

# ANATOMY, PHYSIOLOGY AND HEALTH EDUCATION

Subject Code : PYT.1.101  
Periods / Week: 3  
Nature of Exam: Theory

Sessional : 30  
Examination : 70  
Exam Duration: 3 Hrs

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## Unit – I:

**Introduction:** Anatomical terms in relation to parts of the body, system and organs. Elementary knowledge of the human skeleton; Tissues of the body – properties and functions of epithelial, connective, muscular, nervous and osteous (bone) tissues; General principles of membrane permeability, diffusion, transport, membrane potentials and action potentials.

## Unit – II:

**Nervous Systems:** Neuron, Synapses, ganglion, plexus, physiology of nerve impulse, neurotransmission, reflex arc, central nervous system (parts and functions) and autonomic nervous system.

**Cardiovascular System and Blood:** – Heart, blood vessels, cardiac cycle, circulation, blood pressure and its regulations. Blood (composition and function).

## Unit – III:

**Respiratory System:** – Gross anatomy of respiratory passages, physiology of respiration, nervous control of respiration, vital capacity, respiratory volume, introduction to terms such as anoxia, hypoxia & dyspnoea.

**Digestive System:** – Gross anatomy of alimentary canal, movements of alimentary canal, gastric secretions and the enzymes involved in digestion.

**Endocrine System:** –Mechanisms of hormonal secretion, Physiological considerations of thyroid, pancreas, pituitary, parathyroid, adrenal glands & gonads; Disorders of hypo & hyper secretion.

## Unit – IV:

**Urinogental System:** – Various parts, structure and functions of the kidney and urinary tract. Physiology of urine formation, output and factors controlling it.

**Physiology of Special Senses:** – basic anatomy and physiology of the eye (vision), ear (hearing), tastebuds (Tongue), nose (smell) and skin (touch and pain).

## Unit – V:

Health Education (Epidemiology) and Family Planning.

Elementary pathology – Diseased and pathological processes.

Inflammation and repair, Retrograde changes including disturbances of metabolism, circulation like haemorrhage, thrombosis and growth including various tumours (Neoplasms).

Embolism, infarction, Oedema and shock. Nutritional disorder (Vitamin deficiency)

**Examination :** One question from each unit with internal choice.

### Text Books:

1. Principles of anatomy and physiology by Tortora G.J., and N.P. Anagnokokos,
2. Principles of Anatomy and Physiology by Ross & Wilson.

### Reference Books:

1. Human Physiology by C.C. Chatterjee, Medical Allied Agency, India.
2. Text Book of Medicinal Physiology by A.C. Guyton, W.B. Prism Books Pvt. Ltd.,