

# 18BP016 HUMAN ANATOMY AND PHYSIOLOGY -II

Hours Per Week :

L	T	P	CP	CL
3	1	4	2	4

Total Hours :

L	T	P	WA/RA	SSH/HSH	CS	SA	S	BS
45	1	30						

## SCOPE:

This subject is designed to impart fundamental knowledge on the structure and functions of the various systems of the human body. It also helps in understanding both homeostatic mechanisms. The subject provides the basic knowledge required to understand the various disciplines of pharmacy.

## COURSE OUTCOMES:

Upon completion of the course, the student will be able to achieve the following outcomes:

COs	Course Outcomes	POs	PSOs
1	Explain the gross morphology, structure and functions of various organs of the human body.	1,4,5	1
2	Describe the various homeostatic mechanisms and their imbalances.	1,4,5	1
3	Identify the various tissues and organs of different systems of human body.	1,4,5	1
4	Perform the haematological tests like blood cell counts, haemoglobin estimation, bleeding/clotting time etc and also record blood pressure, heart rate, pulse and respiratory volume.	1,4,5	1
5	Apply the knowledge to perform various physiology experiments	1,2,3	1

**UNIT - I** **10 HOURS**

**PERIPHERAL NERVOUS SYSTEM:**

Classification of peripheral nervous system: Structure and functions of sympathetic and Para sympathetic nervous system. Origin and functions of spinal and cranial nerves.

**SPECIAL SENSES AND INTEGUMENTARY SYSTEM**

Structure and functions of skin, eye, ear, nose and tongue.

**UNIT - II** **06 HOURS**

**DIGESTIVE SYSTEM**

Anatomy of GI Tract with special reference to anatomy, physiology and functions of stomach, small intestine and large intestine, anatomy and functions of salivary glands, pancreas and liver, movements of GIT, digestion and absorption of nutrients.

**UNIT - III** **10 HOURS**

**RESPIRATORY SYSTEM**

Anatomy of respiratory system with special reference to anatomy of lungs, mechanism of respiration, regulation of respiration, Lung Volumes and capacities. Transport of respiratory gases, artificial respiration and resuscitation methods.

**URINARY SYSTEM**

Anatomy of urinary tract with special reference to anatomy of kidney and ureters, functions of kidney and urinary tract, physiology of urine formation, micturition reflex and role of kidneys in acid base balance, role of RAAS in kidney.

**UNIT - IV** **10 HOUR**

**ENDOCRINE SYSTEM**

Classification of hormones, mechanism of hormone action, structure and functions of pituitary gland, thyroid gland, parathyroid gland, adrenal gland, pancreas, pineal gland, thymus and their disorders.

**UNIT - V** **09 HOUR**

**REPRODUCTIVE SYSTEM**

Anatomy of male and female reproductive system, Functions of male and female reproductive system, sex hormones, physiology of menstruation, fertilization, spermatogenesis, oogenesis, pregnancy and parturition

**Introduction to genetics**

Chromosomes, genes and DNA, protein synthesis, genetic pattern of inheritance

