – interest in the subject – love for pupils – Sincerity and open mindedness.

5.4 Desire to learn and participation in In-service course – role models of a good science student. – management of science class

5.5 Personality and dress attention to individual differences- encouragement to pupils giving importance to problems raise by students. Self evaluation of teaching- maintenance of records – Evaluation of teachers by pupils by informal talk and questionnaire.

Practicals

1. Preparation of instructional materials for at least one unit in physical science
2. Demonstration of at least few important experiments in the classroom.
3. Drawing up of a list of experiments in physical science for a particular grade.
4. Preparing a programmed instructional material for any new unit.
5. Building a picture file, a science news album.
6. Biography of important scientists, collection of charts

References

5. NCERT, “ General Science Handbook of Activiites” VI, VII Classes.
6. PSSC “Physics Textbook Laboratory Manual, Teacher’s Guide” , NCERT.
OPTIONAL PAPERS
OPTIONAL: BIOLOGICAL SCIENCE EDUCATION

Objectives

1. To develop necessary competence in teaching the subject in terms of methods skills and techniques.
2. To enable the student teachers to understand the basic principles of the biological science education at secondary and higher secondary level.
3. To gain knowledge in acquainting and administering a biology laboratory, curricular and co-curricular activities
4. To acquire skills in making aids, preparing instructional materials and using audio visual aids

UNIT I: INTRODUCTION

1.1 Present status of biological science as a subset study in high schools and secondary schools – scope of the study.
1.2 Various branches of biology and the interrelationship with other subjects.
1.4 Aims and objectives of teaching biology at primary, Secondary and higher secondary levels.
1.5 Values of teaching biology – problems in teaching biology – the discoveries in biology till date

UNIT II CURRICULAR AND CO-CURRICULAR ACTIVITIES

2.1 General and specific Instructional objectives and their taxonomy – advantages - behavioral terms- knowledge, comprehensive, skills, scientific Interest and appreciation
2.2 Lesson plan- definition, need, advantages – criteria for a good lesson plan – Herbartian steps – preparation of lesson plan- unit plan definition –model unit plan –advantages.
2.5 Biological science Talent Research – Objectives – abilities – and skills to be tested – method of selection.

UNIT III: TECHNOLOGY OF TEACHING AND ALLIED ACTIVITIES

3.1 Problem solving approach – definition – various steps involved – selection of problems and solving – scientific attitude- fostering ways and means to develop scientific attitude.  
3.2 Laboratory method – definition – planning Laboratory to high, higher secondary school- conducting practical work and its importance – physical facilities- Chemical stains and reagents – preservative technique-preparation of permanent and temporary mounts advantages of laboratory method.  
3.3 Laboratory assistant and duties – Maintenance of registers – care and maintenance of apparatus safety rule – Laboratory accidents – prevention and first aids.  
3.5 Project method – definition – different steps- criteria for a good project – purpose-different types of project – selection of project at primary secondary and higher secondary level – merits and demerits.

Unit IV Audio-Visual Materials And Teaching Aids
4.1 Importance of audio-visual materials in teaching biology – OHP, Epidiascope, Film strip projects, Micro projector, 16 mm Film and Loop projector- 35 mm projector, Films and Film strips


UNIT V: GUIDANCE AND COUNSELLING IN BIOLOGY

5.1 Diagnosis of student difficulties in learning biology

5.2 Guidance and counseling – purpose of student counseling – need of counseling – situations of counseling needed.

5.3 Suitable remedial measures – the role of biology teacher – Head Master – public in providing guidance and counseling in biology activities

5.4 Identification- slow and gifted learners – counseling needed for slow learners- Guidance at the primary stage – Secondary stage

5.5 Vocational, Educational guidance and its importance in biological science

Practical

1. Design and carry out simple investigator projects in Biology.

2. Preparation of improvise Biology model.

3. Preparation of Charts, Micro slides, herbarium, stuffed animal – invertebrate,

Reference

OPTIONAL PAPERS
OPTIONAL: HISTORY EDUCATION

Objectives
1. To enable the students to develop and apply effective instructional strategies in history.
2. To help them familiar with the application of advanced technology in teaching-learning history.
3. To help them acquire the knowledge in preparation and management of suitable aids materials, equipments for teaching history and analyse the subject matter of history prescribed for the standards IX and XI

UNIT I: INTRODUCTION
1.1 The meaning and scope of history – History as a special field of study – History of history and historiography.
1.2 Different conceptions – history Biographical conceptions. History as a record of the past evolutionary conceptions. Implications of these conceptions to teachers. History as a science.
1.3 Specific aims on the various stages.
1.4 Values – Informative, Educational, Ethical, Cultural, Disciplinary vocational
1.5 A thorough study of the subject matter of syllabus for std IX and X

UNIT II METHODS OF TEACHING HISTORY AND LESSON PLANNING
2.1 Text book recitation and the lecture- The oral lesson- a) the induction lesson. –b)Socialized recitation.
2.2 Problems and projects – the laboratory method – The source method – Dramatization
2.3 Supervised study and Dalton plan.- Ways of making the past real
2.4 The need for lesson planning – Principles of lesson planning .
2.5 Steps formation of educational objectives – selection and organization of concepts and aids- students activity and teaches role –recapitulation and assignment. – Evaluation – different forms of lesson plans.
UNIT III GENERAL ASPECTS OF TEACHING HISTORY:

3.1 Dimensions of history, continuity, development, time, place.

3.2 Geographical foundation of history.

3.3 Chronological divisions of history.

3.4 Doctrine of natural taste and interests. – Culture epoch theory. – Proceeding from near to remote.

3.5 The ideal approach – reconciliation of the psychological development of the child with demands of the time.

UNIT IV ORGANIZATION OF MATERIALS, EQUIPMENT AND RESOURCES

4.1 Chronological and periodical – The concentric and spiral

4.2 The unit and the topical – Regressive plan.

4.3 Text books – Collateral reading – Library – Audio visual aids –

4.4 History room – Field trips.

4.5 Community resources – Current events- Evaluation – History teacher- Pupils record.

UNIT V: APPLICATION OF EDUCATIONAL TECHNOLOGY AND ACHIEVEMENT TEST IN HISTORY.

