



**PHYSIOTHERAPY TECHNOLOGY
DIPLOMA 2ND, 3RD AND 4TH SEMESTER**

HAFEEZ INSTITUTE OF MEDICAL SCIENCES, PESHAWAR

2nd SEMESTER PLAN

SPECIAL ANATOMY RELATED TO PHYSIOTHERAPY

- a. Human Skeleton:
 - Classification of bones and ligaments
 - Muscular attachments
 - Important bones and joints
- b. Description of important muscles:
 - Innervations of muscles
 - Attachments of muscles
 - Contraction relaxation functions of muscles
- c. Nervous system:
 - Nasopharynx
 - Larynx
 - Trachea
 - Bronchi
 - Lungs and its lobes and segments

PHYSIOLOGY:

Elementary knowledge and brief out lines only.

- a. Composition and functions of bones and joints
- b. Types of muscles and function of various type of muscles including heart muscles (Degeneration and regeneration of nervous, spinal reflex are)
- c. Function of brain, spinal cord and nervous including automatic nervous system
- d. Blood circulation introduction to blood vascular system
- e. Physiology of respiratory system, effect of exercise on respiration.

KINESIOLOGY:

- a. Classification of passive movements
 - Relaxed passive movements
 - Forced passive movements
 - Its techniques and effects
- b. Classification of active movements
 - Active movements and its effective
 - Assisted active movements its technique and effect
 - Resisted movements its techniques and effects
- c. Breathing exercise: its effect and technique
- d. Posture training and control, maintenance correct posture
- e. Suspension therapy.
 - Introduction to suspension
 - Simple methods of suspension
 - Effects and uses
- f. Pulley Circuits introduction to pulley and weight circuits effects and of pulley circuits.

HAFEEZ INSTITUTE OF MEDICAL SCIENCES, PESHAWAR

- g. Body position: effects, uses and muscle works.
 - Standing
 - Kneeling
 - Sitting
 - Lying
 - Hanging
 - Pelvic tilt
- h. Relaxation:
 - Definition, methods of promoting relaxing, effects and uses
- i. Proprioceptive neuromuscular facilitation:
 - Basic technique, its effects and uses.
- j. Reduction of walking:
 - Without aids
 - With crutches
 - Stick and braces

ECTRO MECHANICS:

Current from cells and main's supply

D.C. for treatment

Faradic and sinusoidal apparatus

Electric shocks its severity, effects and treatment, precaution

Physics of heat and radiations

- a. Physical effects of heat and temperature
- b. Transmission of heat
- c. Wavelength and frequency
- d. Infra red rays and its sources
- e. Ultra violet rays its sources and choice of lamp for treatment

ETTIOD OF TEACHING

1. Lectures
2. Demonstrations
3. Practical work

ATTENDANCE:

Every student has to attend 80% of the classes.

RADING AND EVALUATION

We shall be three monthly tests of 20 marks each, which shall be counted in the comprehensive exam in the end of semester passing marks shall be 60%

RECOMMENDED BOOKS

1. Cash textbook of physiotherapy for some medical conditions
2. Cash textbook of physiotherapy in some surgical conditions
3. Cash textbook of neurological conditions
4. Cash textbook of Rheumatology for physiotherapists
5. Practical management of spinal injuries (hardy and Elson)
6. The principles of exercises therapy. (Gardiner)
7. Interferential therapy
8. Adult hemiplegic evaluation and treatment (Bobath)
9. Orthopedic splints and appliances (hoan M. Kennedy)

HAFEEZ INSTITUTE OF MEDICAL SCIENCES, PESHAWAR

رَبِّی زِدْنِی عِلْمًا



HAFEEZ INSTITUTE OF MEDICAL SCIENCES, PESHAWAR

3rd SEMESTER

Anatomy related Physiotherapy Part-2;

HUMAN SKELETON

- I. CLASSIFICATION OF BONDS
- II. CLASSIFICATION OF LIGAMENTS
- III. CLASSIFICATION OF MUSCLES
- IV. CLASSIFICATION OF JOINTS

DESCRIPTION OF IMPORTANT MUSCLES

- I. INNERVATION OF MUSCLES (lower limb)
- II. ATTACHMENT OF MUSCLES (lower limb)

