

**Diploma in Vocational Rehabilitation**

**(Mental Retardation)**

**DVR (MR)**

**Rehabilitation Council of India**

**B-22, Qutab Institutional Area, New Delhi, 110016**

# CONTENT

- 1.0. Preface
  - 1.1. Over- view
- 2.0 Nomenclature of the Course
- 3.0. Philosophy of the Course
- 4.0 Objectives
- 5.0 Entry requirements, admission, number of seats
  - 5.1 Entry requirements
  - 5.2 Admission procedures
- 5.3 Number of seats
- 6.0 Duration of the course
- 7.0 Content of the course
- 8.0 Training Methodology
  - 8.1. Lecture
  - 8.2. Practicals
  - 8.3. Agency Visits
  - 8.4. Educational Tour
- 9.0. Teaching Faculty
- 10.0. Requirements
  - 10.1. Location
  - 10.2. Space
- 11.0. List of furniture and materials
- 12.0. Workshop Equipments and tools
- 13.0. Library books
- 14.0. Examination and Periodical Evaluation
  - 14.1. Examination Systems
  - 14.2. Periodical Evaluation
- 15.0 In-service Training

## APPENDIX

- 1. Theory Papers
- 2. Practical papers
- 3. Teaching Faculty
- 4. List of Furniture and Materials
- 5. Work- shop Equipments and Tools
- 6. Examination
- 7. Model Question paper
- 8. List of books-library

## **PREFACE**

This draft revision is the outcome of deliberations over the course curriculum of Diploma in vocational training and employment (Mental Retardation) during the workshop conducted by the Rehabilitation Council of India on 24 –8 –2005 at the RCI Office, New Delhi. This course has been commenced in 1995 and undergone two revisions in the years 1998 & 2000.

The deliberations were held between the experts who planned the course; the experts in the field of vocational rehabilitation and the master trainers who implemented it, for further review of the course curriculum. A sub committee of the experts Committee was formed to put together relevant views and accordingly revise the course.

# **DIPLOMA IN VOCATIONAL REHABILITATION (MENTAL RETARDATION) DVR (MR)**

## **1.0. Over View**

The Persons with Disabilities {Equal Opportunities, Protection of Rights and Full Participation} Act, 1995 became operational in February 1997, when the rules for its implementation were notified by the Government of India. The Chapter 6 on employment, Section 38 calls upon Government and local authorities to formulate schemes for ensuring employment of persons with mental retardation. It is therefore envisaged that persons with mental retardation will have wide ranging opportunities to seek employment in all kinds of situation such as self employment, open competitive, supported, group and individual employment.

While there are over nine hundred facilities for special education of the persons with mental retardation in India, facilities for vocational training programmes are only about three hundred. Vocational training programmes which were initiated sometime in 1950s aimed at keeping persons with mental retardation happy and busy rather than training them to be productive and employable.

Initiative undertaken in India in early 1990s has changed the perspective in vocational training. There has been increasing emphasis on remunerative employment rather than on unproductive engagement in occupational activities. Another development that took place was that of looking for open competitive employment for persons with mental retardation. With these two initiatives the vocational training programmes have moved away from the concept of charity and move towards enhancing image of persons with mental retardation as persons who can earn their own living and can advocate their own cause.

Rapid expansion of group employment situation occurred in India in the 1990s. This became possible with the involvement of groups of parents on one hand and large public sector undertakings on the other, with technical guidance from professionals. The above initiatives have drastically changed the concept of vocational training and employment of persons with mental retardation.

The Manpower Development Report for Mental Retardation developed by Rehabilitation Council of India envisages professional preparation for different categories of functioning: teaching, education, rehabilitation and vocational training, supervision and administration. The objectives of RCI encompass constant revision and updating of courses . In this context the DVTE (MR) course, which was revised in 2000 needs a fresh look on the basis of opinions and suggestions received from various organizations. The RCI has therefore constituted a Core Group to go through the course structure, content, duration and all other allied issues. The present document is the outcome of an exercise that has gone into the process of updating it.

## **2.0. Nomenclature of the course**

### **Diploma in Vocational Rehabilitation (Mental Retardation) DVR (MR)**

## **3.0. Philosophy Of The Course**

With increasing emphasis on productive and remunerative employment of persons with mental retardation, the institutions require trained human resources who can conduct vocational training programmes in a professional manner. Therefore, a composite course was envisaged with components from diverse fields of psychology, special education, engineering, social work, business management, accountancy and book – keeping.

The vocational instructor thus trained should be able to study the job market demands and accordingly undertake training of persons with mental retardation for gainful and remunerative production.

The Curriculam content envisaged in this course correlates to the Job market demands on one hand and conceptual understanding on the other. Therefore, with adequate theory inputs, having emphasis on practical and field placements in real or simulated environments, this course will train vocational instructors to provide services of vocational rehabilitation and adult independent living skills for persons with mental retardation. This is the first level basic course designed for service providers.

## **4.0. Objectives**

Overall aim of the course is to prepare a cadre of trained personnel to provide services in the area of vocational rehabilitation including adult independent skills in persons with mental retardation functioning at various levels to lead them towards independent life as far as possible.

### **More specifically, the objectives are to:**

- 4.1. Acquire required knowledge on various aspects such as medical, psychological, educational, technology, community work and management related to vocational rehabilitation and adult independent living of persons with mental retardation.
- 4.2. Demonstrate skills to assess, plan, implement and evaluate vocational training programmes for persons with mental retardation individually and in groups, at various work settings.
- 4.3. Develop competences to contact employers, identify suitable jobs, prepare job analysis and learn possible trades in a professional manner so as to enable to train the persons with mental retardation in suitable jobs for placement
- 4.4. Acquire the basic skills to prepare jigs and fixtures and transform the technical know-how to develop suitable adaptive devices and TLMs for vocational rehabilitation and adult independent living
- 4.5. Demonstrate skills necessary for providing training to persons with mental retardation in adult living skills irrespective of their intellectual levels, in various environments such as home, community and work place.



**Diploma in Vocational Rehabilitation (Mental Retardation)  
DVR (MR)  
Course Structure**

**Theory Papers**

Paper	Title	Hours	Marks		
			Internal	External	Total
I	Mental retardation, Therapeutics and First Aid	80	25	50	75
II	Psychology applied to vocational training	80	25	50	75
III	Special education related to adult Independent living	80	25	50	75
IV	Vocational training and Placement aspects	80	25	50	75
V	Science and Technology applied to vocational training	80	25	50	75
VI	Community, legal and management aspects related to disability rehabilitation	80	25	50	75
<b>Total</b>		<b>480</b>	<b>150</b>	<b>300</b>	<b>450</b>

**Practical Papers**

Paper	Title	Hours	Marks		
			Internal	External	Total
I	Individualized vocational training programme	200	100	50	150
II	Group vocational training programme	145	100	50	150
III	Market Survey, Job analysis and Trades training	200	70	30	100
IV	Development of Adaptive Devices and Teaching Learning Materials.	200	100	50	150
Total		745	370	180	550

*See appendix .I for group 'A' theory subjects and appendix II for group 'B' practical subjects.*

**8.0.Training Methodology**

Theoretical subjects under group 'A' will be taught in class in close relationship with practical subjects and group 'B'. Teaching would generally take the form of discussions of problems arising out of actual experiences, supplemented by instruction and directed studies.

## **8.1. Lectures.**

Lectures will be delivered by the experts in the concerned area with case presentation, demonstration, slide projection, video and films.

## **8.2. Practicals.**

See appendix .2. Group 'B' Subjects

## **8.3 Agency visits**

As stated in practical paper.3.

## **8.4. Educational Tour**

Visits will be arranged to various centers for about 15 days. The trainee is expected to give the tour report.

## **9.0. Teaching Faculty**

See appendix.3.

## **10.0. Requirements of Location, staff, space**

### **10.1. Location**

A well-established Centre/ organization with

- An interdisciplinary team for teaching.
- Facility for vocational training & employment of persons with mental retardation
- A training workshop with necessary workshop equipments.