5.1 Programmed learning – Linear, Branching and mathematic programmes.

5.2 Cooperative learning and methods of using it in teaching history .

5.3 Computer applications in teaching history.

5.4 Achievement test in History Education – Essay and objective type tests – construction and uses of tests – Hall marks of good test

5.5 Different forms of tests – Multiple choice – matching- completion-Grouping- True or False. Test involving figures.

References:

3. kochar S.k 1998 – Social Science in actual practice India Sage Pub.
OPTIONAL PAPERS
OPTIONAL: GEOGRAPHY EDUCATION

Objectives:

1. To enable the students to develop and apply effective instructional strategies in geography.
2. To help them familiar with the application of advanced technology in teaching – learning geography.
3. To help them acquire the knowledge in preparation and management of suitable aids materials equipments for teaching geography prescribed for the standards IX and XI

UNIT I INTRODUCTION

1.1 Modern Geography its definition, its importance in the present day world various branches of geography.
1.2 Aims and objectives of teaching geography in behavioral items –cognitive domain-knowledge comprehension application analysis world mindedness: appreciation and interest- psychomotor skills.
1.3 Purpose of teaching geography in the elementary, secondary and higher secondary stage.
1.4 Correlation of geography with the other subjects of the curriculum.
1.5 Geography room –needed for it-minimum requirements –equipments etc.,

UNIT II LESSON PLANING AND CURRICULAR ACTIVITIES

2.1 Organization of a lesson unit-lesson plan-teaching notes-notes of a lesson.
2.2 Communication skills particulars to geography-macro lessons –cycle of operational plan.
2.3 Skills of using visual aids with special reference to maps-different kinds of maps, graphs, diagrams- statistical diagrams-interpretation of maps-use of map in the classroom.
2.4 Educational technology, use and principles of –Hardware-films and film strips-tape recorder-television
2.5 Software-Black board picture –globes and need for improvised aids.
UNIT III INSTRUCTIONAL TECHNIQUES

3.1 Traditional ways – modern methods – individual methods – group methods
3.3 Knowledge of the treatment of the following in the high school and higher secondary school syllabi – Weather and climate, Mathematical Geography – land forms – Economic and commercial – population geography.
3.4 Geography teacher: the pivotal position of geography teacher.
3.5 Essential qualities in a geography teacher, professional growth of geography teacher.

UNIT IV ORGANISATION OF MATERIALS

4.2 Instructional materials – Textbooks, Library, Museum
4.3 Evolution in geography: concept on evolution- objectives of evolution-construction of tests-tools of evaluation-use of statistics in evaluation-interpretation of list results self-evaluation-students evaluation.
4.4 Self learning devices – techniques of programmed learning – Classroom climate – class management – methods of arranging practical classes developing leadership equalities-training of teachers for effective roles.
4.5 Importance of arrangements in geography-value and views of practical note books – geography home work including types of work and time allotment.

UNIT V METHODOLOGY OF TEACHING GEOGRAPHY AND TESTS

5.1 Geography syllabus – principles of selection and organization of subject matter.
5.2 Principles of curriculum development in geography-curriculum construction.
5.3 Test measurement and evaluation in teaching and learning geography.
5.4 Achievement test – type test – objective type test – merits and demerits.
5.5 Characteristics of good achievement test – Blue print criterion referenced test and norms reference test-interpretation of test scores, mean S.D., Correlation among scores.

Practicals
The student may be asked to maintain records of the activities such as those suggested in higher secondary schools. The following are some of the activities.
Designing a Performa for self evaluation and students evaluation.

---------------------
OPTIONAL PAPERS

OPTIONAL: SOCIAL SCIENCES EDUCATION

Objectives
1. The student teacher develops an understanding of all topics that he has to teach in social sciences
2. Aims and values, instructional objectives and methods of teaching such topics.
3. The procedures for developing school curriculum.
4. Curriculum activities pertinent to the teaching of social science.
5. Modern techniques of teacher-preparation for effective teaching and for evaluation.

UNIT I: NATURE AND STRUCTURE OF SOCIAL SCIENCES
1.1 History – meaning definition, nature, and characteristics of social sciences.
1.2 Different conception of History-Biographic and evaluating. Conception: Social sciences as evaluation philosophical economic and social and as evaluation of civilization. – Social sciences as a record of the past – relevance to present and future. –scope of social sciences-dimensions of History-continuity development time, place, idea.
1.3 Social sciences as a Science and Art.- Correlation with other subjects.-
Teaching and learning of Social sciences – year plan, unit plan and
lesson plan – need
1.4 Formulation of performance – objectives – books and ideas makers views
cognitive affective and psychomotor levels.
1.5 Values-practical, cultural, ethical, disciplinary values of teaching history

UNIT II INSTRUCTIONAL STRATEGIES
2.1 Traditional methods – lecture, oral, recitation, review, drill, story telling-
inductive and deductive story telling.
2.2 Modern methods laboratory methods, demonstration, role play and
dramatization, -historical method.
2.3 Project method and problem solving approach- discussion and socialized
methods: small group, panel buss session, seminars, workshops, and
symposia.
2.4 Field trip and excursions – team teaching, group learning and individual
learning.
2.5 Social science teacher-characteristics and tools preparation-year plan-
Unit plan and lesson plan.

UNIT III CURRICULUM DESIGNING
3.1 Selection –organization and radiation of subject content principles to be
followed the linear, or spiral and the concentric types of curriculum, logical
psychological organization – Need for choice of materials in the syllabi –
Curriculum revision.
3.2 Curriculum improvement enriched curriculum-assessment of different
school curricula. Homogeneous grouping Dalton play improvised study.
Theories influencing selection of materials doctrine of natural taste and
interest- cultural epoch theory –proceeding form near to remote etc.,
3.3 Curriculum improvement enriched curriculum –assessment of different
school curricula. Homogeneous grouping Dalton play improvised study-
Theories influencing selection of materials – doctrine of natural taste and
interest – cultural epoch theory – proceeding from near to remote.
3.4 Equipment /resources: Collateral reading books. Social science club and
its activities - social science textbook – preparation qualities.
3.5 Teachers guide – social sciences room with globe, maps, models etc., -
  social science guest lectures by eminent social scientists.

UNIT IV LEARNING STRATEGY
4.1 Assignments – oral, written and drawing forms– workbooks – preparation of
  models and specimens.
4.2 Visits to related fields- temples–museums, Art galleries, Exhibitions. 
  Collection of specimens- stamps coins.
4.3 Reading of books, historical novels, magazines, newspapers and
  learning from other media.- self learning material and using instructional
  materials
4.4 Radio, Record player and the cassette recorder.- slide projector, film
  strips projector, the OHP and sound film projector.
4.5 TV, VCR,. Use of computer in social science education – Need for
  improvised aids.

UNIT V CONTENT, RECENT TRENDS AND EVALUATION
5.1 The subject content prescribed for classes VIII, IX, X, XI and XII by the
5.2 Recent trends in social sciences-education-evaluation of social sciences
  education –civic, political, social economical, geographical, historical
  points of view.-
5.3 Diagnostic and remedial teaching.
5.4 Achievement test – type test – objective type test – merits and demerits.
5.5 Characteristics of good achievement test – Blue print criterion referenced test and
  norms reference test- interpretation of test scores, mean S.D., Correlation among scores.