URINARY AND GENTAL SYSTEM

1. KIDNEY
2. URETER
3. URINARY BLADDER
4. MALE GENITAL ORGANS
5. URETHRA
6. FEMALE GENITAL ORGANS

ENDOCRINE SYSTEM:

1. PITUITARY GLAND
2. SUPRARENAL GLANDS
3. THYROID GLAND
4. SPECIAL ORGANS

EYE EAR NOSE SKIN HAIRS NAILS SWEAT GLANDS

SPECIAL PHYSIOLOGY RELATED TO PHYSIOTHERAPY (Part – II)

1. PHYSIOLOGY OF URINARY SYSTEM
2. PHYSIOLOGY OF DIGESTIVE SYSTEM
3. PHYSIOLOGY OF GENITAL SYSTEM
4. PHYSIOLOGY OF ENDOCRINE SYSTEM
5. PHYSIOLOGY OF SPECIAL SENSES

KINESIOLOGY

1. POSTURAL TRAINING, CONTROL & MAINTENANCE OF CORRECT POSTURE
2. SUSPENSION THERAPY:
 - Introduction
 - Simple Methods of suspension
 - Effects and uses of suspension Therapy
3. PULLY CIRCUITS/WEIGHT CIRCUITS
 - Introduction/Weight circuits

HAFEEZ INSTITUTE OF MEDICAL SCIENCES, PESHAWAR

- Effects of Pully circuits/weight circuits
- Uses of Pully circuits/weight circuits

4. SCARTION POSITION

- Effect of scar ton position
- Uses of Scar ton position
- Muscle work in scar ton position
 - Standing
 - Kneeling
 - Sitting
 - Lying
 - Hanging
 - Pelvic Till

5. RELAXATION

- Definition
- Method of promoting relaxation
- Effects & Uses

6. PROPRIOCEPTIVE NEURO MUSCULAR FACILIATION

- Basic Techniques
- Effect & uses

7. RE-EDUCATION OF WALKING

- Without aids
- With crutches
- With stick and braces

ELECTROMECHINCS

1. Current from cells/current from main supply
2. Direct current for treatment
3. Faradic and sinusoidal apparatus
4. Electric shock
 - Its effects
 - Its treatment
 - Precaution
5. Physics of Heat and Radiation
 - Physical effects of heat and temperature
 - Transmission of heat
 - Wave length & frequency
 - Infra red rays and its sources
 - Ultra violet rays its sources and choice of lamp for treatment

PHYSIOTHERAPY IN SOME MEDICAL CONDITION (Part-1)

1. Physiotherapy in Respiratory system disorder
 - Bronchitis
 - Bronchicetesis

HAFEEZ INSTITUTE OF MEDICAL SCIENCES, PESHAWAR

- Pleurisy
 - Empyreaan
 - Preumonia
 - Lung abseen
 - Lung tuberculosis
 - Brachial Asthma
2. Physiotherapy in joints diseases
 - Osteoarthritis of different joints
 - Rheumatoid Arthritis of different joints
 - Ankylosing spondilitics

PHYSIOTHERAPY IN SOME SURGICAL CONDITION (Part-1)

1. Physiotherapy in
 - Acute in
 - Sub acute in
 - Chronic in
2. Physiotherapy in different types of wounds and other conditions
 - Wounds
 - Atrophy of different organs
 - Hypertrophy of different organs
 - Degeneration of deferent organs
 - Necrosis of different organs
 - Gangrene in different organs
 - Suppuration of different organs calcification of different organs
 - Calcification of different organs
3. Physiotherapy in different types of shock
 - Reversible shock
 - Irreversible shock
4. Physiotherapy in deferent types and degrees of burns
5. Physiotherapy in different types of fractures
 - Simple Fractures
 - Compound Fractures
 - Comminuted Fractures

A. PHYSIOTHERAPY IN SOME MEDICAL CONDITIONS Part-II

1. Disorder of the Nervous System

- Poliomyelitis
 - Vascular diseases of the Brain
 - Chorea
 - Parkinsonism
 - Neuritis
2. Monoplegia
 3. Paraplegia
 4. Hemiplegic
 5. Quadric Plebian