**The training Institute should arrange a minimum of 60 persons with mental retardation above 15 years of age for practicals.**

### **10.2.Space**

Office rooms, class rooms, library and reading room, workshop, toilets and accommodation for trainees.

### **11.0.List of furniture & materials**

See appendix – 4

### **12.0. Workshop equipments & tools**

See appendix – 5

### **13.0. Library books**

The list of books and reading materials necessary for theory and practical papers is given in appendix – 7

## **14.0 . Examination and Periodic evaluation**

### **14.1. Examination system**

For details see appendix. 6



## **14.2. Periodic evaluation**

The course coordinator shall conduct two terminal examinations during the training course in all subjects under Group 'A' and also prescribe certain specified assignments in each of the subjects under the group 'B'. Practical activities under group 'B' shall also be tested at least twice a year. The marks will be considered as internal marks for the final examination.

## **15.0. In-service training**

It is desired that faculty members, especially from the core faculty, should attend conferences, seminars, workshops, short term courses in view of updating their knowledge & skills.

**APPENDIX. 1**  
**THEORY PAPERS**

THEORY PAPERS: GROUP 'A'

**Paper.1**

**Mental Retardation, Therapeutics and first aid**

Total hours: 80

**On completion of this topic, the trainee shall:**

1. *Explain the terms impairment, disability & handicap and their linkage.*
2. *Define mental retardation and associated conditions.*
3. *Describe the importance of therapeutic intervention in vocational training and employment of persons with mental retardation*
4. *Demonstrate the basic first aid skills during accidents and emergencies.*

**1.1 Basic Concepts on disability.**

**20 hours**

1. Normalcy, impairment, handicap – definitions and differences, History and status of mental retardation in India.
2. Mental retardation – definition – classification, characteristics and potentialities.
3. Causes and preventive measures
4. Associated conditions and intervention strategies:  
Epilepsy, Cerebral palsy, Multiple handicap, Autism & Attention Deficit  
Hyperactive disorder, mental illness
5. Misconceptions and attitudes

**1.2. Kinesiology**

**20 hours**

1. Definition – science of human motion
2. Principles of body movements, lever systems, Laws of motion
3. Musculo – skeletal and Nervous systems
4. Neuro-physiology and range of movement and muscle power
5. Basic postures – importance of postures in work set up.

**1.3. Fatigue management**

**10 hours**

1. Definition, meaning, causes of fatigue
2. Fatigue reduction technique
3. Relaxation techniques
4. Management of external factors of fatigue.

**1.4. Therapeutics in vocational rehabilitation**

**20 hours**

1. Physiotherapy – definition – aims, objectives and scope in vocational rehabilitation of persons with mental retardation
2. Speech Therapy- definition, aims, Objectives, and scope in vocational rehabilitation of persons with mental retardation
3. Occupational therapy – definition – aims and objectives.
4. Sensory – motor skills, basic hand and leg functions, eye-hand coordination.
5. Cognitive- perceptual skills – definition, basic skills, application, improvement strategies for adults with mental retardation.

## **1.5 First Aid**

**10 hours**

1. Aims, scope and explanation of terminology
2. Hemorrhages and fractures
3. Burns, Scalds and electric accidents
4. Injuries specific to workshops
5. Precautions during emergency situations

## **Paper. 2**

### **Psychology applied to vocational Rehabilitation**

Total hours: 80

*On completion of this paper the trainee shall:*

1. *Define and state the importance of various aspects of psychology in vocational training.*
2. *Describe the development of social behaviour through various stages of life.*
3. *Apply Behaviour modification technique*
4. *Use creative thinking in vocational training and employment*
5. *Learn the importance and techniques of vocational guidance and Counselling.*

#### **2.1. Psychology - basic concepts 16 hours**

1. Psychology – definition, aims, scope with reference to mental retardation
2. Motivation – definition, basic structure, types
3. Attention - definition, factors affecting attention, problem.
4. Perception – definition – types of perception
5. Learning – definition – process of learning theories – Classical and operant conditioning

#### **2.2. Psychological Assessment 16 hours**

1. Intelligence tests – concept, commonly used tests
2. Adaptive behaviour scale – concept, commonly used scales.
3. Aptitude and interest inventories – concept – commonly used inventories.
4. Personality tests - concept commonly used tests.
5. Importance of psychological assessment in vocational training.

#### **2.3. Behaviour Modification 16 hours**

1. Behaviour modification – Definition, factors, behaviour problems in mental retardation
2. Development of social behaviour (childhood, Adolescence, adult hood)
3. Techniques for increasing desirable behaviour
4. Techniques for decreasing undesirable behaviour
5. Development of sexuality - sex education for persons with mental retardation ethical aspect.

#### **2.4. Guidance and Counselling 16 hours**

1. Guidance & counseling – difference between guidance & counselling
2. Forms of Counselling
3. Process and techniques of guidance and counselling, Community, Individual, family counselling
4. Counselling for vocational rehabilitation

#### **2.5. Creative thinking 16 hours**

1. Thinking - Process, Types, Practice
2. Techniques for Development of creative thinking
3. Brainstorming
4. Team thinking
5. Importance of Creative thinking in vocational training & employment.

## **Paper.3.**

### **Special Education Related to Adult Independent Living**

**Total hours: 80**

On completion of this topic, the trainee shall:

1. *Acquire knowledge on special education required to train persons with mental retardation in vocational training and adult independent living skills.*
2. *Identify the work readiness skills and prepare the Individualized Vocational Transition Plan.*
3. *Demonstrate skills to provide training in adult independent living skills for those who are not capable of vocational placement.*

#### **3.1 Basic concepts of special education** **16 hours**

1. Special education – historical perspectives.
2. Special education- aims & objectives
3. Educational Classification of mental retardation.
4. Service delivery system – Deno's Cascade.
5. Recent trends: normalization, integration, Inclusion

#### **3.2 Principles of skill training** **16 hours**

1. Principles of teaching and stages of learning
2. Individualized Education Programme.
3. Techniques of skill training – task analysis , shaping , chaining , fading.
4. Criteria for grouping and group management
5. Curriculum for prevocational group.

#### **3.3. Work readiness / generic skills.** **16 hours**

1. Work- readiness / generic skills.
2. Components – personal, social, communication, academic, domestic, independent travel
3. Work- readiness skills assessment.
4. Training and transfer of work- readiness skills to work settings
5. Work- behaviour – concept, importance, development of work behaviour

#### **3.4. Transition from school to work.** **16 hours**

1. Transition – definition – need – models.
2. Preparation of Individualized Vocational Transition Plan.
3. Instructional technology, Preparation of TLMs.
4. Training in various settings
5. Evaluation – definition – purpose, types.

#### **3.5. Adult independent living** **16 hours**

1. Personal and social skills training for persons at various intellectual levels, home bound programmes.
2. Functional academics
3. Domestic skill training for employable and non- employable persons.
4. Home management.
5. Recreation and Leisure time skills.

**Paper IV**  
**Vocational training and placement aspects**

**Total hours: 80**

*On completion of this topic, the trainee shall:*

1. *Explain the basic concepts, approaches and current trends in vocational rehabilitation.*
2. *Demonstrate the ability to conduct vocational assessment, identify and match suitable jobs and train persons with mental retardation in various settings.*
3. *Describe various types of employment and related activities to train place the persons with mental retardation.*

**4.1. Vocational Rehabilitation**

**16 hours**

1. Historical perspective, employment status in the country
2. Basic concepts – habilitation, rehabilitation, vocational rehabilitation- Definition, differences.
3. Current trends in services – DRC, VRC, DDRC, CRC, NPRPD and special employment exchanges.
4. Approaches – traditional, Contemporary
5. Attributes of vocational instructor.

**4.2. Vocational assessment and evaluation**

**16 hours**

1. Definition, purpose, types
2. Functional vocational assessment, definition , purposes
3. Tools for vocational assessment
4. Work behaviour assessment, types of work behaviour
5. Evaluation, definition, purpose, types

**4.3. Job Identification**

**16 hours**

1. Criteria for job identification, National Classification of Occupations
2. Employer – expectations, perception, Job development, organized and unorganized sector
3. Job analysis – definition, purpose – conducting job analysis.
4. Job matching & Job training/induction
5. Job placement & follow up.

