

B. Pharm. 1st Year 2nd Semester Examination 2018.

Time: 3 hours

Subject: Human Anatomy and Physiology I

Full Marks: 100

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

1. Discuss in details about sodium reabsorption in Proximal convoluted tubule.
How sodium excretion is regulated. 12+8=20

2. Discuss in details about the acidification of urine with all probable mechanism 20

3. Write notes on (**any two**)- 10X2=20
 - a. Renal Calculi.
 - b. Renin Angiotensin system.
 - c. Acute pyelonephritis

Ref. No.: **Ref. No.: Ex/PHARM/T/124/2018**; Dated: 17.04.2018

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Clearly mention the question number and part number for each answer.

GROUP - B

Q4)

- a) Draw a labeled diagram for the internal structures for vein and arteries. (04)
- b) Discuss about 'Resistance vessels'. (04)
- c) Write short note on 'Anastomoses' and 'End-Arteries' (06)
- d) Discuss about the function of 'Pre-capillary sphincters' and 'Sinusoids' (06)

Q5)

- (a) Discuss about the 'Control of blood vessel diameter'. (06)
- (b) Mention about the main mechanism for 'Local regulation of blood flow' (06)
- (c) Discuss about the factors involved in 'Exchange of gases at tissue space' and 'Capillary fluid d (08)

Q6)

- a) Discuss about the (i) 'Short term' and the (ii) 'Long term blood pressure regulation'. (09)
- b) With the help of a neat sketch mention the structure and function of Heart Wall (05)
- c) Explain the electrical changes of heart that are denoted by ECG tracing. (PQRST) (06)

GROUP - C

7. State two important physiological mechanisms of human body that helps us to coordinate with any external stimulus with brief note on their mechanism of action and differences within them. Give example of a situation where both the mechanisms playing their respective role. What is the basic difference in mode of action between steroid and amine hormones. What are the factors that regulate or have profound effect on the hormone secretion? (5 + 5 + 5 + 5 = 20)
8. Explain positive and negative feedback loop of the endocrine regulation in case of Glucose metabolism. State the name of the hormones released from the pituitary gland with brief note on their site of action and role played by them. (10+ 10= 20)
9. Write short notes (5 X 4 = 20)
 - a. Components of human eye and the role played by them
 - b. Auditory mechanism of the ear
 - c. Different types of sensory receptors.
 - d. Role of ear in maintenance of sense of equilibrium