

# **D.Ed. Special Education**

**(Visual Impairment)**

***NORMS***

**&**

***GUIDELINES***

**REHABILITATION COUNCIL OF INDIA**

*(Statutory Body Under Ministry of Social Justice & Empowerment)*

**B-22, Qutab Institutional Area**

**New Delhi – 110 016**

**2014**

**[www.rehabcouncil.nic.in](http://www.rehabcouncil.nic.in)**

# **D.ED. SPECIAL EDUCATION (VISUAL IMPAIRMENT)**

## **1.0 Preamble**

Manpower development is one of the major objectives of Rehabilitation Council of India. Diploma in Special Education is a major step towards preparing teachers across the country to teach children with special needs from pre-school to elementary level. It aims at preparing quality teachers who could meet the challenges of all round development of the children. The course is geared towards developing knowledge, skills and desirable attitudes in teachers to facilitate the differently abled children to blossom to their fullest by providing a barrier free environment and achieving the goal of universal elementary education.

## **2.0 General Objective**

The Diploma Course in Special Education aims to develop professionals for special education within a broad framework of education in the present context. The course will enable pre-service teachers to acquire knowledge, develop competencies and practice skills to impart education to children with disabilities.

The general objective of the course is to prepare special teachers at primary to elementary levels to serve in the following settings:

- i) Special schools
- ii) Inclusive schools
- iii) Home based programme

## **2.1 Knowledge Related Objectives**

To build adequate knowledge in the following areas:

- 1) Various aspects of disability, its impact and management
- 2) Key aspects of elementary education like goals, function, technology and emerging trends
- 3) Educational needs of the children with disability and their management
- 4) Details of planning and executing curricular and co-curricular activities
- 5) Pedagogy of school subjects
- 6) Various areas of child development and the relevant mental processes

## **2.2 Skill Related Objectives**

To develop skills and competencies in the following areas:

- 1) Personal, professional and social competencies and skills required in teachers
- 2) Subject teaching as per requirement
- 3) Development and adaptation of teaching and learning techniques and devices
- 4) Evaluation of the students, teacher in the school
- 5) Planning and executing lessons (individualized and group)
- 6) Classroom management techniques
- 7) Individual and group parent interaction

## **2.3 Attitude Related Objectives**

To develop desirable attitudes towards following issues:

- 1) Role and need of education in the modern world
- 2) Teaching profession and role of teachers in changing society
- 3) Guiding children and solving their academic/behavior problems

### **3.0 General Framework of the Course**

The diploma course consists of 4 core papers and additional papers pertaining to specific disability areas. Though the number of papers pertaining to disability specialization may vary, the core papers are common across the specialization areas. Each paper will have a total of 90 hours for curriculum transaction. (Revisit again after revision of the syllabus)

### **4.0 Duration of the Course**

The duration of the course will be 220 days consisting of 1320 hours each year thus having a total of 2640 hours for theory and practicum.

### **5.0 Eligibility**

Students who have passed Plus 2 examination / Junior College are eligible for the course.

### **6.0 Medium of Instruction**

The medium of instruction will be English / Hindi / State language

### **7.0 Methodology**

The methodology of the course includes lectures, demonstration, project work, discussions, exposure visits to different schools / rehabilitation projects, participation in community meetings, medical camps and community development programmes, practice-teaching and internship in the disability intervention programmes at grassroots level.

### **8.0 Course Pattern**

The course will be offered through semester or any other pattern as directed by RCI from time to time.

### **9.0 Staff Requirements**

The course should have 2 lecturers for each year of the course and one will assume the charge of course coordinator / head, thus requiring a total teaching staff of 4. In addition to this core faculty, guest lecturers may be invited to handle specific topics.

#### **9.1 Qualifications of the teaching staff**

Essential qualifications:

- a. Masters in Social Sciences, Humanities & Sciences

b. M.Ed.Spl.Ed.(VI) with two years of experience (post qualification) of teaching in special school for children with visual impairment

**Or**

B.Ed.Spl.Ed.(VI) with five years of experience (post qualification) of teaching in special school for children with visual impairment

**Or**

DSE(VI) / D.Ed.Spl.Ed.(VI) with 10 years of experience (post qualification) of teaching in special school for children with visual impairment

c. The candidate must have valid registration certificate with RCI

## 9.2 Staff (Non teaching)

1. Computer Typist-cum-accountant
2. Peon
3. Librarian
4. Watchman

9.3 Visiting Faculty: As per requirement

10.0 Intake capacity: The intake for each year of the course will be 25 maximum.

## 11.0 Minimum Attendance

Eighty per cent minimum attendance is required both in theory and practical to be eligible to appear in the semester end examination.

12.0 Examination Scheme: As per RCI's Scheme of Examination.

## 13.0 Infrastructure

### 13.1 Space

Sl.No.	Type of Facilities	Area	Remarks
1.	Class Room – 2	40 sq. m. each	
2.	Class Room – 2	25 sq. m. each	
3.	Multipurpose Room/Hall -1	60 sq. m.	
4.	Library-1	60 sq. m.	5 Computers & Internet
5.	Toilet (Male-1, Female-1)	04 sq.m. each	
6.	Principal's Room -1	15 sq. m.	
7.	Resource Room- 1	60 sq. m.	
8.	Staff Room-1	40 sq. m.	
9.	Office Room-1	25 sq. m.	
10.	Store Room-1	25 sq. m.	
11.	Lab. for Psychology/ICT-1	60 sq. m.	
12.	Hostel for Boys and Girls (Separately)	-	Optional

13.	Playground for Outdoor games like football, cricket, etc. If not available, then collaboration with nearby Institute/ University	500 sq. m.	
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### 13.2 Furniture for Staff

1. Full time staff	Tables	-	4
	Chairs	-	4
	Cupboards (steel)		4
2. Visiting Staff	Tables	-	2
	Chairs	-	2
3. Computer Typist-cum-Accountant	Table	-	1
	Chair	-	1
4. Librarian	Table	-	1
	Chair	-	1
5. Peon	Chair	-	1
	Stool	-	1

### 13.3 Furniture and Equipment for the Office

1. Cupboards (Steel)	04
2. Filing Cabinet	01
3. Computer with Printer	01
4. Phone	01
5. Xerox Machine	01
6. Wall Clock	one each in every room
7. Fans	two each in every room
8. Electrical fittings (lights etc)	two each in every room

### 13.4 Furniture and Equipment for Classroom

1. Tables (for students)	25	
2. Chairs (for students)	25	
3. Audio Visual equipments	02	
4. Black Board	02	
5. Teaching material (Demonstration)	-	
	Montessori set	01
	Kindergarten set	01
	Nursery set	01
	TLM as per requirement'	01

### 13.5 Furniture for Library

1. Library cupboards	10
2. Library tables (large)	04
3. Library chairs	25

## 14.0 Certification as Registered Personnel

It is mandatory for every rehabilitation professional / personnel to obtain a “Registered Personnel / Professional Certificate” from the Rehabilitation Council of India to work in the field of special education in India. As continuous professional growth is necessary for the renewal of the certificate, the rehabilitation professional / personnel should undergo in-service programme periodically to update their professional knowledge.

## 15.0 Library Material

1. Minimum eighty percent of the prescribed as mentioned in reference list of each paper.
2. Minimum 03 copies of each title, out of which 01 title must be in Hindi/regional language.
3. Periodicals / Journals (initially 5 publications) minimum 5 periodicals including 2 peer reviewed journals on disability.

## 16.0 Papers Wise Hours and Marks Distribution

### 16.1 Theory Papers

Sl.No	Name of the paper	Hours	Internal marks (40%)	External marks (60%)	Total
<b>Semester -I</b>					
I	Introduction to Disabilities (Common Paper)	90	30	45	75
II	Implications of Visual Impairment	90	30	45	75
III	Teaching of Expanded Core Curriculum	90	30	45	75
IV	Pedagogy of Environment Science (EVS) and Social Science Education	90	30	45	75
	<b>Total</b>	<b>360</b>	<b>120</b>	<b>180</b>	<b>300</b>
<b>Semester –II</b>					
V	Educational Psychology	90	30	45	75
VI	Education of Children with Low Vision	90	30	45	75
VII	Pedagogy of Science Education	90	30	45	75
	<b>Total</b>	<b>270</b>	<b>90</b>	<b>135</b>	<b>225</b>
<b>Semester –III</b>					
VIII	Education in Emerging Indian Society and School Administration	90	30	45	75
IX	Education of Visually Impaired Children with Additional Disabilities	90	30	45	75
X	Pedagogy of Hindi/State Language and English Education	90	30	45	75
	<b>Total</b>	<b>270</b>	<b>90</b>	<b>135</b>	<b>225</b>
<b>Semester -IV</b>					
XI	Inclusive Education for Children with Disabilities	90	30	45	75

XII	Early Childhood Care and Education (Visual Impairment)	90	30	45	75
XIII	Pedagogy of Mathematics Education	90	30	45	75
	<b>Total</b>	<b>270</b>	<b>90</b>	<b>135</b>	<b>225</b>
	<b>Grand Total</b>	<b>1170</b>	<b>390</b>	<b>585</b>	<b>975</b>