**4.4. Types of employment**

**16 hours**

1. Open employment – definition, purpose, benefits and limitations
2. Supported employment – definition, purpose , types benefits and limitation.
3. Sheltered workshop – definition, purpose, benefits and limitation.
4. Types of vocations – rural, urban, domestic, skilled/semiskilled/ unskilled.
5. Self employment- definition, purpose, benefits and limitations

**4.5. Employment related activities.**

**16 hours**

1. Self advocacy – definition – development, purpose & formation
2. Recreation and Leisure time activities
3. Money management
4. Inter personal relationships and work adjustment skills.
5. NHFDC and other funding agencies

## PAPER V

### APPLICATION OF SCIENCE AND TECHNOLOGY IN VOCATIONAL TRAINING AND EMPLOYMENT

**Total hours: 80**

After completing this paper the trainee is expected to:

1. *Describe workshop tools & machinery and explain the importance of man – machine linkages in work situations and design simple jigs and fixtures.*
2. *Interpret simple engineering drawings in first and third angle projections and explain the concepts of environmental restructuring.*
3. *Be conversant with the technological aspects to be considered in the design of suitable workstations for the persons with mental retardation.*

#### **5.1. Elements of fabrication**

**16 hours**

1. Elementary Metrology and workshop practice – metric and non metric systems, precision and non-precision measuring tools & uses.
2. Wood, metals and plastics: characteristics, classification & uses.
3. Cutting tools and bench work, joining methods and fasteners.
4. Finishing techniques, safety devices and importance
5. Elements of engineering drawing, interpretation, views and projections.

#### **5.2. Holding & Guiding devices/ jigs & fixtures**

**16 hours**

1. Technology and its application in life and productivity at work.
2. Jigs: definition, uses, designing procedures.
3. Fixtures: definition, uses, designing procedures.
4. Simple tool guiding elements.
5. Modification of simple tools and inspecting tools - need and process.

#### **5.3. Designing and setting up of workstations.**

**16 hours**

1. Determining client, product, spatial, infrastructure requirements, costing, productivity & safety.
2. Technology supported workstations in various conditions – sheltered, open, urban & rural.
3. Application of jobs simplifications, process of task analysis, developing jigs and fixtures, tool tins.
4. Elements of electrical, electronics and information technology
5. Application of electro – mechanical switches

#### **5.4 Environmental Restructuring**

**16 hours**

1. Human factors in engineering – objectives, approaches of some common system.
2. Cognitive, spatial and architectural barrier free environment.
3. Environmental restructuring – importance, identifying special needs and altering living and working environment.
4. Principles of motion economy – operational criteria of physical activity and positioning movements.
5. Task analysis to design workstations.
6. Basics of ergonomics

#### **6.5. Introduction to Industrial engineering**

**16 hours**



1. Assembly flow chart – symbols, directions & preparation.
2. Time study – definition & principles, advantages, methods and operation.
3. Pricing – rate setting
4. Manufacturing process – engineering & non engineering process.
5. Requirements for workstations – product, client, spatial, infrastructure and costing requirements.

## Paper. VI

### Legal, Community and Management Aspects related to Disability Rehabilitation Hours: 80

On completion of this topic, the trainee shall:

- 1. Acquire the necessary information on Constitutional provisions related to disability rehabilitation*
- 2. Demonstrate skills to utilize the community resources for vocational rehabilitation of persons with mental retardation.*
- 3. Describe the importance of management skills in organizing vocational training and employment programmes*

#### **6.1. Legislation related to Disability rehabilitation      16 hours**

1. Rehabilitation Council of India Act.
2. Persons with disabilities Act.
3. National Trust Act
4. Labour related Acts
5. Society's registration Act, Setting up of co-operatives, trust, self-help groups

#### **6.2. Recent trends.      16 hours**

1. Biwako millennium frame- work.
2. UN declarations
3. Social Benefits & Concessions
4. NHFDC and other employment schemes: SISI,DIC,DRDA,NABARD
5. Poverty alleviation schemes

#### **6.3. Community aspects      16 hours**

1. Establishing community network, collaborating with government and non government agencies
2. Creation of awareness among the community – organizing programmes, use of massmedia.
3. Community – based rehabilitation – definition, purpose – models.
4. Community based – vocational training and rehabilitation Tapping community resources to organize vocational rehabilitation programmes

#### **6.4. Management aspects      16 hours**

1. Management – definition – Scope in disability rehabilitation
2. Administration – definition – Scope in vocational rehabilitation
3. Importance of Human resource and material management
4. Leadership skills
5. Institutional planning & management

## **6.5 . Elements of accounting**

**16 hours**

1. Need for account keeping
2. Book of accounts.
3. Bank Reconciliation
4. Computing wages

**APPENDIX.2**  
**PRACTICAL PAPERS**

**PRACTICAL PAPERS- GROUP “B”**

**Diploma in Vocational Rehabilitation  
(Mental Retardation)  
DVR (MR)**

**Practical Papers**

1. Individualized vocational training programme
2. Group vocational training programme
3. Market Survey, Job analysis and Trades training
4. Development of adaptive devices and teaching Learning Materials

**Practical.1. Individualized Vocational Training Programme**

On completion of this practical, the trainees shall:

1. *Conduct assessment to find out the current level of functioning of adolescents/ adults with mental retardation by selecting appropriate assessment tool, after collecting background information on a detailed case history format.*
2. *Develop individualized independent living and vocational training programmes according to the needs of adolescents and adults with mental retardation and implement the programme by using appropriate teaching learning materials and adaptations in various settings.*

**Procedure**

- Each trainee will be assigned 3 students with mental retardation above 15 years of age, functioning at mild, moderate and severe levels from different socio-economic background, residing in urban/rural/slum areas.
- The trainee will collect background information of the 3 students on a detailed case history format including family history, school history and other significant information from parents.
- The trainee will select the appropriate assessment tools (given below) to find out the current level of functioning.
- Individualized training programme will be developed to train in work readiness skills such as eye hand coordination, personal, social, functional academics, domestic and recreational areas.
- Suitable jobs will be selected for each student by filling the NIMH vocational profile and Job analysis /Individualized vocational Curriculam will be prepared.
- Suitable teaching materials/ adaptive devices will be developed and the programme will be implemented in an appropriate environment / work station.

- Formative and Summative evaluation results will be recorded.
- The final record of the 3 students will be submitted for internal and external evaluation.

If the student needs any of the services such as speech therapy, behaviour modification and medical services, the trainee will seek the assistance of these professionals while working with the student.

If the student has severe mental retardation and any other associated conditions and not ready for vocational training, appropriate training should be planned and implemented for adult independent living

**Note:**

The master trainer is expected to seek permission from the parents before allotting their children for practical.

The list of assessment tools the trainee may use shall include:

- Prevocational level check lists one and two (FACP)
- Madras developmental programming system(MDPS)
- Generic skills assessment checklist –Vocational Assessment and programming system: NIMH-VAPS
- BASIC – MR – Published by NIMH.

## Practical. 2

### Group vocational training programme

On completion of this practical the trainee shall:

1. *Identify adult living skills/ work readiness skills/ work skills appropriate to the level of students in a group and plan a programme by selecting aims and objectives, preparing TLMs and adaptations and convert into an instruction to impart skills in adolescents/ adults with mental retardation.*
2. *Evaluate the effect of instruction and modify the methods needed.*

#### Procedure

The trainee is expected to develop and conduct 20 group vocational training programmes under supervision.

- Prevocational / Vocational skills training 10
- Adult living skills / functional academics 5
- Recreational / leisure time activities 5

The student trainee will be provided groups of adolescent /adult persons with mental retardation at various intellectual levels.

Based on the current level of functioning of the groups, the trainee is expected to prepare a programme for 45 minutes to one hour. After the approval of the guide, the programme will be implemented with the help of appropriate learning aids/ equipments with adaptation.

