



महात्मा ज्योतिबा फुले
रुहेलखण्ड विश्वविद्यालय, बरेली

Syllabus

for

B. Ed. (Specialization in Vocational Education)

Department of B.Ed./M.Ed. (I.A.S.E.)
Faculty of Education and Allied Sciences,
M.J.P. Rohilkhand University, Bareilly

B.Ed.
(Specialization in Vocational Education)
COURSE STRUCTURE

Title of the Paper	Paper Code	Marks		
		Ext.	Int.	Total
Theory:				700
Paper I Education in Contemporary Indian Society	1651	100	Nil	100
Paper II Development of Learner & Teaching-Learning Process	1652	100	Nil	100
Paper III Essentials of Educational Technology & Management	1653	100	Nil	100
Paper IV Methods of Teaching				100
Section A:				
Teaching of Vocational Trades	2022	32	Nil	32
Section B:				
Any two from the following:		34x2	Nil	68
1. Teaching of Hindi	2001			
2. Teaching of English	2002			
3. Teaching of Mathematics	2003			
4. Teaching of Science	2004			
5. Teaching of Biology	2005			
6. Teaching of History	2006			
7. Teaching of Civics	2007			
8. Teaching of Economics	2008			
9. Teaching of Geography	2009			
10. Teaching of Commerce	2010			
11. Teaching of Home Science	2011			
12. Teaching of Sanskrit	2012			
13. Teaching of Social Studies	2013			
Paper V Development of Vocational Education in India	1662	100	Nil	100

Title of the Paper	Paper Code	Marks		
		Ext.	Int.	Total
Paper VI Entrepreneurship Development	1663	70	30	100
Paper VII (Optional Paper) Any one from the following:		70	30	100
A. Industrial Electronics	1681			
B. Photography	1682			
C. Software application	1683			
D. Radio & T.V. maintenance	1684			
E. Office management & correspondence	1685			
F. Typewriting	1686			
G. Financial accounting	1687			
H. Auditing	1688			
I. Banking	1689			
J. Food craft (Baking & Preservation)	1690			
K. Textile designing	1691			
L. Beauty culture	1692			
M. Garment designing	1693			
Practical:				200
Practice Teaching	1671	100	50	150
Continuous Comprehensive Assessment	1672	Nil	50	50
(Includes Teaching Aid 20 marks; Co-curricular Activities 10 marks; Community Awareness 15 marks; and Behavior & Conduct 05marks)				

Note:

*Paper I, II, III and Section B of Paper IV
will be common for all the three specializations.*

PAPER – I

EDUCATION IN CONTEMPORARY INDIAN SOCIETY

OBJECTIVES:

1. To enable the student teachers to understand the meaning and scope of education and its sociological and philosophical basis.
2. To enable the student teachers to understand the history of education in India since ancient period to modern period.
3. To acquaint the student teachers with ancient and modern aims and ideals of education.
4. To acquaint the student teachers with the contribution of some modern educational thinkers.
5. To enable the student teachers to understand the role of the teacher in the society.
6. To provide expertise to teacher-trainees in organization of various guiding and connecting activities in their schools.

CONTENTS:

Unit I: Education

- ✿ Education: Meaning and nature; functions of education as human resource development and social development.
- ✿ Agencies of education – Formal, Non-formal and Informal.

Unit II : Education in the Western Context

- ✿ Education in the Western context with reference to Rousseau, Pestalozzi, Russel; their impact on educational thought and classroom practices in terms of progressive trends in education.
- ✿ Indian educational thinkers and their contribution to education with special reference to Gandhi, Tagore, Vivekanand, Gijju Bhai, Aurobindo.

Unit III :Education in the Indian Context

- ✿ Ancient Indian education and its relevance in modern context.
- ✿ Education in medieval period and its impact on Indian society.
- ✿ Education during British rule – Macauley’s minute and Bentick’s resolution, Wood’s Despatch (1854), Lord Curzon’s educational policy, National education movement, Indian Education Commission (1882) and its influence on the subsequent development of education, Sadler Commission (1917), Wardha Scheme of education (1937).

Unit IV: Education Commission and Policies in India

- ✿ Education in Independent India and attempts to reform it, Overview of Education Commissions and National Policies on Education.

Unit V: Sociological Aspects of Education

- ✿ Education and social change, Factors of social change, Indian constitution and educational values of democracy, socialism and secularism, Promoting equality through education, National and emotional integration, Fundamental rights and duties.

Unit VI: Present Trends in Education

- ✿ Environmental pollution, Green and clean society, International understanding, Vocationalization of secondary education, Universalization of primary education, Education of the disadvantaged groups, Role of education in preserving cultural heritage.

REFERENCE BOOKS:

1. Marathe, R.M. : Principles of Education, School College Book Stall, Kolhapur.
2. Pathak, P.D. : Principles of Education, Vinod Pustak Mandir, Agra.
3. Brubacher, J.S. : Modern Philosophies of Education, Mc-Graw-Hill Book Co., New York.

4. Francies Brawn : Educational Sociology, Asia Publishing House Bombay.
5. Chaubey S.P. & Chaubey, Akhilesh: Philosophical & Sociological Foundations of Education, Vinod Pustak Mandir, Agra
6. Subodh, A.: Bhartiya Shiksha Ke Sidhanth, Avinash Prakashan, Allahabad.
7. Mathur, S.S. : Shiksha ke Sidhanth, Vinod Prakashan, Agra.
8. Agarwal, S.K. : Shiksha ke Tatvik Sidhanth, Rajesh Publishing House, Meerut.
9. Pandey, R.S. : Shiksha Darshan, Vinod Pustak Mandir, Agra.
10. Bhatnagar, R.P. & Verma, B.: Educational Administration, Loyal Book Depot, Meerut.
11. Kimprouch, R.B. & Nunnery, M.X. : Educational Administration : An Introduction, McMillan Publishing Co., New Delhi.
12. Pandey, R.S.: Bhartiya Shiksha Darshan, Vinod Pustak Mandir, Agra.
13. Seetharamu A.S. : Philosophy of Education, Ashish Publishing House, New Delhi.
14. Russel, Bertrand : History of Western Philosophy, Unwin University Books, London.
15. Pandey, R.S. : Principles of Education, Vinod Pustak Mandir, Agra, 1991.
16. Bhattacharya, B.: Foundation of education, Atlantic Publishers & Distt., New Delhi, 1996.
17. Pathak, P.D. & Tyagi, S.D.: Principles of Education, Vinod Pustak Mandir, Agra, 1990.



PAPER – II

DEVELOPMENT OF LEARNER AND TEACHING-LEARNING PROCESS

OBJECTIVES:

1. To enable the teacher-trainees to understand the meaning of psychology and scope of educational psychology.
2. To make the teacher-trainees aware with the different stages of growth and development.
3. To expose the teacher-trainees to the process of learning and the different viewpoints of various psychologists.
4. To introduce the student teacher with the implications of psychology for the normal and special need children.
5. To acquaint the student teachers with the knowledge of psychological principles/theories on which effective teaching is based.
6. To introduce the student teachers with the process of learning and factors, which influence the process of teaching-learning.

CONTENTS:

Unit I: Introduction

- ✱ Educational Psychology: Meaning, nature, methods, scope, importance, and functions.
- ✱ Stages of Human Development and their characteristics. (Physical, Mental & Emotional)
- ✱ Adolescence: Characteristics, needs and problems.

Unit -II : Learning & Motivation

- ✱ Definition and nature of learning, Factors influencing learning and teaching process.
- ✱ Theories of learning and their implications in education, Thorndike (Trial & Error), Pavlov's theory of classical conditioning, Kohler's insight theory, Skinner's reinforcement theory.
- ✱ Motivation: Definition, nature, types and techniques of enhancing

learner's motivation.

Unit- III : Intelligence

- ✱ Nature, type and characteristics of intelligence, Theories of intelligence, Two factor, Multifactor (Primary mental abilities) and S.I. Model.
- ✱ Measurement of Intelligence : Verbal, Non-verbal and Performance Test (each one).
- ✱ Creativity: Concept, identification of creative children, enhancing creativity of students.
- ✱ Emotional Intelligence: The concept and its significance.

Unit –IV : Personality

- ✱ Definition, meaning & nature, Development of Personality, Measurement of Personality: Type & Trait theories of personality.

Unit – V : Exceptional Children

- ✱ Concept, Types, Characteristics of each type including children with learning disabilities.
- ✱ Individual Difference: Meaning, nature, types, importance and different techniques.

Unit – VI : Mental Health

- ✱ Meaning, nature, factors, principles & educational implications.

Unit – VII : Guidance & Counselling

- ✱ Meaning, need & significance, basic principles.
- ✱ Types of guidance : Career, Personal, Educational and Social.
- ✱ Types of Counselling – Directive & Non-Directive.
- ✱ Organisation of school guidance services; use of community resources for school guidance services.

Unit – VIII : Statistics

- ✱ Measures of central tendency, Variance, Standard Deviation, Quartile Deviation.
- ✱ Inferential Statistics, Correlation (Rank Difference).

PRACTICAL WORK:

- ✿ Observing the behaviour of an early, mid adolescent and describing her/his characteristics and problems.
- ✿ Administering and interpreting the results of two tests of intelligence – verbal, non-verbal or performance.
- ✿ A case study of an exceptional child and suggesting how to provide for this particular child education.

REFERENCE BOOKS :

1. Mangal, S.K.: Advanced Educational Psychology, 2ed., PHI Learning Pvt. Ltd., New Delhi, 2008
2. Guilford, J.P.: General Psychology, 2ed., D. Van Nostrand Co. Inc., Princeton, N.J., 1952
3. Skinner, C.E.: Educational psychology (4ed.). Prentice Hall of India, New Delhi, 1996.
4. Dececco, L.: Psychology of Learning & Instruments, Prentice Hall of India Pvt. Ltd., New Delhi, 1974.
5. Bigge & Hunt : Psychological Foundation of Education, Harper & Raw Publishers, New Delhi.
6. Rastogi, K.G : Educational Psychology, Rastogi Publications, Meerut.
7. Mathur, S.S.: Educational Psychology, Vinod Pustak Mandir, Agra.
8. Wallia, J.S. : Foundations of Educational Psychology, Paul Publication, Jallundar.
9. Mohan, J.: Educational Psychology. Wiley Eastern Ltd., New Delhi, 1993.
10. Sprinital N.A. and Sprinital, R.C.: Educational psychology: A development approach (5ed.). McGraw Hill, Inc., 1990.
11. Rao, S.N.: Counseling and Guidance, 1994.
12. Brainerd: Development Mental Psychology, 1991.
13. Sharma: Counseling Psychology, 1993.