## 16.2 Practical Papers

Sl.No	Name of the paper	Hours	Internal marks (60%)	External marks (40%)	Total
<b>Semester -I</b>					
I	English Braille	105	60	40	100
II	Orientation and Mobility	60	30	20	50
III	Use of Special Appliances	100	45	30	75
IV	Practice Teaching	45	60	40	100
	<b>Total</b>	<b>310</b>	<b>195</b>	<b>130</b>	<b>325</b>
<b>Semester –II</b>					
I	Braille—Hindi/State language	105	60	40	100
II	Orientation and Mobility	90	60	40	100
III	Preparation of low cost TLM	75	60	40	100
IV	Practice Teaching	60	60	40	100
V	Information and communication technology	30	30	20	50
	<b>Total</b>	<b>360</b>	<b>270</b>	<b>180</b>	<b>450</b>
<b>Semester –III</b>					
I	Braille	90	60	40	100
II	Use of Special Appliances	50	30	20	50
III	Orientation and Mobility	75	36	24	60
IV	Preparation of Teaching Learning Material	60	36	24	60
V	Practice Teaching	60	36	24	60
VI	Project Work	60	45	30	75
VII	Preparation of Tactile/Audio Maps	25	18	12	30
	<b>Total</b>	<b>420</b>	<b>261</b>	<b>174</b>	<b>435</b>
<b>Semester -IV</b>					
I	Practice Teaching	60	36	24	60
II	Teaching of Expanded Core Curriculum (ECC) Skills	50	36	24	60
III	Braille	75	60	40	100
IV	Use of Special Appliances	70	48	32	80
V	Teaching and organizing co-curricular activities for visually impaired children	100	60	40	100
VI	Community Work	35	30	20	50
	<b>Total</b>	<b>390</b>	<b>270</b>	<b>180</b>	<b>450</b>

## **1<sup>st</sup> Year—Semester I (COMMON PAPER)**

### **THEORY PAPER I: Introduction to Disabilities**

**Total Marks: 75**

**Total hours: 90**

#### **Objectives:**

After completion of this paper, the learner is expected to:

1. Understand the differences disability and functioning
2. Understand the educational needs of various categories of persons with disabilities.
3. Know the common causes and preventive aspects of different kinds of disabilities
4. Know the importance of early identification and intervention
5. Understand the importance of different agencies in human resource development

#### **Unit 1: Understanding Disability**

**(15 Hours)**

- 1.1 Historical development in understanding disability
- 1.2 Emerging trends: Concept and Definition of Impairment, Disability, Handicap(ICIDH) and Functioning(ICF)
- 1.3 Definition and Categories of Disability as per National laws
- 1.4 Prevalence and demographic profile
- 1.5 Causes and prevention of disability

#### **Unit 2: Definition, types and educational needs of children with disabilities**

**(15 Hours)**

- 2.1. Hearing Impairment: Definition and types
- 2.2. Visual Impairment: Definition and types
- 2.3. Mental Retardation: Definition and types
- 2.4. Neuro–muscular: Definition and types
- 2.5. Autism Spectrum Disorder: Definition and types

#### **Unit 3: Definition, types and educational needs of children with disabilities**

**(15 Hours)**

- 3.1. Mental Illness: Definition and types
- 3.2. Specific Learning Disabilities / Difficulties: Definition and types
- 3.3. Deafblindness: Definition and types
- 3.4. Locomotor Disabilities: Definition and types
- 3.5. Multiple Disabilities: Definition and types

#### **Unit 4: Early Identification and intervention**

**(15 Hours)**

- 4.1 Concept and need of early identification
- 4.2 Screening and referral
- 4.3 Involvement of parents and the community
- 4.4 Role of special teacher/ educator in Early Intervention and related matters
- 4.5 Models of Early Intervention- Home based and centre based

## **Unit 5: Human Resource in Disability Sector**

**(15 Hours)**

- 5.1 Concept and need of Human Resource in disability sector
- 5.2 Role of National Institutes
- 5.3 Role of International bodies
- 5.4 Role of NGOs and the Community
- 5.5 Status of Human Resource in India

### **Experiential Learning**

**(15 Hours)**

1. Prepare a checklist for identification of at least one disability.
2. The students are expected to visit at least two institutes for disabilities and observe children with disabilities learning, and submit a report of their observation.

### **Reference material:**

1. Madhavan, T. Kayla, M. Naidu, S. Peshawaria, R and Narayan, J (1989) Mental Retardation – A Manual for Psychologists
2. Wallace, P.M. and Goldstein, J.M. (1944) An Introduction to Psychology (3rd Edition) Madison: Brown and Benchmark Publishing
3. Lindgren H (1988) Educational Psychology in the Classroom, Harper and Row
4. Panda, KC (1997) Education and Exceptional Children, Vikas Publishing House, New Delhi
5. Smith, D.D, and Luckasan, R.(1992), Introduction to Special Education, Allyn and Bacon, Boston
6. Alan H. and Ravic R. (1998). Best and promising Practices in Developmental Disabilities, Texas, PRO – ED, Inc
7. Hegarty S. (2002). Education and Children with Special Needs in India: Sage Publications, India Pvt. Ltd.
8. Myron G. Eisenberg, Robert L. Glueckauf, Herbert H. Zaretsky (1999) Medical Aspects of Disability: A Handbook for the Rehabilitation
9. Arthur E. Dell Orto, Paul W. Power (2007) The Psychological and Social Impact of Illness and Disability
10. Vicki L. Schwean, Donald H. Saklofske (1999) Handbook of Psychosocial Characteristics of Exceptional Children
11. Seamus Hegarty, Mithu Alur (2002) Education and Children with Special Needs: From Segregation to Inclusion
12. S.S. Chauhan (2002) Education of Exceptional Children

## **PAPER II: Implications of Visual Impairment**

**Total Marks: 75**

**Total hours: 90**

### **Objectives:**

**On completion of this Paper, the pupil-teachers will be able to:**

1. Bring out clearly an understanding with reference to the functions of various parts of the eye and eye-diseases.
2. Describe perspectives of the education of children with visual impairment in India and abroad in the context of historical and contemporary developments.
3. Demonstrate an understanding of the educational implications of visual impairment and related technologies.
4. Describe clearly psycho-social implications including attitudinal factors, concerning visual impairment.

### **Unit 1: Eye and eye care**

**(15 hours)**

- 1.1. Structure of the human eye
- 1.2. Anatomy and physiology of human eye
- 1.3. Process of seeing
- 1.4. Errors of refraction and muscle imbalance

### **Unit 2: Common Eye Diseases in India**

**(15 hours)**

- 2.1. Cataract, Glaucoma, Trachoma, ROP
- 2.2. Retinal detachment, Optic atrophy, Conjunctivitis, Xerophthalmia
- 2.3. Prevention of blindness and eye care
- 2.4. Classroom implications of various eye conditions

### **Unit 3: Historical perspectives**

**(15 hours)**

- 3.1 Origin of educational facilities for visually impaired children in: France, UK, USA and India.
- 3.2 Pre-Braille tactile scripts and origin and development of the Braille script
- 3.3 Evolution of Bharati Braille
- 3.4 Special contributions to the education of the visually impaired of some Eminent Personalities in India and abroad – An Overview:
  - India -
    1. Neelkanth Rai Chhatrapati
    2. R.M. Alpaiwalla
    3. Lal Bihari Shah
    4. Clutha Mckenzie
    5. Lal Advani
    6. M. K. Chaudhary
  - West -
    1. Louis Braille
    2. Nicholas Saunderson
    3. Thomas Rhodes Armitage
    4. Helen Keller

**Unit 4: Educational Perspectives****(15 hours)**

- 4.1. Aims and objectives of education of visually impaired children
- 4.2. Principles of teaching visually impaired children
- 4.3. Early Childhood Education
- 4.4. Educational technologies – conventional devices: Braille-writing, computing, mobility
- 4.5. Electronic devices – Talking calculator, diary and watches, screen reading software, reading machine, Braille note-taking devices, Braille embossers, mobility devices

**Unit 5 : Psychological Perspectives****(15 hours)**

- 5.1. Losses and restrictions of blindness
- 5.2. Effects of early and adventitious blindness on personality development
- 5.3. Adjustment and coping mechanisms
- 5.4. Success stories and role models
- 5.5. Adolescence and its implications for children with visual impairment

**Unit 6: Attitudes****(15 hours)**

- 6.1. Concept and process of formation of attitudes
- 6.2. Myths and stereotypes about the visually impaired
- 6.3. Parental attitudes
- 6.4. Community attitudes
- 6.5. Attitudes of visually impaired persons towards themselves
- 6.6. Teacher's attitudes
- 6.7. Attitude modification

**Reference material:**

1. Kitchlu, T.N. (1991) A Century of Blind Welfare in India. Delhi: Penman Publishers
2. Kundu, C.L (ed.) (2003), Disability Status India, Rehabilitation Council of India: New Delhi
3. Lowenfeld, B. (1973) The visually handicapped child in school. John Day Company: New York
4. National Institute for the Visually Handicapped (1990). Handbook for Teachers of the Blind: Dehradun.
5. Scholl, G. T. (1986). Foundations of the education for blind and visually handicapped children and youth: Theory and Practice. AFB Press: New York.
6. Warren D.H (1983). Blindness and Early Childhood Development. AFB Press: New York.

