

# Patna Institute of Nursing & Paramedical Science

Brahmpur, New Jaganpura, New By-pass road, Patna – 800027  
Email:- [riantuma@gmail.com](mailto:riantuma@gmail.com), Website:- [www.patnaparamedical.com](http://www.patnaparamedical.com)

## Syllabus for Three Years Diploma Course in Physiotherapy

### **SYLLABUS FOR D.P.T -1 Year**

#### **HUMAN ANATOMY**

##### **Section – I** genral & systemic Anatomy

##### Genral Anatomy:

1. Introduction : Scope of Anatomy Anatomical terms, Anatomical position f the body.
2. Connective tissue, Fibrous tissue, tendon, Aponcurosis, cartilage.
3. Muscles: voluntary and Involuntary muscles, short description of the structure of different muscles.
4. Muscles: Classification of voluntary muscles origin and insertion tendon.
5. Bones: Development of hones parts of long hones and blood supply of hones, genral remarks about the bones of skull, thorax, vertebral column and extrenities.
6. Cartilages:
7. Joints : defination classification of joints. structure of fibrous and Cartilagenous joints.
8. Joints : Structure of synovial joints. Movernents of joints blood supply of hones and joints.
9. Joints : Radiological joints & Nervous system: Nerve cell, synapse and reflex are.

##### Nervous system : spinal Nerves.

1. Cardiovascular system : Blood as a connective tissue.  
function in short gross anatomy of heart with demonstrios and surface anatomy.
2. Respiratory system : Genral out line of respiratory passage, gross anatomy of lung, Pleura with demonstration and surface anatomy.
3. Respiratory system : bronchopulmonary segments. intercostal muscles and mechanism of repiration.
4. Digestive system : genral idea or outline of gastro-intestinal.
5. Excretory system : structure and funcation of kindly. genral outline of ureters, urinary bladder and urethra. demonstration of organs.
6. R. productive system : genral outline of male and female and

### **SYLLABUS / COURSE OF STUDY**

#### **FISRT YEAR**

#### **ANATOMY :-**

##### **SECTION I**

1. **HISTOLOGY** cell, Tissues of the body, Epithelium. Connective tissue, Cartilaage. Bone. Lymph, Muscle, Nerve.
2. **OSTEOLOGY** Formation, Function, Growth & repair of bones.
3. **EMBRYOLOGY** Ovum, Spermatozoas fertilisation. Differentiation, devlopment of various systems.
4. **BLOOD VASCULAR SYSTEM** Arteries, Capillaries, Veins, Heart, Lymphatic system.

5. **RESPIRATORY SYSTEM** –Anatomy of larynx, Trachea and Bronchi, pleura and lungs.
6. **DIGESTIVE SYSTEM.**
7. **UROGENITAL SYSTEM.**
8. **SURFACE ANATOMY.**

## **SECTION -II**

### **Anatomy**

- |                        |  |
|------------------------|--|
| 1 Peripheral Nerves.   | 2 Neuromuscular Junction.                    |
| 3 Sensory End Organs.  | 4 Spinal Cord, Ascending & Descending Tract. |
| 5 Brain stem.          | 6 Cerebellum.                                |
| 7 Inferior Colliculi.  | 8 Superior Colliculi                         |
| 9 Diencephalon.        | 10 Hypothalamus                              |
| 11 Epithalamus.        | 12 Thalamus                                  |
| 13 Cerebrum.           | 14 Corpus striatum                           |
| 15 Rhinencephalon.     | 16 Lateral Ventricles                        |
| 17 Meninges.           | 18 Blood Supply of the brain                 |
| 19 Internal Capsule.   | 20 Visual radiation                          |
| 21 Auditory radiation. | 22 Extra Pyramidal system                    |
| 23 Pyramidal system.   | 24 Intra Cortical Integration                |

## **SECTION III**

1. **The Fasciae And Muscles Of-- Head, Neck & Face.**
2. **Trunk.**
3. **Upper Limb.**
4. **Lower Limb.**
5. **Classification of Joints.**
6. **Movements of Joints.**
7. **Joints of head & neck.**
8. **Joints of trunk.**
9. **Joints of upper limb.**
10. **Joints of lower limb.**

