

# **REVISED SYLLABUS**

**For**

# **D.P.T.**

**(Diploma in Physiotherapy)**



**Lal Bahadur Shastri Paramedical Skill and  
Training Council India**

**लाल बहादुर शास्त्री पराचिकित्सीय कौशल एवं प्रशिक्षण  
परिषद भारत**

मुख्य कार्यालय:— 4 वीं मंजिल, प्राइम प्लाजा, इन्दिरा नगर, लखनऊ।

प्रशासनिक कार्यालय:— द्वितीय तल, सुनील कॉम्प्लेक्स, वेस्टर्न कचहरी रोड, मेरठ।

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**Exam: March and April**

**(To be implemented from 2024-25 session)**

## Syllabus of Diploma in Physiotherapy

### FIRST YEAR (1<sup>st</sup>)

S. No.	Subjects	Distribution of Marks			
		TH	PR	Viva-voce	Total
DPT-1	Anatomy and Neuro Anatomy	50+50	-	-	100
DPT-2	Human Physiology	100	-	-	100
DPT-3	Exercise therapy and massage	100	-	-	100
DPT-4	Electro therapy and action therapy	100	-	-	100
DPT-5	Psychology	100	-	-	100
<b>PRAC</b>	<b>Practical and Viva</b>		100	100	200
	<b>Total</b>	<b>500</b>	<b>100</b>	<b>100</b>	<b>700</b>

## Syllabus of Diploma in Physiotherapy

### SECOND YEAR (2<sup>nd</sup>)

S. No.	Subjects	Distribution of Marks			
		TH	PR	Viva-voce	Total
DPT-6	Medicine	100	-	-	100
DPT-7	Surgery	100	-	-	100
DPT-8	Physical therapy in Medical Conditions	100	-	-	100
DPT-9	Physical Therapy in Surgical Conditions	100	-	-	100
DPT-10	Bio-Mechanics and Kinesiology	100	-	-	100
DPT-11	Disability prevention and Prehabilitation	100	-	-	100
<b>PRAC</b>	<b>Practical and Viva</b>		100	100	200
	<b>Total</b>	<b>600</b>	<b>100</b>	<b>100</b>	<b>800</b>

## **FIRST YEAR (1<sup>ST</sup> Year)- Physiotherapy**

### **Paper-I a) Anatomy b) Neuro Anatomy**

#### **A) Anatomy**

- Histology-cell tissue of the body, epithelium, connective tissue, cartilage, bone, blood, lymph, muscles, nervous system.
- Osteology- formation, classifications, functions, growth and repair of bones.
- Embryology- Ovum, Spermatozoa, Fertilization, organogenesis, Development of various systems.
- Blood Vascular system –arteries, capillaries, veins, lymphatic system.
- Respiratory System –anatomy of larynx, trachea and bronchi, the pleura, the lungs.
- Digestive system
- Urogenital system

#### **B) Neuro Anatomy**

- Microscopic and gross study of
- Peripheral Nerves
- Neuromuscular Junction
- Sensory Organs
- Spine Cord- Segment & Areas
- Brainstem
- Cerebellum
- Inferior colliculi
- Superior Colliculi
- Diencephalon
- The Hypothalamus
- The thalamus
- The Cerebral Hemispheres
- The Corpus Striatum
- The Rhinencephalon
- The Lateral Ventricles
- The Meninges
- The Blood supply of the Brain

## **Paper-II Human Physiology**

- ☑ Structure of Human Cell
- ☑ Elementary tissues of Body
- ☑ Blood, composition, function, Grouping Blood Disorders.
- ☑ CVS (Cardio Vascular System) Structure of Heart, Cardiac cycle, Hypertension Cardiac disorders reference to Physiology.
- ☑ Digestive System –Physiology anatomy, Process of digestion, organs of digestion and disorders.
- ☑ Respiratory system –structural Physiology process of respiration
- ☑ Excretory system; detailed structure of kidney, function, disorders,
- ☑ Elementary knowledge of structure and function of organ of taste, smell, eye and skin.
- ☑ Endocrinology; All the endosome glands in detail
- ☑ Reproductive system; physiology /Anatomy
- ☑ Introduction to pathology
- ☑ Repair and inflammation
- ☑ Pathological terms
- ☑ Pathology of various organs
- ☑ Role of pathology in physiotherapy
- ☑ Review of pathology changes of various organs and their treatment
- ☑ Drugs action on central nervous system. Anesthetics, alkaloids, narcotics, analgesics,
- ☑ antipyretics, sedatives, anticonvulsants,
- ☑ Drugs action on cardiovascular System, neuromuscular system, respiratory system.
- ☑ Drugs acting with Peripheral Nervous system
- ☑ Chemotherapy
- ☑ Hormones and drugs effecting Endocrine functions
- ☑ Vitamins
- ☑ Metallic and other Inorganic compounds
- ☑ Immunological agents
- ☑ Diagnostics.