Practical work
1. Preparation of instructional material for any one unit in one of the subjects of
  social sciences.
2. Dramatization of certain important events given in any one of the subjects
  of social studies.
3. Evaluation of a text book in any one of the subject of social sciences.
4. Preparation of self-learning materials, C/I and Units for one unit, scoring
  tabulation and interpretation.
5. Preparation of one and each in the following categories –maps –charts – slide and models.


6. Participation on social studies club activities.

References
5. Erning C. Arthru and Binding David (1952),”Teaching social studies in secondary schools. New yorK. Mc Graw hill Book Co

OPTIONAL PAPERS
OPTIONAL I : HOME SCIENCE EDUCATION

Objectives:

1. To help the teacher trainee understand and appreciate the importance of study home science at the secondary and higher secondary levels.

2. To help them realize the role of home science in shaping the personality of an individual.

3. To help the teacher trainee develop the skill in planning the lesson.

4. To familiarize the teacher trainee with the different techniques of teaching and evaluation in home science

5. To promote the skill of preparing objective based question paper for different topics in home sciences.

UNIT I: INTRODUCTION TO HOME SCIENCE EDUCATION

1.1 Nature and structure of Home Science relevant to family work –


1.3 Home Science as a subject in the academic structure – relationship with the other subjects.

1.4 Aims, Goals, objectives and values of Home Science education – Objectives –Cognitive and psychomotor on Bloom’s model in Home Science at different
levels, primary secondary higher secondary and at the college in relation to the needs of pupils and society.

1.5 Annual plan, Unit plan and lesson plan preparation of lesson plan..

UNIT II: INSTRUCTIONAL AND LEARNING STRATEGIES

2.1 Instructional strategies in teaching Home Science, heuristic method, Dalton plan, Individualized instruction –

2.2 Individual projects – home projects, supervised study, team teaching, lecture, demonstration, discussion, seminar, symposium, role play –

2.3 Practice of micro teaching – for any fie skills – relevant for teaching link practice – Home Science – Home Science teacher characteristic Role.

2.4 Learning strategies – Assignment – Problem solving, using Radio, TV, Filmstrip, Audio tape, charts displays, models, improving aids,

2.5 Usage of CAI, Mid-day meal programme – nutrition, oxtons in programme, adult education programme.

UNIT III CURRICULUM DESIGNING

3.1 Curriculum Designing – selection- organization and up gradation of subject – content.

3.2 Principles to be followed – linear, spiral and concentric types of content selection- logical and psychological organization

3.3 Need for choice of material in the syllabus – curriculum revision – improvement –assessment of different school curricula.

3.4 home science exhibition, Home science club, Home science Lab, equipping the lab, organizing and its maintenance –records, registers to be kept, Home text of books and reference books.

3.5 Principle and criteria of good text books, review of books used, Text books Library – Organization, storage and use – Guest lectures by eminent Home Scientists – CAI in Home Science

UNIT IV: INSTRUCTIONAL AIDS AND CONTENT ANALYSIS

4.1 Radio, Record player, cassette Recorder, Slide Projector

4.2 Software, TV, VCR, DVD, and other electronic devices
4.3 Charts, diagram, Specimen, Need for improvised aids.
4.4 Analysis of content prescribed for Home science
    for XI and XII, by Tamilnadu Text Book Society.
4.5 Recent trends in Home Science Education

UNIT V: ACHIEVEMENT AND DIAGNOSIS TESTS IN HOME SCIENCE EDUCATION

5.1 Essay and objective type tests – Advantages and limitations
5.2 Norms referenced and criterion referenced – Power and sapped test
5.3 Oral pronunciation and fluency tests – Reading comprehension test
5.4 Blue print construction for achievement test – Characteristics of good test
    – interrelationship of test results –
5.5 Mean, SD, Correlation, Need for continuous evaluation - cumulative record card – diagnosis and Remedial teaching.

Practicals
1. Teacher trainee is expected to give minimum of 12 lessons in topics from
   nutrition, children, home management, textiles and clothing, first aid and
   home nursing.
2. practical are to be arranged to textiles and clothing home management –
   record is to be maintained
3. Organizing of exhibitions
4. Demonstrations of food preparation for infants, pre-schools and adolescents to rural community.
6. Preparation and administration of achievement test in unit – scoring
   tabulation and interpretation of results.

Reference
   Macmillian & ci., Ltd.
   Madras: Orient Longmans
   (Revised Edn) New Delhi: NCERT.,
OPTIONAL PAPERS

OPTIONAL –II  HOME SCIENCE EDUCATION

Objectives

1. To help the student teacher of Home Science to understand the need for teaching Home Science in Secondary and Higher Secondary schools
2. To make them realize that home, school and community are joint laboratories in developing them as worthy citizens.
3. To impart knowledge of the different steps involved in the various methods of teaching
4. To enable the student teachers to acquire skill in planning a lesson with reference to methods and instructional materials and presenting them effectively.
5. To familiarize the students with recent trends in evaluation as applied to Home science and to prepare objective based test items to evaluate the achievement and progress of pupils.
6. To enable the student-teacher to understand the principles of curriculum organization in secondary and higher secondary schools.
7. To enable the student – teacher to realize the value of Home Science in contemporary life.
8. To familiarize the student teacher with the organization and maintenance of the Home Science department.
9. To help the student –teacher to develop an analytical and creative mind and make them effective members of the home, the school, the community and the profession.

UNIT I: DEVELOPING LEADERSHIP AND METHODS OF INSTRUCTIONS

1.1 Understanding adolescents – the role of home, community and the teacher - Securing discipline, sharing responsibility.
1.2 Developing leadership of teachers for effective roles – Group work in practicals.
1.3 Individualized instruction – assignment, supervised study, individual project and home project, programmed instruction and computer assisted instructions.
1.4 Group techniques – Lecture – Project – Discussion – Seminar –
   dramatization – experimental method.
1.5 Field trips and excursion- exhibition- educational games and puzzles – team
   teaching.

UNIT II: PROGRAMMES OF NUTRITION & MALNUTRITION.

