Avinashilingam Institute for Home Science and Higher Education for Women
Deemed to be University Estd. u/s 3 of UGC Act 1956, Category A by MHRD (now MoE)
Re-accredited with A++ Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641043, Tamil Nadu, India

Bachelor's Degree Examination-November 2025
I Semester

Class : I UG **Time : 3 Hours**
Major : Physical Education **Max. Marks : 100**

23BPEC02 Basic and Systemic Anatomy & Physiology

Course Outcomes:

CO1: The student will be oriented with the basic structure and function of human body by identifying, comparing and relating different systems, organs and their functional and structural units.
CO2: Able to Relate and interpret the role of exercise on body systems and its relation towellbeing, through literature reviews and physical conditioning exercises.
CO3: Adapt the art to apply the knowledge of anatomy and physiology in physical activity classes at school level.
CO4: Construct anatomy and physiology related pedagogical materials exploring their creative imaginations while working in group and using technology.
CO5: Appraise the effects during the training and practical sessions.

Part A **10 x 1 = 10**
Choose the Correct Answer

1. The basic structural and functional unit of the human body is: CO1 K1
   a. Tissue b. Cell c. Organ d. System
2. How many bones are present in the adult human skeleton? CO1 K1
   a. 200 b. 206 c. 210 d. 201
3. Which of the following is the basic structural unit of a muscle? CO1 K1
   a. Sarcomere b. Neuron c. Myelin d. Cartilage
4. In a biceps curl, the biceps act as the: CO1 K2
   a. Antagonist b. Agonist c. Stabilizer d. Neutralizer
5. The human heart has: CO2 K2
   a. Two chambers b. Three chambers c. Four chambers d. Five chambers
6. The voice box in the respiratory system is called: CO2 K3
   a. Pharynx b. Larynx c. Trachea d. Bronchi
7. The functional unit of the kidney is: CO2 K2
   a. Nephron b. Neuron c. Glomerulus d. Nephritis
8. The functional unit of the nervous system is: CO2 K2
   a. Axon b. Neuron c. Synapse d. Dendrite
9. Which gland is called the "master gland"? CO1 K2
   a. Thyroid gland b. Pituitary gland c. Adrenal gland d. Parathyroid gland
10. "Fight or flight" hormone is secreted by: CO3 K3
    a. Pituitary gland b. Thyroid gland c. Adrenal gland d. Pancreas

Part B 5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a. Classify bones and state their functions. CO1 K2

(or)

11.b. Why is the study of Anatomy and Physiology important in the field of Physical Education? CO2 K2

12.a. Write a short note on the classification of muscles. CO3 K3

(or)

12.b. Differentiate between slow-twitch and fast-twitch muscle fibers. CO2 K3

13.a. Define stroke volume and cardiac output. CO2 K3

(or)

13.b. Differentiate between external respiration and internal respiration. CO3 K3

14.a. How is the nervous system classified structurally and functionally? CO4 K4

(or)

14.b. State the effects of exercise on the digestive system. CO3 K3

15.a. Write short notes on accessory organs of digestion CO3 K3

(or)

15.b. Classify glands with examples. CO2 K3

Part C 5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Explain about types of bones with examples. CO1 K2

(or)

16.b. Describe the effects of exercise on skeletal system. CO1 K2

17.a. Describe the Sliding Filament Theory of muscular contraction. CO3 K2

(or)

17.b. Discuss the effects of exercise on the muscular system. CO2 K3

18.a. Explain the structure and functions of the circulatory system. CO3 K3

(or)

18.b. Discuss the cardio-respiratory adaptations to long-term exercise. CO2 K3

19.a. Explain the structural units and functional mechanism of the excretory system. CO3 K3

(or)

19.b. Describe the structure and function of the neuromuscular junction and explain the all-or-none law. CO3 K2

20.a. Write notes on the structure and functions of the thyroid gland and its role in metabolism. CO3 K3

(or)

20.b. Explain the structure and functions of the large intestine in the digestive process. CO2 K3

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