## **PAPER III: Teaching of Expanded Core Curriculum**

**Total Marks: 75**

**Total hours: 90**

### **Objectives:**

**On the completion of this paper, the pupil-teachers will be able to:**

1. Describe clearly the concept and importance of expanded core curriculum and appreciate the rationale for the use of the term.
2. Acquire and use information about the methods of teaching Braille to visually impaired children.
3. Understand and utilize the procedures, principles and methods of sensory training.
4. Acquire necessary skills and competencies for imparting training in orientation and mobility and daily living skills to the visually impaired children.
5. Demonstrate an ability to use various assistive devices for the visually impaired.
6. Gain knowledge about concept-formation for the visually impaired children.

### **Unit 1: Expanded Core Curriculum**

**(05 hours)**

- 1.1 Concept of expanded core curriculum
- 1.2 Need and importance
- 1.3 Rationale for using the term “Expanded Core Curriculum” instead of “Plus Curriculum”

### **Unit 2: Teaching of Braille**

**(20 hours)**

- 2.1 Pre-requisite skills for Braille reading
- 2.2 Braille reading readiness
- 2.3 Methods of teaching Braille reading (letter, word, sentence method) Use of flash cards
- 2.4 Introduction of Braille writing
- 2.5 Techniques of rapid reading and note taking skills

### **Unit 3: Sensory Training**

**(15 hours)**

- 3.1 Meaning and Importance
- 3.2 Tactile discrimination
- 3.3 Auditory discrimination
- 3.4 Olfactory and Gustatory discrimination
- 3.5 Kinesthetic discrimination
- 3.6 Visual discrimination (use of residual vision)
- 3.7 Inter-sensory coordination/sensory integration

### **Unit 4 : Teaching of Orientation and Mobility**

**(15 hours)**

- 4.1. Definition and importance
- 4.2. Techniques of teaching orientation
- 4.3. Techniques of teaching indoor and outdoor mobility – sighted guide, pre-cane, cane techniques
- 4.4. Significance and use of clues and landmarks

4.5. Tactile and auditory maps and Echo-location

**Unit 5: Teaching of Daily Living Activities and Social Skills**

**(10 hours)**

5.1. Meaning and importance

5.2. Age-appropriate classification of daily living skills

5.3. Techniques of teaching daily living skills

5.4. Personal hygiene, grooming and social etiquette

5.5. Performing household tasks (cooking, cleaning, washing etc.)

**Unit 6: Use of Assistive Devices**

**(10 hours)**

6. 1. Taylor Frame and Abacus

6.2. Braille Writing Devices

6.3. Geometry Devices

6.4. Low cost/No cost Teaching -Learning material, tactile maps, diagrams and three-dimensional models

**Unit 7: Concept Formation**

**(15 hours)**

7.1. Meaning and definition of concept

7.2. Stages of concept formation

7.3. Implications of loss of vision in concept formation

7.4. Development of concepts amongst visually impaired children

**Reference material:**

1. Kundu, C.L (ed.) (2003), Disability Status India, Rehabilitation Council of India: New Delhi
2. Mani. M.N.G (1992). Techniques of Teaching Blind Children. New Delhi : Sterling Publishers.
3. Pandey, R.S. and Advani, Lal (1995) Perspectives in Disability and Rehabilitation. Vikas Publishing House: New Delhi
4. Punani, B., and Rawal, N. (1993). Handbook : Visual Impairment. New Delhi : Ashish Publishing House.
5. Radha Bai. Et al. (Ed.) (1995). All Colors are there. Trichy : Holy Cross Service Society.

## **PAPER IV: Pedagogy of Environment Science (EVS) and Social Science Education**

**Total Marks: 75**

**Total hours: 90**

### **Objectives:**

On completion of this Paper, the pupil-teacher will be able to:

- 3 Appreciate the concept and nature of Environment Science.
- 4 Gain and apply knowledge of different environmental issues and how to transact them in the classroom.
- 5 Gain comprehension of the nature and scope of Social Science.
- 6 Describe clearly methods and skills of teaching Social Science.
- 7 Gain familiarity with skills for preparing teaching-learning material for children with visual impairment, concerning Social Science.
- 8 Carry out systematic evaluation.
- 9 Acquire and apply knowledge of different Social Science issues

### **Unit 1: Concept of Environment Science (EVS)**

**(10 hours)**

- 1.1 Scope of Environment Science (EVS) as a curricular area at primary level
- 1.2 Understanding Environment Science (EVS) as an integrated area of Science, Social Science, and Environmental Education
- 1.3 Special significance of EVS education for children with visual impairment.

### **Unit 2: Organization and Classroom Transaction**

**(20 hours)**

- 2.1. Environment Science (EVS) as a Science – water, air, soil, source of energy, eco system, response and adaptation in plants and animals
- 2.2 Environment Science (EVS) as a Social Science – human population and the environment, agriculture and industry, degradation of environment, environmental concerns, disasters and management
- 2.3. Classroom transaction: ways of conducting enquiry, activities, discussion, small group work, field visit, project

### **Unit 3: Nature of Social Science**

**(10 hours)**

- 3.1. Scope and nature of Social Science
- 3.2. Objectives of teaching Social Science
- 3.3. Integration between different social sciences
- 3.4. Role of Social Science in developing children understands of their social context and reality

### **Unit 4: Methods of teaching Social Science**

**(10 hours)**

- 4.1. Source method
- 4.2. Discovery method
- 4.3. Project method
- 4.4. Problem solving
- 4.5. Play way method
- 4.6. Field study
- 4.7. Observation method
- 4.8. Pendulum method
- 4.9. Correlation method

4.10. Discussion method

**Unit 5: Skills of teaching Social Science**

**(10 hours)**

5.1. Dramatization

5.2. Narration

5.3. Explanation

5.4. Story telling

5.5. Role play

**Unit 6: Use of Devices in Social Science**

**(10 hours)**

6.1. Techniques of preparing embossed maps

6.2. Guidelines for preparing models for teaching Social Science to children with visual impairment

6.3. Development of relevant teaching-learning materials

6.4. Techniques of adapting material for teaching Social Science

**Unit 7: Evaluation**

**(05 hours)**

7.1. Construction of test items for evaluating learning of Social Science by pupils

7.2. Diagnosing pupil difficulties in learning Social Science

7.3. Designing remedial teaching

**Unit 8: History**

**(06 hours)**

8.1. Rise of various dynasties through early and Middle Ages

8.2. Establishment and expansion of the British Empire

8.3. India's freedom struggle – 1857 to 1947

**Unit 9: Socio -Political life / Civics**

**(05 hours)**

9.1. Salient features of the Indian Constitution

9.2. Concept of democracy and secularism

9.3. Relationship between union, state and local self-government

**Unit 10: Geography**

**(04 hours)**

10.1. Understanding globe

10.2. Earth and solar system

**Reference material:**

1. Kochhar, S.K., Teaching of Social Studies (1984); Sterling Publishers Private Limited - New Delhi
2. Y K Singh - Teaching of Social Studies (2004); APH Publishing Corporation, New Delhi
3. Scholl, G. T. (Ed.) Foundations of the education for blind and visually handicapped children and youth: Theory and Practice; (1986).. AFB Press: New York.

## **Semester – I: PRACTICUM**

### **I - English Braille**

**Total Marks: 100**

**Hours: 105**

#### **Unit 1: Beginnings**

- 1.1. Seven-line Braille system
- 1.2. English alphabets
- 1.3. Different ways of embossing dot-combinations
- 1.4. Various signs used in English Braille—punctuation marks, Capitalization, italics, numeric, Numerals
- 1.5. Practice on the use of Braille writing devices –Pocket Frames, Inter-Line Frames, Inter-Point Frames, Braillers
- 1.6. Reading and writing English Braille – Grade I

#### **Unit 2: English Braille Grade II**

- 2.1. English contractions and abbreviation
- 2.2. Writing poems
- 2.3. Reading and writing English Grade II Braille

#### **Unit 3: Transcribing of a 20-page English Book in to English Grade II Braille.**

### **II- Orientation and Mobility**

**Total marks: 50**

**60 Hours**

#### **Unit 1: Training Under Blind-fold Condition**

- 1.1. Auditory — Sound Localization, Discrimination, Masking Sound , Echo-Location and Sound Shadow
- 1.2. Tactile Exploration of Surfaces
- 1.3. Use of Kinesthesia

#### **Unit 2: Identification of clues and landmarks in in-door and out-door environment and their use**

#### **Unit 3: Training in Independent Living Skills (ILS) under Blindfold**

- 2 Eating
- 3 Dressing
- 4 Hygiene
- 5 Personal grooming
- 6 Household chores

### **III- Use of Special Appliances**

**Total marks 75**

**100 Hours**

#### **Unit 1: Abacus:**

1.1 Exercises involving:

1.1.1. Setting numbers

1.1.2. Addition and Subtraction

1.1.3. Multiplication and division

#### **Unit 2: Taylor Frame:**

2.1. Exercises involving:

2.1. 1. Writing of numbers and digits

2.2. 2. Writing of various mathematical signs like plus, minus, multiplication, division etc.

