

Reg. No. :

Code No. : 7451

Sub. Code : ZZOM 31

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023

Third Semester

Zoology – Core

COMPARATIVE ANIMAL PHYSIOLOGY

(For those who joined in July 2021-2022 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Identify the kind of adaptations found in the desert animal.
 - (a) impervious skin
 - (b) goblet cells
 - (c) pneumatophores
 - (d) stream lined body
2. Name the ability of organisms to maintain internal stability in response to the changes.
 - (a) osmoregulation
 - (b) homeostasis
 - (c) diffusion
 - (d) inheritance

3. Select the animal in which hypotonic body fluid is maintained.
- (a) marine protozoa (b) marine fish
(c) fresh water fish (d) endoparasites
4. Show one of the following which helps to excrete out the excess salts in the marine fish.
- (a) Lungs
(b) kidney
(c) glomerular kidney
(d) chloride secretory cells
5. Write down the blue coloured respiratory pigment.
- (a) haemocyanin (b) haemoglobin
(c) echinochrome (d) chlorocruorin
6. Predict the total capacity of the human lung
- (a) 1-2 lit (b) 5-6 lit
(c) 7-8 lit (d) 3 lit
7. Select the excretory products of Reptiles and birds.
- (a) urea (b) ammonia
(c) uric acid (d) creatine
8. Select the term related with the process of producing milk from the mammary gland.
- (a) parturition (b) child birth
(c) adsorption (d) Lactation
9. Choose the name of the junction formed between two neurons.
- (a) synapse (b) synopsis
(c) erythroptosis (d) neurosis

10. Select one of the neural degenerative disease.
- (a) cancer (b) Parkinson's disease
(c) leprosy (d) dysentery

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Enumerate the extreme terrestrial environment.
- Or
- (b) Differentiate Acclimation and Acclimatization
12. (a) Explain the meditation and its effect.
- Or
- (b) Illustrate the physiological adaptation to osmotic stress.
13. (a) Illustrate the transport of gases between lung and tissues.
- Or
- (b) Illustrate the Bohr effect.
14. (a) Summarises about gonadal axis.
- Or
- (b) Differentiate amminotelism and Uricotelism.
15. (a) Summarises the neurotransmitters and its uses.
- Or
- (b) Defend the Muscle contraction process.



PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain about stress avoidance and stress tolerance.

Or

- (b) Enumerate the adaptation found in the Desert animal.

17. (a) Explain the osmoregulation in marine environment.

Or

- (b) Associate the Yoga and good health.

18. (a) Explain the functions of respiratory pigments.

Or

- (b) Write down the neural and chemical regulation of respiration.

19. (a) Illustrate about the mechanism of excretion.

Or

- (b) Explain the following; (i) Parturition
(ii) Feed back regulation

20. (a) Summarises the Conduction of nerve impulses through neurons.

Or

- (b) Defend the Neuro degenerative diseases