PAPER – III

ESSENTIALS OF EDUCATIONAL TECHNOLOGY AND MANAGEMENT

OBJECTIVES :

1. To introduce the teacher-trainees with the meaning and nature of educational technology.
2. To introduce the teacher-trainees with the audio-visual aids and modern innovations in the field of educational technology.
3. To make the teacher-trainees aware with various applications of modern technology and equipment in the classroom teaching.
4. To develop favourable attitude, knowledge, understanding and basic skills among pupil-teachers towards software and hardware educational technologies.
5. To make the teacher-trainees aware about the organization of various curricular and co-curricular activities in schools.

CONTENTS:

Unit I : Introduction

- ✿ Educational Technology: Meaning, definition, scope and significance.
- ✿ Approaches (hardware & software) and types (Teaching Technology, Instructional Technology, Behavioural Technology) of educational technology
- ✿ Significance and types of hardware technologies: Educational television; Projectors (OHP, slide & LCD); Computer (E-mail, internet, language laboratory)
- ✿ Significance & types of software technologies: Teleconferencing, Micro teaching, PI (linear & branching), CAI.

Unit II : Psychological bases for use of modern technologies

- ✿ Multisensory instruction
- ✿ Cone of experience (Edgar Dale)

Unit III : Modalities and Strategies of teaching

- ✿ Phases / Operations
- ✿ Levels
- ✿ Strategies
- ✿ Tactics

Unit IV : Administration and Management

- ✿ Roles and responsibilities of Principal and Teacher
- ✿ Managing educational aspects of school- Curriculum, time table, co-curricular activities
- ✿ Control and Planning- Discipline, school records, institutional planning, preparing institutional profile

Unit V : Evaluation and Standards

- ✿ Evaluating instructional outcomes- Types of test items (essay type, short answer, and objective), item construction, types of testing (norm and criterion referenced)
- ✿ Teacher evaluation – Need, significance and methods (self rating, pupil rating, peer rating principal / supervisor rating), composite rating scores and its uses
- ✿ Teacher accountability – Meaning, types, significance and assessment
- ✿ Professional norms and ethics for the teachers

REFERENCE BOOKS :

1. Mangal, S.K. & Mangal, U.: Essentials of Educational Technology, PHI Learning Pvt. Ltd., New Delhi, 2009.
2. Sampath, K., Panneerselvam, A. & Santhanam, S.: Introduction to Educational Technology, Sterling Publishers Pvt. Ltd., New

- Delhi, 1998.
3. Sharma, R.A.: Teaching Learning Innovation, Loyal Book Depot, Meerut.
 4. Sharma, R.A.: Technology of Teaching, International Publishing House, New Delhi.
 5. Sharma, R.A.: Shikshan Takniki, Loyal Book Depot, Meerut.
 6. Dale, E. : Audio-Visual Methods of Teaching, The Dayden Press.
 7. Wittich, W.A. & Shaller, C.F.: Audio-Visual Materials - Their Nature & Uses, Harper International, New York.
 8. Srivastava, S.S.: Educational Technology (Hindi), Doaba House, New Delhi.
 9. Kumar, K.L.: Educational Technology, New Age International, New Delhi.
 10. Sukhia, S.P.: School Administration organization and Health Education, Vinod Prakashan, Agra, 1997.
 11. Dececoo, & Crawford: Psychology of Learning & Instruction, Prantice Hall of India Pvt. Ltd., New Delhi.
 12. Brennan, N.K.: Curriculum for Special Needs, Open University Press, 1985.
 13. Desai, A.N.: Helping the Handicapped Problems and Prospects, Ashish Publishing House, New Delhi, 1990.
 14. Bigge & Hunt: Psychological Foundation of Education, Harper & Raw Publishers, New Delhi.
 13. Dececco, P.: Psychology of Learning & Instruction, Prentice Hall of India Pvt. Ltd., New Delhi.



PAPER - IV

METHODS OF TEACHING

This paper has been divided into two sections:

Section A: Teaching of Vocational Trades

Section B: Teaching of Two School Subjects

OBJECTIVES :

1. To prepare the teacher-trainees to implement teaching programmes in classrooms.
2. To enable the pupil-teachers for the needs of classroom instruction.
3. To develop necessary skills and attitude required for applying various devices and methods of teaching in integrated classrooms.
4. To familiarize the teacher-trainees with various instructional techniques.

PAPER IV (SECTION A): TEACHING OF VOCATIONAL TRADES

CONTENTS:

- Unit 1. Aims, objectives and importance of teaching vocational trades at + 2 level. Qualities of a vocational teacher.
- Unit 2. Methods of teaching vocational trades: Lecture, Demonstration, Project, Laboratory, Excursion, Exhibition, Problem solving and Assignment.
- Unit 3. Techniques of trade teaching: Questioning, Illustration, Narration, Explanation and Story-telling.
- Unit 4. Modern audio-visual aids and equipment of trade teaching and their use in classroom conditions.
- Unit 5. Text book: Importance, characteristics, merit and demerits.

Unit 6. Planning different types of lessons.

Unit 7. Organization and management of vocational laboratory.

REFERENCE BOOKS :

1. Siddiqui MA., & Khan, R.S. (1995). Handbook for Business Studies Teachers (Methods of Teaching). IASE, Jamia Millia Islamia, New Delhi.
2. Bhatia, S.K. (1996). Methods of Teaching Accountancy. IASE, Deptt. of Education (CIE), University of Delhi, New Delhi.
3. Pophan, E.L., Schrag, A.F. and Blockhus W. (1975) A Teaching-Learning System for Business Education. McGraw- Hill, Inc., New York.
4. Peterson, A.D.C.: Techniques of Teaching - Secondary Education, Oxford, Bergamon.
5. Stones, E. & Monis, S.: Teaching Practice: Problems and Perspectives, Methues, London
6. Bhatt, B.D. & Sharma S.R.: Methods of Science Teaching, Kanishka Publication House, Delhi
7. Singh R.P. & Singh, P.: Teaching of Commerce, Vinod Pustak Mandir, Agra.
8. Siddiqui, M.H.: Excellence of teaching, Asia Publication House, New Delhi.
9. High, J.: Teaching secondary school social studies, The McMillan Co., New York.
10. Bhall: Audio Visual Aids in Education, Atma Ram & Sons, Delhi
11. Chakravarty, S.K.: Audio Visual Education in India, Oxford Book & Stationary Co.
12. Mehta, C.: Senior Home Science, Research Publication, Jaipur
13. Dasai, R.B.: Teaching of Home Science, Sterling Publication Private Limited, New Delhi
14. Sherry, G.P.: Teaching of Home Science, Vinod Pustak Mandir, Agra



PAPER - IV (SECTION B):

(1) TEACHING OF HINDI

CONTENTS:

- Unit 1. Aims and objectives of teaching Hindi at different stages.
- Unit 2. Importance of Hindi as mother tongue in education and importance of Hindi to non-Hindi speaking people.
- Unit 3. Application of modern methods in Hindi teaching.
- Unit 4. Methods of teaching of prose and poetry.
- Unit 5. Teaching of grammar, composition and rapid reader.
- Unit 6. Use of audio-visual aids in the teaching of Hindi.
- Unit 7. Text Books as means of instruction in Hindi teaching.
- Unit 8. Evaluation in Hindi teaching.
- Unit 9. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS:

1. Srivastava, R.: *Bhasha Shikshan*, Vani Prakashan, New Delhi
2. Kulkarni, V.: *Hindi Ki Adshyayan Paddhati*
3. Sathey, G.N.: *Rashtra Bhasha Ka Adhyan*
4. Bhagat, R.T.: *Hindi Kaisay Padhayen*
5. Shaktriya, K.: *Matra Bhasha Shikshan*
6. Pandey, R.S.: *Hindi Shikshan*, Vinod Pustak Mandir, Agra



PAPER - IV (SECTION B):

(2) TEACHING OF ENGLISH

CONTENTS:

- Unit 1. Aims and objectives of teaching English at various stages.
- Unit 2. Importance of English as a foreign language to Indians.
- Unit 3. General problems in teaching English as a foreign language.
- Unit 4. Methods of teaching English with special reference to translation method, direct method, and structural approach.
- Unit 5. Teaching of prose, poetry and rapid reading at different stages.
- Unit 6. Teaching of Pronunciation, Grammar, Composition, Translation and Dictation at different stages.
- Unit 7. Importance of textbook as means of instruction.
- Unit 8. Use of audio-visual aids in the teaching of English.
- Unit 9. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

1. Joseph, M & Shabir, B.A.: The Teaching of English In India, Arya Book Depot, New Delhi.
2. Memon & Patel, J.: The Teaching of English as a foreign Language.
3. Palmer: The Principles of Language Study.
4. Pathak, P.D. : Teaching of English In India, Vinod Pustak Mandir, Agra.
5. Anand, R.L.: Aims & Methods of Teaching English in India.
6. Jain, R.K.: Essentials of English Teaching, Vinod Pustak Mandir, Agra.



PAPER - IV (SECTION B):
(3) TEACHING OF MATHEMATICS

CONTENTS:

- Unit 1. Aims and objectives of teaching mathematics, Place of mathematics in school curriculum.
- Unit 2. Methods of teaching mathematics: Inductive, deductive, analysis-synthesis, laboratory, project etc.
- Unit 3. Correlation in teaching of mathematics.
- Unit 4. Importance of drill, oral and mental work in mathematics.
- Unit 5. Need and evaluation of textbook of mathematics.
- Unit 6. Audio-visual aids in teaching of mathematics.
- Unit 7. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

- 1. Aiyanger: The Teaching of Mathematics in New Education.
- 2. Pitter, F.F.: The Teaching of Mathematics.
- 3. Schultze, A.: The Teaching of Mathematics in Secondary School.
- 4. Young, J.W.A.: The Teaching of Mathematics.
- 5. Ballard, P.B.: Teaching of Essentials of Arithmetic.
- 6. Modben, L.: Mathematics for Millions.