2.2.3. Writing and doing various mathematical exercises –

a. addition

b. Subtraction

c. multiplication

d. division

e. LCM and HCF

**Unit 3: Tactile geometry kit and its use for drawing tactile diagrams and figures.**

**Unit 4: use of embossed globe, tactile maps and charts.**

### **IV - Practice Teaching**

**Total Marks 100**

**45 Hours**

Each pupil-teacher is expected to plan and deliver 20 lessons in the concerned school subject.

## **Theory-Semester II: Common Paper**

### **PAPER–V: Educational Psychology**

**Total Marks: 75**

**Total Hours: 90**

**Objectives:** After completion of this paper, the students are expected to:

1. Clearly delineate the nature of child development including delayed development.
2. Gain insights into various aspects of growth and development including personality development.
3. Acquire and apply knowledge about cognition and intelligence.
4. Demonstrate clear comprehension of different perspectives of learning.
5. Acquire knowledge of different behavior problems among children and their management.

#### **Unit I: Psychology and Theories of Learning**

**(15 Hours)**

- 1.1 Educational Psychology – Nature, Importance and Scope.
- 1.2 Individual differences and methods of dealing with the differences
- 1.3 Importance of principles of psychology for the educators of children with disabilities.
- 1.4 Theories of Learning: Behaviorist (Classical & Operant), Social Learning (Bandura), Cognitive Learning (Information Processing).
- 1.5 Role of teacher and learner in different teaching-learning situations- Learning Styles and Learning in Constructivist Perspective

#### **Unit II: Nature of Child Development**

**(15 hours)**

- 2.1 Child Development: meaning and nature
- 2.2 Principles of growth and development
- 2.3 Significance of child development for special educators in understanding the learner with disability
- 2.4 Concept of developmental delay and / differences
- 2.5 Factors influencing development: heredity and environmental

#### **Unit III: Major Aspects of Development**

**(20 hours)**

- 3.1 Physical and Motor Development: meaning, growth and maturation, gross and fine motor development skills in infancy and pre-school children
- 3.2 Social Development: meaning, significance, stages, psycho-social development
- 3.3 Emotional Development: meaning, development of emotions at different stages
- 3.4 Personality Development: meaning, definition and factors affecting
- 3.5 Language Development: meaning and significance, bilingual and multilingual language situations, implications for teachers

#### **Unit IV: Cognition and Intelligence**

**(15 hours)**

- 4.1 Cognitive Development: Concept, Piaget's stages of cognitive development
- 4.2 Understanding socio-cultural difficulties and factors influencing cognition
- 4.3 Role of cognition in learning
- 4.4 Intelligence: meaning, definition and measurement of IQ.

#### 4.5 Howard Gardner's theory of Multiple Intelligence

### **Unit V: Behaviour Problems and Management**

**(10 hours)**

5.1 Common behaviour problems in children

5.2 Assessment of problem behaviour

5.3 Functional analysis

5.4 Behaviour management techniques

5.5 Planning, Implementation and Evaluation of Behavioural Management Programme

### **Experiential Learning (15 Hours)**

The student learner is expected to observe problem behaviour of two children with disability and write a report.

### **Reference material:**

1. Kaul, V (1993) Early Childhood Education Programme, New Delhi, NCERT
2. Madhavan, T. Kalyan, M. Naidu, S. Peshawaria, R and Narayan, J (1989) Mental Retardation – A Manual for Psychologists,
3. Muralidharan R (1990) Early Stimulation Activities for Young Children, New Delhi NCERT
4. Panda, KC (2001) Elements of Child Development (Sixth Revised Edition), Ludhiana Kalyani Publishers.
5. Sharma, P (1995) Basics on Development and Growth of a Child. New Delhi: Reliance Publishing House.
6. Sharma, R and Sharma, R (2002) Child Psychology Atlantic: New Delhi.
7. Mohan Mathew (1972) Child Psychology in Indian Perspective
8. Jan Borms (1984) Human Growth and Development
9. Madhavan, T. Kayla, M. Naidu, S. Peshawaria, R and Narayan, J (1989) Mental Retardation – A Manual for Psychologists
10. Wallace, P.M. and Goldstein, J.M. (1944) An Introduction to Psychology (3rd Edition) Madison: Brown and Benchmark Publishing
11. Lindgren H (1988) Educational Psychology in the Classroom, Harper and Raw
12. Panda, KC (1997) Education and Exceptional Children, Vikas Publishing House, New Delhi
13. Arthur E. Dell Orto, Paul W. Power (2007) The Psychological and Social Impact of Illness and Disability
14. Vicki L. Schwean, Donald H. Saklofske (1999) Handbook of Psychosocial Characteristics of Exceptional Children

## **PAPER-VI: Education of Children with Low Vision**

**Total Marks: 75**

**Total Hours: 90**

### **Objectives:**

**On completion of this paper, the pupil-teachers will be able to:**

1. Understand and apply the definitions and terminologies of low vision and undertake need-based assessment.
2. Carry out vision training programmes systematically.
3. Get fully upraised of the educational needs of low vision children.
4. Understand and describe the various implications of low vision.
5. Get knowledge of low vision devices and suggest suitable environmental modifications.

### **Unit 1: Understanding Low vision**

**(15 hours)**

- 1.1. Definitions as per the extant Indian Law and WHO
- 1.2. Use of different terminologies – low vision, visual impairment, partially sighted and legal blindness
- 1.3. Visual Deficits: types and causes
- 1.4. Importance of early identification
- 1.5. Functional assessment
- 1.6. Commonly used adapted tests for assessment

### **Unit 2: Vision Training Programme**

**(20 hours)**

- 2.1. Nature and importance of the programme
- 2.2. Underlying considerations for the programme
- 2.3. Visual stimulation: concept and procedure
- 2.4. Procedure for increasing visual efficiency
- 2.5. Factors affecting visual efficiency training programme

### **Unit 3: Educational Intervention**

**(15 hours)**

- 3.1. Special educational needs of low vision children
- 3.2. Early intervention
- 3.3. Exemplar curricular adaptations
- 3.4. Evaluation procedure
- 3.4. Management of children with progressive vision loss

### **Unit 4: Educational and Psychological Implications**

**(20 hours)**

- 4.1. Identity issues of low vision children
- 4.2. Selection of an appropriate medium of reading and writing for low vision children
- 4.3. Programme for developing reading and writing skills
- 4.4. Orientation and mobility for low vision children
- 4.5. Classroom management – seating arrangement, adjustable furniture, illumination, non-reflecting surfaces and color contrast.

## **Unit 5: Low vision Devices and Environmental Modifications**

**(20 hours)**

- 5.1. Optical aids
- 5.2. Non-optical aids
- 5.3. Electronic devices ICTs
- 5.4 Environmental modifications at home, school, public places, means of transport and communication, common utility items, etc.

### **Books Recommended**

1. Barraga, N.C., Visual handicaps and learning. Belmont, CA : Wadasworth Publishing Co., Inc., Inc., 1976.
2. Fernandez,G., Koenig, C., Mani M.N.G., and Tesni, S. (1999). See with the Blind. Bangalore : Books for Change and CBM International.
3. Jangira, N.K. Mukhopadhyay, M., Mani M.N.G., and Roychoudary. Source book for Teaching of Visually disabled children. New Delhi : NCERT, 1988.
4. Julka, A. (2000). Low Vision Children : A Guide for Primary School Teachers. NCERT, New Delhi – 1999. Both in English (1999) and Hindi ( 2001).
5. Kelly, L.J. and Vergason, G.A. (1978). Dictionary of Special Education and Rehabilitation. Denver: Love Publishing Company.
6. Mani, M.N.G., (2001). Reading Preference Test (REPT) for Children with Low Vision. Coimbatore : International Human Resource Development Centre for the Disabled.
7. Randall T Jose (1983). Understanding the Low Vision. New York : American Foundation for the Blind.
8. Warren, D.H. (1977). Blindness and early childhood development. New York: American Foundation for the Blind.
9. World Health Organization (1993). Management of Low Vision in Children. Geneva.

## **PAPER-VII: Pedagogy of Science Education**

**Total Marks: 75**

**Total Hours: 90**

### **Objectives:**

On completion of this Paper, the pupil-teachers will be able to:

- 1 Understand and describe the objectives of teaching Science
- 2 Use methods of teaching science
- 3 Conduct practical work
- 4 Make use of various aids and instructional material
- 5 Carry out evaluation properly
- 6 Acquire basic knowledge of various science concepts, principles and material
- 7 Understand and apply information about elementary physics, chemistry and biology.