### **ANATOMY PRACTICAL :-**

1. To study the surface land marks on human body.
2. To study the muscles of trunk, lower and upper extremities and face on a dissected human body.
3. To study the bones of human body with special emphasis on origin and insertion and land marks of muscles.
4. To study the anatomy of joints of upper and lower extremities and cerebrum column on a dissected human body.
5. To study the anatomy of C.N.S. and P.N.S. on a dissected human body.
6. To study the anatomy of respiratory, digestive, urinary and genital system on a dissected human body.

## **PHYSIOLOGY :-**

## **SECTION 1**

### **1. Function of Cell.**

### **2. Cell membrane, Digestion, control of food & water intake and secretion & absorption, Movements of the alimentary canal.**

**3. Circulation** Cardio vascular system, Mechanical and electro physiological activity of the heart, Regulation of heart and coronary circulation, Haemodynamics, Circulation through brain. Skin and skeletal muscle.

**4. Blood & Lymph** - Cell renewal system. Haemoglobin, Erythrocyte, granulocyte, Lymphocyte. Coagulation, Regulation of hydrogen within the Cell.

## **EXERCISE THERAPY :**

1. Mechanical anatomy of motion and posture.
2. Exercise of the shoulder and hip and evaluation.
3. Exercise of the hand and foot and evaluation.
4. Exercise of the knee and Elbow and Evaluation.
5. Various Motion/assessment.
  
6. Joint Motion assessment.
7. Manual Muscle Examination.
8. The therapeutic gymnasium.
9. Exercise in water.
10. Resisted exercise.
11. Brief isometric exercise.
12. Exercise based on neurophysiologic principles.
13. Crutch and cane exercises.
14. Gait training.
15. Principles of therapeutic exercise.
16. Posture.
17. Exercises for healthy persons.
18. Exercise for spine.
19. Activities of daily living.
20. Massage.
21. Suspension therapy.
22. Neuro Muscular Coordination.
23. Starting Positions.
24. Cryotherapy.
25. Traction -Cervical and lumbar.

## **EXERCISE THERAPY [PRACTICAL] :-**

1. Study of muscle work, joint positions, stability of fundamental and derived positions.
2. To palpate and visualise muscle contractions / Muscle work and its types.
3. To study and practice Mobilization of joints - region wise with free Exercises. Assistant Exercises, Assisted - Resisted Exercise and Resisted Exercises.
4. To study and practice progressive Strengthening Exercises of Muscles region wise, using R.M Method, De lorme and watkin's method, macqueen's and Oxford techniques.
5. To study and practice Relaxation. General and local by active, passive method and in

Suspension.

6. To study and practice Suspension, Therapy the structure and dimension of gutherie Similar suspension apparatus.
7. Types of Suspension and its application to various parts of body regionwise.
8. To study walking Aids and gait the structures and dimensions of various walking aids.
9. Gymnasium To study the structure and function along with application of shoulder wheel shoulder ladder, pronator .supinator exercisor. wrist Rotator, Static Cycle. Rowing Machine. Ankle exercisor, flat feet hoard, springs, weights and pulleys.
10. To Study and practice Mat exercises with push up blocks and Mat Crutches.
11. To study and practice Co-ordination Frankel's Exercises.
12. Posture To study a normal posture and correction of posture.
13. Hydrotherapy -To study the sturcture and function of whirlpool bath and hubbard Tank and application.
14. Traction -To study and practice Machanical and Electronic Cervical and lumbar traction application and effects.
15. Goniometry -To measure R.O.M. of joints with a Goniometer. I.
16. To study and practice Manual Muscle testing of various muscle groups region wise To Measure contractures. shortening and deformity.
17. Massage To study and practice application of all types regionwise.