2.1 Acquainting teachers with programmes of Nutritious Noon Meal Scheme –
   Applied Nutrition programme
2.2 Adult Education programme – World Food Day – ICDS .,
2.3 Role of international agencies in the Nutritional programmes.
2.4 Critical problems India is facing at present – malnutrition – Over population –
   communicable diseases. Causes and prevention of the above.
2.5 Need for the inculcation of values

UNIT III: HOME SCIENCE TEACHER

3.1 The Home Science Teacher – Qualification – Duties and responsibilities to
   school and community and professional growth.
3.2 Problems faced by the Home Science teacher- Lack of Text books, Hob
   opportunities.
3.3 Home science department, organization and maintenance of Home Science
   Laboratory
3.4 Planning an all – purpose room –management of the department – records
   and registers.
3.5 Home Science Association of India, In service training, self evaluation of the
   teacher – need to design a self evaluation Performa.
UNIT IV HOME SCIENCE TEACHING LEARNING ENVIRONMENT

4.1 Classroom climate – Teacher dominated pattern – Laissez faire pattern and democratically planned pattern

4.2 Significance of the classroom climate – classroom Interaction analysis.

4.3 Student evaluation – Rationale for student evaluation – Teacher pupil attitude.

4.4 Factors affecting criteria for evaluation based on student perception and teacher perception

4.5 Modification of teacher behaviour and development students growth.

UNIT V: MEASUREMENT AND EVALUATION

5.1 Construction and Standardization of an achievement test in Home Science-

5.2 Blue print- Norms – Reliability and Validity – item analysis.

5.3 Graphic representation of data- Bar and Pie diagram – Histogram – Frequency polygon- Cumulative frequency – Graphic and ogive Curve.

5.4 Objective based testing –Evaluation of teachers- rating by supervisors or colleges – Evaluation by pupils- Self evaluation – Comparing performance with lesson plan-

5.5 Teacher dominated pattern- Democratic pattern – Laissez faire pattern – Interaction Analysis (F.I.A.S)

Note: Students of optional “Home Science” are to be familiarized with the latest – Tamil Nadu Curriculum for “Nutrition and Dietetics”, prescribed for Higher Secondary Classes.
Practical Work

1. Presenting demonstration lessons to the peers in selecting topics from Home Management, Foods and Nutrition, Textiles and Clothing and Child Development.
2. Undertaking minor projects.

References

OPTIONAL PAPERS

OPTIONAL I: COMMERCE AND ACCOUNTANCY EDUCATION

Objectives:

1. To help the teacher trainees to acquire knowledge of nature and scope of commerce and Accountancy.
2. To understand the aims and objectives of teaching commerce and accountancy.
3. To develop micro teaching skills and understand the different methods, skills and techniques of teaching.
4. To know the preparation and use of audio visual aids in commerce teaching.
5. To implement the methods of evaluation, construct and administer the achievement and diagnostic tests.

UNIT I: COMMERCE EDUCATION – AN INTRODUCTION.

1.2 Practical, social, cultural, moral, disciplinary and vocational values of teaching commerce and accountancy. – Need for commerce and accountancy education – importance.
1.3 Aims and Objectives of teaching commerce and accountancy subjects – base for the development of the objectives through the appropriate learning experience-
1.4 Bloom’s Taxonomy of educational objectives – Classroom objectives of teaching commerce- General instructional objectives and specific learning outcomes relating to the objective affective and psychomotor domain.
1.5 Cognitive aspect like attention, perception and concept formation with reference to teaching of commerce and accountancy.
UNIT II: MICRO TEACHING AND METHODS OF TEACHING COMMERCE AND ACCOUNTANCY.

2.1 Micro teaching – need for micro teaching – components – skill of explaining, stimulus variation, black board writing, reinforcement, illustrating with examples, - advantages of microteaching.

2.2 Traditional methods – lecture, demonstration, Heuristic, Story telling, Biographic and project method.

2.3 Modern Methods – Team Teaching, seminar, symposium, workshop, debate, panel discussion and group discussion.


2.5 Computer Aided Instruction (CAI) – Role of teachers in individualized instruction. Teaching for concept mapping and cooperative learning.

UNIT III: APPROACHES AND SYSTEMS OF COMMUNICATION AND MODERN ACCOUNTING SYSTEM

3.1 Communication- principles and barriers of communication – principles of modern communication informal and non formal learning situation – Various stages in modern communication system-

3.2 Mass-media approaches to education – different media – multimedia approach in learning – its need and scope –uses of internet in communication-

3.3 E-Commerce and the impact of information technology.


3.5 Preparing final account – Trading, profit and loss account and balance sheet –methodology of teaching final a/c’s – teaching difficult items in accounts namely, adjustment entries.
UNIT IV: AREAS OF TRADE AND INDUSTRY

4.1 Major divisions of Commerce – Trade, Transport, warehouse, bank Insurance and advertisement – Trade – wholesale and retail

4.2 Middleman and market functions – departmental and multiple shops- co-operative consumer shops – fair price shops- hire purchase and installment system.

4.3 Transport and warehouse – road, rail, air and water transport – railway receipt –way bill –container service – classification

4.4 Warehousing –warehouse documents- Banking and insurance –banking services- major activities of commercial banks.

4.5 Co-op banks –lending schemes of nationalized banks-RBI – Travelers Cheques and Hundies.

UNIT V: AUDIO VISUAL AIDS AND EVALUATION

5.1 Instructional Aids – need, uses and kinds – audio visual aids and their merits – Visual Aids – text books, black board, charts, models, flannel board, magnetic board.

5.2 LIC and other financial institutions – projective Aids: Film – strip – Film, OHP, projector, Epidiascope, Micro-projector – Audi-aids: Tape – recorder, gramophone plates – Field- trips, excursions – organizing, commerce club, museum, exhibition, school co-operative society etc.,


5.4 Blue print – construction, administration, evaluation and interpretation item analysis- measures of central tendency. Measures of dispersion, correlation and rank correlation coefficient.

Reference:

OPTIONAL PAPERS

OPTIONAL II: COMMERCE AND ACCOUNTANCY EDUCATION

Objectives

1. To acquire the knowledge of commerce as a subject at the secondary and Higher secondary levels and relation with other subjects.
2. To understand the cognitive aspects of teaching commerce and accountancy.
3. To practice the trainees to prepare the lesson plan.
4. To understand the nature and types of accounting functions.
5. To develop competency in evaluation techniques applicable to commerce.
6. To understand the principles of curriculum construction and organization of the subject matter at different levels of school education.
7. To know the various in-service programmes needed by a commerce and accountancy teacher.
8. To identify the slow and gifted learners in commerce and accountancy subjects.
9. To organize co-curricular activities in commerce and accountancy.
10. To develop competency in evaluation techniques applicable to commerce.
UNIT I : INTRODUCTION TO TEACHING OF COMMERCE

1.1 Nature and scope of the subject commerce and accountancy its definition – purpose of commerce education- importance and meaning of commerce education.