### **Unit 1: Understanding Science**

**(08 hours)**

- 1.1. Nature and scope of Science
- 1.2. Objectives of teaching Science
- 1.3. Scientific enquiry in different domains of knowledge
- 1.4. Values of Science – social, cultural, ethical, vocational, utilitarian

### **Unit 2: Methods of Teaching Science at Elementary Stage**

**(12 hours)**

- 2.1 Discovery method
- 2.2 Project method
- 2.3 Problem solving method
- 2.4 Inductive-deductive and constructive method
- 2.5 Field trip: visit to science museum and exhibition
- 2.6. Understanding Science through media

### **Unit 3: Conducting Practical Work**

**(12 hours)**

- 3.1. Setting up a Science lab
- 3.2. Determining the nature of practical work and apparatus requirements for the class
- 3.3 Instructions for carrying out practical work for children with visual impairment
- 3.4 Actual performance of the practical work and interpreting results and drawing conclusions
- 3.5 Collaboration in practical work in inclusive setup

### **Unit 4: Use of Aids**

**(08 hours)**

- 4.1 Techniques of adapting available teaching aids for children with visual impairment
- 4.2 Techniques of preparing new teaching aids
- 4.3 Techniques of preparing embossed diagrams and charts
- 4.4 Preparation of adapted instructional material in teaching Science
- 4.5 Techniques of using multi-sensory approach

### **Unit 5: Evaluation**

**(05 hours)**

- 5.1. Construction of test items for evaluating learning of Science by pupils
- 5.2 Diagnosing pupil difficulties in learning Science
- 5.3 Designing remedial teaching

**Unit 6: Food, Materials and World of Living Things****(20 hours)**

- 6.1 Sources of food, components of food, food processing, crop production and micro organisms
- 6.2 Material: Clothes (Cotton, jute, silk, wool), metal –non-metal properties (....., roughness, transparency, solubility)
- 6.3 Living, non-living things, habitats plants (form, function and multiplication/reproduction)
- 6.4 Animals – form and function, reproductive / reproduction health

**Unit 7: Moving Things****(15 hours)**

- 7.1 Motion and measurement (distance, velocity, speed)
- 7.2 Idea of force, friction, pressure, gravity
- 7.3 Electric current and circuits
- 7.4 Magnets
- 7.5 Sound and light

**Unit 8: Natural Phenomena****(10 hours)**

- 8.1 Rain, thunder, lightening, earthquake
- 8.2 Conservation – biodiversity, wild life, pollution preventions, florat fauna, soil
- 8.3 Change of climate, formation of day and night
- 8.4 Stars and planets

**Books Recommended:**

1. Das R C, Science Teaching in Schools (1985); Sterling Publishers Private Limited, New Delhi
2. Joshi, S.R., Teaching of Science (2005 )- APH Publishing Corporation, New Delhi.
3. Rao V K.; Science Education (2004) - APH Publishing Corporation, New Delhi
4. Siddiqui, M H ; Teaching of Science (2005) - APH Publishing Corporation, New Delhi

## **Semester II: Practicum**

### **I: Braille—Hindi/State language**

**Total marks: 100**

**Hours: 105**

#### **Unit 1: Reading and Writing**

- 1.1 Alphabets
- 1.2 Reading Words
- 1.3 Writing Words – Use of writing Frames and Brailers
- 1.4 Reading and Writing Passages

#### **Unit 2: Preparing Braille Calendar**

#### **Unit 3: Hindi/State language Braille Formats**

- 3.1 Paragraphs
- 3.2 Poems
- 3.3 Poetry in prose format
- 3.4 Poetry in verse format
- 3.5 Making a mark sheet

#### **Unit 4: Transcribing a 20-Page Hindi/ Stale Language Book into Braille (concerned language)**

## **II: Orientation and Mobility**

**Total Marks: 100**

**Hours: 90**

#### **Unit 1: Using Safety Techniques**

- 1.1. Trailing
- 1.2. Protective Techniques (Upper arm, Lower arm and Both arms Techniques)
- 1.3. Squaring off
- 1.4. Locating and picking dropped objects/articles

#### **Unit 2: Sighted Guide/Human Guide Techniques**

- 2.1 Familiarization with the Technique
- 2.2 Getting started
- 2.3 Changing sides
- 2.4 Walking through narrow spaces and door-ways
- 2.5 Ascending and descending stairs
- 2.6 Getting into cars and public transport
- 2.7 Negotiating various seating arrangements

#### **Unit 3: O&M for Low Vision**

- 3.1 Encouraging optimum use of residual vision
- 3.2 Negotiating doors, door- ways, stairs

### 3.3 Independent outdoor travel with and without human guide

### **III: Preparation of Low Cost TLM**

**Total Marks: 100**

**Hours: 75**

Each teacher-trainee will be required to prepare at least two low cost / no cost teaching-learning material in the concerned subjects and present the same for evaluation along with one 3D model.

### **IV: Practice Teaching**

**Total marks: 100**

**Hours: 60**

**20 lessons in the concerned subject**

### **V: Information and communication technology (ICT)**

**Total Marks 50**

**Hours: 30**

#### **Unit 1:Nature of Information and Communication Technology**

- 1.1 Meaning and scope of information and communication technology
- 1.2 Technological inputs to reduce handicapping conditions
- 1.3 Technological devices enhancing cognitive abilities
- 1.4 Major ICT devices for the visually impaired
- 1.5 Evolution of ICT for the visually impaired

#### **Unit 2: Orientation to Computers and Computer Applications**

- 2.1 Hardware
- 2.2 Software

#### **Unit 3: Special Software for the Visually Impaired**

- 3.1 Screen Reading Software
- 3.2 Magnification devices
- 3.3 Braille Translation
- 3.4 DAISY Book Production

#### **Unit 4:Basic Computer Applications**

- 4.1. Keyboard operations
- 4.2. Using application software – MS Office, Windows
- 4.3. Preparing word documents
- 4.4. Preparing power-point files
- 4.5. Creating spread sheets

#### **Unit 5:Internet applications**

- 5.1 Google search operations
- 5.2 E-mail
- 5.3 Use of speech synthesizers
- 5.4 Adaptive devices for persons with disabilities
- 5.5 Using internet for learning and teaching purposes

#### **Unit 6:Hands-on Practical experience for unit 4.**

#### **Unit 7:Hands-on Practical experience for unit 5.**

## **2<sup>nd</sup> Year/Semester III: (Common Paper)**

### **THEORY PAPER VIII: Education in Emerging Indian Society and School Administration**

**Total Marks: 75**

**Total Hours: 90**

**Objectives:** After completion of this paper, the students are expected to:

1. Understand the different facets of education in India.
2. Describe various philosophies and their educational implications.
3. Appreciate the role of various agencies of education.
4. Know various significant legal policies initiative concerning education of children with disabilities.
5. Acquire proficiency in school-administration and documentation matters.

#### **Unit I: Nature and Emerging Priorities of Education (15 Hours)**

- 1.1. Meaning, Definition and Scope of Education
- 1.2. Aims and objectives of general education and special education with reference to pre-primary and elementary level(Primary and upper primary)
- 1.3. Value education
- 1.4. Gender-equity (women's education) with particular reference to special education
- 1.5. Prevocational education

#### **Unit II: Philosophies and Educational Implications (15 Hours)**

- 2.1. Idealism
- 2.2. Naturalism
- 2.3. Pragmatism
- 2.4. Humanism
- 2.5. Implications of Educational Philosophies in special education

#### **Unit III: Agencies of Education (15 Hours)**

- 3.1. Formal – special and regular schools
- 3.2. Informal – family, community and mass media
- 3.3. Open and distance education with reference to special education
- 3.4. Roles of governmental and non-governmental agencies in general and special education
- 3.5. Equalization of educational opportunities

#### **Unit IV: Significant Legal/Policy Initiatives Concerning Education of Children with Disabilities (15 Hours)**

- 4.1. United Nations Convention on the rights of Persons with Disabilities (UNCRPD) and Incheon Strategy
- 4.2. The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act 1995/ Replacement Legislation
- 4.3. National Trust Act for Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities (1999)
- 4.4. National Policy for Persons with Disabilities (2006)

4.5. The Right of Children to Free and Compulsory Education Act (RTE) (2009) along with Amendment

**Unit V: Introduction to School Administration and Documentation****(15 Hours)**

- 5.1. Definition and principles of school organization and administration
- 5.2. Organization of Special School and Inclusive School
- 5.3. Duties and responsibilities of the head of school
- 5.4. Annual school plan and Preparation of time-table
- 5.5. Maintenance of school-record--progress report, cumulative record, case histories, Continuous and Comprehensive Evaluation (CCE)

**Experiential Learning****(15 Hours)**

The student is expected to take up one of the important facets of education such as gender-equity, value education, prevocational education or any of the legal initiatives and develop a review of literature.