## **ELECRO THERAPY & ACTINO THERAPY :**

### **SECTION-I: 1**

1. Electrical Fundamentals.
2. Elcectron Tubes.
3. Power Supplies.
4. Amplifiers.
5. Oscillators.
6. Cathode ray tubes.
7. Transistors.
8. Recorders.
9. Transducers.
10. Radiation.
11. Principles of designs and circuits of infra red and ultra violet generators, short - wave diathermy, Microvaves ultra .sonics and Electrical stimulators.
12. Signal processes.
13. Displaydevices and indicators.
14. Magnetic tape recorders.
15. Data transmission and processing.

### **SECTION— II :-**

1. Physics of heat.
2. Thernometry
3. Biophysics of daithermy
4. Physiology of heat and cold.
5. Thermal radiation, pain and diathermy injury.
6. Genral principles of thermotherapy.
7. Conduction heating.

8. Luminous and infra red heating.
9. High frequency instrumentation.
10. Short wave diathermy
11. Microwaves.
12. Ultrasound therapy.
15. Instrumentation of Electrotherapy.
14. Therapeutic electrostimulation.
15. Iontophoresis.
16. Electrosleep therapy and Anaesthesia.
17. Instrumentation for ultra violet therapy.
18. Physiological effects of Ultra Violet Radiation.
19. Low frequency currents.
20. T.N.S. interferential therapy.
21. Wax therapy.

### **SECTION III :** **ELECTROPHYSIOLOGY**

1. Bio electricity.
2. Electric potentials generated by cell.
3. Electrogenic membrane response.
4. Chemoresponsive electrogenic system.
5. Propagation of nerve impulse.
6. Neuromuscular junction.
7. Synapse.
8. Muscle electrogenic.
9. Electrophysiology of C.N.S.
10. Chronaxie.
11. Strength duration curves.
12. Electrical Skin resistance.
13. Electromyography.
14. Nerve conduction studies.
15. Microneurography.
16. Reflex physiology monosynaptic and polysynaptic reflexes, Microreflexes.
17. Spinograms.
18. Cerebral evoked potentials.

### **ELECTRO THERAPY & ACTINO THERAPY [PRACTICAL] :**

1. To Experience sensory and motor stimulation of nerves and muscles by various types of low frequency currents on self.
2. To locate and stimulate different motor points regionwise.
3. Therapeutic application of different low frequency currents, Faradic foot bath, faradism under pressure, stimulation of pelvic floor muscles, Iontophoresis, Anodal and Cathodal Galvanism.
4. To study the reaction of degeneration of nerves. To plot strength duration curves. To

feel chronaxie and rheohase.

5. To study a hydrocollator unit, its operation and therapeutic application of hot packs regionwise.
6. To study a short wave diathermy unit, its operation and different methods of application region wise.
7. To study a Micro wave Diathermy Unit, its operation and methods of application regionwise
8. To study a Paraffin Wax Bath unit, its operation and different methods of application region wise.
9. To study a Ultra sonic therapy Unit, its operation and different methods of application region wise.
10. To study a different types of Ultra Violet therapy Unit, its operation, assessment of test do and application of U.V.R. region wise.
11. To study a high frequency apparatus, its operation and application regionwise.
12. To study a electro vibrator, its operation and application of cold pack region wise.
13. To study a Cryotherapy unit, its operation and application of cold pack— region wise.
14. To study a Trans Cutaneous Stimulator, its operation and application region wise.

### **ENGLISH :**

**Grammar:-** Students will be expected to use the following grammatical features correctly in context :-

- a. Verb:- The following forms, simple present, simple past, simple future, present continuous, past continuous, future continuous, present perfect, present perfect continuous, past perfect, future perfect.
- b. Adverb:- Their formation, the position of certain types.
- c. Preposition:- The most common uses of simple prepositions, selected verb preposition or verb adverbial particles.
- d. Articles, Conjunction, Subject verb agreement, Direct and reported speech, transformation of sentences, including Active and Passive voice.