1.2 Correlation of commerce and Accountancy with other subjects Viz., Economics, Mathematics, Business Administration, and commercial Geography.

1.3 Need for accountancy education- importance – fulfilling the present day needs.

1.4 Aims and objectives of teaching commerce and accountancy – values of the study commerce- practical, social and vocational – history of vocational education- commerce education, its importance to present day educational system.

1.5 Aims and objectives and values of teaching commerce and accountancy, subject base for the development of the objectives through learning experience – instructional objectives – general, specific with reference to individual lessons.

UNIT II PLANNING FOR SUCCESSFUL TEACHING

2.1 Need for preparation and planning the lessons in advance and advantage – importance- of planning for successful teaching – activity approach to lesson planning – steps in the preparation of lesson plans.

2.2 Preparation of year plan and unit plan – model lesson plans.

2.3 Motivation – categories of learners – identification of slow and gifted learners – in learning of accountancy and commerce – the characteristics of slow and gifted learners – reasons for their variation in commerce and accountancy subjects.
2.4 Catering to the needs of different individuals – planning differently through arranging for extra coaching classes and assigning simple problems. – Analysis of the effects of differential treatment.

2.5 A study content of commerce and accountancy for plus 2 standard.

UNIT III ACCOUNTING AND ITS PRINCIPLES – COMMERCE AND ACCOUNTANCY TEACHERS.


3.2 Issue of shares, forfeiture and re-issue of shares – preparation of company final accounts – identify the difficulties in teaching the accountancy subjects n plus 1 and plus 2 students – remedial steps.

3.3 The commerce and accountancy teacher – their academic and professional qualification- the need and importance of attending in-service programmes – the important duties.

3.4 Responsibilities of a commerce and accountancy teacher – preparation of teacher’s diary, time table

3.5 Proper maintenance of registers and records – qualities of a good commerce teacher.

UNIT IV : CURRICULUM AND ENRICHMENT ACTIVITIES IN COMMERCE

4.1 Principles of curriculum construction – principles to be observed in selection of subject matter – arrangement and order of topics – Psychological and sectional arrangement- concentric pattern.
4.2 Latest trends in the curriculum construction in the developed countries – a critical analysis of the commerce and accountancy syllabus at higher secondary level in Tamil Nadu.

4.3 Organizing commerce clubs – utilizing commerce club for planning model banks – forming and organizing co-operative stores, debates and discussions

4.4 Planning for special visits to commercial markets, banks, life insurance corporation of India etc.,

4.5 Procedure for taking part in stock exchange – primary and secondary market – visit to stock exchange market – Excursions as a source of learning.

UNIT V : EVALUATION

5.1 Tools of evaluation – observation, oral testing, mental written tests – testing and evaluation –

5.2 Merits and demerits – different item types as applied to commerce and accountancy scoring of such items.

5.3 Tests for different purpose – achievement, diagnosis and prognosis

5.4 Diagnosis and prediction – test construction, administration and interpretation

5.5 Co-efficient of correlation – Rank order correlation- Normal probability curve and its applications in educational evaluation.

Reference:


5. Khan M.S. The teaching of Commerce, New Delhi: Sterling
OPTIONAL PAPERS

OPTIONAL – I: COMPUTER SCIENCE EDUCATION

Objectives:

1. To help student teachers understand computer, its parts, its kinds and uses in schools.
2. To enable them attain knowledge about the functioning of computers, developing computer programmes in BASIC AND C.
3. To help them acquire skills of teaching and evaluation as applied to computer science at the higher secondary level.
4. To enable the student teachers understand the principles of curriculum construction.
5. To familiarize the student teachers with the various methods that can be employed for the teaching of computer science.
6. To help the student teachers in acquiring skills relating to planning lessons and presenting them effectively.

UNIT I: INTRODUCTION

1.1 What computers are: The various uses of computers in general – The main parts of the computer and their role.
1.2 Brief History of the development of computers. – Different kinds of computers – use of computers in schools.
1.3 The Aims and Objectives of teaching Computer Science in Schools –
1.4 Computer Science teaching at different levels, primary, Secondary and Higher Secondary levels.
1.5 The place of Computer Science in Higher Secondary Curriculum. – Correlation with other school subjects – computer Literacy and Awareness Programmes.

UNIT II FUNCTIONING OF COMPUTER, OPERATING SYSTEMS AND APPLICATION.

2.1 Binary, octal and Hexa system of numbers. – Computer Arithmetic – pitfalls in computing.

2.3 Operating systems – function and Types – DOS and its applications.

2.4 Windows – Introduction – Importance of mouse

2.5 Use of interpreters and Compliers – Basic concepts in Visual Basic

**UNIT III COMPUTER SOFTWARES ( DOS BASED SOFTWARES AND WINDOW BASED)**


3.3 MS Office – introduction and Utilities – MS word – Introduction – Entering Text – Creating documents


3.5 Power Point – slide preparation – applications in Teaching and Learning – Net work – its advantages and types.

**UNIT IV : MICROTEACHING, LESSON AND UNIT PLANNING**

4.1 Teaching Skills – Micro teaching Cycle – Teaching components Planning a micro lesson

4.2 Teaching relevant Skills- Skill of Explaining, Stimulus Variation, Reinforcement, Questioning, Black board writing.

4.3 Lesson Planning : Importance of Lesson Planning

4.4 Writing Instructional Objectives and Planning for specific behavioral changes-steps and preparation of Model Lesson Plan.


**UNIT V : EVALUATION IN COMPUTER SCIENCE**

5.1 The concept of evaluation, Evaluation for achievement, diagnosis and prediction

5.2 Characteristics of good test – Blue Print – online examinations

5.3 Various kinds of test, Principles of construction and administration of an achievement test.

5.4 Diagnosis and prediction – test construction, administration and interpretation

5.5 Co-efficient of correlation – Rank order correlation- Normal probability curve and its applications in educational evaluation.
Reference.
OPTIONAL PAPERS

OPTIONAL –II COMPUTER SCIENCE EDUCATION

Objectives

1. To help student teachers plan and manage computer laboratory.
2. To provide practical training in program entry, editing, debugging and question bank.
3. To enable student teachers understanding the fundamentals of ‘Basic’
4. To enable them understand the fundamentals of ‘c’
5. To help them using CAI packages for teaching
6. To enable the student teachers develop interest and appreciate various pedagogical principles in teaching of computer science.
7. To develop in the student teachers skills in preparing and using Computer Assisted Instruction Programmes.
8. To help the student teachers acquire knowledge on computer software and the growing capacity of computer Technology.
9. To enable the student teachers acquire knowledge on latest trends in Information Technology.

