

HUMAN ANATOMY AND PHYSIOLOGY-II

(HAP-II)

THEORY 3 hours/Week

UNIT -I

1. Digestive System: Gross anatomy of the gastro-intestinal tract, functions of its different parts including those of liver, pancreas and gall bladder, various gastrointestinal secretions and their role in the absorption and digestion of food. Disorders of digestive system.

UNIT - II

2. Respiratory system: Anatomy of respiratory organs & its functions, respiration mechanism & regulation of respiration, respiratory volumes & vital capacity.

UNIT -III

3. Central Nervous System: Functions of different parts of brain & spinal cord. Neurohumoral transmission in the central nervous system, reflex action, electroencephalogram, specialized functions of the brain, cranial nerves & their functions.

4. Autonomic Nervous System: Physiology & functions of the autonomic nervous system. Mechanism of neurohumoral transmission in the A.N.S.

UNIT -IV

5. Urinary System: Various parts, structures and functions of the kidney and urinary tract. Physiology of urine formation and acid-base balance. Diseases of the urinary system.

6. Reproductive System: Male and female reproductive systems and their hormones, physiology of menstruation, coitus and fertilization. Sex differentiation, oogenesis, spermatogenesis & organogenesis. Pregnancy, its maintenance and parturition.

UNIT -V

7. Endocrine System: Basic anatomy and physiology of Pituitary, Thyroid, Parathyroid, Adrenals, Pancreas Testes and Ovary, their hormones and functions. Diseases in hypo and hyper secretions.

8. Sense Organs: Basic anatomy and physiology of the eye (vision), ear (hearing and balance), taste buds, nose (smell) and skin (superficial receptors).

RECOMMENDED BOOKS:

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1. Anatomy and Physiology in Health and Illness by Ross and Willson (Churchill living stone)
 2. Concise Medical Physiology by S.K.Choudhury
 3. Guyton A C, Hall JE., Text book of Medical Physiology, W.B.Sandnders Company
 4. Human Physiology, C C Chatterjee, Medical allied agency, Calcutta
 5. Tortora G.J., & Anagnodokos N.P., Principles of Anatomy & Physiology

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PRACTICAL 3 hours/Week

(A minimum of 15 practical shall be conducted)

Study of the following systems with the help of charts and models:

1. Digestive system
2. Respiratory system
3. Central nervous system
4. Autonomic nervous system
5. Urinary system
6. Reproductive system
7. Endocrine system
8. Sense organs
9. Determination of vital capacity
10. Physiological experiments on nerve-muscle preparation
11. Microscopic study of different tissues
12. Study and preparation of permanent slides