



### Sessional II (Even) Semester Examination, May 2025

Roll no.....

Name of the Course and semester: **B.Pharm (II semester)**

Name of the Paper: **Human Anatomy and Physiology-II**

Paper Code: **BP-201T**

**Time: 1.5-hour**

**Maximum Marks: 30**

**Note:**

- (i) This question paper contains three sections.
- (ii) All the questions are compulsory.

#### Section-A

##### **Q1. Multiple Choice Questions – Attempt all questions (10 X 1 = 10 Marks)**

- a) Which of the following muscles is primarily responsible for inspiration during quiet breathing? CO-3
  - i. Internal intercostals
  - ii. Rectus abdominis
  - iii. Diaphragm
  - iv. External oblique
- b) What is the main function of the loop of Henle? CO-3
  - i. Filtration of blood
  - ii. Reabsorption of water and salts
  - iii. Secretion of drugs
  - iv. Urine storage
- c) What is the correct sequence of air passage from the nose to the alveoli? CO-3
  - i. Nasal cavity → Pharynx → Larynx → Trachea → Bronchi → Alveoli
  - ii. Nasal cavity → Trachea → Pharynx → Bronchi → Larynx → Alveoli
  - iii. Nasal cavity → Larynx → Pharynx → Bronchi → Trachea → Alveoli
  - iv. Nasal cavity → Alveoli → Bronchi → Trachea → Larynx → Pharynx
- d) What is the role of surfactant in the alveoli? CO-3
  - i. Enhances oxygen diffusion
  - ii. Prevents alveolar collapse
  - iii. Increases blood flow
  - iv. Stimulates ciliary movement
- e) Which of the following cells in the alveoli are responsible for the production of pulmonary surfactant? CO-3
  - i) Type I pneumocytes
  - ii) Type II pneumocytes
  - iii) Alveolar macrophages

- iv) Goblet cells
- f) Which part of the brain regulates the rhythm of breathing? CO-4  
i. Hypothalamus  
ii. Cerebellum  
iii. Medulla oblongata  
iv. Thalamus
- g) Which of the following glands is both endocrine and exocrine in nature? CO-4  
i. Pituitary gland  
ii. Adrenal gland  
iii. Pancreas  
iv. Thyroid gland
- h) Which of the following hormones is responsible for increasing blood calcium levels? CO-4  
i. Calcitonin  
ii. Thyroxine  
iii. Parathyroid hormone (PTH)  
iv. Insulin
- i) Which of the following pairs is correctly matched? CO-4  
i. Adrenal cortex – Epinephrine  
ii. Thyroid gland – Insulin  
iii. Pancreas – Glucagon  
iv. Anterior pituitary – Oxytocin
- j) What is the function of luteinizing hormone (LH) in females? CO-4  
i. Stimulates milk production  
ii. Stimulates ovulation  
iii. Stimulates follicle development  
iv. Maintains pregnancy

### Section B

- Q. 2 Short Questions: Attempt any two questions (2X 5 = 10 Marks)**
- a) Classify the Hormones with example. Elaborate on the mechanism of action of water-soluble hormone. CO-4
- b) Explain the role of Renin Angiotensin system in kidney. CO-3
- c) Enlist various organs of respiratory system and write the mechanism of respiration. CO-3

### Section C

- Q. 3 Long questions: Attempt any one question (1X10= 10 Marks)**

- a) Write the hormones secreted by thyroid and adrenal gland and explain their function. CO-4
- b) Explain the physiology of urine formation. CO-3