### **SECOND YEAR**

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#### **PSYCHOLOGY :**

1. Definition and scope of Psychology in relation to Occupational therapy, Physical Therapy.
2. Methods of studies in Psychology.
3. Psychological development of human individual from conception to birth and birth to old age.
4. Special need, characteristics and problems of the various groups of handicapped.
5. Learning factors affection learning, learning disability techniques to deal with. Implications of various handicaps in the learning process. Principles of learning for various handicapped groups. Techniques of motivating the handicapped children.
6. Adjustment, criteria of mental health, adjustment problems faced by handicapped

Children counselling and guidance with special reference to the Physically and mentally handicap.

7. Interaction with the family, community and peer groups. Communication patterns. Specific problems faced by handicapped, development of social skills and sensitivity training.

8. Role of Psychologist in Rehabilitation of the Handicapped.

## **MEDICAL CONDITIONS** :-

### **General Medicine including respiratory diseases:-**

1. Infection and antibacterial agents.
2. Infectious diseases.
3. Chemical and physical agents carrying disease.
4. Diseases of Metabolism.
5. Deficiency diseases.
6. Diseases of endocrine glands.
7. Diseases of the digestive system.
8. Diseases of the Lymphatic system.
9. Diseases of the Blood.
10. Diseases of the Cardio vascular system, circulatory failure ischaemic heart disease, hypertension, pulmonary heart disease, congenital heart disease, peripheral vascular diseases embolism and thrombosis.
11. Collagen disease.
12. Diseases of the Respiratory system, the trachea, the bronchi. the lungs, the diaphragm and the pleura
13. Diseases of the Kidney.
14. Diseases of the Skin-sensory disorders, pigmentary anomalies, Vaso motor disorder. dermatitis focal infections, fungal infections, cutaneous cerculosis. viral infections. parasitic infections erythematous conditions, scleroderma and allied conditions. Atrophy and Hypertrophy. diseases of the Head, Tropical Skin Diseases.
15. Psychiatry
  - a. Definition and introduction to Psychiatry in relation to O.T. and P.T.
  - b. Concept of normal and abnormal.
  - c. Behavior disorders. Causes and management: i
    - i. Psychoneurotic disorders.
    - ii. Psychotic disorders.
    - iii. Psychosomatic disorders,
  - d. Techniques of Therapy :-
    - i. Psychotherapy:
      - \* Group Therapy.
      - \* Psychoderma.
      - \* Behaviour Modification.
      - \* Family Therapy
      - \* Play Therapy
    - ii. Drug Therapy
    - iii. E C. T.
  - e. The role of Psychiatrist in dealing with the problems of mental health.
16. Paediatrics
17. Geriatric
18. Nursing and Bandaging

## **SURGICAL CONDITIONS :-**

1. Surgical wounds - haemorrhage, Shock - water and electrolyte balance, burns.
2. Surgery of head and neck, elementary system and genitourinary system.
3. Neurosurgery.
4. Cardio -vascular and thoracic surgery.
5. Gynaecology and obstetrics.
6. E. N. 'T'.

## **ORTHOPAEDICS :-**

1. Postural defects - anteroposterior and lateral curves of the Spine, the feet, genu valgum. genu varum.
2. Back pain.
3. The spine, the intervertebral disc, Osteoporosis, ankylosing spondylitis. Spina bifida. Torticollis, Tuberculosis of the spine and sacroiliac joints. Osteomyelitis, Tumours.
4. The hip-congenital dislocation. Coxa vara. Tuberculosis, hirsutis.
5. The knee-injuries to medial ligament, lateral ligament, Semilunar cartilages, cruciate ligament. chronic strain. chondromalacia. patella, Rheumatoid arthritis, Osteoarthritis, synovitis. clickine knees, tuberculosis, strain.
6. The foot and ankle-painful feet, pessevus, hallux, gout, painful heel, the ligaments of the ankle, tuberculosis, strain fractures.
7. The shoulder girdle pain in the shoulder, cervical spondylosis, carpal tunnel syndrome. cervico-brachial junction. recurrent dislocation of the shoulder, tuberculosis.
8. The Elbow-tennis elbow. myositis-ossilians. ulnar palsy, tuberculosis.
9. The wrist and hand-tenosynovitis, tuberculosis. ganglion. rupture of tendons, contractures
10. Pyogenic infection.
11. Tuberculosis
12. Chronic arthritis, Rheumatoid and Osteoarthritis.
13. Diseases of Nervous system, poliomyelitis, Cerebral palsy.
14. Common fractures of spine and extremities.
15. Radiology.

