



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 an A++ Grade by NAAC CGPA 3.65/4, Category I by UGC

Coimbatore - 641043, Tamil Nadu, India

Continuous Internal Assessment II –October 2025

III Semester

Class : II UG

Major : Biochemistry and Biotechnology

Time : 2 Hours

Max. Marks : 60

23BBTC03 Mammalian Physiology

Course Outcomes:

CO1: The various physiological systems in the human body.

CO2: The functional anatomy of different organs in each system.

CO3: The complex mechanisms of the processes of digestion, absorption, excretion, gas exchange, reproduction and neuromuscular coordination.

CO4: Integrated System physiology that will enable understanding of the biochemical basis of disease.

CO5: Qualitative and quantitative analysis of Biochemical parameters

Part A

6 x 1 = 6

Choose the Correct Answer

1. Which of the following is the primary site for gas exchange in the lungs?
a. Alveoli b. Bronchus c. Bronchioles d. All of the above CO3K1
2. The total number of alveoli present in the human lungs is estimated to be around ____
a. 1 billion b. 800 million c. 500 million d. 1500 million CO3K1
3. Where does the stimulation of muscle fibers by a motor neuron take place
a. myofibril b. transverse tubules CO4K3
c. sarcoplasmic reticulum d. neuromuscular junction
4. The length of this is reduced while the muscle contracts
a. Sarcomere b. I- Band c. A- Band d. H-Zone CO4K3
5. Which organ produces egg cells?
a. Vagina b. Fallopian Tubes c. Uterus d. Ovaries CO4K3
6. The primary sex organ is known as _____
a. Regulate blood volume and composition b. Synthesize glucose CO4K3
c. Regulate blood pressure d. Gonads

Part B

3 x 6 = 18

Answer ALL questions

Each answer should not exceed 400 words or two pages

- 7.a. What is hypoxia and explain the risk factors and how is it diagnosed?
(or) CO3K3
- 7.b. Write short note on the structure and functions of neuron? CO4K3
- 8.a. Explain the sliding filament model of skeletal muscle contraction.
(or) CO4K3
- 8.b. Elaborate on cerebrospinal fluid and its functions. CO4K3
- 9.a. Explain the process of spermatogenesis.
(or) CO5K3
- 9.b. Explain the classification of hormones based on their chemical nature with examples. CO5K2

Part C

3 x 12 = 36

Answer ALL questions

Each answer should not exceed 800 words or four pages

- 10.a. Explain in detail the anatomy, physiology and abnormalities of vision.
(or) CO3K3
- 10.b. Describe the mechanism of skeletal muscle contraction and relaxation and draw neat sketch. CO4K3
- 11.a. Discuss in detail about the Central nervous system and its functions ?
(or) CO4K3
- 11.b. Describe the major disorders of skeletal muscles; include causes, symptoms, diagnostic methods, and treatment approaches. CO4K3
- 12.a. Explain in detail the anatomy of female reproductive system and oogenesis.
(or) CO4K2
- 12.b. Explain physiological changes taking place during menstruation? What is Parturition. CO4K2