PAPER - IV (SECTION B):
(4) TEACHING OF SCIENCE
(PHYSICS & CHEMISTRY)

CONTENTS:

- Unit 1. Place and importance of science teaching in schools.
- Unit 2. Aims of teaching science at Primary, Junior and High school levels.
- Unit 3. Methods of Science teaching: Lecture, Heuristic, Laboratory, Demonstration and Project.
- Unit 4. Science Laboratory-Construction and equipment.
- Unit 5. Audio-Visual aids in science teaching.
- Unit 6. Co-curricular activities in science teaching, Science museums, Science clubs, Excursions, Science talent search.
- Unit 7. Text books, Laboratory manuals, workbooks of science.
- Unit 8. Correlation of Physics and Chemistry internally and with other school subjects.
- Unit 9. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

1. Rao, A: Teaching of Physics, Anmol Publications, New Delhi.
2. Siddiqui, N.N. & Siddiqui M.N.: Teaching of Science, Doaba House, New Delhi.
3. Rawat, M.S. & Agarwal M.B., Naveen Vigyan Shikshan, Vinod Pustak Mandir, Agra
4. Yadav, M.S.: Objective Science, Anmol Publication, New Delhi
5. Singh, R.: Teaching Methods in Schools, Commonwealth Publication, New Delhi



PAPER - IV (SECTION B):

(5) TEACHING OF BIOLOGY

CONTENTS:

- Unit 1. Aims of Biology teaching.
- Unit 2. Important applications of Biology in modern human life from the school pupils' point of view.
- Unit 3. Methods of Biology Teaching: Heuristic, Demonstration, Laboratory, Inductive, Deductive and Project methods.
- Unit 4. Aids of Biology teaching-construction and maintenance of aquarium, school garden, models, charts, film projector, epidiascope.
- Unit 5. Planning a Biology laboratory: Requirement and maintenance.
- Unit 6. Co-curricular activities: Collection of specimen, presentation of specimen, excursions for biological studies, biological museums, science fairs and science clubs.
- Unit 7. Textbooks and work-books in Biology: Merits and demerits.
- Unit 8. Correlation of Biology with other sciences and with other schools subjects.
- Unit 9. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

- 1. Chandra, T.: Principles of Teaching, Anmol Publication, New Delhi
- 2. Version: Biological Science - An inquiry in to life.
- 3. Green, T.I.: Teacher of Biology of Secondary Schools.
- 4. Chauhan, S.S.: Innovations in Teaching, Vikash Publication House, New Delhi
- 5. Kulshrestha, S.P.: Jeev Vigyan Shikshan, Loyal Book Depot, Meerut



PAPER - IV (SECTION B): (6) TEACHING OF HISTORY

CONTENTS:

- Unit 1. History: Meaning, nature and scope; Formulating the objectives of teaching History at the junior and senior stages with special reference to desired behaviour.
- Unit 2. The teaching of current events in History, Syllabus and textbooks of History at the junior and senior stages, their critical analysis and evaluation.
- Unit 3. Methods and techniques of teaching History.
- Unit 4. Aids and Equipment in History teaching
 - a. Black-board, Maps, Graphs and time and space charts, pictures, Models, slides, Films, Filmstrips.
 - b. History room
 - c. History Library
 - d. Role of History teacher
- Unit 5. Teaching of History and international understanding of our human heritage.
- Unit 6. Examination and evaluation in History, Evaluation approach to the teaching of history, Different techniques of evaluation, different types of test (essay, short answer, objective based), their merits and limitation.
- Unit 7. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

1. Kaushambi, D.D.: An Introduction to Study of History.
2. Hurston, W.N.: Principles of Teaching History.
3. Ghate, V.D.: Suggestion for Teaching of History in India.
4. Tyagi, G.D.: Itihas Shikshan, Vinod Prakashan, Agra.
5. Pillai, N.P.: History and Method of Teaching of History.
6. Chowdhary, K.P.: Audio-Visual Aids in Teaching of Indian History.

PAPER - IV (SECTION B):

(7) TEACHING OF CIVICS

CONTENTS:

- Unit 1. Justification of the teaching of Civics as a separate subject in the school curriculum; Propagation of social ideals through teaching of Civics.
- Unit 2. Formulating objectives of teaching Civics at different levels.
- Unit 3. The syllabus of Civics, its scope and adequacy; an evaluation of the contents of the present syllabus. Principles involved in the construction of a syllabus for Civics. Fixing up the contents to be prescribed as learning experience for different grade.
- Unit 4. Methods, techniques and aids of teaching Civics to be discussed under the following heads.
 - a) The broad principles
 - b) Their suitability to different content areas
 - c) Application precautions to be taken while using different methods, techniques and aids.
 - d) Evaluation, discussing their merits and demerits.
- Unit 5. Textbooks of Civics. How to construct the evaluation criteria for the appraisal of textbook in Civics and its application principles involved in the selection of textbooks. An evaluation of the current textbooks of Civics.
- Unit 6. Evaluation approach in the teaching of civics, construction of objective based items in Civics.
- Unit 7. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

1. Tyagi, G.D.: *Nagrik Shastra Shikshan*, Vinod Pustak Mandir, Agra

2. Kochhar, S.K.: Teaching of Social Science, Sterling Publication, New Delhi.
3. Buning A. C.: Teaching of Social Studies in Secondary Schools, McGraw Hill Book Company Inc., New York.
4. High J.: Teaching Secondary School Social Studies, The Macmillan Company, New York.
5. Singh, R.P.: Civics Teaching, R. Lal Book Depot, Meerut
6. Mittal, M.L.: Civics Teaching
7. Kodesia, U.C.: Civics Teaching Techniques, Vinod Pustak Mandir, Agra



PAPER - IV (SECTION B):

(8) TEACHING OF ECONOMICS

CONTENTS:

- Unit 1. The meaning and scope of Economics, a brief history of Economics thought. Significance and importance of Economics in the school curriculum.
- Unit 2. Formulating objectives of teaching Economics at different stages.
- Unit 3. Methods, techniques and aids in the teaching of Economics.
- Unit 4. A critical evaluation of the textbooks and syllabus to Economics preparing evaluation criteria for this.
- Unit 5. Correlation of the teaching of Economics with other subjects.
- Unit 6. Improving tools and visual aids for the teaching of Economics.
- Unit 7. Application of evaluation approach in the teaching of Economics, construction of objective centered test items.
- Unit 8. Qualities of good Economics Teacher
- Unit 9. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

1. Tyagi, G.D.: Teaching of Economics, Vinod Pustak Mandir, Agra
2. Buning, A.C.: Teaching of Social Studies in Secondary Schools, McGraw Hill Book Company Inc., New York.
3. High J.: Teaching Secondary School Social Studies, The Macmillan Company, New York.
4. Jarolimek, J.: Social Studies in Elementary Education, The Macmillan Company, New York.
5. Sharma K. & Tuteja T.: Teaching of Economics, Vani Prakashan, New Delhi.



PAPER - IV (SECTION B):

(9) TEACHING OF GEOGRAPHY

CONTENTS:

- Unit 1. Significance of Geography in the school curriculum, the modern concept of Geography for national and international understanding.
- Unit 2. Objectives of teaching Geography at the senior stages with special reference to desired behaviour change, understanding of ecology through Geography.
- Unit 3. Methods and techniques in teaching of Geography.
- Unit 4. The place of pictures, models and sketches and other material aids in the teaching of geography. Preparing maps and charts.
- Unit 5. Equipment of the Geography room, apparatus and applications, the Geography museum and library, the study of local Geography Excursion.
- Unit 6. Correlation of Geography with other subjects with particular reference to Science, Nature study, Work and History.
- Unit 7. Application of evaluation approach in teaching of Geography, Construction of objective centered item in Geography.
- Unit 8. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

- 1. UNESCO: Source Book for Geography Teaching, Langmans Green & Co., Paris.
- 2. Bernard, H.G.: Principles & Practice of Teaching Geography (3ed.). University Tutorial Press, London.
- 3. Hart, S.R.: Perspectives on the nature of Geography. Butler and Tanner Ltd., London.
- 4. Morris, J.W.: Methods of Geography Instruction, Blaissdell Publishing Co., London.
- 5. Simpson C.: The Study of Local Geography - Hand Book for Teachers.

6. Long, M. & Robertson, B.S.: Teaching Geography, Education Book Ltd., London.
7. Singh, H.N.: *Bhugol Shikshan*. Agra: Vinod Pustak Mandir, Agra.



PAPER - IV (SECTION B):

(10) TEACHING OF COMMERCE

CONTENTS:

- Unit 1. The meaning and scope of Commerce; Significance and importance of commerce in school curriculum.
- Unit 2. Objectives of teaching Commerce, proper selection of profiles for the course. Course curriculum and its division.
- Unit 3. Equipment and aids for effective instruction and classroom arrangement.
- Unit 4. Different methods and techniques of teaching Commerce.
- Unit 5. Correlation of the Commerce with other subject.
- Unit 6. Selection of textbooks, reference Books, reports, trade journals and statistical publications.
- Unit 7. Evaluation methods in Commerce.
- Unit 8. Qualities of a Commerce teacher.
- Unit 9. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

1. Singh R.P. & Singh P.: *Vanijya Shikshan*, Vinod Pustak Mandir, Agra
2. Tripathi, S.: Teaching Methods, Radha Publications, New Delhi
3. Chauhan, S.S.: Innovations in Teaching Learning Process, Vikash Publication House, New Delhi
4. Siddiqui, M.H.: Excellence of Teaching, Ashia Publication House, New Delhi



PAPER - IV (SECTION B): (11) TEACHING OF HOME SCIENCE

CONTENTS:

- Unit 1. Aims, objectives and importance of Home Science.
- Unit 2. Subject to be included in Home Science -
 - a) Physiology and Hygiene
 - b) Home Nursing and First-Aid
 - c) Needle work, household sewing and mending
 - d) Food values and cooking
 - e) Home Management
 - f) Laundry and the values of each in the Home-economy.
- Unit 3. Methods of Home Science teaching- Demonstration, Project, Laboratory, excursion and exhibition.
- Unit 4. Material aids for teaching of Home science, library books, charts, models and other apparatus required for the teaching of the various branches of the subjects.
- Unit 5. Organization of Home Science department.
- Unit 6. Qualities of a good teacher of Home Science.
- Unit 7. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

1. Shaili, G.P.: Grah Vigyan Sikshak, Vinod Pustak Mandir, Agra
2. Das R.R. & Ray, B.: Teaching of Home Science, Sterling Publications Private Limited, New Delhi
3. Sukhiya, S.P.: Home Science Teaching, Sahitya Prakashan, Agra
4. Bloom, B.S.: Taxonomy of Education Objectives, McKay Co., New York
5. Bossing, N.H.: Teaching Secondary Schools, Amrind Publishing Co., New Delhi
6. Ryons, D. C.: Characteristics of Teachers, Sterling Publication Co. Pvt. Ltd., Delhi



PAPER - IV (SECTION B):

(12) TEACHING OF SANSKRIT

CONTENTS:

- Unit 1. The importance of Sanskrit as a classical language, its cultural, literary and linguistic values, relationship of Sanskrit with modern Indian languages.
- Unit 2. Aims of teaching Sanskrit at different stages.
- Unit 3. Methods of teaching Sanskrit-grammatical method, substitution method, translation method, direct method analytical & explanatory method.
- Unit 4. Methods of Teaching-Prose, Poetry, Grammar, Composition, Dictation, Translation, Drama & rapid reader.
- Unit 5. Importance of Phonetics.
- Unit 6. Use of audio-visual aids in the teaching of Sanskrit.
- Unit 7. Planning different types of lessons, steps involved in lesson planning : Herbartian and Unit planning.