## **PHYSICAL THERAPY IN MEDICAL CONDITIONS :-**

### **Part—I**

#### **PHYSICAL THERAPY IN NEUROLOGICAL CONDITIONS**

1. Examination of Neurological disorders and Principles of Treatments.
2. Hemiplegia, Cerebral palsy. Tabes dorsalis, Cerebellar ataxia, extra Pyramidal lesions [In Detail].
3. Disseminated sclerosis, peroneal muscular Atrophy, Amyotrophic lateral sclerosis, progressive muscular Atrophy, Syringomyelia, Sub-acute combined degeneration of cord.
4. Peripheral Nerve lesions [In Details]
5. Neuritis and Neuralgia-Brachial, Sciatica and facial palsy In Detail].
6. Infections-Poliomyelitis. Meningitis. Encephalitis. Polyneuritis.
7. Myopathies.
8. Paediatrics and Geriatrics:-
  - a. Special Problems of elderly and children related to special conditions which they are prone to
  - b. Treatment as modified to the particular needs of each age group.

## **PHYSICAL THERAPY IN SURGICAL CONDITIONS :-**

### **Part—I**

## 1. Orthopaedics and Fractures:

- i. Fractures and dislocations.
- ii. Types of displacement.
- iii. Classifications.
- iv. Immediate and late signs and symptoms.
- v. Changes at fracture site and its surrounding tissues
- vi. Reasons for Union, Non-union, delayed union.
- vii. Methods of reduction and fixation.
- viii. Healing of fractures and factors influencing it.
- ix. Common fractures of Upper and Lower extremities and their complications.
- x. Corrective Surgery
  - a. Arthroplasty, Arthrodesis, Osteotomy, Tendon Transplant, Soft tissue release grafting.
  - b. Physical Therapy as applicable to above conditions.

## 2. Injuries:-

- i. Soft tissue injuries.
- ii. Crush Injuries.
- iii. Repair of Injured tendons and nerves.
- iv. Injuries of Semilunar cartilage and cruciate ligaments of Knee:- Physical therapy applicable to above complications.

## 3. Deformities:-

- i. Congenital:- Torticollis, cervical rib, Sprengel's shoulder, spina bifida. Talipes Equinovarus and valgus, hallux valgus, pes planus and other common deformities.
- ii. Acquired:- Scoliosis, Kyphosis, Lordosis, Coxarthrosis, genu valgum, genu varum and recurvatum, planus and other common deformities.
- iii. Other miscellaneous:- orthopaedic conditions commonly treated by Physical Therapy  
Physical therapy related to above conditions.
- iv. Amputations:- Traumatic, Elective, common sites of amputations in upper and lower extremities. Advantages and disadvantages, physical therapy as applicable to care of prosthetic training with emphasis in Lower extremity.

Note:- Emphasis should be on the assessment of disability with the selection of treatment based on these. Where possible therapy should be related to the activities of daily living and patient occupation and directed towards the development of self confidence and independence.

## **THIRD YEAR**

### **BIOMECHANICS AND KINESIOLOGY :-**

#### **KINESIOLOGY :-**

1. Introduction to Kinesiology.
2. Fundamentals of Human Motions., C. G., line of gravity, plane and axis of motion in human body.
3. Musculo-skeletal system, Skeletal muscles-types and properties, function and co-ordination of the muscular system, types of muscular action, function, classification and motion of the joints of vertebral column, upper extremity and lower extremity.

