- 2. What is the process of urine formation? Discuss in detail.
- 3. What is protein synthesis and genetic pattern of inheritance? (6+4)

III. Short answers (Answer seven out of nine questions) 5x7=35

- 1. What are hormones, classify them? What is the mechanism of action of hormones?(2.5+2.5)
- 2. What is the structure of adrenal gland? What are the hormones released from adrenal gland?

(2.5+2.5)

- 3. What is male reproductive system?
- 4. What is the blood supply of nephron?
- 5. What are respiratory volumes and capacities?
- 6. What is the role of small intestine in the process of digestion?
- 7. What is ATP? What is the difference between oxidative phosphorylation and phosphorylation? (2+3)
- 8. What is nerve fibre? What are the anatomical and physiological properties of nerve fibre? (1+4)
- 9. What is the structure of pineal gland and what are the hormones released from pineal gland? (2.5+2.5)

2023/EVEN/13/38/BP-201/001

B Pharm Even Semester Examination, September, 2023

PHARMACEUTICAL SCIENCES

(2nd Semester)

Course No: BP-201T

(Human Anatomy and Physiology-II - Theory)

FM: 75 Time: 3 Hours

The figures in the right margin indicate full marks for the question

I. A. Multiple Choice questions 1x10=10

- 1. Afferent neurons carry nerve impulses from
 - i) CNS to muscles
 - ii) CNS to receptors
 - iii) Receptors to CNS
 - iv) Effector organs to CNS
- 2. Which of the following cells supports, nourishes, and protect the neurons?
 - i) Nissl bodies
- ii) Perikaryon

iii) Ganglia

- iv) Glial cells
- 3. The correct sequence of complex process involved in the digestion of food is:
 - i) Ingestion-absorption-digestion-assimilation-excretion

- Ingestion-digestion-absorption-assimilationexcretion
- iii) Ingestion-digestion-assimilation-absorptionexcretion
- Ingestion-assimilation-absorption-digestionexcretion
- In which part of the respiratory system, gaseous exchange takes place?
 - Alveoli

ii) Pharvnx

iii) Larvnx

- iv) Trachea
- The maximum volume of air contained in the lung by a full forced inhalation is called
 - Tidal Volume
- ii) Vital capacity
- iii) Ventilation rate iv) Total lung capacity
- This artery passes blood to the kidney 6.
 - i) common iliac
- ii) cvstic

iii) renal

- iv) coeliac
- Which part of nephron is part of the juxtaglomerular apparatus?
 - Proximal convoluted tubule
 - Distal convoluted tubule ii)
 - Connecting duct
 - Collecting duct
- Difference between endocrine and exocrine glands is that
 - endocrine glands release hormones, exocrine glands release waste

- endocrine glands are interconnected, ii) exocrine glands are totally independent
- endocrine glands are formed by epithelial tissue, exocrine glands are connective tissues primarily
- endocrine glands are ductless, exocrine glands release secretions into ducts or at the surface of the body
- Fertilization in human female occurs in which part?
 - Fallopian tubes ii) Uterus
 - iii) Cervix

- iv) Placenta
- 10. Trisomy 21 is known as
 - Grey baby syndrome ii) Down's syndrome
 - iii) Edward's syndrome iv) Evan syndrome

Objective type I.

2x5=10

- Draw a labelled diagram of neuron. (a)
- What are the layers of alimentary canal organs?
- What is the structure of thyroid gland?
- What is structure of DNA?
- Name the hormones which are released from pituitary gland.

Long answers (Answer two out of three questions) 10x2=20

What do you mean by electrical signals in neurons? What are ion channels and membrane potential? Discuss about the generation of action potential. (2+3+5)