The guide/ Supervisor/ Observer evaluates the programmes and provides internal marks.

The 20 group vocational training plans with TLMs and adaptations will be submitted for internal and external evaluation.

#### Note:

The trainee shall observe 2 demonstrations and 5 peer instruction sessions and submit the report.

## Practical. 3

### Job survey, Job Analysis and Trades training

On completion of this practical, the trainee shall:

1. *Visit various job sites, contact employers, identify suitable jobs for persons with mental retardation at various functional levels and suggest job requirements for the identified jobs.*
2. *Learn a minimum of 6 trades in a professional manner so that the student trainee will be able to organize and train the persons with mental retardation in these trades.*

#### Procedure:

The trainee is required to:

Visit a minimum of 3 job sites, list out the suitable jobs and prepare the requirements of the job.

Select a minimum of 6 trades, which can be performed by the mild/moderate/ severe persons with mental retardation in various settings such as:

- home based
- rural based- Agro-based, Cottage Industry

- urban based

( For example assembling jobs, screen printing, lamination, mushroom Culture, food items preparation, printing technology, paper technology and so on).

The trainee should prepare the job analysis and learn the selected trades in a professional manner, which will be evaluated by the internal and external examiners by asking to demonstrate the task.

#### **Note**

The job survey proforma 1&2 given in the guide, Transition from school to work, NIMH Publication/ any other relevant format, can be used to collect information and submit the record.

### **Practical 4.**

#### **Development of Adaptive devices and Teaching Learning Materials**

*On completion of this practical, the trainee shall:*

1. *Acquire the basic skills to use the simple tasks to prepare jigs and fixtures.*
2. *Convert this technical know – how to prepare adaptive devices and teaching learning materials for vocational and adult independent living skills training.*

#### **Procedure:**

Each trainee is expected to:

- 1 Prepare 5 jigs and fixtures with drawing
- 2 Apply these principles and skills to develop a minimum of 5 adaptive devices and 10 teaching learning materials.
- 3 Prepare a brief report about the developed adaptive devices and TLMs ie: the title, purpose, the method of preparation, raw materials, cost of production and guide lines to use.



## **Practicals: Guide Lines for Final Examination System**

### **Paper I: Individualized vocational Training Programme**

Based on the record submitted for the individualized vocational training programme, viva will be conducted by the internal and external examiners. Internal marks will be given based on the regular work done by the student trainee as per the time schedule.

### **Paper 2: Group Vocational Training programme:**

A topic related to adult living/ vocational training will be allotted to the trainee by lot system, 3 days ahead of the examination.

The trainee will prepare the programme for 45 minutes to 1 hour duration with appropriate aids and appliances and implement it in a group of 8 to 12 adolescents / adults with mental retardation before the internal and external examiners. After the class, viva voce will be conducted and marks will be given.

### **Paper. 3: Market Survey, Job Analysis and Trades Training**

Based on the market survey and job analysis record, viva voce will be conducted by the external and internal examiners. Internal marks will be given by evaluating the performance during survey and preparation and submission of records as per the time schedule.

The proficiency of the student trainee in trade training also will be checked through questions or demonstration of the trade if possible.

### **Practical 4. Development of Adaptive Devices and Teaching learning materials**

-A device/TLM to be prepared on topic allotted by lot

-Each trainee is required to exhibit the adaptive devices and TLMs with descriptions prepared during the training period.

-The marks will be given based on the exhibits and viva conducted by the internal and external examiners.

**Diploma in Vocational Rehabilitation (Mental Retardation)  
DVR (MR)**

**Examination**

**Theory Papers**

Paper	Title	Hours	Marks		
			Internal	External	Total
I	Mental retardation, Therapeutics and First Aid	3	25	50	75
II	Psychology applied to vocational training	3	25	50	75
III	Special education related to adult Independent living	3	25	50	75
IV	Vocational training and Placement aspects	3	25	50	75
V	Science and Technology applied to vocational training	3	25	50	75
VI	Community, legal and management aspects related to disability rehabilitation	3	25	50	75
	Total		150	300	450

**Practical Papers**

Paper	Title	Hours	Marks		
			Internal	External	Total
I	Individualized vocational training programme	15 Mnts viva Based on practical records	100	50	150
II	Group vocational training programme	1 hour/class based on the topic allotted by lot & viva	100	50	150
III	Market Survey, Job analysis and Trades training	Demonstration of trade & viva	70	30	100
IV	Development of adaptive devices and teaching learning materials	3 hours adaptive device preparation & 15mts viva	100	50	150
			370	180	550

**Recommended books for practicals:**

Department of Special Education (1994). Functional Assessment Check list for Programming, NIMH, Secunderabad.

Jayachandran and Vimala,V (1983). Madras Developmental Programming System,Vijay Human Services,Chennai.

Peshawaria, R &Venkadesan, S (1992). Behavioural Assessment Scales for Indian Children with mental Retardation,NIMH, Secunderabad.

Thressiakutty, A.T. (1998) Vocational Assessment & Programmig System. NIMH,Secunderabad.

Thressiakutty, A.T. Rao,G.L. (2001)Transition of persons with mental retardation from School to work: A Guide, NIMH, Secunderabad.

Thressiakutty, A. T. Rao, G.L. (2001, 2002, 2003). Curriculum for vocational Education, Transition of persons with mental retardation from School to work, NIMH, Secunderabad.

Thressiakutty, A.T (1998) Open employment Opportunities For Persons with mental retardation in the Departments of Railways and post and Telecommunication.

Myreddy,V, & Narayan,J.(1998)Functional Academics, NIMH, Secunderabad.

**APPENDIX. 3**  
**TEACHING FACULTY**

## Appendix.3.

### Teaching Faculty

#### 1.0. Core Faculty

1.1. Core faculty (Positions 1 & 2 Faculty members) at each center will consist the following staff.

1. Faculty in Vocational training /Special Education
2. Faculty in Psychology

#### Faculty position 1 (Faculty in vocational training/ Special Education)

##### Essential qualification

Master degree in social science with DVTE (MR)/ DSE.MR, with 2 years experience in the field of mental retardation.

#### For Position 2 Faculty in Psychology (Full Time):

**Essential qualifications:** Master degree in Psychology/ Rehabilitation Psychology with two years experience of working in the area of Mental Retardation.

**Note:** One amongst the full time core faculty will serve as Course Co – Ordinator of the course.

#### Position 3. Workshop Supervisor (full time)

##### Essential qualifications:

Preferably, Diploma in engineering trades with two years of experience

OR

NCVT (ITI) certificate in engineering trade with 5 years experience.

##### Desirable qualifications:

Experience of working in the area of disability rehabilitation for at least one year.

#### 1.2. Visiting Faculty

##### Theory Paper I:

**Unit 1&5:** MBBS preferably with DCH/ DPM, BSC Nursing with 2 years experience

**Unit. 2&4.** Degree in Physiotherapy, Occupational therapy, Speech Therapy with 2 years experience

**Theory Paper II:** MA in Psychology, M. Phil (Rehabilitation Psychology) with 2 years experience in Disability rehabilitation

**Theory Paper 3&4 Practical 1 & 2.** Master degree in Social Sciences with M.Ed. in Special Education (MR)/DSE (MR) with 2 years experience

**Theory Paper 4, practical paper. 2& 3** Master Degree in social sciences with DVTE (MR)/DSE(MR)

**Visiting faculty:** Masters Degree in social sciences with 5 years of experience in disability rehabilitation:

Preferably Principals/ senior instructors from ITIs and/or VRCs/ Employment officers/ faculty from financial institutions and service institutions.

**Theory Paper 5,practical.4:** B.E. (Mechanical Engineering) with 2 years experience or Diploma in Mechanical Engineering with 5 years experience

**Theory Paper 6:** Master Degree in Disability Rehabilitation Administration/ MA in Social Work with two years experience, Master Degree in Rehabilitation Science, Personnel from Business Management and accountancy.

