

M.Sc. ZOOLOGY  
THIRD SEMESTER  
ANIMAL PHYSIOLOGY AND BIOCHEMISTRY-II  
MSZ-304 E

**SET  
A**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1hr. 30 mins.

Full Marks: 35

Time: 15 mins.

**(Objective)**

Marks: 10

Choose the correct answer from the following:

1×10=10

- Which one is not a factor for anti-hemostatic process released from endothelial cells?
  - Nitric oxide
  - PGI<sub>2</sub>
  - Heparin sulphate
  - Thromboplastin
- Von Willebrand factor is related with which event in hemostasis?
  - Vascular spasm
  - Platelet adhesion
  - Coagulation
  - Clot retraction
- Which equation explains that the product of diffusible ions on one side of a membrane is equal to the product of same ions on the other side?
  - Gibbs-Donnan equilibrium
  - Nernst equation
  - Goldman-Hodgkin-Katz equation
  - None of these
- The breathing pattern of Apneustic breathing is:
  - Prolonged inspiratory gap with a pause of full inspiration
  - Deep labored regular breathing
  - Deep breathing for short interval followed by slight or no breathing
  - All of these
- Which one is incorrect for natives of high altitude?
  - High RBC count
  - Broad chest
  - Short body structure
  - Low amount of cardiac output
- Mucus secreting part of our olfactory epithelium is:
  - Sustentacular cell
  - Mitral cell
  - Bowman's gland
  - Glomerulus
- Endo cochlear fluid helps in:
  - Transmission of vibration to the membranes of cochlea
  - Serves in balancing of body
  - Both a and b
  - None of these
- When there is excess water in the body and extracellular fluid osmolarity is reduced, the secretion of ADH by the posterior pituitary gland:
  - Increases
  - Decreases
  - Remains same
  - None of the above

9. The osmolarity of interstitial fluid in almost all parts of the body is about:
- a. 100  $\mu$ Osm/L
  - b. 200 mOsm/L
  - c. 300 mOsm/L
  - d. 400 mOsm/L
10. Active transport of sodium ions into the medullary interstitium takes place from which part of the loop of Henle?
- a. Thick ascending limb
  - b. Thin ascending limb
  - c. Thick descending limb
  - d. Thin descending limb



(Descriptive)

Time : 1 hr. 15 mins.

Marks : 25

[ Answer question no.1 & any two (2) from the rest ]

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|--|--------|
| 1. Classify the neurotransmitters that have been reported in animal body.  | 5      |
| 2. Explain different segments and intervals of an ECG with suitable diagram. Mention the common cardiac abnormalities that can be detected from ECG. | 8+2=10 |
| 3. How does the kidney produce concentrated urine? Explain the counter current multiplier.   | 3+7=10 |
| 4. Describe the structure of ear. Discuss how auditory stimulus is transmitted through ear with proper diagram.                                      | 3+7=10 |
| 5. Write short notes on <i>any two</i> :   | 5+5=10 |
| a) Hypoxia   |        |
| b) Structure of retina   |        |
| c) Dyspnea   |        |

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