



ROYAL COLLEGE OF PHARMACY

COURSE: DIPLOMA IN PHARMACY

LESSON PLAN

Faculty Name: Ms. Anju

Subject: Human Anatomy and Physiology

Class: D. Pharmacy – 1st Year

Subject Code: ER20-14T

Scope of the Subject: This course is designed to impart basic knowledge on the structure and functions of the human body. It helps in understanding both homeostasis mechanism and homeostatic imbalances of various systems of human body.

Course outcome: Upon completion of this course the student should be able to:

- Understand the structure and functions of the various organs of the human body
- Understand the various homeostatic mechanisms and their imbalance
- Perform the hematological tests and also record the blood pressure, heart rate, pulse rate and respiratory volumes

Theory Lecture No.	Theory topics	Practical lecture no.	Practical topics	Remarks / date
Unit -1:- Introduction (2 hrs)				
1	Scope of Anatomy and Physiology	1	Study of microscope	
2	Definition of various terminologies			
Unit -2:- Structure of Cell:(2 hrs)				
3	Introduction to cell structure	2	To perform general techniques for blood collection	
4	Components and its functions			
CLASS TEST				
Unit -3 :- Tissues of the human body: (4hrs)				
5	Tissues of the human body: Epithelial their sub-types and characteristics.	3	To perform microscopic examination of epithelial tissues, cardiac muscles, smooth muscles of pre prepared slides	
6	Tissues of the human body: Connective- their sub-types and characteristics.			

7	Tissues of the human body: Muscular– their sub-types and characteristics.			
8	Tissues of the human body: Nervous tissues–their sub-types and characteristics.		Viva-voice	
	CLASS TEST			
Unit - 4:-Osseous system: (3 hrs)				
9	Structure and functions of bones of axial skeleton	4	To perform microscopic examination of epithelial tissues, cardiac muscles, smooth muscles of pre prepared slides	
10	Structure and functions of bones of appendicular skeleton			
11	Classification, types and movements of joints, disorders of joints			
	CLASS TEST			
Unit - 5:-Haemopoietic system (8 hrs)				
12	Composition and functions of blood	5	To perform microscopic examination of skeletal muscles, connective tissues and nervous tissues Of prepared slides.	
13	Process of Hemopoiesis			
14	Characteristics and functions of RBCs.			
15	Characteristics and functions of WBCs.			
16	Characteristics and functions of platelets			
17	Mechanism of Blood Clotting			
18	Introduction of Blood groups	6	To determine blood group ESR.	
19	Importance of Blood groups			
	CLASS TEST			
Unit - 6:- Lymphatic system (3 hrs)				
20	Lymph and lymphatic system, composition, function and its formation.			
21	Structure and functions of spleen.			
22	Structure and functions of lymph node.			
	CLASS TEST			
Unit – 7:- Cardiovascular system (8 hrs)				
23	Anatomy and Physiology of heart	7	To determine hemoglobin content of blood.	
24	Blood vessels			
25	Pulmonary circulation			
26	Coronary circulation			

27	systemic circulation			
28	Cardiac cycle and Heart sounds,			
29	Basics of ECG			
30	Blood pressure and its regulation	8	To determine bleeding time clotting time	
	CLASS TEST			
Unit – 8:-Respiratory system (4 hrs)				
31	Anatomy of respiratory organs and their functions.	9	To record the pressure of blood in various postures	
32	Anatomy of respiratory organs and their functions.			
33	Mechanism of respiration.			
34	Respiratory volumes and capacities – definitions		Viva-voice	
	CLASS TEST			
Unit – 9:-Digestive system (8 hrs)				
35	Anatomy of the GIT	10	To record body temperature, pulse rate, heart rate and Respiratory rate.	
36	Anatomy of the GIT			
37	Physiology of the GIT			
38	Physiology of the GIT			
39	Anatomy accessory glands			
40	Functions of accessory glands			
41	Physiology of digestion	11	To record pulse oxygen (before and after exertion)	
44	Physiology of absorption			
	CLASS TEST			
Unit – 10 :- Skeletal muscles (2 hrs)				
45	Histology	12	To perform microscopic examination of skeletal muscles, connective tissues and nervous tissues Of preprepared slides	
46	Physiology of muscle contraction Disorder of skeletal muscles			
	CLASS TEST			
Unit – 11:- Nervous system (8 hrs)				
47	Classification of nervous system	13	To determine WBC count of blood	
48	Anatomy and physiology of cerebrum,			
49	Anatomy and physiology of cerebellum ,mid brain			

50	Function of hypothalamus ,medulla oblongata and basal ganglia			
51	Spinal cord-structure and reflexes			
52	Names and functions of cranial nerves			
53	Anatomy and physiology of sympathetic nervous system (ANS)	14	To determine RBC count of blood	
54	Anatomy and physiology of parasympathetic nervous system (ANS)			
	CLASS TEST			
Unit – 12:- Sense organs (5 hrs)				
56	Anatomy and physiology of Ear	15	To record force of expelled air using peak flow meter	
57	Anatomy and physiology of Eye			
58	Anatomy and physiology of Eye			
59	Anatomy and physiology of Skin			
60	Anatomy and physiology of tongue			
61	Anatomy and physiology of Nose	16	To measure the height, weight and BMI of the body	
	CLASS TEST			
Unit – 13 :- Urinary system (4hrs)				
62	Anatomy and physiology of urinary system			
63	Physiology of urine formation			
64	Renin - angiotensin system	17	To study the various system and organs using chart, models and specimens	
65	Clearance tests and micturition			
	CLASS TEST			
Unit – 14 :- Endocrine system (Hormones and their functions) (6hrs)				
66	Pituitary gland	18	To study the various system and organs using chart, models and specimens	
67	Adrenal gland			
68	Thyroid gland			
69	parathyroid gland			
70	Pancreas			
71	Gonads			
	CLASS TEST			
Unit – 15 Reproductive system(4 hrs)				
72	Anatomy of male and female reproductive system	19	To study about sensory organs.	
73	Physiology of menstruation			
74	Spermatogenesis and Oogenesis			
75	Pregnancy and parturition		Viva-voice	