**APPENDIX. 4 & 5**

**FURNITURE AND WORKSHOP EQUIPMENTS**

## Appendix.4.

### Furniture For Staff

Full time staff	Tables and chairs
Visiting staff	Tables and chairs
Data Entry Operator-cum-Accountant	Table, chair and cupboards
Peon	Stool
Furniture and Equipment for the office	Cupboard (Steel)
	Filing Cabinet
	Phone
	Fans (ceiling, table, exhaust)
	Fire extinguisher
	Computer configuration-Pentium IV
	Office tables and chairs
	Class room furniture and equipment
	Lecture chairs with tables
	Over head projector (O.H.P)and L.C.D Projector
	Cassette player with recorder
	Psychological test material
	Conference table for reading room

### Workshop Equipment And Tools

#### A) Essential Equipment

01. Pillar/Bench drill
02. Hand Power drills
03. Bench vice
04. Fitting tools
05. Demonstration Jigs & fixtures
06. Cutting tools
07. Fitters bench
08. Marking & measuring tools etc.
09. Carpenter's bench
10. Carpentry tools



## Appendix.5.

### Workshop Equipments And Tools

#### Essential Metal Working/Serviceing

1. Work bench	2 mtrs. x 1mtrs. x 1mtrs Ht	-	2 nos
2. Bench vices-	4"	-	4 nos
3. Drilling machine-	20 mm	-	1 no
4. Shearing machine-	3 mm Cap	-	1 no
5. Bench Grinder (double ended)	15 c	-	1no
6. Anvil -	50 Kgs	-	1 no
7. Hand Drilling machine -	1/4"	-	2 nos
8. Set of Files			
a) Flat Coarse	25 cm	-	6 nos
b) Fine	25 cm and 15 Cm	-	6 nos
c) Medium	15 cm	-	6 nos
d) Half round Coarse	15 cm	-	3 nos
e) Round file Coarse	15 cm	-	3 nos
f) Round file Fine	15 cm	-	2 nos
g) Square file	15 cm	-	2 nos
h) Needle files	15cm	-	1 set
9. Tap wrench		-	2 nos
10. Die stocks		-	2 nos
11. Hacksaw frames		-	3 nos
12. Marking tools (each)		-	4 sets
(Scales/Compasses/measuring tape)			
13. Hammer -	1/2 kg (Ball pean)	-	6 nos
14. Hammer -	1 kg (Ball Pean)	-	6 nos
15. Punches/Scribers(assorted)		-	6 nos
16. Inside Caliper -	5 cm		
17. Outside Caliper -	15 cm	-	6 nos
18. Divider -	15 cm	-	6 nos
19. Try – Square		-	6 nos
20. Chisels -	5/10/15 wide	-	3 nos each
21. Oil can	0.5 liter	-	1 no
22. Cutting Plier	20 cm	-	2 nos
23. Nose plier	15 cm	-	2 nos
24. Screw driver	20 cm	-	2 nos
25. Connector Screw driver	10 cm	-	2 nos
26. D E Spanner	6 mm to 20 mm	-	1 set
27. Ring Spanner	6 mm to 20 mm	-	1 set
28. Vernier Caliper	15 cm	-	1 no
29. Vernier height guage-		-	1 no
30. Bevel protractor		-	1 no
31. Pitch Guage		-	1no
32. Micro meter	0 - 25 mm	-	1 no
33. Pipe wrench	30 cm	-	1 no
34. Tin cutting Scissors	450 mm	-	1 no
35. Multi -meter (Digital)		-	1 no
36. Volt- meter AC and DC		-	1no
37. Amp meter AC and DC		-	1no
38. Soldering iron rod		-	4no
39. Line tester		-	6nos
40. Set of Screw drivers (Taparia)		-	1 set

**Essential Carpentry Work**

1. Wood cutting Saw	45 cm	-	6 nos
2. Gross Cut saw	30 cm	-	2 nos
3. Wood marking tools - Gimlet		-	6 sets
4. Marking Gauge		-	6nos
5. Wood files - Rasp - 300		-	6 nos
6. a) Chisels -15, 20, 25, 40		-	3 nos
	(each)		
	b) Oil Stone -( 20 cm)	-	2 nos
7. Wooden Mallets		-	6 nos
8. Claw hammers -1/2 Kgs		-	6 nos

**Optional**

Workshop:	4 M x 6 M floor space (min)
Others:	Racks 2/Cabinets 2 ( for tools/models) Table/chair/book for instructor (Optional)
Workshop Store:	For storing raw materials 3 M x 2 M
Lighting:	Work space to be lit by 40 w. tube lights (3 pieces) Pedestal fans - 2 Pieces (optional) Bench and drill to have gooseneck fitted lamps

**Drawing Office Equipment**

Drawing Boards	-	6 nos
Drawing Instruments	-	6 sets

In addition to the above mentioned equipments, provision should be made to equip their training centre with the tools and equipments for the trades offered by that centre: for example as cited in practical paper 3 : 6 trades.

**APPENDIX. 6 & 7**  
**EXAMINATION AND MODEL QUESTION**

### Examination

#### 1.0.Examination system

1.0.A uniform pattern of evaluation will be adopted and the final examination will be held simultaneously at all the training centres.

1.1. Candidates who fail in the examination can reappear either in supplementary examination or in the next annual examination for which marks for internal assessment of the first attempts will be carried over

1.3.No Candidate shall be permitted to appear for the examination more than thrice and after a period of 3 years from the date of admission.

#### 2.0. Attendance

A minimum attendance of 80% during the academic term of the course shall be necessary before taking the examination

#### 3.0. Periodical evaluation

The Candidate will be periodically evaluated in all the practicals. All the records will be considered as a part of internal assessment.

#### 3.1. Internal assessment

The internal external proportion has been kept in theory 1:2 in practical 2:1 approximately to avoid decimals.

3.2. The internal marks will be added to the respective subjects in the annual examination. The results shall be declared on the basis of total attained.

#### 4.0. Scheme of Examination

See Table .2

The final evaluation will be based on theory and practicals including submission & presentation, total bearing 1000 marks for the purpose of declaring results.

#### 5.0. Board of examiners

6.1.The examination will be conducted by a board consisting of 3 experts with RCI concurrence.

6.2.The board of examiners will be an advisory body for the following functions.

- (a) Co – ordinate setting of the theory & Practical Papers
- (b) Selecting external examiners
- (c) Coordinate compilation of results.

The board shall be assisted by the panel of examiners, both internal and external examiners, appointed for the purpose

#### 6.3.External examiners.

External examiners for practicals shall at least understand the regional language of the State where the training centre is located.

## **7.0. Minimum for pass**

**7.1.** Candidate shall be declared to have passed if he/ she obtains 40% or more marks in both internal and external evaluation in

- (a) Each of the theory paper
- (b) Each of the practical examinations

**7.2.** A candidate who obtains 70% and above in the aggregate (700 or above out of 1000) shall be declared to have fulfilled the requirements for conferring of the Diploma in Vocational Rehabilitation (Mental Retardation).

**7.3.** A candidate who scores between 60% and 69.9% of marks in the aggregate of the above (600/1000) shall be declared to have fulfilled the requirements for conferring of Diploma in Vocational Rehabilitation (Mental Retardation).

## **8.0. Appearance for each examination**

**8.1.** A candidate shall appear for all the theory and practical papers when appearing for the first time.

**8.2.** A failed candidate when reappearing shall be re– examined in a specific paper of theory or practicals in which he/ she has failed.

## **9.0. Types of questions**

**9.1.** The examination paper would encompass three types of questions namely essay type, short type answers and objective type (very short answer type) with weightage of 40%, 40% & 20% respectively. Model question, see appendix.8

## **10. Medium of language for examination**

**10.1.** The candidate who desires to write the examination in their regional language will be allowed to do so. In such case the interpreters have to be identified to help the examiners.