B. PHYSIOTHERAPY IN SOME SURGICAL CONDITIONS Part-II

1. Physiotherapy management of Dislocations
2. Physiotherapy managements of deformities
 - Congenital deformities
 - Acquired deformities
3. General post op-care of patients in physiotherapy
4. Physiotherapy in chest surgery
 - Emphysema
 - Lobotomy
 - Lung collapse
 - Pneumonectomy
5. Physiotherapy in Traumatic conditions

C. ELECTROTHERAPY

1. Technique & application of Galvanic Current, its effects uses-indication and precautions
2. Technique and application of Faradic Currents its effects uses dangers indications contra indication precaution
3. Technique uses and effects of sinusoidal current, Physiological and therapeutic effects
4. Micro wave diathermy its uses effect and danger
5. Ionization
6. Short wave diathermy its different techniques physiological Therapeutic effects uses danger precaution & contra indication
7. Ultra sonic its technique, uses and effects
8. Infra Red rays
 - Physiological effects & Therapeutic effects and dangers
9. Ultra Violet Rays
 - Physiological effects & therapeutic effects & dangers

D. HYDROTHERAPY

1. Physiological Principles of Hydrotherapy
2. Application cold shot. Outline of methods of applying moist, heat, contrast bath, wax bath, whirl pool baths, Technique effects, uses dangers and contraindication each.
3. Use of water as a medium for movements.

E. MASSAGE

1. Different Techniques of massage
2. Effects of massage
3. Uses of massage

F. PHYSIOTHERAPY TREATMENT AND TECHNIQUES

1. Introduction to the following
 - a. Posture, suspension therapy, Hydrotherapy, Pully circuits and Pully and weight circuits
2. Massage, manipulation, technique uses & effects (in detail)
3. Re-education of different Muscles its technique uses & effects
4. Re-education of walking.
 - a. Without aid
 - b. With cruches
 - c. Stick and braces
5. General Breathing exercises its effect and uses localized & specialized Breathing Exercises
6. Mobilization of different joints & co-ordination of movements

G. NERVOUS SYSTEM

- a. Principles of treatment of nervous diseases
- b. Classification of Nervous diseases
 - Upper Motor neuron diseases
 - Lower Motor neuron diseases
- c. lesions of upper motor neuron
Hemiplegic- Cerebral palsy-paraplegia
- D. lesion of the lower Motor neuron
Poliomyelitis, progressive Muscular trophy

Lesion of peripheral Nerves-its principles of treatment

- ulnar nerve paralysis
- Erb's paralysis
- Median nerve paralysis
- Facial nerve paralysis
- Radial nerve paralysis
- Lateral popliteal nerve paralysis
- Circumflex nerve paralysis

Cardiovascular system – its principle of treatment

Respiratory Tracts – its principle of treatment

- Chronic Bronchitis – Bronchitis's – Preumonia – Asthma
Emphysema – Emphysema – Tuberculosis

Diseases of joints – Traumatic Sinusitis and arthritis rheumatoid arthritis Osteen Arthritis-Bursitis Osteomyilitis.

Fractures: - General consideration – principle of treatment

- a. Fracture of the upper extremity splinting & support
- b. Fractures of lower extremity splinting & support

HAFEEZ INSTITUTE OF MEDICAL SCIENCES, PESHAWAR

Joint & Muscular Injuries: - Principle of Treatment

Dislocation of upper & lower extremity, sprain & strain of wrist ankle & back. Tennis elbow.

Deformities of the upper and lower extremities-General principle of treatment.

PRACTICAL AND DEMONSTRATIONS

1. Recognition of all Physiotherapy instruments-Equipments and appliances
2. Cleanliness and maintenance and care of instruments, equipments and appliances
3. Type of splints and their uses
4. Practice of Massage
5. Passive movements of all individual joints
6. Assisted active movements of all individual joints
7. Re-medical exercises its technique-uses & effects
8. Practical class in Pully and weight circuits
9. Clinical Demonstration on patients
10. Bandaging and splinting including plaster work
11. Progressive treatment in all medical & surgical condition

NOTE

Practical classes will be held through out the whole two years training course in the working hours without any vacation i.e. (Summer, Winter and Spring).



HAFEEZ INSTITUTE OF MEDICAL SCIENCES, PESHAWAR