#### **BIOMECHANICS :-**

1. Introduction to Mechanics, Biomechanics, static, Dynamic.
2. Scalar and vector quantities.

3. Motion-Cause, Kind and factors modifying motion.
4. Force-Nature. magnitude and its components.
5. Lever-Classification. Principles and Anatomic Levers.
6. Motion and force-Newton's laws of motion, friction, fluid and rebounding forces.
7. Stability and equilibrium-principles of stability.
8. Posture and locomotion.

## **PHYSICAL THERAPY IN MEDICAL CONDITIONS :**

### **Part-H**

1. Pathological Changes:

Review of Pathological changes and principles of the treatment by Physical therapy of:

- i. Inflammation-acute, chronic and suppurative.
- ii. Oedema-Traumatic, obstructive. Paralytic, Oedema due to poor muscle and laxity of the fascia.
2. Arthritis and allied conditions [In Details]
  - i. Spondylosis and disorder.
  - ii. Rheumatoid Arthritis, Stills's disease, infective arthritis.
  - iii. Spondylitis, ankylosing Spondylitis.
  - iv. Non-Articular Rheumatism-Fibrositis, Myalgia, Bursitis, PeriArthritis etc.
3. Diseases of the Respiratory System:-
  - i. Mechanism of Respiration.
  - ii. Examination of Chest of Patients and Principles of Physical Therapy.
  - iii. Bronchitis, Asthma, Lung abscess, Bronchiectasis. Emphysema.
4. Common conditions of skin:- Acne, Psoriasis, Alopecia, Leucoderma, Leprosy.
5. Common Cardiac Disorder:- Thrombosis, Embolism, Buerger's disease, Arteriosclerosis, Thrombophlebitis, Phlebitis, Gangrene, Congestive Cardiac failure, Hypertension.
6. Deficiency Diseases:- Rickets.

## **PHYSICAL THERAPY IN SURGICAL CONDITIONS :-**

### **Part— II**

1. Complications common to all operations:- Pre and Post operative Physical Therapy.
2. Wounds, Local Infection, Ulcers, Surgical procedures related to peripheral vascular diseases.
3. Burns, Degree of Burns, skin Grafts.
4. General Abdominal Surgery and obstetrics and Gynaecology:-
  1. Abdominal-incisions:- Its pre and post operative physical therapy.
  - ii. Operations on stomach, intestines, Appendectomy, Splenectomy, Cholecystectomy
  - iii. Operations on abdominal wall, hernia.
  - iv. Operations of Genitio-urinary system, Prostatectomy Nephrectomy.
  - v. Antenatal and Post natal training.
  - vi. Prolapse rectum.
  - vii. Complications of Pregnancy.
  - viii. Weak abdominal and pelvic floor muscles.
  - ix. Stress incontinence.
  - x. Prolapse Uterus.
  - xi. Special points related to Pelvic Surgery.
  - xii. Pelvic inflammatory conditions.

xiii. Surgery of the Breast-Radical mastectomy.

### **Physical Therapy related to Above conditions.**

5. Thoracic Surgery: -

1. Thoracic incisions-pre and post operative treatment and later rehabilitation of the patients.

ii. Lobectomy, Pneumonectomy, Thoracotomy, Thoracoplasty.

iii. Operations on Chest Wall.

iv. Common Complications with emphasis to atelectasis, Pneumothorax Bronchopulmonary fistula, Pre and Post Operative Physical Therapy related Cardiothoracic Surgery.

v. Operations on pericardium and heart, Chronic Constrictive pericarditis, valvular incompetence aortic stenosis, Mitral Valvotomy, Congenital heart defects:- Patent duct arteriosus. Tetralogy of Fallot.

6. Ear, Nose and Throat conditions:- Otitis Media, Sinusitis. Vasomotor Rhinorrhoea. Adenoids, Tonsillitis, Physical Therapy related to above conditions.

7. Neuro-Surgery:-

i. Cranial Surgery:- head injuries, Intra cranial abscess. Intracranial tumour.

ii. Surgery of spinal cord and cauda equina. Spina Bifida and its complications. Infection of the spine. Epidural abscess. Tuberculosis. Lumbar Disc herniation. Cervical Disc herniation, Laminectomy, Pre and Post operative Physical therapy related to above conditions.

iii. Surgery of peripheral nerves, Peripheral nerve injuries, Pre and Post operative physical Therapy as applicable to above conditions.