REFERENCE BOOKS :

1. Pandey, R.S.: *Sanskrit Shikshan*, Vinod Pustak Mandir, Agra.
2. Mittal, S.: *Sanskrit Shikshan*, R. Lall Book Depot, Meerut.
3. Vatsa, B. L.: *Sanskrit Shikshan*, Vinod Pustak Mandir, Agra.



PAPER - IV (SECTION B): (13) TEACHING OF SOCIAL STUDIES

CONTENTS:

- Unit 1. Aims and objectives of teaching social science with special reference to Indian conditions.
- Unit 2. Curriculum of social science at secondary level and its critical analysis.
- Unit 3. Principles and maxims of class-room teaching of social science.
- Unit 4. Traditional and modern methods of teaching social science.
- Unit 5. Techniques of teaching social science.
- Unit 6. Teaching aids in the teaching of social science: importance of teaching aids, different kinds of teaching aids.
- Unit 7. Text book of social science: importance of text book, basic principles of selection of text books, critical study of present text book of social science at secondary level.
- Unit 8. Lesson planning in social science: meaning, needs, importance and preparation of lesson planning.
- Unit 9. Teacher of social science: personal, social and professional qualities of an ideal teacher of social science.

REFERENCE BOOKS :

- 1. Kochhar, S.K.: Teaching of Social Science, Sterling Publication, New Delhi.
- 2. Bunning, A.C.: Teaching of Social Studies in Secondary Schools, McGraw Hill Book Company, Inc., New York.
- 3. High, J.: Teaching Secondary School Social Studies, The Macmillan Company, New York.
- 4. Tripathi, S.: Teaching Methods, Radha Publications, New Delhi.
- 5. Chauhan, S.S.: Innovations in Teaching Learning Process, Vikash Publication House, New Delhi.
- 6. Siddiqui, M.H.: Excellence of Teaching, Ashish Publication House, New Delhi.

PAPER – V

DEVELOPMENT OF VOCATIONAL EDUCATION IN INDIA

OBJECTIVES:

To enable the teacher-trainees:

1. To explain the concept, philosophy and historical development of vocational education.
2. To describe the systems, models and progress of vocational education in India.
3. To appreciate the role of central and state governments, in evolving, managing and promoting vocational education.
4. To explain the vocational education programme within the national curriculum framework and the strategies of its implementation.
5. To describe the organization and management structure of VE at various levels.
6. To discuss the issues, problems and new trends and developments in the field of vocational education.

CONTENTS:

Unit I

- ✿ Concept of vocational education, objectives and importance of vocational education
- ✿ Gandhian concept of basic education
- ✿ Concept of Craft Education, Work experience, Socially useful productive work (SUPW), Work education, Pre-vocational education and Skill development.

Unit II

- ✱ Developmental history of vocational education in India, Recommendations of commission and committees on vocational education in pre and post independent India.
- ✱ Policy framework for vocational education under National Policy on Education and different five year plans.

Unit III

- ✱ Systems of vocational education and training in India, Models of vocational education,
- ✱ Streams of vocational education. Progress and present status of vocational education in major vocational areas.

Unit IV

- ✱ Management structure of vocational education at national, regional, state and district level.
- ✱ Major issues related to vocational education, problems and challenges of vocational education in Indian context,
- ✱ New trends and development in vocational education.

Unit V

- ✱ National curriculum framework, National curriculum structure and form (Competency based curriculum);
- ✱ Strategies for effective implementation of vocational education programme – industry-school linkage, collaborative arrangement, on-the-job training.

REFERENCE BOOKS :

1. Rashtriya, T.: Vocational Education. A.P.H. Publishing corporation, New Delhi
2. Thimmaiah, S. et.al.: Vocational Education- Problems and prospects. Himalaya Publishing House, Bombay.
3. Agrawal J.C.& Agrawal S.P.: Vocational Education in India why, what & how; Doaba House , Delhi.

4. NCERT: Higher Secondary Education and its Vocationalisation. New Delhi: NCERT.
5. Report of the Education Commission (1964-66), Ministry of Education, GOI, New Delhi.
6. National Policy on Education (1986), MHRD, GOI, New Delhi.
7. Thakur, D. & Thakur D.N.(eds): Vocational and Technical Education, Deep & Deep Publications, New Delhi.
8. Hiremath, N.R.: Socially Useful Productive Work- Principals and Practice, Revanasidha Prakashana, Bangalore.
9. National Curriculum Framework for school education NCERT (2005).
10. National Curriculum Framework for Teacher Education. NCTE (2010).
11. Mays, A.B.: Principals and Practices of Vocational Education. McGraw Hill Book co, inc., New York
12. Roberts, R.W. : Vocational and Practical Arts Education- History, Development and Principals. Harper & Persther Publishers, New York.
13. Sharma, S.R.: Vocational Education and Training. Mittal Publishers, New Delhi.
14. Evans, R.N. & Herr, E.L.: Foundations of Vocational Education. (2ed.) Macmillan Publishing Co., New York
15. Shivarudrappa, G.: Vocationalisation of Education, Himalaya Publishing House, Bombay.



PAPER - VI

ENTREPRENEURSHIP DEVELOPMENT

OBJECTIVES:

1. To provide the teacher-trainees an understanding of importance of entrepreneurship as an essential element for successfully tapping the opportunities in the area of business and marketing.
2. To provide teacher-trainees an understanding of attitudinal and behavioural prerequisites for entrepreneurial development.
3. To enable teacher-trainees to acquire skills for analysis and exploring the changing business environment.
4. To acquaint the teacher-trainees with practical exposure and developing skills in them for enterprise launching.
5. To orient the teacher-trainees towards managerial skills in the fields of finance, human resources, production and marketing.

CONTENTS:

Unit I: Introduction

- ✱ Entrepreneurship - Concept, characteristics and importance
- ✱ Entrepreneurial competencies
- ✱ Self and external motivation in entrepreneurship

Unit II: Entrepreneurial Career Orientation

- ✱ Sensing available opportunities for self-employment
- ✱ Preparation of project report
- ✱ Broad outlines of regulatory and support systems from government and development agencies

Unit III

- ✱ **Functional Management:** Functions of management; Principles of management; Process of planning, organizing,

decision-making and controlling; Supervision, Communication and Co-ordination.

- ✱ **Material Management:** Meaning and importance; Methods of material control.

Unit IV

- ✱ **Human Resource Management :** Importance, Functions; Selection Procedure; Methods of Training and development.
- ✱ **Financial Management :** Principles of financial planning; Sources of finance; Management of working capital; and Break-even analysis.

Unit V: Marketing Management

- ✱ Marketing Mix, Product planning, Standardization, Pricing, Consumer behaviour, Distribution channels; Process of selling,
- ✱ Emerging challenges in marketing management.

PRACTICAL WORK:

- ✱ An exercise on opportunity identification.
- ✱ Industrial survey: Visit of three small manufacturing or processing units and preparation of a report.
- ✱ Consumer Survey: Interviewing consumers (Min. 20) of a product and preparation of a report.
- ✱ Preparation of a project report for establishing a small business unit.

REFERENCE BOOKS:

1. Akhouri, Mishra, Pathak, Sengupta & Sundariyal (2004). Entrepreneurship Development (Text Book for Class XI). NCERT, New Delhi.
2. Hisrich, R.D. & Peters, M.P. (2002). Entrepreneurship. (5ed.). Tata Mc Graw- Hill, New Delhi.
3. Gupta, C.B. & Srinivasan, N.P.: Entrepreneurial Development;

- Sultan Chand & Sons, New Delhi.
4. Paul, Kumar & Mampilly: Entrepreneurial Development; Himalaya Publishing House, Bombay.
 5. Prasanna & Chandra: Projects - Planning, Analysis, Selection, Implementation & Review; Tata McGraw Hill, New Delhi.
 6. Chhabra, T.N.: Principles and Practice of Management; Dhanpat Rai & Sons, New Delhi.
 7. Prasad, L.M.: Principles and Practice of Management; Sultan Chand & Sons, New Delhi.
 8. Garg, Arun Kumar: *Samagri Prabandh*, Sahitya Bhawan, Agra.
 9. French, W.L.: Human Resource Management, Houghton Mifflin Company, USA/ All India Publishers & Distributors Regd., Chennai.
 10. Aggarawala, D.V.: Manpower Planning, Selection, Training & Development; Deep & Deep Publications, New Delhi.
 11. Saxena, S.C.: *Vittiya Prabandh*, Sahitya Bhawan, Agra.
 12. Brigham & Eugene: Fundamentals of Financial Management; Prism Books Pvt. Ltd., Bangalore.
 13. Parth, S.M.: How to Finance small Business Enterprises; McMillan India, New Delhi.
 14. Kotler, P.: Principles of Marketing Management, Prentice Hall of India Pvt. Ltd., New Delhi.
 15. Smith, J.K. & Smith, R.L. (2000). Entrepreneurial Finance. John Wiley & Son, inc., New York.