## **11.0. Award of Diploma**

**11.1** Based on the results of the examination, successful candidates will be awarded diploma in Vocational Rehabilitation (Mental Retardation)

## **Appendix. 7**

### **Diploma in Vocational Rehabilitation ( Mental Retardation)**

#### **Model question Paper**

#### **Paper.4. Vocational training and placement aspects**

**Time: 3 hours**

**Total: 50 marks**

#### **1. Essay questions**

**10x2=20**

1. a. Compare various aspects of traditional and contemporary approaches to vocational training and employment of persons with Mental retardation

**Or**

- b. Explain functional vocational Assessment

2. a. Define supported employment. Explain 2 supported employment models with example.
- Or**
- b. Define sheltered employment. Explain the merits and demerits of sheltered employment.

**2. Write short notes on any four of the following** **5x4=20**

1. District Rehabilitation Centre
2. Self advocacy of persons with mental retardation
3. Work Behaviours
4. Adult independent living skills.
5. Job analysis
6. Domestic vocations.

**3. Write very short answers in one or two sentences** **1x10=10**

1. Define vocational Rehabilitation
2. Two services provided by VRC
3. Two advantages of self employment
4. Two examples of semi skilled vocations for persons with mental retardation.
5. Two recreational activities for adults with mental retardation.
6. NPRPD – expand
7. Main objective of NHFDC.
8. Training in simulated setting
9. Name two vocational assessment tools.
10. State the difference between assessment and evaluation.

**APPENDIX. 8**

**LIBRARY BOOKS**

**(Paper wise reading material)**

## References / Suggested Readings

### Paper I – Mental Retardation, Therapeutics, and First-Aid

- Andrews, I (1997). The A-Z of first aid. What to do in an emergency. Mumbai: Blitz.
- Ann Thomson, Alison Skinner, Joan Piercy, Tidy's Physiotherapy, 12<sup>th</sup> Edition, Varghese Publishing House.
- Baroff, G.S. (1986). Mental retardation – Nature, causes and management (2<sup>nd</sup> Edition). Washington: Hemisphere Publishing corporation.
- Batshaw, M.L. & Parret, Y.M. (1986). Children with handicaps. A medical Primer London: Paul Brookes.
- Black, E.E. & Nogel, D.A. (1975). Physically handicapped children: An atlas for teachers: New York; Grune & Stratton.
- Carrie M. Hall, Lori Thein Brody, Therapeutic Exercises – Moving Toward Function, Lippincott Williams & Wilkins, 1999.
- Cogher, L. et.al (1992). Cerebral palsy: The child and young person. London Chapman & Hall.
- Compilation of Readings in Special Education by The Spastics Society of Tamilnadu.
- Crawford, M.E., Mendell, R., (1987). Therapeutic recreational and adapted physical activities for mentally retarded individuals , prentice – Hall New Jersey.
- Datta, A.K. Principles of General Anatomy, 2<sup>nd</sup> Edition, K.P Basu Publishing Company, 1980.Dena Gardiner, M. The Principles of Exercise Therapy, Fourth Edition, C.B.S Publishers and Distributors.
- Fraser, W.I., Mac Gillivray, R.C. & Green, A.M. (1991). Halla's caring for people with mental handicaps. Oxford: Butter worth Heinmann.
- Ganong W. F., Review of Medical Physiology, 16<sup>th</sup> Edition, Prentice Hall International Inc.
- Gardiner, M.D. (1985). The principles of exercise therapy. Delhi; CBS Publishers & Distributors.
- Gupta, L.C. (1995). First aid. New Delhi: Jaypee Brothers Medical Publications Pvt. Ltd.
- Jain, K.K. (1994). General anatomy for students. New Delhi: Jaypee Brothers Medical Publications Pvt. Ltd.
- John Bullock, Joseph Boyle and Michael B Wang, PHYSIOLOGY, National Medical Series from Williams and Wilkins, 2<sup>nd</sup> Edition, 1991.
- Kiernan, C., Reid, B. & Goldbart, J. (1987). Foundations of communication and language; course manual. Manchester: Manchester University Press.
- Maheshwari, M.C. All you want to know About EPILEPSY, The National Book Trust, India, 1998.
- Manual for Training of PHC Medical Officers by Rehabilitation Council of India, 1999.
- Mervyn Fox, A. An Introduction to Neuro-Developmental Disorders of Children, National Trust, February 2003.
- Michael Webb, Roy Scott, Sir. Peter Beale, First Aid Manual, 7<sup>th</sup> Edition, Dorling Kindersley.



- Mills, D., & Fraser, C. (1988). Therapeutic activities for the upper Limb, British library cataloging in publication Data, Southamptor.
- Moffat, D.B. (1993). Lecture notes on anatomy. London: Blackwell Scientific Publications.
- Panda, K.C. Education of Exceptional Children, A basic text on the Rights of the Handicapped and the Gifted., Vikas Publishing House Pvt Ltd., Reprint 2004.
- Puri, M & Sen, A.K. (1989). Mentally retarded children in India. New Delhi: Mittal Publications.
- Ratan, V. (1993). Hand book of human physiology. New Delhi: Jaypee Brothers Medical Publications Pvt. Ltd.
- Sen, A (1992). Mental handicap among rural Indian children. New Delhi: Sage Publications India Pvt. Ltd.
- Shanley, E. (1986). Mental handicap. A hand book of care. Edinburgh: Churchill Livingstone.
- Sodenberg, G.L. (1997). Kinesiology: application to pathological motion. (second edition). Baltimore: Williams and Wilkins.
- Stanley H. K., (1988). NEUROANATOMY, Stanley H. Kaplan Educational Center Ltd.
- Study Notes on Paper I (Mental Retardation Nature and Needs), D.S.E (M.R), Secunderabad, National Institute for the Mentally Handicapped.
- Subba Rao, T.A. (1992). Manual on Developing Communication Skills in Mentally Retarded Persons. NIMH, Secunderabad.
- Towards Inclusive Communities, The Spastic Society of Tamilnadu, First Print 2000.
- Trombly, C.A., (1995). Occupational Therapy and Physical Dysfunction, 4<sup>th</sup> Ed, Baltimore : Williams & Wilkins.
- Turner, A., Faste, M., Johnson, S.E., (1999). Occupational Therapy and Physical Dysfunction , Churchill Livingstone, London.
- DVTE (MR) Manuals (2006), Published by Rehabilitation Council of India.

## **Paper II. Psychology Applied to Vocational Training**

- Alberto, P.A. & Trontman, A.C. (1995). Applied behaviour analysis for teacher (4<sup>th</sup> edition). London: Merrill Publishing Company.
- Alfred M Freeman, Harold I Kaplan and Benjamin J Saduck – Comprehensive Textbook of Psychiatry II.
- Baron, R.A. & Byone, D. (1995). Social Psychology. New Delhi: Prentice Hall of India.
- Berk, L.E. (1993). Infants, children and adolescents. Boston: Allyn end B.
- Bhatia, H.R. (1994). General Psychology. New Delhi : Oxford & I.B.H.
- Clifford. T. Morgan, Richard. A. King, John. R. Weisz and John Schopler – Introduction to Psychology.
- Dave, T. (1991). The basic essentials of counselling Vol. I to III. New Delhi: Streling Publishers Pvt. Ltd.
- Desair, A.N. (1990). Helping the handicapped: Problems and Prospects. New Delhi – Ashish Publishing House.
- Dubey, E. Kothawala, G. & Pillai, M (Eds.) (1998). Sexuality and the mentally handicapped. A manual for parents and teachers. Mumbai : Family Planning association of India and Association for the Welfare of Mentally Handicapped.
- Edgar Vinacke, W. – The Psychology of Thinking.
- Elizabeth B Hurlock – Child Development.
- Ewa Zarkowska and John Clements – Problem Behaviour in the People with Several Learning Disabilities.
- Hurlock, E.B. (1992). Developmental Psychology (Fifth edition). Mumbai : Tata MC Graw Hill Publishing Co.
- Hurlock, E.B. (1994). Personality development. Mumbai : Tata MC Graw Hill Publishing Co.
- Kagan, J & Segal, J (1991). Psychology. An introduction (7<sup>th</sup> edition). Philadelphia : Harcourt Brace Jovanovich college publishers.
- Keenan, K. (1996). Management guide to solving problems. New Delhi : Pustak Mahal.
- Kochar, S.K. (1993). Guidance and counselling in college and universities, New Delhi: Sterling Publishers Pvt. Ltd.
- Madhavan, T. et.al (1989). Mental Retardation : A manual for psychologists. Secunderabad : National Institute for the Mentally Handicapped.
- Mangal, S.K. (1994). Abnormal Psychology (1994). New Delhi : Sterling Publishers Pvt. Ltd.
- Margaret W Maltin – Cognition.
- Matson, J.L. (1990). Hand book of behaviour modification with mentally retarded. New York : Plenum Press.
- Morgan, C.T. (1995). Introduction to psychology : Mumbai : Tata MC Graw Hill Publishing Company.
- Michael Gelder, Richard Mayon, Philip Cowen – Shorter Oxford Textbook of Psychiatry.