UNIT I COMPUTER LABORATORY PLANNING AND MANAGEMENT – HANDS ON-TRAINING.

1.1 Need for planning the computer laboratory – Special features of Computer laboratory – Setting up a computer lab – Essential infrastructure
1.2 Laboratory management – lab routine for pupils – arranging practical for pupils- Maintenance of records.
1.3 Hands- on training – meaning and importance – Organizing Hands – on – Training for pupils
1.4 Programme entry, editing, debugging and execution – Organizing practical and evaluation of practical.
1.5 Question Bank preparation.
UNIT II: FUNDAMENTALS OF ‘BASIC’ & ‘C’ PROGRAMMING

2.1 System commands – Variables – Statements – Kinds – and Syntax


2.3 Introduction to ‘c’ programming – statements – kinds – syntax – Simple program development

2.4 Validation of program and documentation

2.5 Speed and special uses of computers.

UNIT III INSTRUCTIONAL METHODS FOR A GROUP AND INDIVIDUAL LEARNING

3.1 Introduction to Instructional Methods for a group – large group strategy – Lecture, Seminar, Symposium

3.2 Small group strategy – co-operative learning, Discussion –

3.3 Diagnostic and remedial teaching program – Interactive Video- Video Conference

3.4 Introduction to individual instruction – concepts – Principles involved in individualized instructions –Self-learning, library based learning


UNIT IV: COMPUTER EDUCATION & TECHNOLOGY

4.1 Computer software: Categories of software, different procedures for acquiring software advantages.

4.2 The ethical and practical issues involve in the software piracy.

4.3 The growing capability of Computer Technology.

4.4 Use of Robots – Artificial intelligence – Office Automation

4.5 Question Bank Preparation – Validation – Uses.
UNIT V : METHOD OF TEACHING AND USE OF TEACHING AIDS

5.1 Introduction to Internet – Utilities in Education – Introduction to e-mail – Utilities.

5.2 Modem and its functions – Multimedia and its functions –

5.3 Introduction to Hyper Text Markup Language (HTML)

5.4 Need and importance of audio-visual aids in teaching Computer Science and their classification.

5.5 Use of graphic materials: Picture charts – diagrams – graphs and tables – projective aids.

Practical

1. Study of the syllabus prescribed for Higher Secondary Classes
2. Hands-on – Training in the operation of the computer
3. Preparation of simple program in BASIC And C
4. Maintain a record book containing at least 15 programs
5. Preparing a question Bank.

Reference

OPTIONAL PAPERS

OPTIONAL I – ECONOMICS EDUCATION

Objectives

To help the student teachers acquire knowledge of the nature, scope and development of Economics.

1. To sensitize student teachers the value of the discipline of Economics.

2. To create among student teachers awareness of Economic Problems and their impact on political and civic life.

3. To acquaint the student teachers with the objectives of teaching economics in Higher Secondary Schools and help them to plan the learning activities according to the stated objectives.

4. To enable the student teachers understand the long and short term goals of teaching Economics and develop the skill in the formulation of general instructional objectives and specific learning outcomes (specific objectives)

5. To develop effective instructional skill in the student teaches for effective delivery of the subject matter.

6. To guide the student teachers in acquiring skills relating to planning lesson and presenting them effectively.

7. To help the student teachers understand the principles of curriculum construction and examine critically the Economics curriculum in the light of the principles of curriculum construction.

8. To familiarize the student teachers with the various methods and techniques that can be employed for the teaching of Economics.

9. To develop the ability of the student teachers prepare and use effectively the A.V. aids and mass media.

10. To enable the student teachers understand the evaluation techniques and prepare objective based and type of test items to assess the achievement of the students.
11. To encourage the student teachers prepare hard and soft ware wherever and whenever necessary after understanding the theoretical value of them.

12. To encourage the student teaches understand the various methods of evaluating the classroom teaching.

UNIT I: NATURE, SCOPE OF ECONOMICS AND METHODS OF TEACHING

1.1 Economics, political Science and civics as social sciences and the interrelationship between them - Place of these in higher Secondary Schools

1.2 General and specific aims of teaching Economics at the Higher Secondary level.

1.3 Principles of micro teaching - teaching of relevant set induction: Black Board Writing, Explaining, Questioning, illustrations with examples, Reinforcement, Stimulus Variations - Need for link lessons in micro teaching.


1.5 Activity based teaching – use of source materials – case studies – Their applicability to the teaching of Economics at the Higher Secondary level.

UNIT II: LESSON, UNIT PLANNING AND INSTRUCTIONAL AIDS

2.1 Lesson Planning – importance of lesson plans – Writing Instructional objectives – Planning for specific behavioral changes. Essential parts of the lesson plan – preparation and use of Unit plan.

2.2 Visual Aids: Charts – Maps – Graphs – Diagrams – Pictures and Photographs – Film & Film strips - Over head projector –

2.4 Audio Aids: Radio – Tapes – Record players

2.5 Audio Visual aids: Television – video Cassette – CAI – Mass media. Use of these in the teaching of Economics.

UNIT III: CURRICULUM DESIGN AND MODERN METHODS OF TEACHING ECONOMICS

3.1 The principles of curriculum construction as applicable to Economics – The selection of content and its organization – Content materials in the syllabus – their relation to objectives of teaching the subject.

3.2 Critical Study of the Curriculum in Economics at the Tamil Nadu Higher Secondary School Level,

3.3 Uses of modern techniques in Teaching Economics Discussion – seminar Workshop – supervised study.

3.4 Scientific attitudes and its importance to the individual and society – Catering to the individual difference.

3.5 Instructional model and multimedia Self learning Packages.

UNIT IV: RESOURCES FOR TEACHING ECONOMICS AND EDUCATIONAL TECHNOLOGY.

4.1 Club – Guest lectures – Exhibition, Museums, field trips – excursion-community resources – use in the teaching economics.


4.3 Audio – Video Technology - Interactive Broadcasting Tele text and Video text Audio conferencing.

4.4 Video Computer Technology – Computer – Videodisc – Internet and Intranet and Intranet- Electronic –mail (E-mail)

4.5 Computer conferencing – Tele –communication and Networks – Telephone and Fax – Teleconferencing – V SAT (Very Small Aperture Terminals) – EDUSAT.
UNIT V: EVALUATION AND STATISTICS

5.2 Different types of objective tests – Blue print of a question paper – Discriminating index and difficulty value.
5.3 Remedial measures – Interpretation of test scores – Measures of central tendency – Mean – Median –Mode – Measures of Variability.
5.4 Standard deviation- quartile deviation- Percentile and percentile ranks. – Co-efficient of correlation
5.5 Rank order correlation – Normal probability curve and its applications in educational evaluation.