### **Paper-III- Exercise therapy and massage**

- Mechanical anatomy of motion and posture
- Exercise of the shoulder and hip and evaluation
- Exercise of the Foot and Hand evaluation
- Exercise of the Knee and elbow and evaluation
- Vicarious motion
- Joint motion assessment
- Manual muscle examination
- The therapeutic gymnasium
- Exercise based on Neuro Physiological Principles
- Crutch and cane exercises
- Gait training
- Principles of therapeutic exercise
- Postures
- Exercises for healthy persons
- Activities of daily living
- Exercise of spine
- Massage
- Suspension therapy
- Neuro muscular co-ordination
- Starting positions
- Cryotherapy.

## **Paper-IV- Electro therapy and action therapy**

### **UNIT – I (Medical Electronics)**

- Electrical fundamentals
- Electron tubes
- Power supplies
- Amplifiers
- Oscillators
- Cathode ray tubes
- Transistors
- Recorders
- Transducers
- Radiation
- Principles of designs and circuits of infrared and ultra violet generators, shortwave
- Diathermy, microwaves, ultrasonics and electrical stimulators
- Signal processes
- Display devices and indicators
- Magnetic tape recorders
- Data transmission and processing

### **UNIT – II (Medical Electronics)**

- Physics of heat
- Thermometry
- Biophysics of diathermy
- Physiology of heat and cold
- Thermal radiation, pain and injury
- General principle of thermotherapy
- Conducting heating
- Luminous and infra-red heating
- High frequency instrumentation
- Short wave diathermy
- Microwaves
- Ultrasound therapy
- Instrumentation of electrotherapy
- Therapeutic electro stimulation
- Iontophoresis

- Electro sleep Therapy and anesthesia
- Instrumentation for ultraviolet therapy
- Physiological effects of Ultraviolet radiation
- Low frequency currents
- T.N.S.
- Interferential therapy
- Wax Therapy

### **UNIT – III (Electro-Physiology)**

- Electric potential generated by cell
- Electrogenic membrane response
- Chemo responsive electrogenic system
- Propagation of nerve impulse
- Neuromuscular Junction
- Synapse
- Muscle Electronic
- Electrophysiology of CNS
- Chronaxie
- Strength duration curves
- Electromyography
- Electrical duration curves
- Nerve conduction studies
- Microneurography
- Reflex Physiology Monosynaptic and Polysynaptic reflexes
- Spirograms
- Cerebral evoked potentials.

## **Paper-V- Psychology**

- ☑ Definition and scope of psychology in relation to occupational therapy Physiotherapy, Methods of studies in Psychology.
- ☑ Psychological Development of human individual from conception to birth to old age.
- ☑ Special needs, characteristics and problems of the various groups of Handicapped.
- ☑ Learning, factors affecting learning, disabilities 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.
- ☑ Adjustment, criteria of mental health, adjustment problems faced by handicapped children, counseling and guidance with special reference to the physically and mentally handicapped.
- ☑ Interaction with the family, community and poor groups Communication pattern, specific problems faced by handicapped, development of social skills and sensitivity training.
- ☑ Role of Psychologist in Rehabilitation of the handicapped.



## **SECOND YEAR (2<sup>nd</sup> Year)- Physiotherapy**

### **Paper-6- Medicine**

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

- Infection and antibacterial agents.
- Infections and Diseases
- Poisons and Venoms
- Chemical and Physical agents carrying diseases
- Diseases of Metabolism.
- Deficiency Diseases
- Diseases of Endocrine Glands.
- Diseases of Digestive System.
- Diseases of Lymphatic System
- Diseases of Blood
- Diseases of Cardio-vascular system, Circulatory failure, Ischemic heart disease, Hypertension Pulmonary Heart Diseases, Congenital heart Disease, Peripheral vascular diseases, Embolism and Thrombosis, Collagen diseases.
- Diseases of the Respiratory System-the trachea, the bronchi, the lungs, the diaphragm, the pleura.
- Diseases of the Kidney
- Diseases of the Skin sensory disorders, Pigmentary Anomalies, vasomotor, Disorders, Dermatitis, Coccal Infections, Fungus Infections, Cutaneous, Tuberculosis, Virus infection, Parasitic infections, Erythematous conditions, Scleroderma of the Hand Tropical skin diseases.
- Psychiatry: -
  - \* Definition and introduction to Psychiatry in relation to OT & PT
  - \* Concept of normal and abnormal
  - \* Behavior disorders: - Causes & management
    - Psychoneurotic disorders
    - Psychotic disorders
    - Psychosomatic disorder
  - \* Techniques of Therapy
  - \* Psycho Therapy
    - Group Therapy
    - Psychodrama
    - Behavior modification