**Reference material:**

1. Ashok Kumar (1991) Current Trends in Indian Education. New Delhi: Ashish Pub. House
2. Garg, V.P. (1990) Development of Perspectives in India education. New Delhi: Metropolitan Pub.
3. Agrawal, S.P. and J.C. (1994) Third Historical Survey of Educational Development of India. New Delhi: Concept Pub. Co.
4. Sharma, S.N. (1995) Philosophical and Sociological Foundation of Education. New Delhi: Kanishka.
5. Smt, D.D. and Luckasson (1992) Introduction to Special Education. Boston: Allyn and Bacon.
6. Nanda, V.K Education Emerging Indian Society
7. B.N. Dash (2004) Theories of Education and Education in the Emerging Indian Society

## **PAPER IX: Education of Visually Impaired Children with Additional Disabilities**

**Total Marks: 75**

**Total Hours: 90**

**Objectives: On the completion of this paper, the pupil-teachers will be able to:**

1. Identify visually impaired children with additional disabilities and provide support by way of early intervention.
2. Acquire necessary skills and competencies to recognize special needs of and provide educational interventions for visually impaired children who are slow-learning or have such additional disabilities as: learning disability/ADHD/Autism/mental retardation / neuro-muscular / locomotor disabilities /deafblindness.

### **Unit 1: Visually Impaired Children with Additional Disabilities (18 hours)**

- 1.1 Concept and definition of multiply disabled child
- 1.2 Types of additional disabilities
- 1.3 Current status of education of visually impaired child with additional disabilities
- 1.4 Challenges of teaching visually impaired children with additional disabilities
- 1.5 Early intervention and its significance in education of the visually impaired children with additional disabilities

### **Unit 2: Management of Slow Learning Visually Impaired Children (18 hours)**

- 2.1 Meaning and characteristics
- 2.2 Factors responsible for slow learning
- 2.3 Implications
- 2.4 Educational interventions

### **Unit 3: Visually Impaired Children with Cognitive Deficits: (18 hours)**

- 3.1 Learning disability – concept, educational implications and teaching strategies
- 3.2 Attention -deficit/Hyperactivity disorder (ADHD) -- concept, educational implications and teaching strategies
- 3.3 Mental retardation – concept, educational implications and teaching strategies
- 3.4 Autism -- concept, educational implications and teaching strategies

### **Unit 4: Visually Impaired Children with Neuromuscular and Locomotor Disabilities (18hrs)**

- 4.1 Visually impaired children and cerebral palsy -- concept and educational implications, teaching strategies
- 4.2 Visually impaired children and locomotor disability (upper and lower extremities) -- concept, educational implications and teaching strategies
- 4.3 Visually impaired children with severe seizure disorders -- concept, educational implications and teaching strategies
- 4.4 Architectural modifications

## **Unit 5: Teaching of Deafblind Children**

**(18 hours)**

- 5.1 Assessment – hearing, vision and age of onset
- 5.2 Teaching communication skills – verbal and non-verbal
- 5.3 Using vibratory devices for communication
- 5.4 TADOMA Method, Braille and Large Print
- 5.5 Manual alphabet and Total Communication

### **Books Recommended:**

1. Blake, K.A., *The Mentally Retarded: An educational psychology*, Englewood Cliffs, NJ: Prentice-Hall, 1976.
2. Fernandez,G., Koenig, C., Mani M.N.G., and Tensi, S. (1999). *See with the Blind*. Bangalore: Books for Change and CBM International.
3. Rehabilitation Council of India (2000). *Status Report on Disability 2000*.
4. Murickan S.J.J, and Kareparampil, G. (1995). *Persons with Disabilities in Society*. Trivandrum: Kerala Federation of the Blind.
5. Punani, B., and Rawal, N. (1993). *Handbook: Visual Impairment*. New Delhi: Ashish Publishing House.

## **PAPER X: Pedagogy of Hindi/State Language and English Education**

**Total Marks: 75**

**Total Hours: 90**

### **Part A: Hindi/State Language (Hours: 45)**

**(The course content for this paper needs to be formulated by the concerned training centre on the basis of the language of the given State).**

### **Part B: English (Hours: 45)**

Objectives:

On completion of this paper, the pupil-teachers will be able to:

1. Define the objectives of teaching English at the elementary level, consistent with its place in society.
2. Make use of appropriate methods of teaching English.
3. Acquire efficient skills of listening, speaking, reading and writing English.
4. Enrich their knowledge of grammar and lexical items and teach them efficiently in the classroom.
5. Carry out evaluation properly.

#### **Unit 1: Role of English Language in Curriculum and Life**

(03 hours)

- 1.1 Importance of English Language in a multilingual society
- 1.2 Objectives of teaching English as second/third language at elementary level

#### **Unit 2: Methods of Teaching English**

(07 hours)

- 2.1. Translation method – Importance, merits and demerits
- 2.2 Auro-Oral Approach-- Importance, merits and demerits
- 2.3 Structural Approach -- Principles of Structural Approach, merits and demerits
- 2.4 Direct method – Aims, merits and demerits
- 2.5 Skill based Approach – Listening, speaking, reading, writing
- 2.6 Communicative Approach – Importance, merits and demerits
- 2.7 Eclectic method – Importance, merits and demerits

#### **Unit 3: Listening and Speaking**

(07 hours)

- 3.1 Listening with comprehension to follow simple instructions, public announcements, telephonic conversation, radio, television news, sports commentary, classroom discussion
- 3.2 Organs of speech, the classification and description of speech sounds: consonants, vowels
- 3.3 Word stress and sentence stress
- 3.4 Intonation, accents and rhythm in connected speech
- 3.5 Use dictionary for correct pronunciation and stress
- 3.6 Organizing listening and speaking activities – rhymes, songs, stories, poems, role play, dramatization, language games etc.

**Unit 4: Reading**

(07 hours)

- 4.1 Reading Readiness/creating environment for reading
- 4.2 Methods of teaching reading-- the phonic method, the sentence method, and story method
- 4.3 Reading efficiency – reading aloud, silent reading, reading with speed.
- 4.4 Reading with comprehension -- textbooks, story books, fiction, poetry, articles and Internet
- 4.5 Using reading as a tool for reference – use of Dictionary, Encyclopedia and Internet

**Unit 5: Writing**

(07 hours)

- 5.1 Prewriting skills and writing readiness
- 5.2 Mechanics of writing and punctuations
- 5.3 Improving writing skills – writing a paragraph, identifying a topic sentence, arranging sentences in logical order and joining them with linking words and phrases
- 5.4 Different forms of writing – letters (application, complaint, permission, invitation), messages, notices and posters

**Unit 6: Grammar**

(07 hours)

- 6.1 Word formation/spelling
- 6.2 Parts of speech
- 6.3 Kinds of sentences
- 6.4 Transformation of sentences – tenses, clauses and connectors, non-finites, voices
- 6.5 Methods of teaching grammar – inductive and deductive methods

**Unit 7: Evaluation**

(07 hours)

- 7.1 Objectives of evaluation
- 7.2 Tools of evaluation
- 7.3 Types of evaluation – formative, summative, continuous and competency-based
- 7.4 Construction of test items for evaluating language problems of children
- 7.5 Designing remedial teaching

**Books Recommended:**

1. Baruah, T C, The English Teachers Hand Book (2006), Sterling Publishers Private Limited: New Delhi
2. Paul Varghese, C., Teaching English as a Second Language (1989), Sterling Publishers Private Limited: New Delhi
3. Prem Shankar, Teaching of English (2004), APH Publishing Corporation: New Delhi
4. Singh, Y K, Teaching of English (2005), APH Publishing Corporation: New Delhi.

## **Semester III: Practicum**

### **I—BRAILLE**

**Total Marks 100**  
**90 Hours**

#### **Unit 1: Mathematical Braille**

- 1.1 Writing Numerals, Numeric Indicator, Math, Comma, Decimal Point, Punctuation Indicator
- 1.2 Signs of operation (+, -, X, )
- 1.3 Brackets (Round, Curly, Square)
- 1.4 Fractions - (i) Simple fraction (ii) Mixed fraction
- 1.5 Units of Currency Measurements
- 1.6 Roman Numerals
- 1.7 Omission and Cancellation
- 1.8 Shape Signs – Basic Shapes (Angle, Triangle, Circle, Square, Rectangle, Quadrilateral, Rumbas)
- 1.9 Run over Indicator
- 1.10 Dash and Ellipsis
- 1.11 Recurring Indicator
- 1.12 Miscellaneous - (At Check Mark, Ditto Mark, Percentage, Ratio of Proportion, since, therefore)

#### **Unit 2: Letters**

Format of different types of letters.