Practical Work:

1. Preparation of unit plans in Economics.
2. Visits to different types of banks, super market, warehouse and industries.
3. Collection of yearbooks, newspapers, magazines and clipping of articles related to economics.
5. Preparation of charts and albums relating to Economics

Learning from Cyber Resources:

1. Identification and cataloguing of three websites relating to the prescribed school curriculum.
2. A comparative evaluation of any two Web Pages bearing on the same unit in the school curriculum.

References


OPTIONAL PAPERS

OPTIONAL II: ECONOMICS EDUCATION

Objectives

1. To enable the student teachers to understand the nature and scope of Economics.
2. To make the student teachers understand the Economical problems facing India.
3. To enable the student teachers develop interest in adopting modern method/techniques of teaching.
4. To develop in student teachers competence in the preparation of programmed learning materials (Economics text books and workbooks).
5. To develop the ability of the student teachers prepare and use effectively the A.V. aids and mass media.
6. To enable the student teachers understand the evaluation techniques and prepare objective based and type of test items to assess the achievement of the students.
7. To enable the student teachers understand the various techniques such as ATI, Models of Teaching and their implications to Economics teaching and learning.
8. To encourage the student teachers prepare hard and software wherever and whenever necessary after understanding the theoretical value of them.
9. To encourage the student teachers to understand the various methods of evaluating the classroom teaching.
10. To help the student teachers to recognize the special problems in teaching Economics in rural schools.

UNIT I NATURE AND SCOPE OF TEACHING ECONOMICS

1.1 Meaning – Aims Values and scope of Teaching Economics – Sectors of Economy.
1.2 Relationship with other subjects like Geography, Civics, History, Politics, Mathematics, Statistics, Management and commerce- the relative value of Economics

1.3 Organization and Maintenance: Structure and design for schools- Equipping the departmental libraries, Club and museums.

1.4 Educational Technology: Programmed Instruction – Type of programming – Computer assisted instruction

1.5 Use of Audio and Videotapes, Interactive video in teaching Economics.

UNIT II: METHODS AND MATERIALS OF TEACHING ECONOMICS:

2.1 Use of modern techniques in teaching Economics- Discussion – Seminar – Symposium –Workshop

2.2 Team Teaching – Supervised study and Tutorial system.

2.3 Scientific Attitudes and its importance to the individual and society.

2.4 Catering to the individual differences – Aptitude – Treatment Training-Programmed learning – techniques –

2.5 Linear and branching – Instructional model and multimedia- self learning packages – identification and care of the talented – helping the slow learners in economics.

UNIT III: RESOURCE FOR TEACHING ECONOMICS:

3.1 Contemporary issues – community resources – Excursions- Field trips – Library – uses of these in the teaching of economics.


3.3 Political and Economic Problems in India: Political and Economic Development in India – Liberalization and Globalization-

3.4 E-commerce its impact on internal and external marketing.

3.5 Relationship between Political Problems and Economic problems

UNIT IV: TEACHER OF ECONOMICS
4.1 Characteristics of a good Economic teacher – Scholarship – professional growth – in-service education-

4.2 Availability of Teaching Aids and other relevant materials for economic teaching –

4.3 Periodicals related to economics and economic data.

4.4 Information, knowledge about functioning of economic organization like industries, banks, share and capital markets, wholesale and retail market etc.,

4.5 Lack of background experience in students – Inculcating Economic attitudes.

UNIT V : EVALUATION IN ECONOMICS

5.1 Construction and Standardization of an achievement test in Economics-
   Blue print- Norms – reliability and Validity- item analysis
5.2 Graphic representation of data Bar and Pie diagram – Histogram – Frequency polygon.
5.3 Cumulative frequency - Graphic and Ogive curve. Objective based testing
5.5 Class room climate – Teacher dominated pattern – Democratic pattern – Laissez faire pattern – interaction Analysis (F.I.A.S)

Practical Work

1. Maps of India can be drawn showing the following things a. birth rate b. Mortality rate c. Migration d. Industries
2. Survey to find out the problems of the rural community a. Poverty b. Malnutrition c. illiteracy d. Status of Women e. Unemployment f) Diseases
3. construction and standardization of an achievement test in the subjects
4. Guest lectures on Liberalization and Globalization, Marketing and other subjects of local and topical interest
References

அட்சு 1: சிற்றகம் காரணம்

1.1 சான்றகம்- காரண சிற்றகம்- பார்வைப்படுத்தல், உள்ளிட்டுகைகள், சான்றகம் காரண சிற்றகம் பார்வைப்படுத்தல்- உள்ளிட்டுகைப்படுத்தல்- அகத்து பிரிவுகள்.

1.2 முன்னையுள்ள- பெருமைல் முன்னெடுக்காள்.

1.3 புகழ்பெற்ற சிற்றகம்- பார்வைமுன்னையுள்ள- பார்வைமுன்னையுள்ள பிரிவுகள், பார்வை அருங்காட்சிகள், இருரு உந்துப் பாதிக்காக்கள்.

1.4 குரல்பொருள் முன்னையுள்ள- பார்வைத் தகவல்கள்- குரல்பொருள் முன்னையுள்ள- பார்வைகள்- குரல் சிற்றகம்.

1.5 குரல்பொருள் முன்னையுள்ள- குரல் சிற்றகம்- பார்வைகள், பார்வைகள், குரல்பொருள் முன்னையுள்ள- பார்வைகள்- குரல் சிற்றகம்- பார்வை அருங்காட்சிகள்.

அட்சு 2: சிற்றகம் விளக்கம்

2.2 இணையெடி- எழுதுமை- எழுதுமை அவரைகள்
2.3 அரசியல்- 2-வம் 2-டேக்
2.4 ஜார்ஜின் - எழுத்தடையன் - எழுத்தடையன் - மட்டும் தமம் - குறிப்பு வேலைகள்

பார்வு பார்வு ஓவி குறிக்காள் 2-டேக்
2.5 புதுமை- புதுமை புதுமை புதுமை- புதுமை புதுமை- புதுமை புதுமை- புதுமை புதுமை- புதுமை புதுமை

அது: 3 தவறுகள்

3.1 வல்லு தவறுகள்
3.2 வல்லு தவறுகள்
3.3 வல்லு தவறுகள்
3.4 வல்லு தவறுகள்
3.5 வல்லு தவறுகள்

அது: 4 குறுகிகள்

4.1 குறுகிகள் குறுகிகள் குறுகிகள்- குறுகிகள் குறுகிகள்
4.2 குறுகிகள்- குறுகிகள் குறுகிகள்- குறுகிகள்- குறுகிகள்- குறுகிகள்

4.3 குறுகிகள்- குறுகிகள் குறுகிகள்- குறுகிகள்- குறுகிகள்
4.4 குறுகிகள்- குறுகிகள்- குறுகிகள்- குறுகிகள்
4.5 குறுகிகள்- குறுகிகள்- குறுகிகள்- குறுகிகள்

அது: 5 வல்விலைத் தளபதிகள்

5.1 வல்லு வல்லு வல்லு வல்லு
5.2 வல்லு வல்லு
5.3 வல்லு வல்லு- வல்லு- வல்லு- வல்லு- வல்லு-
5.5 குழுத்துச்செயலாய்மை தமிழ்- கல்க்கிளியட்டுச்செயலாய்மைகள்.

