

B. Pharm. 1st Year 2nd Semester Examination 2019.

Time: 3 hours

Subject: Human Anatomy and Physiology I

Full Marks: 100

(Answer any *five* questions taking at least **one** from each group)

GROUP - A

1. Write down the function of Kidney. Define Nephron. With appropriate diagram describe different parts of Nephron. 6+2+12=20

2. Define glomerular filtration. What is the composition of glomerular filtrate? Write in details about different factors that influencing glomerular filtration. 2+4+14=20

3. Write notes on (any two)- 10X2=20
 - a. Glucose reabsorption from PCT.
 - b. Renin Angiotensin system.
 - c. Abnormal constituent of Urine

Group code: Pharm/T/124

GROUP - B

1. What is the basic difference between the amine hormones and steroid hormones depending on their mechanism of action? Give examples of each of these two hormone types. How nervous system and endocrine system works together to maintain our body co-ordination? State the causes when a hormone dependent physiological function can be hampered. What are the functions of the hormones secreted from posterior pituitary? What are the effects of hypersecretion and hyposecretion of growth hormone?
(4+2+3+4+4+3 =20)
2. How blood sugar level is maintained by two major hormones of pancreas creating positive and negative feedback loop? What are the differences between type I and type II diabetes? How estrogen and progesterone play their role in female reproductive cycle? What is LH spike? State the functions of major hormones regulating male reproductive system.
(6+3+4+3+4 =20)
3. How many types of cone cells human eye have? How their function differs from rod cells? What are the roles of receptors for sensing the outside world? How hair cells help us in hearing? What are the nerves that connects our taste sensation of tongue with the brain? What are thermoreceptors and mechanoreceptors? What is glaucoma and astigmatism?**(2+2+3+4+3+3+3=20)**

Ref. No.: EX/PHARM/T/124/2019 ; Dated: 17.04.2019
Name of Examination: B.PHARM 1st yr, 2nd Sem. Exam. 2019

Subject: PHARMACEUTICAL BIOLOGY II /HUMAN ANATOMY & PHYSIOLOGY – II;
Time: 3 hrs; Clearly mention the question number and part number for each answer. Full Marks:100

GROUP - C

Q1) Write short note on the following topics:

- a) Internal structures for vein and arteries (with diagram). (05)
- b) Collateral circulation and its importance in human physiology (04)
- c) Factors regulating Venous return (05)
- d) Discuss about the function of 'Precapillary sphincters' and 'Sinusoids' (06)

Q2)

- (a) Draw a labeled diagram for the internal structures of human heart (Layers of heart walls. (06)
- (b) Discuss about Heart Sounds and Electrical conduction through heart. (06)
- (c) Write in brief about Cardiac Cycle and Factors affecting "Cardiac Output" (04+04)

Q3)

- a) Discuss in brief about the salient features of "Fetal Circulation". (06)
 - b) Write a short note on " Hypovolaemic Shock", "Arteriosclerosis" and "Varicose vein" (03 X 03)
 - c) Explain the electrical changes of heart that are denoted by ECG tracing. (PQRST) (05)
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