**Unit 3: Use of Thermoform machine/other duplicating devices, Braille embosser including Braille Translation software, Braille Note-Taker/refreshable Braille Display.**

### **II—Use of Special Appliances**

**Total Marks: 50**  
**Hours: 50**

**Unit1: Use of Low Vision Devices – optical, non-optical, electronic**

**Unit 2: Abacus:**

**Exercises involving:**

2.1 Fraction

2.2 Decimal fraction—addition, subtraction, multiplication and division

**Unit 3: Taylor Frame:**

**Exercises involving:**

3.1. Percentage

3.2. Ratio

3.3. Average

### **III—Orientation and Mobility**

**Total Marks: 75**

**Hours: 60**

**Unit 1:** Use of cane techniques – Grip, Rhythm, Swing, Gait, Arc, Taking Direction using Cane.

Unit 2:

2.1 Two-point touch technique

2.2 Three- point touch technique

2.3 Trailing, Shoreline-- both inside and outside the campus

2.4 Ascending and descending stairs with cane

Unit 3: Using cane with sighted guide

Unit 4: Preparing tactile/auditory maps for blind and low vision children.

Unit 5: Indoor and outdoor travel with long and folding canes and with use of residual vision.

### **IV—Preparation of Teaching Learning Material**

**Total Marks: 60**

**Hours: 60**

Each teacher-trainee will be required to prepare at least 2 low cost / no cost teaching-learning material in the concerned subject and present the same for evaluation along with one 3-D model.

### **V-- Practice Teaching**

**Total Marks: 60**

**Hours: 60**

Each pupil-teacher is expected to plan and teach 20 lessons—10 in English and 10 in Hindi/ State language.

### **VI--Project Work**

**Total Marks: 75**

**Hours: 60**

Each student-teacher is expected to plan, execute and present a report on any three of the following activities relating to elementary education of visually impaired children:

1.1 Functional assessment of vision of at least two low vision children

1.2 Visual stimulus training for at least two low vision children

1.3 Remedial teaching in any one of the curricular/expanded Core Curricular areas for at least two children

1.4 Preparation of individualized education plan for at least two preschoolers/multiply disabled visually impaired children

1.5 Preparation of Braille Reading Readiness Kit

1.6 Case histories of at least two children

- 1.7 Need-assessment in respect of regular schools for meaningful inclusion of visually impaired children and preparing a brief set of guidelines for regular classroom teachers
- 1.8 Preparing a small pamphlet in Hindi/State language in conversational mode with illustrations, on raising awareness regarding visually impaired children
- 1.9 Adapting a short story book for visually impaired children to make pictorial illustrations/visual images accessible.

## **VII--Preparation of Tactile/Audio Maps**

**Total marks: 30**

**Hours: 25**

Each student-teacher is expected to prepare 2 tactile/audio maps and present the same for evaluation.

## **2<sup>nd</sup> Year—Semester IV (Common Paper)**

### **THEORY PAPER XI: Inclusive Education for Children with Disabilities**

**Total Marks: 75**

**Total Hours: 90**

#### **Objectives:**

On completion of this paper, the student-teachers will be able to:

1. Define inclusion
2. Relate inclusion to all aspects of life and service delivery
3. Discuss the advantages and potential challenges of inclusion
4. Understand and use the methods and strategies of enhancing/promoting inclusion
5. Describe the roles of the community and society in general for successful inclusion

#### **Unit I: Introduction to Inclusive Education**

**(15 hours)**

- 1.1 Understanding Inclusive Education: Meaning and Definition
- 1.2 Benefits of Inclusion
- 1.3 Difference between special, integrated and inclusive education
- 1.4 SSA, IEDSS and RMSA
- 1.5 Barriers to Inclusion: Systemic barriers, Societal barriers and Pedagogical barriers

#### **Unit II: Accessing Inclusive Education**

**(15 hours)**

- 2.1 Fundamental elements of inclusive school
- 2.2 Strategies for making schools inclusive
- 2.3 Need for Curriculum differentiations and assessment
- 2.4 Classroom Management and Teaching Strategies—Cooperative Learning and Peer Tutoring
- 2.5 Physical accessibility of schools and Universal Design Model

#### **Unit III: Including Children with Disabilities in Education**

**(15 hours)**

- 3.1. Identifying special needs of children with disabilities
- 3.2. Curriculum Adaptations
- 3.3. Use of Technology, Teaching Learning Material and Educational Aids
- 3.4. Continuous and Comprehensive Evaluation in Disabilities
- 3.5. Developing resource room and resource facilities

#### **Unit IV: Networking for Inclusive Education**

**(10 hours)**

- 4.1. Developing partnerships with family
- 4.2. Developing partnership with school functionaries and peer group
- 4.3. Collaborative Teaching and team work
- 4.4. Mobilizing support for learners-role of voluntary organizations, community, special school, Health care professional and local bodies
- 4.5. Understanding the role of BRCs, CRCs and school management committees

## **Unit V: Major components of successful change toward Inclusion**

**(10 hours)**

- 5.1 Communication
- 5.2 Interpersonal skills
- 5.3 Positive attitudes
- 5.4 Flexibility
- 5.5 Success Stories, Financial Resources and Infrastructure.

### **Experiential Learning**

**(15 Hours)**

(The students are expected to visit one inclusive setting and observe classroom teaching and prepare case studies of students with disabilities in this school.)

### **Reference material:**

1. Fernandez, G., Koenig, C., Mani M.N.G., and Tensi, S. (1999). See with the Blind. Bangalore : Books for Change and CBM International.
2. ICEVI (1995). Proceedings of the Asia Regional Conference on “Reaching the Unreached”. Organized by the International Council for Education of People with Visual Impairment at Ahmedabad, India.
3. Jangira, N.K. and Mani, M.N.G. (1990). Integrated Education for the Visually Handicapped: Management Perspective. Gurgaon: Academic Press Rehabilitation Council of India (2000). Status Report on disability 2000.
4. Mani, M.N.G. (2001). Inclusive Education in Indian Context. Coimbatore, IHRDC
5. Murickan S.J.J, and Kareparampil, G. (1995). Persons with Disabilities in Society. Trivandrum: Kerala Federation of the Blind.
6. Mukhopadhyay, S. and Mani. M.N.G. (1999). Education of Children with Special Needs, Country Report, New Delhi: National Institute of Educational Planning and Administration.
7. Punani, B., and Rawal, N. (1993). Handbook: Visual Impairment. New Delhi: Asish Publishing House.
8. Awareness Package for Upper Primary teachers: NCERT, New Delhi, 2003
9. Inclusive Education: An Orientation Package for Teacher Educators. Department of Education of Groups with Special Needs, NCERT, New Delhi, 2002 (both in Hindi & English).
10. Planning and Managing Inclusive Education in the Indian Context. Department of Education of Groups with Special Needs, NCERT and UNESCO, 2004.
11. Assessment of Needs for Inclusive Education: Report of the First Regional Workshop of NCERT and UNESCO, 2000.

## **Paper XII: Early Childhood Care and Education (Visual Impairment)**

**Total Marks: 75**

**Total Hours: 90**

### **Objectives:**

On completion of this paper, the pupil-teachers will be able to:

1. Understand and apply concept, principles and methods of early childhood care and education in the context of children with visual impairment.
2. Provide support through early detection and intervention services.
3. Make necessary help available to parents of young children with visual impairment.
4. Develop and implement individualized educational plan for young visually impaired children.
5. Facilitate successful transition to primary education.

### **Unit 1: Concept, Principles and Methods of Early Childhood Care and Education with reference to the Visually Impaired (20 Hours)**

- 1.1 Concept and scope of early childhood care and education
- 1.2 Some important principles of early childhood care and education for young visually impaired children:
  - a. Supporting sensory development
  - b. Creating safe and stimulating environments
  - c. working with families
  - d. Developing a sense of self and capacity
  - e. Encouraging independence
- 1.3 Methods:
  - a. Montessori
  - b. Kindergarten
  - c. Playway
  - d. Gijubhai Badheca system
- 1.4 Implications of the above methods for the early care and education for visually impaired children.

### **Unit 2: Early Intervention (15 Hours)**

- 2.1 Need and importance of early childhood intervention, particularly for the young child with visual impairment
- 2.2 Roles of early childhood-teacher of children with visual impairment
- 2.3 Utilizing services of Anganwadi and Balwadi workers
- 2.4 Models of early childhood services with reference to the visually impaired
- 2.5 Overcoming challenges to service-delivery to young children with visual impairment in India

### **Unit 3: Supporting Families (15 Hours)**

- 3.1 Understanding how disability impacts the family (mother, father, siblings, grandparents, extended family)
- 3.2 Helping families see the child's strengths and understand his rights
- 3.3 Helping families deal with difficult social situations
- 3.4 Helping families integrate the child's developmental goals into their daily routine
- 3.5 Accommodating special circumstances:
  - a. Parents with disability
  - b. Single parent families
  - c. Working parents
  - d. Parents in rural areas or below poverty line

**Unit4: Special Assessments and Interventions**

**(25 Hours)**

- 4.1 Assessment of sensory capacity
- 4.2 Assessment of orientation and mobility
- 4.3 Learning medium and language assessment
- 4.4 Developing an individualized family service plan: birth to 3 years
- 4.5 Developing an individualized education plan: 3 to 6 years
- 4.6 Implementing the plan

**Unit 5: Successful Transition into Primary School**

**(15 hours)**

- 5.1 Range of service options
- 5.2 Preparing the child
- 5.3 Preparing the school, the head and the teachers in inclusive settings
- 5.4 Utilizing community resources
- 5.5 Obtaining simple assistive devices and accessible books: sources, affordability

**Books Recommended:**

## **PAPER XIII: Pedagogy of Mathematics Education**

**Total Marks: 75**

**Total Hours: 90**

### **Objectives:**

After completion of this paper, the pupil-teachers will be able to:

- 1 Describe the importance of Mathematics in school-curriculum and objectives of teaching the subject at the elementary stage.
- 2 Understand and make use of appropriate methods and procedures of teaching Mathematics and coping with challenges.
- 3 Consolidate knowledge about various special Mathematical appliances.
- 4 Appreciate the importance and working of mental mathematics and apply related rules to teaching.
- 5 Carry out evaluation effectively.
- 6 Be familiar with and make use of basic Arithmetic concepts.
- 7 Be able to comprehend and teach advanced Arithmetic.
- 8 Be able to teach basic Geometry and Algebra as also polynomials.