## **Paper-7- Surgery**

### **☑ General surgery and cardio-vascular and thoracic surgery.**

- Surgical wounds, hemorrhage, shock, water and Electrolyte Balances, Burns.
- Surgery of head and neck, alimentary systems and genitor-urinary system x
- Neuro Surgery
- Cardio-Vascular and Thoracic surgery
- Gynecology and obstetrics: pelvic inflammatory conditions, complications during and following pregnancy prolapsed uterus.
- ENT

### **☑ Orthopedics**

- Postural defects anteroposterior and lateral curve of the spine, the feet genu valgum genu varum.
- Back pain
- The spine, the intervertebral disease, osteoporosis, Ankylosing spondylitis, spina bifida, torticollis, tuberculosis of the spine and Sacro- iliac joints Osteometries, Tumors.
- The Hip congenital dislocation, coxa Vara, tuberculous bursitis
- The knee- injuries to medial ligament, lateral ligament, Semilunar cartilages, cruciate ligament, chronic strain, chondromalacia patella, locking rheumatoid Arthritis The Foot and ankle painful feet, pesavus, hallux, values gout, painful heel, the ligaments of the ankle tuberculosis,
- The foot and ankle painful feet, pesavcus hallux valgus Gout painful heel the ligaments of the ankle, Tuberculosis, stress fracture
- The shoulder girdle pains the shoulder, cervical spondylosis, carpal Tunnel syndrome, cervical Brachial Junction Recurrent dislocation of the shoulder, Tuberculosis.
- The elbow tennis elbow, myositis ossificans, ulnar palsy, tuberculosis.
- The wrist and hand tenosynovitis, tuberculosis ganglion, rupture of tendons contractures.
- Pyogenic infection
- Tuberculosis
- Chronic arthritis rheumatoid and osteoarthritis
- Diseases of nervous system, poliomyelitis, cerebral Palsy
- Common fractures o spine and extremities: -
  - \* Trauma Therapy

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- ✱ Play therapy
- ✱ Drug Therapy
- ✱ E.C. T
- The role of psychiatrist in dealing with the problems of mental health
- Pediatrics.
- Geriatrics
- Nursing and Bandaging

## **Paper-8- Physical therapy in Medical Conditions**

### **☑ Physical therapy in neurological conditions**

- Examination of Neurological disorder and principles of treatment
- Hemiplegia, paraplegia, cerebral palsy, Tabs dorsalis cerebellar alexia, extra pyramidal lesions.
- Disseminated sclerosis muscular atrophy, amyotrophic lateral sclerosis, progressive muscular atrophy, syringomyelia, sub-acute combined degeneration of cord
- Peripheral Nerves lesions
- Neuritis and Neuralgia Brachial sciatica and facial palsy
- Infections-Poliomyelitis, Meningitis, Encephalitis, Polyneuritis
- Myopathies
- Pediatrics and Geriatrics

### **☑ Pathological conditions:**

- Review of pathological changes and principles of the treatment by physiotherapy of:

Inflammation acute chronic and suppurative.

Oedema Traumatic, Obstructive, Paralytic, Oedema due to poor muscle and laxity of the fascia.

### **II. Arthritis and Allied conditions:**

- ✦ Osteo arthritis generalized, degenerative and traumatic, spondylosis and disorders
- ✦ Rheumatoid arthritis, stills disease, infective arthritis
- ✦ Spondylitis, Ankylosing spondylitis
- ✦ Non articular Rheumatism Fibrositis, Myalgia, Bursitis, Periarthritis etc.

### **III. Diseases of the Respiratory System:**

- ✦ Mechanism of Respiration
- ✦ Examination of chest of patient and principles of physiotherapy treatment.
- ✦ Bronchitis, Asthma, Lung Abscess, Bronchiectasis, Emphysema
- ✦ Pleurisy and Empyema, Pneumonia
- ✦ Bacterial Disease-Tuberculosis
- ✦ Tumors

### **IV. Common conditions of Skin:**

- ✦ Ane, Psoriasis, alopecia, Leucoedema, Leprosy etc.

### **V. Common Cardiac Disorders:**

- ✦ Thrombosis, Embolism, Burger's disease, Arteriosclerosis, Thrombophlebitis, Phlebitis,

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✦ Gangrene, Congestive Cardiac failure, Hypertension, Rheumatic fever etc.

**VI. Deficiency Diseases:**

✦ Rickets, Osteomalacia etc.