குழுத்துச்செயலாய்மை:
1. புதுச்சேரிபற்பரப்பாளர் சஞ்சித்துச்செயலாய்மை, புதுக்கோட்டை
2. காசிகோட்டை
3. பன்னாட்டில் லிங்கு தொடர்பு
4. மக்களவும் நிறைவும் துவக்கி கல்விப்பிற்புறம்
5. கிருட்காலுத்து காய்ப்பகுதி துவக்கி
6. மாணவர் மாணவர்
7. மலை கும்பத்தார்
8. குண்டுகள் குழும்பாளர் துவக்கி செயலாய்மை உயர்வெளியான குழும்பாளர் துவக்கி
9. பாலகுருகுழி துவக்கி
10. அறிவியல் துவக்கி
11. குழும்பிருப்புப்பிற்புறம், துவக்கி பிற்புறம்
12. மாணவர் பிற்புறத்து துவக்கி

குறிப்புத்தகம்:
1. குறிச்சி துவக்கி அருணாசல் கார்னால் பெண்
2. குறிச்சி துவக்கி கார்னால் பெண், 1989.
3. குறிச்சி துவக்கி கார்னால் பெண், 1965
4. புதராம்பத்தி பெண், 1990
5. துவக்கி மாணவர் கார்னால் பெண், 1988
6. அறிவியல் குறிச்சி கார்னால் பெண், 1990
ஒலிப்பட்டை-2: மெய்யுருகுருக்கள் குறிப்பிட்டுள்ளன

குறிப்பிட்டுள்ளன:

1. கருது மெய்யுருகுரு மைய்கருத்தரங்கங்கள், கருது மெய்யுருகுரு
   மைய்கருத்தரங்கங்கள் அறிக்கை
2. கருது மெய்யுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
3. கருது மெய்யுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
4. இருப்பை எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
5. இருப்பை எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
6. இருப்பை எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
7. இருப்பை எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
8. இருப்பை எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
9. இருப்பை எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
10. காற்று எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
11. காற்று எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
12. காற்று எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
13. காற்று எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை
14. காற்று எ-லக்ச்நுருகுரு மைய்கருத்தரங்கங்கள் அறிக்கை

ஏற்று-1 கேள்வி ஊரும்பை கருது மெய்யுரு இலவசியம், கருது மெய்யுருகுரு பொழிவு

1.1 குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன, குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன.
1.2 குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன.
1.3 பொழிவு- என்று குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன, பொழிவு- என்று குறிப்பிட்டுள்ளன.
1.4 கருது உபருகுருசபைப்பை என்று கருது உபருகுரு சபைப்பை என்று கருது உபருகுரு சபைப்பை என்று கருது உபருகுரு சபைப்பை என்று கருது உபருகுரு சபைப்பை என்று கருது உபருகுரு சபைப்பை
2.1 Similarly, for example, the following words are used: -

2.2 Similarly, for example, the following words are used: -

2.3 Similarly, for example, the following words are used: -

2.5 Similarly, for example, the following words are used: -

3.1 Similarly, for example, the following words are used: -

3.2 Similarly, for example, the following words are used: -

3.4 Similarly, for example, the following words are used: -
4.1 பாண்டியிலும் முதுகீழ்க்குறித் தியானிப்புபாடல்- மாதுகாலிலிருந்து வளர்ந்த வழிகாட்டைகள், வழிகாட்டைகள், எந்திரும் பார்வையில் விளக்கம் செய்யும் பாண்டியிலும் முதுகீழ்க்குறிது நூற்றாண்டுகளில் தியானிப்புபாடல் எந்திரும் பார்வையில் விளக்கம் செய்யும். 4.2. முன்னொளிகளில்- முன்னொளிகளில் தியானிப்புபாடல்- முன்னொளிகளில் தியானிப்புபாடல்

4.3 தியானிப்புபாடலை முன்னொளிகளும் முன்னொளிகள் விளக்கும் வழிகாட்டைகள்- குறிப்பிட்டு முன்னொளிகள் விளக்கும் வழிகாட்டைகள், வழிகாட்டைகள் பிரம்மாயணம் குறிப்பிட்டு முன்னொளிகள் விளக்கும் வழிகாட்டைகள். 4.4 முன்னொளிகளில் தியானிப்புபாடல்

4.5 பாண்டியில் விளக்கம்- முன்னொளிகள் விளக்கம், வழிகாட்டைகள்

5.1 முன்னொளிகள் விளக்கும் வழிகாட்டைகள்- நிறுவனங்கள்- முன்னொளிகளில் விளக்கும் வழிகாட்டைகள்- பாண்டியில்

5.2 முன்னொளிகளில் தியானிப்புபாடல் விளக்கும் வழிகாட்டைகள்:

5.3 முன்னொளிகளில் விளக்கும் வழிகாட்டைகள், முன்னொளிகளில் விளக்கும் வழிகாட்டைகள், முன்னொளிகளில் விளக்கும் வழிகாட்டைகள், முன்னொளிகளில் விளக்கும் வழிகாட்டைகள், முன்னொளிகளில் விளக்கும் வழிகாட்டைகள். 5.4 பாண்டியில் விளக்கும் வழிகாட்டைகள், முன்னொளிகளில் விளக்கும் வழிகாட்டைகள், முன்னொளிகளில் விளக்கும் வழிகாட்டைகள், முன்னொளிகளில் விளக்கும் வழிகாட்டைk
1. முன்னர் பெருமான் பிறப்பு - ம. அம்ப ரோஜூர்-1957
2. முன்னர் அரசாங்க தொழிற்சாலை 1 முது 11 - அஞ்சாங்கை- 1989
3. முன்னர் தொழிற்சாலைகள் கல்லூரி, குருக்கல்- அஞ்சாங்கை-1989
4. முன்னர் குருக்கல் - பா.ஜி.பி.கோவால்- 1998

-----------------------------------------------