



LESSON PLAN

Faculty Name: Dr. D. P. Bhagwat

Subject Name: Human Anatomy and Physiology

Class: B. Pharmacy – 2<sup>nd</sup> Sem

Subject Code: BP201T

**Scope of the Subject:** 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 outcome:** Upon completion of this course the student should be able to:

- Explain the gross morphology, structure and functions of various organs of the human body
- Describe the various homeostatic mechanisms and their imbalances
- Identify the various tissues and organs of different systems of human body
- Perform the hematological tests like blood cell counts, haemoglobin estimation, bleeding/clotting time etc and also record blood pressure, heart rate, pulse and respiratory volume
- Appreciate coordinated working pattern of different organs of each system
- Appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body

Number of Lectures: 45

Each lecture: 01 hour

Lecture No.	Particular	Remark/Date
<b>Module 1: Nervous system</b>		
1.	Organization of nervous system	
2.	Classification and properties of nerve fibre	
3.	Electrophysiology, action potential, nerve impulse	
4.	Neuron, neurogliareceptors, synapse, neurotransmitters	
5.	Central nervous system: Meninges, ventricles of brain and cerebrospinal fluid	
6.	Structure and functions of brain (cerebrum, brain stem, cerebellum)	
7.	Spinal cord (gross structure, functions of afferent and efferent nerve tracts, reflex	
<b>Module 2: Digestive System</b>		
8.	Anatomy of GI Tract with special reference to anatomy and functions of stomach	
9.	(Acid production in the stomach, regulation of acid production through parasympathetic nervous system, pepsin role in protein	

	digestion) small intestine and large intestine	
10.	Anatomy and functions of salivary glands	
11.	Anatomy and functions of pancreas and liver	
12.	Movements of GIT	
13.	Digestion and absorption of nutrients and disorders of GIT	
<b>Energetics</b>		
14.	Formation and role of ATP, Creatinine Phosphate and BMR	
<b>Module 3: Respiratory system</b>		
15.	Anatomy of respiratory system with special reference to anatomy of lungs	
16.	Mechanism of respiration	
17.	Regulation of respiration Lung Volumes and capacities transport of respiratory gases	
18.	Artificial respiration, and resuscitation methods	
<b>Urinary System</b>		
19.	Anatomy of urinary tract with special reference to anatomy of kidney and nephrons	
20.	Functions of kidney and urinary tract, physiology of urine formation	
21.	Micturition reflex and role of kidneys in acid base balance	
22.	Role of RAS in kidney and disorders of kidney	
<b>Module 4: Endocrine system</b>		
23.	Classification of hormones	
24.	Mechanism of hormone action	
25.	Structure and functions of pituitary gland and their disorders.	
26.	Structure and functions of thyroid gland and their disorders.	
27.	Structure and functions of parathyroid gland and their disorders.	
28.	Structure and functions of adrenal gland and their disorders.	
29.	Structure and functions of pancreas and their disorders.	
30.	Structure and functions of pineal gland and their disorders.	
31.	Structure and functions of thymus and their disorders.	
<b>Module 5: Reproductive system</b>		
32.	Anatomy of male reproductive system, Functions of male reproductive system	
33.	Anatomy of female reproductive system, Functions of female reproductive system	
34.	Sex hormones	
35.	Physiology of menstruation	
36.	Fertilization	
37.	Spermatogenesis, oogenesis	
38.	Pregnancy and parturition	
<b>Introduction to genetics</b>		
39.	Chromosomes, genes and DNA,	
40.	Protein synthesis,	
41.	Genetic pattern of inheritance	
<b>Revision</b>		

42.	Revision of previous question papers	
43.	Revision of previous question papers	
44.	Revision of previous question papers	
45.	Revision of previous question papers	
46.	Revision of previous question papers	

**Teacher in-charge**

**HOD**

**Principal**