8. Pre and Post operative physical therapy, related to plastic surgery:- Tendon transplantation Leprosy, Polio etc. Pre and Post Operative Physical therapy related to above conditions.

### **PHYSICAL THERAPY IN SURGICAL CONDITIONS :**

1. Introduction.

2. Definitions concerned in the phase of disability process.

3. Definitions concerned with causes of impairment, functional limitation and disability.

4. Rehabilitation and disability prevention.

5. Present rehabilitation services.

6. Reservation and legislation for rehabilitation services for the disabled.

7. Community and rehabilitation.

8. Basic principles of Administration, Budget, approach personnel and space etc.

9. Contribution of social worker towards rehabilitation.

10. Vocational evaluation and goals for disabled.

11. Rural Rehabilitation incorporated with Primary health Centres.

12. Principles of Orthotics and Prosthetics:-

- a. Lower Extremity Orthotics.
- b. Spinal Orthotics.
- c. Upper extremity orthotics.
- d. Upper extremity prosthetics
- e. Lower extremity Prosthetics.

11 Principles of Communication, Impairment:-

- a. Speech production.
- b. Communication disorders secondary to Brain Damage.
- c. Aphasia and its treatment.
- d. Evaluating Language.
- e. Dysarthria and its treatment.
- f. Non aphasic Language disorders.

14. Code and Conduct.

15. Ethics and Management.

- a. Principles in Management of social problems.
- b. Social needs of the patient.
- c. Rehabilitation Centre Environment.
- d. The social worker as member of the Rehabilitation team.
- e. Community Resources.

6. Principles in Management of Vocational Problems.

- a. Vocational Evaluation.
- b. Vocational Goals for Several disabled.

17. Mental Subnormality :-

- a. Identification and assessment of the Mentally subnormal.
- b. Classification of the Mentally subnormal.
- c. Common Characteristics of Different categories fo the Mentally subnormal.
- d. Causes. prevention and Management of the Mental subnormal.
- e. Training of the mentally subnormal.
- f. Home Education programme.
- g. Rehabilitation of the mentally subnormal.

18. **Definition, scope, importance of A. D. I.**

19. Goal of self help Devices.

20. Teaching A. D. L. in the following areas:-

- a. Wheel chair activities.
- b. Bed activities.

c. Self Care activities:-

- i. Toilet.
- ii. Eating.

iii. Dressing.

iv. Miscellaneous hand activities.

21. Principles of design materials used,

22. A. D. L. Form.

23. A. D. L. Room.

24. Relationship of A. D. L. to Occupational therapy and physical therapy.

25. Practicals:- Eating device, bathing device, shoe wearing adapted device, brushing device. combing device, writing device, leather cuff amputee, helping hand, socking devices.

## **PHYSICAL THERAPY PRACTICAL EXAMINATION**

To examine and evaluate the patients suffering from Muscular neurological and skeletal conditions.

I, Examination.

1. Motor:- Muscle Tone. Muscle Power grading, measurement of girth.

2. Range of Motion: Coniometry, contracture, deformity and measurement of limb length.

3. Sensory: Touch, Pain Temperature, Pressure and Kinesthetic sense.

4. Neurological: .

i. Primitive reflexes, Motor development.

ii. Superficial and deep tendon reflexes.

iii. Involuntary movements. Inco-ordination, Gait.

5. Respiratory System:-

a. Measurement of Chest expansion.

b. Pattern of Breathing, Diaphragmatic.

c. Localized costal breathing.

6. Functional Evaluation of A. D. L.'s:-

a. The aims and plan of treatment of the patients suffering from the diseases as per Theory Syllabus.

b. To operate the electro-therapeutic and mechanic-therapeutic equipments for treatment patients as per electro-therapy and exercise therapy practical syllabus of first year.