- Narayan Rao, S. (1995). Perspectives in disability and rehabilitation. New Delhi: Wiley Eastern Ltd.
- Panda. K.C. – Education of Exceptional Children.
- Papalia, D.E. (1992). Human Development : New York : MC Graw Hill.
- Peshawaria, R & Venkatesan, S. (1992). Behavioural approach in teaching mentally retarded children. A manual for teachers. Secunderabad : National Institute for the Mentally Handicapped.
- Rai, B.C. (1996). Educational Psychology. Lucknow : Prakasan Kendra
- Reeta Peshawaria – Managing Behaviour problems in Children, A guide to parents.
- Robert L Solso – Cognitive Psychology.
- Rogers, B. (1991). How to solve your problems, Sheldon Press.
- Self Instructional material, B.Ed in Special Education, (SECP 02). MP Bhoj (Open) University.
- Sethi, R (1997). Tips for creativity. Boston : Beacon books.
- Sharma, P (1995). Basics on development and growth of a child. Delhi : Reliance Publishing House.
- Study material – Paper III, Psychology D.S.E (MR) old syllabus. Secunderabad : National Institute for the Mentally Handicapped.
- Thressiakutty, A.T. & Govinda Rao, L. (2001) – Transition of person with mental retardation from School to Work – A guide, published by National Institute for the Mentally Handicapped, Secunderabad.
- Walker, J.E. & Shea, T.N. (1995). Behaviour management. A practical approach for educators (6<sup>th</sup> edition). Englewood Cliffs (New Jersey) : Prentice Hall, Inc.
- Zirfpoli, T.J. & Mellay, K.J. (1993). Behaviour management applications for teachers and parents. Toronto : Maxwell Macmillan, Canada.

### Paper III – Special Education Related To Adult Independent Living

- Baine, D. (1998). Handicapped children in developing countries: Assessment curriculum and instruction. Edmonton (Alberta): University of Alberta.
- Berkell, D.E. & Brown, J.M. (1989). Transition from school to work for persons with disabilities. London : Longman.
- Clark, G.M. & Kostoe, O.P. (1995). Career development and transition education for adolescents with disabilities (2<sup>nd</sup> edition). Boston: Allyn and Bacon.
- Eaves, R.C. & McLaughlin, P.J. (1993). Recent advances in special education and rehabilitation. Bosto : Andover Medical Publishers.
- Hong, C. & Perk, C. (1994). Living skills for mentally handicapped people. Therapy in practice. London : Chapman & Hall.
- Jacobs, K (1985). Occupational therapy. Work related programmes and assessment (2<sup>nd</sup> edition)
- Joyce, B. & Weil, M. (1997). Models of teaching. New Delhi : Prentice Hall of India.
- Mager, R.F. (1997). Preparing instructional objectives (2<sup>nd</sup> edition). London : Kogan Page.
- Mandelson, M (1992). How to get equipment for disability (2<sup>nd</sup> edition). London : Kingsley Publisher.
- Miles. Christine. (1990). Special Education For Mentally Handicapped Pupils, A Teaching Manual. (Revised Edition), Published by Mental Health Center, Peshawar.
- Moon, M.S. et.al (1990). Helping persons with severe mental retardation get and keep employment. Baltimore: Pauk H. Brooks Publishing Co.
- Morrison, J.E. (1991) Training for performance. Principles applied human learning Chester : Johan Wiley and sons.
- Myreddy, V. & Narayan. J. (1998). Functional Academics, Secunderabad: National Institute for the Mentally Handicapped, Secunderabad.
- Narayan, J. & Menon, D.K. (1989). Organisation of special school, National Institute for the Mentally Handicapped, Secunderabad.
- Narayan, J. (ed) (1990). Vocational training and employment of persons with mental retardation. National Institute for the Mentally Handicapped, Secunderabad.
- Narayan, J. (1997). Grade Level Assessment Device For Children with Learning Problems in Schools. A Project Funded by ICSSR. National Institute for the Mentally Handicapped, Secunderabad.
- Overtone, T. (1992). Assessment in special educaitoun. An applied approach New York : Macmillan Publishing Co.
- Polloway, E.A. & Patton, J.R. (1993). Strategies for teaching learning with special needs. New York : Macmillan Publishing Co.
- Proctor, R.W. (1995). Skill acquisition and human performance. London : Sage Publications.

- Reddy, S.H.K. (2002). Directory of Institutions for the persons with mental retardation in India, National Institute for the Mentally Handicapped, Secunderabad.
- Sampath, & Selvam, P. (1995). Introduction to educational technology. New Delhi : Sterling Publishers Pvt. Ltd.
- Sethi, R. (1996). Tips for effective leadership. Boston : Beacon Books.
- Smith, D.D. & Luckasson, R. (1995). Introduction to special education: Teaching an age of challenge (2<sup>nd</sup> edition). Boston : Allyn and Bacon.
- Strickland, B.B. & Turnbull, A.P. (1990). Developing and implementing individualised education programme. London : Merrill.
- Study Notes on Paper II (Curriculum and Teaching), D.S.E. (M.R), National Institute for the Mentally Handicapped, Secunderabad.
- Study Notes of B.Ed Special Education, Self Instructional Material, SESM: 01, Identification and Assessment of Persons with Mental Retardation. Block: 2, Madhya Pradesh Bhoj (Open) University.
- Stumpe, S.H. (1990).Path ways to success : training for independent living. Washington DC : A.A.N.R.
- Thressiakutty, A.T. & Govinda Rao, L. (2000). Transition of persons with mental retardation from school to work, National Institute for the Mentally Handicapped, Secunderabad.

## Paper IV – Vocational Training and Placement Aspects

- Baine, D. (1998). Handicapped children in developing countries: Assessment curriculum and instruction. Edmonton (Alberta): University of Alberta.
- Berkell, D.E. & Brown, J.M. (1989). Transition from school to work for persons with disabilities. London : Longman.
- Clark, G.M. & Kostoe, O.P. (1995). Career development and transition education for adolescents with disabilities (2<sup>nd</sup> edition). Boston: Allyn and Bacon.
- Eaves, R.C. & McLaughlin, P.J. (1993). Recent advances in special education and rehabilitation. Bosto : Andover Medical Publishers.
- Hong, C. & Perk, C. (1994). Living skills for mentally handicapped people. Therapy in practice. London : Chapman & Hall.
- Jacobs, K (1985). Occupational therapy. Work related programmes and assessment (2<sup>nd</sup> edition)
- Joyce, B. & Weil, M. (1997). Models of teaching. New Delhi : Prentice Hall of India.
- Mager, R.F. (1997). Preparing instructional objectives (2<sup>nd</sup> edition). London : Kogan Page.
- Mandelson, M (1992). How to get equipment for disability (2<sup>nd</sup> edition). London : Kingsley Publisher.
- Miles. Christine. (1990). Special Education For Mentally Handicapped Pupils, A Teaching Manual. (Revised Edition), Published by Mental Health Center, Peshawar.
- Moon, M.S. et.al (1990). Helping persons with severe mental retardation get and keep employment. Baltimore: Pauk H. Brooks Publishing Co.
- Morrison, J.E. (1991) Training for performance. Principles applied human learning Chester : Johan Wiley and sons.
- Myreddy, V. & Narayan. J. (1998). Functional Academics, Secunderabad: National Institute for the Mentally Handicapped, Secunderabad.
- Narayan, J. & Menon, D.K. (1989). Organisation of special school, National Institute for the Mentally Handicapped, Secunderabad.
- Narayan, J. (ed) (1990). Vocational training and employment of persons with mental retardation. National Institute for the Mentally Handicapped, Secunderabad.
- Narayan, J. (1997). Grade Level Assessment Device For Children with Learning Problems in Schools. A Project Funded by ICSSR. National Institute for the Mentally Handicapped, Secunderabad.
- NIMH Newsletter, Vol. 17, Issue 1, June, 2004.
- Overtone, T. (1992). Assessment in special educaitoun. An applied approach New York : Macmillan Publishing Co.
- Paul Kaplan, Pathways for Exceptional Children: School, Home, and Culture, West Publishing Company, New York.