PAPER – VII

(Optional Paper)

Students have to select one paper from the following :

- A. Industrial Electronics
- B. Photography
- C. Software application
- D. Radio & T.V. maintenance
- E. Office management & correspondence
- F. Typewriting
- G. Financial accounting
- H. Auditing
- I. Banking
- J. Food craft (Baking & Preservation)
- K. Textile designing
- L. Beauty culture
- M. Garment designing

PAPER VII (A)

INDUSTRIAL ELECTRONICS

OBJECTIVES:

1. To provide the teacher-trainee sufficient knowledge required for acquiring Vocational competencies in the area of applied electronics.
2. To help the electronics industries in having adequate supply of middle level manpower.
3. To reduce the unemployment problem through training the students at plus two level, this will provide opportunities for their self-employment.

CONTENTS:

Unit 1. Basic Electronics: Semi conductor diodes (P-N, Zener, Tunnel, LED, Photodiode), Transistors (Bipolar junction, Unipolar Junction) and their characteristics, Amplifier types and details about R-C coupled single and double stage amplifiers, Operational Amplifier, parameters and applications like Summing Amplifier, Current to Voltage, Integrator, Differentiator, Schmitt Trigger.

Unit 2. Power Supplies: Rectifiers (Half wave, full wave, Bridge type) and filters, Basic series Regulator, Basic shunt Regulator, Introduction to IC Voltage Regulator. Introduction of switched mode power supply, merits and demerits of switched mode power supply.

Unit 3. Digital Circuits: Gates (OR, AND, NOT, NOR, NAND, XOR.), flip-flops (R-S flip-flop, D flip flop, JK flip flop, JK Master slave flip-flop), Counters (Ring Counters, Synchronous Counters), Seven- Segment LED Displays, B.C.D-to-Seven Segment Decoder/ driver and a Short Note on Introduction to microprocessor.

Unit 4. Electronic Instruments: Oscilloscopes, Digital multimeter,

frequency counters and function generator. (Working principle only of all above Electronic instruments).

Unit 5. Transformer Design: Transformer principle, Transformer core material Selection, turns per volt Selection, Coil thickness Selection, transformer Winding details, transformers testing.

Unit 6. Transducers: Working principle of strain gauge, LVDT, Temperature transducers.

Unit 7. Industrial Applications: PCB art work rules, layout design, PCB materials and etching methods. Component assembling techniques in PCB, wire harnessing methods, temperature and humidity testing of electronic equipment, painting and plating techniques used in electronic equipment.

PRACTICAL WORK:

1. Single Stage R.C. coupled amplifier.
 - (i) To assemble a single stage amplifier.
 - (ii) Measurement of voltage gain at 1 KHz for different load Resistance.
 - (iii) Plot Frequency Response Curve of the Amplifier.
2. Two Stage R-C Coupled Amplifier.
 - (i) To assemble a two stage R-C Coupled Amplifier.
 - (ii) To measure the over all voltage gain of the two stage R-C Coupled Amplifier.
3. 7-Segment decoder driver assembly and then testing.
 - (i) To use a B.C.D. to Seven Segment decoder.
 - (ii) To make electrical connection for common anode and common cathode displays.
4. Voltage Regulator using OP-AMP.
 - (i) To assemble a regulated power supply.
 - (ii) Measurement of line & load Regulation.
5. 723 type Voltage Regulator.
 - (i) To design & assemble a voltage regulator using ICS 723.

- (ii) To measure line and load Regulation.
- 6. To study operational Amplifier parameters.
 - (i) Input bias current.
 - (ii) Input offset current.
 - (iii) Input offset Voltage.
 - (iv) Measurement of closed loop gain.
- 7. To study OP-AMP in
 - (i) Inverting Amplifier.
 - (ii) Non-Inverting Amplifier.
 - (iii) Inverting Summing Amplifier.
 - (iv) Non-Inverting Summing Amplifier.
- 8. To study OP-AMP in
 - (i) Integrator
 - (ii) Differentiator
- 9. To study & verify truth table of 2-input AND and NAND gate.
- 10. To study & verify truth table of 2-input OR and NOR gate.
- 11. To study & verify truth table of Edge Triggered J.K. flip-flop.
- 12. To study & verify truth table of J.K. Master-slave flip-flop with AND input.
- 13. To study & verify truth table of 4-Bit counter.
- 14. To draw resistance viz. Temperature Characteristics of a Thermistor.
- 15. To find temperature co-efficient of thermistor from graph and to verify it by comparing with theoretical value.
- 16. To study D.C. gate control characteristics (firing characteristics) of a SCR.
- 17. To study and Plot the anode current characteristics of a SCR.
- 18. To measure the Holding current of a SCR.
- 19. To study and plot the phase firing characteristics of a SCR.
 - (i) D.C. phase control. (ii) A.C. phase control.
- 20. Testing of small Transformer - regulation.
- 21. Component assembly in P.C.B.

ON-THE-JOB TRAINING:

Industrial training for 2 weeks in an Institute/Industry engaged in the production of electronic instruments and submission of the report thereof.

REFERENCE BOOKS:

1. Millman, J. & Halkias, C.C.: Electronic Devices and Circuits, McGraw Hill Co., New York
2. Malvino: Electronic Principles, Tata Mc Graw Hill, New Delhi.
3. Malvino and Leach: Digital Principles and Applications; Tata McGraw Hill Co., New York.
4. Bose, S.K.: From Gates to Microprocessors, Willey Eastern Limited, New York.
5. Cooper W.D.: Electronic Instrumentation and Measurement Techniques, Prentice Hall of India, New Delhi.
6. Parranabis, D.: Principles of Industrial Instrumentation, Tata McGraw Hill Co., New Delhi.
7. Bosshart, W.C.: Printed Circuit Boards design and Technology, Tata McGraw Hill, New Delhi



PAPER VII (B)

PHOTOGRAPHY

OBJECTIVES:

1. To provide the teacher trainees a sufficient knowledge needed for vocational competency in fast developing fields of photography to generate self-employment in the above field.
2. To equip the teacher trainees with necessary knowledge and skills for quality photography.

CONTENTS:

Unit I: Basic Photography:

- ✱ History of Photography, Requirements for photography, Anatomy of Camera, Types of Camera: Pin hole camera, Box camera, Range finder Camera, SLR camera, TLR Camera, Comparison between SLR & TLR camera.
- ✱ Parts of Camera, Aperture or f/stop, progression of f/stop, different types of Shutters, Shutter as controller of Motion and light.

Unit II: Lens

- ✱ Definition, Angle of view, Perspective, types (Concave, Convex, Normal, Wide angle, Telephoto, Zoom, Macro, Micro), Aberrations and Remedies of lenses.
- ✱ Depth of field: Factors affecting depth of field, Depth of Focus, comparison between depth of field and depth of focus.
- ✱ Filters: UV filter, ND filter, Polarising filter, colour filters and uses.

Unit III: Photo-chemistry

- ✱ Cross section of B/W film, Making an image on silver halide (latent Image), types of film: High, Low, medium speed films and their comparison; Choosing the correct speed of film. How

B/W film seems colour (Tones), Photographic emulsion.

- ✱ Detailed Study of Darkroom & its lay out, Types of Development: Tank, Tray, Fixing, How developer & fixer affect exposed negative, factors affecting development: Temperature, time, concentration of solution, Agitation. Use of hardening agent.
- ✱ Negative defects & Remedies.
- ✱ Reduction and Intensification of Negatives, Printing, types of printing: contact Printing, Projection print, Enlarger. Anatomy of Enlarger, Grades of Papers, Study of types of paper available in India, Toning. Study of ready-made developer.

Unit IV: Lighting

- ✱ Importance of Light in Photography, Source of light and its types Natural and Artificial, (Flash gun, and flash bulb, flood light, spot-light) Types of light (Hard, soft Key light, fill-in light and Back light, Bruce light) Uses of hard and soft light, Key light (Low Key, High Key), lighting conditions (Flat, Half, 3/4th) lighting Ratio, Exposures, Determination of correct exposure, Exposure latitude & Density of Negative and Characteristic Curve Colour Temperature of different light sources, reflectors and their uses, Electromagnetic Spectrum of light.

PRACTICAL WORK:

1. Study & Handling of camera.
2. Loading Winding and Rewinding of film.
3. Studying effects of shaking of camera during exposure.
4. Determination of Aperture and Shutter Speed, effective use of the combination of shutter and aperture.
5. Effect of depth of field, changing of depth field by changing aperture.
6. Exposure with focusing by viewfinder.
7. Study of perspective and its effective use.
8. Simple photo tricks.

9. Study of Composition.
10. Taking out door portraits, Landscapes, Buildings and monuments etc.
11. Photography of moving subjects.
12. Use of different filters.
13. Photography in indoor light.
14. Developing fixing, hardening of film.
15. Preparing Solution.
16. Printing the positive (Projection and contact printing).
18. Reduction and intensification of films & prints.
19. Corrections in prints and film.
20. Study of Tanning Solution
21. Study of Different types of lenses with special reference to angle of view
22. Study of Different Grade of Paper

ON-THE-JOB TRAINING:

Industrial training for 2 weeks in an established photography lab/studio to gain the practical knowledge of shooting still pictures, developing, printing & enlarging of films; and thereafter submission of a report about the work done.

REFERENCE BOOKS:

1. Hashmi, A.H.: Trick Photography and Colour Processing, Universal Book seller, Lucknow.
2. Hashmi, A.H.: Practical Photography, Universal Book Seller, Lucknow.
3. Kodak: Good Photography, Universal Book Sale, Lucknow.
4. London, B. & Upton, J.: Photography (4ed.), Harper Collins
5. Barow, T. & Shilly: Reading into Photography, Willian E. Tydeman
6. Keefe, Lawrence E, Jr., & Dennes: The life of a Photography, Focal Press, London.



PAPER – VII (C)

SOFTWARE APPLICATION

OBJECTIVES:

1. To provide the teacher-trainees sufficient knowledge required for acquiring vocational competencies in the area of computer applications.
2. To train teacher trainees to acquire the competency to use application software for variety of purpose.
3. To reduce the unemployment problem through training the students at plus two level, this will provide opportunities for their self employment.

CONTENTS:

Unit I: Computer fundamentals

Capabilities of Computer and its use in various fields, Block diagram of computer, Input, Output and Storage Devices, Computer Software, Operating System concept and overview, Types of Networks and their utilities.

Unit II: Operating System concept and overview

Meaning & functions of an operating, system, user interface, File management & operations, GUI and development in windows operating system, Key features of Windows OS, Exploring the desktops, accessories, control panel, window explorer.