## **Paper-9- Physical Therapy in Surgical Conditions**

### **☑ UNIT – I (Orthopedic and fractures)**

- Fractures and dislocations
- Types of displacement
- Classification
- Immediate, late signs and symptoms
- Changes at fracture site and its surrounding tissues
- Reasons for union, non-union, delayed union
- Healing of fractures and factors influencing it
- Common fractures of upper and lower extremity and their complications
- Methods of reduction and fixation
- Corrective surgery
- Arthroplasty, Arthrodesis, Osteotomy, Tendon, Transplant, Soft Tissue release, Grafting.
- Physiotherapy treatment as applicable to above conditions

### **☑ UNIT-II (Injuries)**

- Soft tissue injuries: synovitis, Capsulitis Volkmann's ischemic contracture etc.
- Crush injuries
- Repair of injured tendon and nerves
- Injuries of semilunar cartilage and cruciate ligaments knee: Physical Therapy
- treatment as applicable to above conditions

### **☑ UNIT - III. (Deformities):**

- Congenital, torticollis, Cartilage and cruciate ligaments knee: Physical Therapy Treatment as applicable to above conditions.
- Acquired: Scoliosis, Kyphosis, Lordosis, coxa vara, Genu Valgum, Genu varum and pervurvatum, Planus and other common deformities.
- Other miscellaneous Orthopaedic conditions commonly treated by Physiotherapy.
- Physical therapy treatment related to above conditions

### **☑ UNIT - IV. (Amputations):**

- Traumatic, elective, common sites of amputation in Upper & Lower extremities
- Advantages and disadvantages physical Therapy treatment as applicable to care of
- Prosthetic training with emphasis on Lower extremity.
- Complications common to all operations: pre and post operative physiotherapy.
- Wounds, local infections, ulcers Surgical procedures related to peripheral vascular
- disease.
- Burns –Degree, Grafting of skin.

➤ General abdominal surgery and obstetrics and Gynecology.

✓ **Thoracis Surgery**

- ✦ Thoracis incisions pre and post operative treatment and later rehabilitation of the patient.
- ✦ Lobectomy, pneumonectomy, Thoracotomy, Thoracoplasty
- ✦ Operations on Chest Walls
- ✦ Common complications with emphasis to atelectasis Pneumothorax,
- ✦ bronchopulmonary fistula, pre and post operative physiotherapy related to Cardiothoracic surgery
- ✦ Operations on Precordium and Heart, Chronic Constructive pericarditis, valvular in competence and Stasis, mitral, valvotomy, tetralogy of Fallot.

✓ **Ear, Nose and throat conditions:**

**a) Neuro surgery otitis sinusitis vaso motor, Rhimorrhoea, tonsillitis physiotherapy it above conditions.**

- ✦ Cranial Surgery:
- ✦ Head Injury, intra cranial abscess, Intracranial Tumors.
- ✦ Surgery of spinal Cord and Couda Equina, spina Bifida and its complications, infections
- of the spine, Epidural Abscess, Tuberculosis, pre and post operative physiotherapy laminectomy, treatment related to above conditions.
- ✦ Surgery of peripheral Nerves, peripheral nerve injuries, pre and post operative physiotherapy treatment related to above conditions

## **Paper-10- Bio-Mechanics and Kinesiology**

- General Principles
- Force, axis, planes, center of gravity levers
- Classification of force systems
- The linear force system resultant force equilibrium
- Parallel forces in one plane
- Concurrent and genral force system
- Friction
- The fundamental principles of motion
- Locomotion



## **Paper-11- Disability prevention and Prehabilitation**

- ☑ Introduction
- ☑ Definition concerned in the phase of disability process
- ☑ Definitions concerned with cause of impairment, functional limitation and disability
- ☑ Rehabilitation and disability prevention
- ☑ Present rehabilitations services
- ☑ Reservation & Legislation for rehabilitation services for the disabled
- ☑ Community and Rehabilitation
- ☑ Basic principles of Administration, Budget, Approach Personnel and Space etc.
- ☑ Contribution of Social worker towards rehabilitation
- ☑ Vocational evaluation and goals for disabled.
- ☑ Rural rehabilitation in-corporated with PHC's
- ☑ Principles of Orthotics & Prosthetics:
  - Lower Extremity orthotics/Upper extremity; orthosis
  - Spinal Orthotics
  - Upper extremity prosthetics
  - Lower Extremity Prosthetics
- ☑ Principle of Communication: Impairment
  - Speech Production
  - Communication disorders secondary to Brain damage
  - Aphasia and its treatment
  - Dysarthria and its treatment
  - Non- aphasic language disorders
- ☑ Code and Conduct
- ☑ Ethics and Management
  - a) Principles in Management of Social Problems:
    - Social needs of the patient
    - Rehabilitation center Environment
    - The Social worker as a Member of the Rehabilitation Team
    - Community Resources
  - b) Principles in Management of Vocational Problems:
    - Vocational Evaluation
    - Vocational goals for the disabled

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- Definition Scope and importance of A. D. L.
- Goals of Self-Help Devices
- Principles of design materials used
- A. D.L Fom
- A. D. L. Room
- Relationship of ADL to occupational Therapy and Physiotherapy
- National Health Programmes
- Bio-Medical Waste

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