



# **Tripura University**

**(A Central University)**

**Suryamaninagar**

**West Tripura**

**Syllabus for**  
**Four Years Undergraduate Programme Subject:**  
**Human Physiology**  
**(As per NEP-2020)**

**8<sup>th</sup> Semester (Minor)**

Revised as on October, 2025

**Semester-VIII**  
**Paper- 8A (Theory)**  
**HP- 801M**

**Full marks-60 (Internal assessment-24; End Sem. Exam. -36)**

**Unit-1: Nerve -Muscle Physiology**

1. Structure, properties and classification of Neurons and Neuroglia.
2. Resting membrane potential (RMP). Action potential (AP), ionic basis, characteristics of AP, propagation in different types of nerve fibers.
3. Synapse, structure, classification, Transmission of nerve impulse through synapse. Neuromuscular Junction (NMJ)- structure, motor unit, propagation of nerve impulse through the neuro-muscular junction.
4. Receptors, classification, types, Reflex, arc, classification.
5. Structure of skeletal muscle. Mechanism of skeletal muscle contraction.

**Unit-2: Nervous system**

1. Introduction to Nervous system. Structural organization of brain and spinal cord.
2. CSF and functions of CSF. Blood Brain Barrier.
3. Somato-sensory system: Ascending (sensory) tracts-carrying touch, pain, temperature sensation.
4. Motor system: Descending tracts (pyramidal and extra pyramidal systems), Upper motor and lower motor neurons and their lesions.
5. Autonomic Nervous system (ANS): Classification, structural and functional organizations. Neurotransmitter in ANS.
6. Thalamus, hypothalamus, basal ganglion and cerebellum-structure and functions.

**Unit-3: Special senses**

1. Vision: anatomy and structure of different layers of eye ball, cornea, lens, aqueous and vitreous humor.
2. Blood supply to different layers of eye. Histology of retina and transmission of light signal. Functions of iris, lachrymal gland secretion and functions. Myopia and hypermetropia, color blindness,
3. Mechanism of development of cataract, glaucoma.
4. Mechanism of hearing and role of hair cells.
5. Structure and functions of receptor organs and nervous pathway, Gustatory pathway.

**Paper-8B (Practical)**  
**HP- 402M**

**Full marks-25 (Internal assessment-10; End Sem. Exam. -15)**

**CONTENTS:**

1. Study of Models for anatomical position and functions of organs of brain, eye, ear, nose, tongue.
2. Study and identification of histological slides of brain and spinal cord.
3. Examination of reflexes: Deep reflex (Knee jerk), Superficial reflex (planter reflex).
4. Deafness test: Nerve & conductive deafness -Rinne's and Weber's Test