### **Unit 1: Role of Mathematics and Objectives of Teaching Mathematics (10 hours)**

- 1.1 Role of Mathematics in day-to-day living
- 1.2 The place and importance of Mathematics in the school curriculum for children with visual impairment
- 1.3 Problems encountered by teachers in teaching Mathematics
- 1.4 Relationship of Mathematics with other subjects
- 1.5 Objectives of teaching Mathematics – general and specific

### **Unit 2: Methods of Teaching Mathematics (10 hours)**

- |  |   |
|--|---|
| 2.1 Inductive-deductive procedures     | 2.2 Analytic-synthetic procedure                |
| 2.3 Mathematics laboratory             | 2.4 Workbook and TLM                            |
| 2.5 Familiarization with web resources | 2.6 Mathematics phobias and coping with failure |

### **Unit 3: Teaching Aids (10 hours)**

- |                  |                  |
|------------------|------------------|
| 3.1 Taylor frame | 3.2 Geo board    |
| 3.3 Abacus       | 3.4 Geometry kit |

### **Unit 4: Mental Mathematics (10 hours)**

- 4.1 Concept, Need and Importance
- 4.2 Importance of Tables and Partner numbers
- 4.3 Tricks of solving:
  - a. Addition
  - b. Subtraction
  - c. Multiplication
  - d. Division
- 4.4 Simple methods for finding squares and square roots.
- 4.5 Mathematical Games and Puzzles.

### **Unit 5: Evaluation (07 hours)**

- 5.1 Construction of test items for evaluating learning of Mathematics of pupils
- 5.2 Diagnosing pupil difficulties in learning Mathematics
- 5.3 Designing remedial teaching

**Unit 6: Basic Arithmetic****(07 hours)**

- 6.1 Types of numbers – natural, whole, integers, rational and irrational numbers, real numbers, number line
- 6.2 Properties of numbers and basic Arithmetic operations – addition, subtraction, multiplication and division
- 6.3 Prime and composite numbers, laws of divisibility, LCM, HCF
- 6.4 Ratio and proportion
- 6.5 Practical Arithmetic – problems related to time and work, percentage, profit and loss, simple and compound interest, average

**Unit 7: Advanced Arithmetic****(07 hours)**

- 7.1 Fractions – Simple fractions, decimal fractions, conversion of simple fractions into decimal fractions and vice versa
- 7.2 Weights and measures – length, distance, weight, mass, area, volume, metric system, measurement of time
- 7.3 Indices – square and square root, cube and cube root

**Unit 8: Geometry****(07 hours)**

- 8.1 Point, line, segment, rays, angles, perpendiculars, Perimeters  
Parallels, properties of parallel lines and types of angles
- 8.2 Concept and types of triangles, quadrilaterals
- 8.3 Circle – parts of a circle, circumference, area
- 8.4 Polygons -- interior and exterior angles, convex and concave polygons
- 8.5 Concept of congruent, equivalent and lateral, lateral axis
- 8.6 Theorems

**Unit 9: Algebra****(7 hours)**

- 9.1. Simple equations
- 9.2. Presenting Arithmetic principles in Algebraic formulae, addition, subtraction, multiplication and division of algebraic expression
- 9.3. Expansion formulae
- 9.4. Equations – simple, quadratic, binomial

**Unit 10: Polynomials****(10 hours)**

- 10.1 Polynomials – concept and definition
- 10.2 Addition of polynomials
- 10.3 Subtraction of Polynomials
- 10.4 Multiplication of Polynomials
- 10.5 Division of polynomials

**Books Recommended:**

1. Rani T.S., Teaching of Mathematics (2007), APH Publishing Corporation: New Delhi
2. Scholl, G. T. (Ed.) Foundations of the education for blind and visually handicapped children and youth: Theory and Practice; (1986). AFB Press: New York.
3. Sharan, R., Teaching of Mathematics (2006), APH Publishing Corporation: New Delhi
4. Siddique, M.H., Teaching of Mathematics (2005), APH Publishing Corporation: New Delhi
5. Sidhu Kulbir Singh, Teaching of Mathematics (2006), Sterling Publishers Private Limited: New Delhi



## **Semester IV: Practicum**

### **I-- Practice Teaching**

**Total Marks: 60**

**Hours: 60**

Each student-teacher is expected to plan and teach 20 lessons in the concerned subject keeping in view the needs of low vision children, as appropriate.

### **II--Teaching of Expanded Core Curriculum (ECC) Skills**

**Total Marks: 60**

**Hours: 50**

Each student-teacher is expected to plan and teach at least 10 lessons of ECC skills to children with visual impairment.

### **III--Braille**

**Total Marks: 100**

**Hours: 75**

#### **Unit 1: Braille Mathematics Code**

- |   |                                       |
|---|---------------------------------------|
| 1.1. Fraction—Complex and Hyper-Complex       | 1.2. Shape signs                      |
| 1.3. Superscript and subscript                | 1.4. Radicals                         |
| 1.5. Greek letters                            | 1.6. <b>Mensuration</b> and Logarithm |
| 1.7. Reference signs                          | 1.8. Negation signs                   |
| 1.9. Degree, infinite, prime, English letters | 1.10. Compounded shape signs          |
| 1.11. Spatial arrangement of fractions        |                                       |

**Unit 2: Transcription of a 20-page Maths text into Braille of the last class of primary /elementary education.**

### **IV-- Use of Special Appliances**

**Total Marks: 80**

**Hours: 70**

#### **Unit 1: Abacus:**

- 1.1 Exercises involving: Square root and percentage
- 1.2 Revision and practice on Abacus

#### **Unit 2: Taylor Frame:**

- 2.1 Exercises involving: percentage, profit and loss, simple and compound interest
- 2.2 Use of Algebra Types and doing Algebra sums as indicated in Unit 9 of the theory paper "Teaching of Mathematics"

## **V. Teaching and organizing co-curricular activities for visually impaired children**

Total Marks: 100

Hours: 100

### **Unit 1: Physical Education**

**Hours: 20**

- |                           |                                 |               |
|---------------------------|---------------------------------|---------------|
| 1.1 Body posture and gait | 1.2 Physical exercises and Yoga | 1.3 Athletics |
|---------------------------|---------------------------------|---------------|

1.4 Outdoor games with appropriate modifications/modifications for visually impaired.

**Unit 2: Music**

**Hours: 20**

2.1 Nursery Rhymes and Children's Songs

2.2 Patriotic songs

2.3 Introduction to the octave, scales, notations and basics of playing Harmonium as accomplishments

2.4 Basic rhythmic patterns and orientation to playing of percussion instruments.

2.5 Techniques of using a microphone for individual group songs.

**Unit 3: Art and Craft**

**Hours: 20**

3.1 Tactile graphics for Art and Drawing

3.2 Paper craft/Origami

3.3 Pottery

3.4 Clay Modeling and sculpture

**Unit 4: Dramatics**

**Hours: 20**

4.1 Body Language/non-verbal communication

4.2 Dialogue delivery – voice modulation, pronunciations and stress, etc.

4.3 Facial expressions

4.4 Stage management

4.5 Script writing for short play.

**Unit 5: Dance**

**Hours: 10**

5.1 Basic steps and body movement

5.2 Dance costumes

5.3 Group dance

5.4 Stage Management.

5.5 Techniques of coordination dance with playback music.

**Unit 6: Literary Activities**

**Hours: 10**

6.1 Elocution

6.2 Extempore Speech

6.3 Debate

6.4 Language Games

6.5 Miming

**NOTE:**

1. This is a practical subject being introduced for the first time and Unit-wise teaching hours have been listed for the guidance of teacher-educators.

2. On the basis of learning acquired, each student-teacher will be required to teach and organize at least two of the above listed activities for visually impaired children.

3. Evaluation will be carried out on the basis of planning by the student-teacher and the quality of performance of activities by visually impaired children.

**VI. Community Work**

**Total Marks: 50**

**Hours: 35**

Each student-teacher is expected to work with visually impaired children and their parents in the community.

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