Unit III: MS - Word

Starting MS-Word, Creating & Formatting a Document, Changing Fonts and point size, Table Creation & operations, Auto correct, spell checker, word art, Inserting Objects, Mail

Merge, Page Setup, Print Overview, Printing a document.

Unit IV: MS - Excel

Starting MS – Excel, Worksheet, Cell inserting, Data into Row & columns, Alignment, Text-Wrapping, Sorting Date, Functions, Referring formula cell in other formula, naming cells and ranges, generating graphs, inserting objects, import-export a file, Page setup, print overview, Printing worksheets.

Unit V: Power Point

Starting MS-Power Point, Auto wizard, Creating a presentation using Auto content wizard, Blank presentation, Creating, saving and printing a presentation, Adding slides to a presentation, Navigating through a presentation, slide sorter, slide show, editing slides, using clip arts, word art, transitions and animation effects, setting timings for slide show, hand outs, master slide.

PRACTICAL WORK:

1. Exploring windows
2. MS – Word
3. MS – Excel
4. MS – Power point

ON-THE-JOB TRAINING :

Industrial training for two weeks in an institute/industry for office automation with MS-Office, and submission of a report thereof.

REFERENCE BOOKS :

1. Sinha PK : Fundamentals of computers.
2. Rajaraman V : Computers fundamentals
3. Leon & Leon : Introduction to computers with MS-Office.



PAPER - VII (D)

RADIO & TELEVISION MAINTENANCE

OBJECTIVES:

1. To provide the teacher trainees sufficient knowledge needed for Vocational competency in the field of Radio & T.V. maintenance
2. To help the Radio & T.V. assembling industries in having adequate supply of middle level manpower.
3. To reduce the Unemployment Problem, through training the students at plus two level, this will provide opportunities for their self-employment.

CONTENTS:

Unit I: Introduction

Nature of Sound waves, Characteristics of sound wave, frequency Response of human ear, Characteristics of Electromagnetic waves, principles of propagation of Electromagnetic waves (Ground, Space, Sky), Factors affecting wave propagation.

Unit II: Basic Principle of Radio

Amplitude modulation and detection, frequency modulation and demodulation. Simple receiver principle, Superheterodyne receiver principle.

Unit III: Different Stages of Receiver

Input antenna, IF-Transformer, Tuning control, R.F. amplifier, Frequency Mixers and frequency convertors, IF amplifier, Detector stage, Limiter, Automatic gain control (AGC), Automatic frequency control (AFC), Automatic Voltage Control (Detailed working of all above stages).

Unit IV: Television Picture

Aspect ratio, image continuity, brightness gradation and colour characteristics. Block diagram of Monochrome and colour television receiver and working of each stage, sync separator, horizontal and vertical deflection. Block diagram of Monochrome and colour Television Transmitters and working of each stage, coder, colour killer.

Antennas: Halfwave dipole, Dipole Antenna with Reflector and Director, Yagi Antenna, Antenna Mounting. Television routine Maintenance- commonly occurring faults and troubleshooting.

PRACTICAL WORK:

1. To measure sensitivity of Radio receiver
2. To measure selectivity of Radio receiver
3. To measure fidelity of Radio receiver
4. Familiar with circuit diagram and signal flow of a radio receiver
5. Familiar with physical layout, location of stages, major component of a Radio receiver.
6. 1-band and 2-band, band connection in a Radio receiver
7. Study of gang condensers and volume controls of Radio receiver
8. Study and identification of coils in a Radio receiver.
9. Aerial types and their uses in a Radio receiver.
10. Assemble a F.M. plate receiver.
11. Radio maintenance, Commonly occurring faults, troubleshooting and repairing.
12. Familiar with all control and effect of adjustment of controls on the performance of monochrome T.V. receiver.
13. Familiar with all control and effect of adjustment of controls on the performance of colour T.V. receiver.
14. Familiarisation with physical layout, Location of stages, Major components and Signal flow in a monochrome T.V. receiver.
15. Familiarisation with Physical layout, Location of stages, Major components and Signal flow in a colour T.V. receiver.
16. Fault finding in power supply (S.C.R. type) of T.V. receiver.

17. Fault finding in Power Supply (S.M.P.S. type) of T.V. receiver.
18. Fault finding in Horizontal and vertical stage of T.V. receiver.
19. Fault finding in Video section and sound section of T.V receiver.
20. Fault finding in I.F. stage of T.V. receiver.
21. Fault finding in AFC and SYNC Separator section of T.V. receiver.
22. T.V. maintenance, Commonly occurring fault, Trouble shooting and repairing.
23. Designing and installation of Yogi Television receiver antenna.

ON-THE-JOB TRAINING:

Industrial training for 2 weeks in an Institute/ Industry/Sector undertaking of Radio, T.V. and electronic instruments for domestic appliances and thereafter submission of a report.

REFERENCE BOOKS :

1. Grob. B.: Basic Television, McGraw Hill.
2. Gulati, R.R.: Monochrome and Colour Television, Wiley Eastern.
3. Gulati, R.R.: Modern Television and Practice, Wiley Eastern.
4. Millman, J. & Halkias, C.: Electronic Devices and Circuits, Mc Graw Hill Co., New York
5. Halkias, C., & Millman, J.: Integrated Electronics, McGraw Hill Co., New York.
6. Bapet, Y.N.: Electronic Devices and Circuits (discrete integrated).
7. Malvino & Leach: Digital Principles and Applications, McGraw Hill, New York
8. Bose, S.K.: Form Gates to Microprocessors, Willey Eastern, New Delhi
9. Smith, F.L.: Perspectives on Radio and Television, Harper & Row, Publishers, New York.
10. Amos, S.W.: Principles of Transistor Circuits, Butterworth Heinemann.

11. Buscombe, C.G.: Television Theory and Servicing, Prentice Hall Inc.
12. Kiver & Kaufman: Television Electronics Theory and Servicing, CBS
13. Brindley, K: Radio and Electronics, Heinemann Professional Publishing.
14. Maplin: Audio IC Projects, BH Newnes.



PAPER VII (E)

OFFICE MANAGEMENT AND CORRESPONDENCE

OBJECTIVES:

1. To train teacher trainees, who in turn will train students to take up the job of office staff in various establishments.
2. To familiarize the teacher trainees with different types of office equipment and machines, and train them to handle those effectively and efficiently.
3. To impart the knowledge of different type of correspondence done in the business environment to the teacher trainers and to develop skills for effective letter writing.

CONTENTS:

Unit I: Introduction

- ✱ Office Management: Importance and functions; Concept of a modern office; Departmentation, Selection of office-location and Layout.

Unit II: Office Operations

- ✱ Handling of Inward and Outward Mail - centralized and decentralized system.
- ✱ Filing & Indexing - nature, functions, importance, types and their relative merits & demerits; factors influencing choice of a suitable filing and indexing system
- ✱ Office Equipment and Machines: Types and importance.

Unit III: Office Communication

- ✱ Process of communication, Barriers to communication; Guidelines for effective communication in office.

- ✿ Code of behaviour in office.

Unit IV: Correspondence

- ✿ Business Correspondence: Drafting letters, memos, notices, agenda and minutes.
- ✿ Office & Business Correspondence of Routine Nature:
 - a. General circulars
 - b. Trade enquiry letters
 - c. Trade enquiry replies
 - d. Letters placing orders, terms, conditions or instructions for suppliers
 - e. Letters of execution of orders and forwarding of documents for payments etc.
 - f. Letters acknowledging receipt of consignments, deliveries and claims for damages and deficiencies.
 - g. Letters regarding establishment, confirmation and dismissal etc.
 - h. Letters asking for payment of dues, reminder for payments.
- ✿ Letters to and from stock and share brokers: Sale or purchase of shares, debentures and securities etc.
- ✿ Letters to banks on different matters.
- ✿ Letters to and from insurance companies.
- ✿ D.O. letters: Format and qualities.
- ✿ Telex, Telegraph: Drafting & despatch.

PRACTICAL WORK:

1. Use of office equipment such as office telephone, EPABX, Telex, FAX, E-mail and intercom.
2. Preparation of newspaper advertisement for an office post with the help of details provided for this purpose.
3. Preparing Bio-Data and covering letter in response to different vacancy advertisements.
4. Writing different types of office letters.

ON-THE-JOB TRAINING:

Attachment to a Govt. office/ establishment/ business enterprise for 2 weeks so as to familiarize and acquire direct experience in office correspondence, filing, indexing and other office functions as enumerated above in Course Content.

REFERENCE BOOKS:

1. Ghosh, P.K.: Office Management; Sultan Chand & Sons, New Delhi.
2. Jain, S.P. & Chhabra, T.N.: Office Management; Dhanpat Rai & Sons, New Delhi.
3. Mahajan, J.P.: Fundamentals of Office Management; Pitambar Publication, New Delhi.
4. Duggal, B.: Office Management and Commercial Correspondence; Kitab Mahal Publication, New Delhi.
5. Frank, M. Rachat: Management of Office Operations; Prentice Hall of India, New Delhi.
6. Sahay, I.M.: Modern Office Management; Kitab Mahal Pub., New Delhi.
7. William, H. & Robinson, E.: Text Book of Office Management; Tata McGraw Hill, New Delhi.
8. Singh, Y.P.: Office Management and Secretarial Practice; Gyan Publication House, New Delhi.
9. Nagamia & Bhal: Business Correspondence and Office Practice; Thakkar Publication, Bombay.
10. Shukla & Gulshan: Secretarial Practice and Office Management; S.Chand & Co. Ltd., Delhi.
11. Tandon, B.N.: Office Management and Commercial Correspondence; S.Chand & Co. Ltd., Delhi.
12. Sharma R.C. & Mohan, K.: Business Correspondence and Report Writing, Tata McGraw Hill Publishing Co. Ltd., New Delhi.



PAPER - VII (F)

TYPEWRITING

OBJECTIVES:

1. To enable teacher-trainees to acquire skills for proper handling of different types of typewriters.
2. To train the teacher trainees for proper typing and enabling them to gain a speed of 40 w.p.m. in English typing
3. Acquainting the teacher-trainees with the means to redress the unemployment problem through creation of greater and immediate self-employment opportunities.

