

INTEGRAL UNIVERSITY, LUCKNOW
DEPARTMENT OF PHYSIOTHERAPY
Syllabus-Entrance Examination for PhD Program
Session 2020-21

Anatomy:

- a. Basics of Neuro-musculoskeletal anatomy.
- b. Applied anatomy of Neuro-musculoskeletal system.
- c. Basics of cardio pulmonary anatomy.
- d. Applied anatomy of cardio pulmonary system.
- e. Anatomical angle of body.

Physiology:

- a. Basics of blood, Ca, Vitamins physiology.
- b. Basics of musculoskeletal physiology.
- c. Basics of cardio pulmonary physiology.
- d. Basics of Neuro physiology.
- e. Applied physiology of musculoskeletal, cardio pulmonary and neurological system.

Pathology:

- a. Inflammation and infection
- b. Tissue healing.
- c. Immune response.
- d. Immunology and exercise.

Pharmacology:

- a. Basics of pharmacokinetics and pharmacodynamics.
- b. NSAIDS, Muscle relaxant.
- c. Anti-convulsion and Anti-anxiety.
- d. Anti-hypertensive and Anti-coagulant.
- e. Anti-tubercular and Bronchodilator's.
- f. Nutritional supplements and life saving dugs.

Advance Electrotherapy and Electro diagnosis:

- a. Basics of common electrotherapeutic modalities
- b. Recent advancement in electrotherapeutic modalities
- c. Recent advancement of pain management with electrotherapeutic modalities
- d. NCV, EMG and recent advancement in electro diagnosis

Biomechanics:

- a. Basics of kinematics and kinetics & its application.
- b. Basics biomechanics of UL, LL and Spine.
- c. Biomechanics of soft tissue and neurodynamics.
- d. Kinetic and kinematic analysis of posture.
- e. Gait Parameter- Kinetic, Kinematic, Time – Space, Pathological Gait – Running, Stair Climbing, Changes in Gait Following Various Surgeries /Diseases / Disorders.
- f. Biomechanical Principle of Orthosis, Orthosis of Upper Limb, Lower Limb, & Spine, Prescriptions. Checkouts & Proper Fittings.

Physiotherapy assessment and Intervention in various disorders:

- a. Musculoskeletal disorders.
- b. Neurological disorders.
- c. Pulmonary disorders
- d. Sports injury.
- e. Gynaecological and special conditions.
- f. Paediatric and Geriatric conditions.

Physiotherapy assessment and Intervention in various surgeries:

- a. Orthopaedic surgery.
- b. Neurological surgery.
- c. Cardiothoracic surgery.
- d. Reconstructive and replacement surgeries.
- e. Gynaecological and urogenital surgeries.
- f. Oncological and organ replacement surgeries.
- g. Paediatric and Geriatric surgeries.
- h. Amputation

Manual Therapy Concepts and Techniques:

- a. Maitland concepts & Techniques in details.
- b. Mulligan concepts & Techniques in details.
- c. Keltonborn' concepts & Techniques in details.
- d. McKenzie concepts & Techniques in details.
- e. Muscle Energy techniques.
- f. Buttler concepts and techniques.
- g. Cyriax concepts and techniques.
- h. Stretching techniques.

Fundamentals of Neuro Therapeutic Approaches:

- a. Proprioceptive Neuromuscular Facilitation (PNF).
- b. Neurodevelopment therapy (NDT).
- c. Sensory integration Technique (SIT).
- d. Motor Relearning Program (MRP).
- e. Constraint Induced Movement Therapy (CIMT).
- f. Roods approach.
- g. Vojta Therapy.
- h. Mental imagery technique.

Special and advance techniques in physiotherapy:

- a. Orthopaedic physiotherapy.
- b. Neurophysiologicalphysiotherapy.
- c. Pulmonary physiotherapy.
- d. Sports physiotherapy.
- e. Geriatric Physiotherapy.
- f. Community based Rehabilitation.
- g. Paediatric Physiotherapy.
- h. Neuro-Paediatric Physiotherapy.