



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 - 641 043, Tamil Nadu, India

Continuous Internal Assessment – II October 2025

Semester V

Class: III UG

Major: Zoology

Time : 2 Hours

Marks: 60

23BZODE3 – MAMMALIAN PHYSIOLOGY

Course Outcomes:

- CO1 Realize the mechanism and regulation of breathing and the process of circulation
- CO2 Examine how mammalian body gets nutrition
- CO3 Study the process of digestion and excretion
- CO4 Elucidate the organization of nervous system and process of nerve conduction
- CO5 Explicate the process of vision and hearing

Part – A

6x1=6

Choose the correct answer

- 1 Interactions between neurons commonly occur across junctions called
a) presynaptic membranes b) postsynaptic membranes
c) synapses d) juxtapositions CO3K2
- 2 A membrane potential is the difference in electrical charge between
a) potassium and sodium ions b) the inside and outside of the cell
c) phosphoric acid and glycolipid layers d) resting and action potentials CO3K2
- 3 The structure responsible for controlling the amount of light entering the eye is
a) Pupil b) Cornea c) Lens d) Iris CO4K1
- 4 Which of the following separates the outer ear from the middle ear?
a) Cochlea b) Pinna c) Eardrum d) Auditory nerve CO4K1
- 5 Which of the following is an example of voluntary muscle tissue?
a) Cardiac muscle b) Smooth muscle
c) Skeletal muscle d) Autorhythmic muscle CO5K1
- 6 The summation of individual twitches that results in a sustained contraction is
a) Tetanus b) Fatigue c) Cramps d) Spasms CO5K2

PART- B

3x6=18

Answer all the questions

Each answer should not exceed 400 words or two pages

- 7 a) Give an account on the types of synapse CO3K1
- 7 b) Report on the genesis of resting membrane potential CO3K2
- 8 a) Explain in detail the retinal components of an eye CO4K1
Or
- 8 b) Analyze the ionic changes that occur in ear CO4K2
- 9 a) Enumerate the characteristics of muscle twitch CO5K1
Or
- 9 b) Compare and contrast on isometric and isotonic contractions CO5K1

Part – C

3x12=36

Answer all the questions

Each answer should not exceed 800 words or four pages

- 10 a) Explicate the transmission of signal across a synaptic cleft. CO3 K1
Or
- 10 b) Assess the initiation and conduction of action potential CO3 K2
- 11 a) Explicate the structure of ear with a neat diagram CO4K1
Or
- 11 b) Portray the ionic basis of potential regeneration in eye CO4K2
- 12 a) Explain the ultra structure of a smooth muscle with a neat diagram CO5K1
Or
- 12 b) Emphasize on the molecular and chemical basis of muscle contraction in mammals CO5K1