CONTENTS:

- Unit I: Typewriter - its brief history, importance, its make and mechanical construction, qualities of good typewriter.
- Unit II: Main operating parts of a typewriter, correct position of the typewriter, correct sitting position relating to the position of the typewriter, correct position of fingers on guide keys: care and maintenance of the typewriter, oiling and cleaning operations;
Different methods of typing; light touch and its advantages.
- Unit III: Use of the Key board: Different kinds of key board;
Punctuation marks and rules for spacing;
Margin; its adjustment and control;
Syllabification and division of words at the end of lines.
- Unit IV: Use of the Carriage and Ribbon Mechanism: Parts of the carriage; Parts of the ribbon mechanism, ribbon changing process; economy in the use of ribbon; different types and sizes of papers; carbon papers and their uses; copying with the help of carbon papers.
- Unit V: Tabulator and its application: Display of tabulating work on invoices; balance sheets; sales accounts etc.; paragraph heading; envelope addressing; typing of simple letters with subject headings; telegrams and manuscripts.

Unit VI: Rotary duplicator - its make and use; process of cutting stencil paper for duplicating purpose. Rectification of errors including strike-over. Eraser: its kind and use; methods of its application; security against loss.

PRACTICAL WORK:

1. Typewriter cleaning and oiling operations.
2. Ribbon changing exercises.
3. Special hand and finger exercises.
4. Typing exercises containing about 100 words accurately at 20 w.p.m. and correction of errors.
5. Exercises on stencil cutting for duplicating machine.
6. Typing exercises on electric or electronic typewriter.

ON-THE-JOB TRAINING:

Placement of the teacher-trainee in an office or a commercial typing institution for 2 weeks to acquire work experience and submission of a report thereof.

REFERENCE BOOKS:

1. Gupta, O.P.: Typewriting. Sahitya Bhavan Publication, Agra.
2. Walmsley: Horizontal Typewriting. Wheeler Publishing, New Delhi.
3. Raizada, P.: Methods and Techniques of Typewriting Instruction; Sterling Publication Pvt. Ltd., New Delhi.
4. Kuthiala, O.P. & Thorpe, E.: Typewriting Speed and Accuracy; Pitman S.S. Publication, New Delhi.
5. Mishra, C.K. & Raizada P.: Teachers Guide in Typewriting; NCERT, New Delhi.
6. Graded Lessons in Typewriting Theory; Sir Issac Pitman & Sons, London.
7. High Powered Typewriting Drills, Sir Issac Pitman & Sons, London.
8. Practical Course in Touch Typewriting, Sir Issac Pitman & Sons, London.

PAPER - VII (G)

FINANCIAL ACCOUNTING

OBJECTIVES:

1. To enable the teacher trainees to develop the competency in the various concepts, principles, practices and procedures of accountancy
2. To impart in the teacher trainees the habits of accuracy, efficiency, promptness, judgment and analytical ability.
3. To enable the teacher trainees to obtain content mastery necessary for becoming an accountancy teacher.
4. To enable the teacher trainees to act as an entrepreneur in the area of accounting.

CONTENTS:

- Unit 1. Accountancy - meaning, functions and importance;
Accounting principles - concepts and conventions;
Accounting systems - single entry, double entry and Indian system; Accounting bases - cash and accrual; Concepts of capital and revenue.
- Unit 2. Recording financial transactions: Journals and their classification; Rules for classification of transactions; Concept and application of credit and debit; Procedure of journalizing in different sections of journal
- Unit 3. Ledger: concept, types, posting & balancing
Trial balance - meaning, objectives and preparation
Accounting errors and their rectification
- Unit 4. Preparation of Bank Reconciliation Statement
- Unit 5. Financial statements: objectives, classification and preparation.
 - I. For profit organizations -
 - a. Income statement

- b. Manufacturing and trading account
- c. Profit & loss account
- d. Balance sheet

II. For non-profit organizations-

- a. Receipt and payment account
- b. Income and expenditure account
- c. Balance sheet

Unit 6. Financial Statements:

- a. Partnership firms
- b. Companies

Unit 7. Ratio Analysis

PRACTICAL WORK:

1. Preparing basic supporting accounting vouchers - cash-memo, receipts, bills / invoices, account sale, debit note, credit note, journal voucher - credit and debit, cash receipt and cash payment, voucher, cheques and other instruments, treasury challans, pay - in - slip and withdrawal form, etc.
2. Practice on set activities covering - cash books, sales and purchase day books, returns books, journal and ledger posting through proformas
3. Practice on set activities covering -
 - a. Preparation of trial balance and final accounts
 - b. Design to differentiate between capital and revenue
 - c. Passing entries for rectification of errors
 - d. Passing adjustment entries
4. Preparing schedules to be annexed to final accounts, fixed assets, investments, loan and advances, inventories & capacity utilization, etc.
5. Studying annual reports of some companies with a view to assess the profitability, efficiency, liquidity and solvency

ON-THE-JOB TRAINING:

Teacher - trainee may be attached to some business organizations to study their accounting system for a period of two weeks. The teacher- trainee should study the system in all its bearings and submit a report.

REFERENCE BOOKS:

1. Shukla & Grewal: Advanced Accounts, S. Chand and Co., New Delhi.
2. Agrawal, J.D.: Accounting for Financial Analysis, Indian Institute of Finance.
3. Maheshwari, J.D.: Introduction to Accountancy, S. Chand & Co., New Delhi.



PAPER - VII (H)

AUDITING

OBJECTIVES:

1. To enable the teacher trainees to develop the competency in the various concepts, principles, practices and procedures of auditing.
2. To develop the habit of accuracy, efficiency, promptness, judgement and analytical ability in the teacher trainees.
3. To enable the teacher trainees to obtain content mastery over theoretical concepts of auditing.
4. To enable the teacher-trainees for working as a vocational teacher who in turn will train their students to work as audit assistants under supervision of Chartered Accountants.

CONTENTS:

- Unit 1. Introduction:** Meaning, Significance, Objectives, and Classification. Internal Check, internal control and internal Audit
- Unit 2. Planning to Audit:** Preparation, Division of work, Audit Programme & Audit - Note Book
- Unit 3. Vouching and Verification:** Vouching of Cash transactions and Trading Transactions; Verification of Assets and Liabilities
- Unit 4. Company Audit:** Broad outlines of audit of companies, Qualifications, Appointment, Removal, Remuneration, Rights and Duties of a company Auditor.
- Unit 5. Cost Audit:** General features
- Unit 6. Audit of Specific institutions:** Special Feature in the audit of Banking Companies, Insurance Companies, Co-operatives and Educational Institutions.
- Unit 7. Audit Report:** Preparation of different types of audit reports.

PRACTICAL WORK:

1. Preparation of the audit programmes for different categories of organizations.
2. Practical illustrations of division of work among the members of staff for effective internal check.
3. Practical orientation to vouchers and vouching of important transactions of receipt and payments exemplifying the documents required and the audit procedure.
4. Practical orientation to the audit of bank reconciliation statement.
5. Practical orientation to checking of stores records and physical verification of stock, store and other assets
6. Preparation of objection sheet.
7. Preparation of audit-reports.
8. Practical orientation to cost audit.
9. Ensuring compliance with statutory requirements

ON-THE-JOB TRAINING:

The teacher-trainees may be attached to a chartered accountant's firm for yielding the practical knowledge of audit procedure for a period of two weeks. They should learn the audit procedure of different firms and submit a report.

REFERENCE BOOKS:

1. Tandon, B.N.: Principles of Auditing, S. Chand & Co., New Delhi.
2. Sharma, T.R.: Auditing, Sahitya Bhawan, Agra.
3. Gupta, K.: Contemporary auditing, Tata McGraw Hill, New Delhi.
4. Paula, D.: Auditing, Sir Issac Pitman & Sons, London.
5. Spicer & Pegler: Auditing, Allied Publishers Pvt. Ltd., Bombay.
6. Ghatalia, S.V. : Practical Auditing, Allied Publishers, New Delhi.
7. Kishnadwala, V.H.: Auditing, Sultan Chand Publication, New Delhi.
8. Saxena, R.G.: Principles and Practice of Auditing, Himalaya Publishing House, Bombay.

PAPER VII (I)

BANKING

OBJECTIVES:

1. To provide the teacher trainees sufficient knowledge required for acquiring vocational competencies in the area of banking
2. To help the banking institutions in having adequate supply of manpower with desired level of ability
3. To enable the teacher-trainees to obtain content mastery for teaching banking students.

CONTENTS:

- Unit 1. Introduction to Indian Banking: Objectives, Growth, Structure, and Nationalization
- Unit 2. Types of Banking -
 - a. Commercial
 - b. Co-operative
 - c. Development (LDBs, NABARD, IDMI, IFCI, ICICI, SFCs, EXIM, NBH)
- Unit 3. Banking functions & services: Traditional and modern services; Central Banking functions - Control and Monitoring
- Unit 4. Dealing Customers: Types of Customers; Banker - Customer Relationships; Deposit Accounts and related aspects; Lending - Principles and Practice.
- Unit 5. Negotiable instruments: Types of negotiable instruments and their negotiation - Crossing, Endorsement, Collection and Payment.
- Unit 6. Remittances - Drafts/ MTs / TTs and inter bank transactions.
- Unit 7. Contemporary Trends in Banking Sector: Priority Sector Financing (including State sponsored schemes) and latest banking trends.

PRACTICAL WORK:

(All the practicals are based on real life banking situations)

1. Filing of account opening forms, introduction, pay-in-slips, etc.
2. Nomination forms
3. Operation of accounts
4. Handling of cash
5. Preparation of transfer vouchers
6. Charging of interests and other services charges
7. Maintenance of pass books and statements of accounts
8. Balancing of books
9. Preparing vouchers for transfers and collections
10. Pre-mature payments and renewal of time deposits
11. Transfer and clearing of customers' accounts
12. Servicing loan account
13. Issue of duplicate instruments
14. Payment of DD/TT (Telegraphic Transfers)
15. Handling of Traveler's Cheques
16. Types of bills and related documents, demand and usance RR/TR (Railway Receipt/Transport Receipt) Invoices, their scrutiny and maintenance of related registers.
17. Clearing House Functions - Outward and Inward
18. Writing of cash book/general ledger, dummy banking and various bank books
19. Follow up and recovery of advances
20. Disposal of assets of deceased constituents
21. Enquiry and receptions

ON-THE-JOB TRAINING:

The teacher-trainee will be required to visit different banks and submit a report on their functions and procedures.