- Polloway, E.A. & Patton, J.R. (1993). Strategies for teaching learning with special needs. New York : Macmillan Publishing Co.
- Proctor, R.W. (1995). Skill acquisition and human performance. London : Sage Publications.
- Reddy, S.H.K. (2002). Directory of Institutions for the persons with mental retardation in India, National Institute for the Mentally Handicapped, Secunderabad.
- Sampath, & Selvam, P. (1995). Introduction to educational technology. New Delhi : Sterling Publishers Pvt. Ltd.
- Sethi, R. (1996). Tips for effective leadership. Boston : Beacon Books.
- Smith, D.D. & Luckasson, R. (1995). Introduction to special education: Teaching an age of challenge (2<sup>nd</sup> edition). Boston : Allyn and Bacon.
- Strickland, B.B. & Turnbull, A.P. (1990). Developing and implementing individualised education programme. London : Merrill.
- Study Notes on Paper II (Curriculum and Teaching), D.S.E. (M.R), National Institute for the Mentally Handicapped, Secunderabad.
- Study Notes of B.Ed Special Education, Self Instructional Material, SESM: 01, Identification and Assessment of Persons with Mental Retardation. Block: 2, Madhya Pradesh Bhoj (Open) University.
- Stumpe, S.H. (1990). Path ways to success : training for independent living. Washington DC : A.A.N.R.
- Thressiakutty, A.T. & Rao, G. L. (2000). Transition of persons with mental retardation from school to work – A Guide, National Institute for the Mentally Handicapped, Secunderabad.
- Thressiakutty, A.T., & Rao, G.L., Curriculum for Vocational Education, Transition of Persons with Mental Retardation From School to Work, Series 1 and Series 2, National Institute for the Mentally Handicapped.
- Thressiakutty, A.T. & Rao, G.L., Hope beyond Hope Some Success Stories - National Institute for the Mentally Handicapped, Secunderabad.
- Thressiakutty, A.T. (1998) NIMH Vocational Assessment and Programming System for Persons with Mental Retardation, National Institute for the Mentally Handicapped, Secunderabad.
- Vocational Training and Employment of Persons with Mental Retardation, (A Handbook for professionals, employers and parents in India), National Institute for the Mentally Handicapped, Manovikas Nagar, Secunderabad.
- Vocational Rehabilitation of the Mentally Retarded, ILO – Geneva.
- Wehman, P.H., Kregel, J., Barcus, J.M., and Schalock, R.L., Vocational Transition for Students with Developmental Disabilities.

## Paper V – Science and Technology Applied to Vocational Training

- Adaptation of Jobs And the Employment of the Disabled International Labour Office Geneva 1984
- Anwai, (1996). Basic engineering drawing. Delhi: Dhanpat Rai & Sons.
- Bawa, (1986) Carpentry – A complete guide. Mumbai: Tata MC Graw Hill.
- Bhatt, N.D. & Punal, V.M. (1996). Machine drawing in first angle projection method: Charotar Publishing.
- Bhatt, N.D. (1995). Machine Tools New Delhi : Sultan Chand & Co.
- Barnes. R. M. Motion and Time study design and Measurement of Work.
- Choudhury. S.K.H - Elements of Workshop Technology.
- Colvin F.H. and Hass. L. L. - Jigs and Fixtures.
- Ghosh, A. & Malik, A.K. (1991). Manufacturing Science. New Delhi: East West Press Pvt. Ltd.
- Grant, H.E. (1995), I.T.I workshop calculations. Delhi: Khanna Publishers.
- Gupta, J.K. (1996), Basic workshop practice. New Delhi: Sultan Chand & Co.
- Gupta, K. (1989). Basic fitting tools. Delhi: Dhanpat Rai & Sons.
- Gupta, K. (1995), Machine shop theory and practice. Delhi: New Heights Publishing.
- Gupta, R.B. (1991). Engineering drawing. Delhi:L Sathya Prakasan.
- Gupta, R.C. (1989). Basic shop theory, tools and die marker. Delhi Dhanpat Rai & Sons.
- Jain. R.K. and Gupta. S.C. - Production Technology.
- Joshi, P.H. (1994). Jigs and fixtures. Mumbai : Tata MC Graw Hill.
- Jain. R.K. - Machine Design.
- Kumar, B. (1997). Industrial engineering. Chennai: Kamma Publishers.
- Margalit, M. (1990) Effective technology integration for disabled children the family perspective. Springer – Verlag.
- Mc. Cormick, (1996). Human Factors engineering. New Delhi: McGraw Hill.
- Morris, L.H. (1996). Geometrical drawings for art students. Mumbai : Orietn Lognman Ltd.
- Mundel, (1996). Motion and time study. Improving productivity Cliff: Prentice Hall.
- Nagpal, G.R. (1995). Machine tool engineering. Delhi: Khanna Publishers.
- Raghuvanshi, B.S. (1995). A course in workshop technology. (Vol. I & II). Delhi: Dhanpath Rai & Sons.
- Sachdev, B.R. (1996). Blue print reading. Delhi: Tata MCGraw Hill.
- Salmon. D and Penny .P Mechanical Engineering level II .
- Samaddar. B - Electric Wiring.
- Venugopal, K. (1994). Engineering drawing and graphics. Delhi New Age International Ltd. Publishers.
- Zhongjia, Y. (1985). Metrology Beijing: China Science and Technology.



## **Paper VI – Community, Legal And Management Aspects Related**

### **To Disability Rehabilitation**

- Agarwal,C.B.(1997).Store keeping.:King Books.
- Eastern Book Company (1995).Guardians and wards act 1890. Delhi:(author)
- Hanks,K. (1995).Motivating people.New Delhi:Pustak Mahal.
- Juneja, (1996). Book keeping and accountancy. New Delhi:Higginbothams.
- Law Publishers I.P. Ltd (1997). The Indian trusts act 1882. Allahabad:(author).
- Management Science Tata McGraw-Hill Publishing Company Limited New Delhi.
- Menon,K.S.(1995).Stores management. Mumbai: Mac Millan India Ltd.
- Narasimhan,M.G.& Mukerjee,A.(1996).Disability - A continuing challenge. New Delhi: Wiley Eastern Ltd.
- Narayan Rao,S.(1995).Counselling and guidance Vol.I & II. Mumbai:Tata McGraw Hill Publishing co.
- National Trust Act, (1999). Government of India.
- Pandey,R.S., & Advani, L. (1995).Perspectives in disability and rehabilitation. New Delhi: Vikas Publishing House.
- Persons with Disabilities Act, (1995). Government of India.
- Peshawaria, et.al (1995). Understanding Indian families having persons with mental retardation Secunderabad: National Institute for the Mentally Handicapped.
- Pillai, R.S.N. & Bhagwati, (1997).Commercial correspondence and office management. New Delhi: Sultan Chand & Co.Ltd.
- Rehabilitation Council of India Act, (1992). Government of India.
- Varma,M.M.(1997).Essentials of store keeping and purchasing. New Delhi: Sultan Chand & Co.Ltd.