

**EXERCISE PHYSIOLOGY**

**Unit - I**

Meaning and scope of Physiology of exercise - Structure and function of skeletal Muscles – Types of Muscle fibers – Red and White – Types of Muscular Contraction – Isotonic Isometric and Isokinetic – Effect of exercise on Muscular system – Hypertrophy, Hypo trophy.

**Unit - II**

Mechanism of respiration – respiratory muscles – Lung volumes and Capacities - Heart rate – Stroke Volume – Cardiac cycle – Cardiac Output during rest and Exercise – Blood pressure – Systolic, Diastolic – Effect of exercise on Respiratory system and Circulatory system.

**Unit - III**

Nervous System – Types of Nervous System – Central Nervous System (CNS) and Peripheral Nervous System (PNS) – Structure of Neuron - Effect of exercise on Nervous system.

**Unit - IV**

Metabolism – Anabolism and catabolism - sources of energy – Aerobic and Anaerobic Metabolism, Fat metabolism and protein metabolism and endocrine system.

**Unit- V**

Exercise and temperature regulation in Hot and Cold climate – Exercise and Altitude – Sex differences on exercise – aging and exercise – Physical Conditioning.

**Books for Reference**

1. Devrises H.A Physiology of exercise for physical Education and Athletics London, Staples Press – 1976.
2. More house LE and Milter A.T. Physiology of exercise St Louis, The CV Mosby Company 1976.
3. Jonson W.R. Science and Medicine of exercise and sports London Harper & Bros 1974.
4. Guyton AC Text book of Medical Physiology W.B. Soundars Company Philadelphia.
5. Bourne GH the Structure and function of Muscle London Academic Press.