REFERENCE BOOKS:

1. Nigam, B.M.L.: Banking Law & Practice, Vikas Publishing House, New Delhi.

2. Shekhar, K.C. : Banking Theory and Practice, Vikas Publishing House, New Delhi.
3. Singh, Avtar: Negotiable Instrument Act, Eastern Book Sellers, New Delhi.
4. Jain, A & Jain, V: Banking Vidhi Evam Vyavahar, Vishal Prakashan Mandir, Meerut.
5. Varshney, P.N.: Banking Law and Practice Part-1, Sultan Chand & Sons, New Delhi.
6. Gulshan & Kapoor: Banking Law and Practice, S. Chand and Co., Delhi.
7. Srivastava, P.K.: Banking Theory & Practice, Himalaya Publishing House, New Delhi.



PAPER VII (J)

FOOD CRAFT

(BAKING & PRESERVATION)

OBJECTIVES:

1. To give to the teacher-trainees a general idea of food, nutrients, sources & functions
2. To impart to the teacher - trainees skills in food craft i.e. bakery, food preservation and storage, formulation of snacks and spice mixture and catering management. These are intended to give them skills for income generation.
3. To give the knowledge of food adulteration

CONTENTS:

Unit 1. Food: Its function and classification.

Unit 2. Bakery and confectionery:

- ✱ Principles of baking - weight, measurements, volume and quality standards
- ✱ Baking ingredients - flour, leavening agents, fats and miscellaneous items
- ✱ Methodology, preparation and decoration

Unit 3. Preservation and storage:

- ✱ Deterioration in foods and factors causing them
- ✱ Food preservation principles & methods
- ✱ Methods of preservation - Bottling, canning, freezing, dehydration and drying, pickling, bringing use of sugar in preservation
- ✱ Effect of method of preservation on nutrition value of foods
- ✱ Grain storage methods and facilities

Unit 4. Spices and Condiments: Production and costing of spice mixture

Unit 5. Food Adulteration: Causes of food adulteration, Types of Adulterants and standardization.

PRACTICAL WORK:

1. Economics involved, marketing, accounting and preparation of Breads, Cakes, Cookies, Biscuits, Pastries and Icing.
2. Preparation and packaging of ready-to-eat snacks -
 - a. Sweets, Savouries
 - b. Sandwiches
3. Preparation of preserved products, techniques of freezing and dehydration -
4. Production and costing of spices and their mixture
5. Identification of Food Adulteration

ON-THE-JOB TRAINING:

1. Visits and working in bakery units.
 2. Visits to College/Institution canteen.
 3. Visits to food preservation factories.
- The teacher-trainee will have to go for OJT in a bakery, food packaging industry or a factory of such a nature for 2 weeks to acquire direct experience on the above-enumerated course content.

REFERENCE BOOKS:

1. Home Scale Processing and Preservation of Foods and Vegetables, CFRTI.
2. Hutchinson, R.C.: Food storage in the Home, Arnold Publication, London.
3. Sultan, W.L.: Practical Baking, The AVI Publishing Co., Inc.
4. Lal, S. & Tondon: Preservation of Foods and Vegetables, ICAR.
5. Philip, T. E.: Modern cookery for Teaching and the trade, Orient Longman's Publication, Bombay.



PAPER VII (K)

TEXTILE DESIGNING

OBJECTIVES:

1. To study the chief characteristics of some of the outstanding textile and handicraft of India.
2. To help the teacher-trainee to gain knowledge of different phases of fabric formation and decoration by printing
3. To equip the teacher-trainee with adequate knowledge of printing and printing techniques.
4. To provide adequate knowledge of textile technology for self-employment

CONTENTS:

Unit 1. Yarns: Concept of yarn and its classification.

Unit 2. Loom: Structure of loom, Preparation of yarns for the loom and Weaving on loom

Unit 3. Study of Simple Weave: Plain weave, Basket weave, Rib weave, Twill weave, Honey Comb weave, Huckaback weave, Sateen weave,

Unit 4. Study of Fancy Weave: Double cloth weave, Jacquard weave, Leno weave, Pile weave, Dobby weave.

Unit 5. Printing: Techniques and designs of Roller, Screen, Block, Stencil, Tie and Die, Batik printing and its procedures,

Unit 6. Printing: Preparation of printing paste and fabric, application and final treatment.

PRACTICAL WORK:

1. Preparation of woven samples on handlooms
 - a. Preparation of designs on graph paper.
 - b. Weaving
2. Analysis of weaves

3. Preparation of knitted samples by
 - a. Hand knitting
 - b. Machine knitting
4. Preparation of suitable designs for various printing techniques - block, screen, stencil, tie & die and batik.
5. Preparation of paste and printing samples with different techniques.

ON-THE-JOB TRAINING:

1. Visit to textile mills.
 2. Survey of weaving, knitting and printing workers and their working conditions, and preparation of a report.
- Objective of this training is to make the teacher-trainee aware about the working conditions of the weaving, knitting and printing units of textile industry.

REFERENCE BOOKS:

1. Hollen, N. & Saddler, I.J.: Textiles, The Macmillan Co., New York.
2. Cowan, M.L. & Jungerman, M.E.: Introduction to Textiles, Appleton - Century Crafts, New York.
3. Stout, E.E.: Introduction to textiles, John Wiley and sons, Inc., New York.
4. Potter, M.D. & Corbman, B.P.: Textile - Fiber to Fabric, McGraw Hill Book Co., New York.
5. Deulkar, D.: Household textiles and laundry work, Atma Ram & Sons, London.
6. Mathews, M. J.: Textiles fibers, John wiley & sons, New York.
7. Birrell, V.: The textiles Arts, Harper & Row, New York.
8. Towey, J.: The technique of weaving, Reinhold Publishing Corp., New York.



PAPER VII (L)

BEAUTY CULTURE

OBJECTIVES:

1. To train and equip the teacher-trainees with required knowledge and skill to find employment opportunities in the private sector as well as to gain competencies for self employment.
2. To train teacher-trainee for imparting sufficient vocational skill to +2 level students to take up jobs as beauticians or open their own beauty parlours.
3. To develop skills of imparting practical training in area of health care and physical fitness.

CONTENTS:

- Unit 1. Health:** Its importance and need, Physical and Mental health.
- Unit 2. Nutrients:** their functions and food services, role of naturopathy.
- Unit 3. Common Skin & Hair Infections:** Prevention, Causes and Treatment.
- Unit 4. Skin Care:** Cleaning, Maintenance and Handling Common Skin Infections.
- Unit 5. Hair Care:** Cleaning, Maintenance of healthy hair, Treatment of hair infection and related problem prevention.
- Unit 6. Care of Eyes and Teeth.**
- Unit 7. Facials and Make-up:** Home made Pack including Bridal make-up.
- Unit 8. Removal of hairs:** different methods. (Threading, Waxing, Plucking, Electrolysis)
- Unit 9. Hair Styling and Cutting**
- Unit 10. Mehendi designs**
- Unit 11. Pedicure & Manicure**
- Unit 12. Personality Grooming**
- Unit 13. Obesity:** causes, equipment of for weight reduction.

PRACTICAL WORK:

1. Waxing and Threading
2. Manicure
3. Pedicure
4. Facials
5. Make up
6. Hair Cutting & Styling
7. Mehendi application
8. Method of hair removal
9. Home made packs.
10. Body massage
11. Herbal packs.
12. Various Exercises

ON-THE-JOB TRAINING:

Such training includes Visits to Beauty Parlours, Yoga centers, Naturopathy Institute, and Placement at Beauty parlour and Health Centers for 2 weeks to acquire first hand experience on the mentioned course content.

REFERENCE BOOKS:

1. Vohra, A.: Ladies Health Guide. Pustak Mahal, Delhi
2. Bowler, V.: The Complete Beauty Workshop, Golden Hand Books, Marsh all cavandish, Landon, New York.
3. Handa, P.: Home Beauty Clinics, Pustak Mahal, Delhi



PAPER VII (M)

GARMENT DESIGNING

OBJECTIVES:

1. To develop better understanding of fabric selection, principles of design and how they contribute to the beauty and distinction of costume.
2. To cultivate the ability to understand the techniques of dress designing, fitting and fitting problems of the garments.
3. To impart the knowledge to improve the aesthetic appeal of the garments.
4. To develop better understanding and skills in pattern making.

CONTENTS:

- Unit 1.** Fabric selection: studying the fabric texture, colour, body and surface design as related to the type of apparel and garment design
- Unit 2.** Equipment and Machine: Equipment needed for tailoring, use and care of sewing machines
- Unit 3.** Understanding darts, gathers, pleats and tucks
- Unit 4.** Study of various garment units - Necklines, collars, sleeves, yokes.
- Unit 5.** Study of various garment units - Pockets, belts, bows, zippers and trimmings
- Unit 6.** Pattern making - drafting, draping and flat pattern making
- Unit 7.** Fitting the garment: General principles.

PRACTICAL WORK:

1. Preparation of samples of -
 - a. Neck lines and Yokes
 - b. Collars
 - c. Sleeves

2. Construction of garments:
 - a. Baby frock
 - b. A line frock
 - c. Gown
- d. Skirt
- e. Blouse

ON-THE-JOB TRAINING:

Survey of boutiques and tailor's shop, and preparation of a report so as to understand the working of different workers of boutiques and shops as well as to get an idea of the garments in vogue.

REFERENCE BOOKS:

1. Carson, B.: How You Look And Dress, McGraw Hill Book Company Ltd., New York, U.S.A.
2. Gawne, E.J. & Oerke, B.V.: Dress: The Clothing Text Book, Peoria Bennett Co. Inc., Illinois, U.S.A.
3. Doongaji, S. & Deshpande, R.: Basic Processes and Clothing Construction, New Raj Book Depot, New Delhi.
4. Unit Method of Sewing, Iowa Home Economics Association, The Iowa State University Press, Ames, Iowa.
5. Erwin, M.D.: Clothing For Moderns, Macmillan Publishing Co., New York, U.S.A.
6. Strickland, G.: A Tailoring Manual, The McMillan Co., New York, U.S.A.
7. Hedge, K.M.: Scientific Garment Cutting, K.M. Hedge and Sons, Poona.
8. Srivastava, N.: Instructional Cum Practical Manual, Neelkamal Prakashan, New Delhi.

