

B.Sc. ZOOLOGY 4TH SEMESTER SESSIONAL EXAMINATION, 2022
ANIMAL PHYSIOLOGY: LIFE SUSTAINING SYSTEMS
PAPER CODE: ZOO-HC-4026

Q1. Answer the following:

1x5=5

- a) In humans, lacteals are found in _____
 - 1. Ileum
 - 2. Oesophagus
 - 3. Ear
 - 4. None of the above
- b) Most of the oxygen being transported by blood
 - 1. Is dissolved in plasma
 - 2. Is attached to glucose
 - 3. Is reversibly bound to haemoglobin
 - 4. Is carried in the form of bicarbonate
- c) Ultrafiltration by the glomerulus is enhanced by
 - 1. Large surface area of the capillaries
 - 2. Thin permeable barrier
 - 3. High pressure in capillaries
 - 4. All of the above
- d) All blood cells are derived from _____
 - 1. Hepatic cells in the liver
 - 2. Splenic cells in the spleen
 - 3. Hematopoietic Stem Cells in the bone marrow
 - 4. Hematopoietic Stem Cells in the blood
- e) This is the only artery that carries deoxygenated blood away from the heart
 - 1. Aorta
 - 2. Pulmonary trunk
 - 3. Superior Vena Cava
 - 4. Inferior Vena Cava

Q2. Answer **any five** from the following:

2x5=10

- a) Mention the different gastric secretory cells and their secretions.
- b) What do you mean by 'respiratory membrane'? What are its different components?
- c) What is a glomerulus? Mention its function.
- d) Define one cardiac cycle.
- e) What are 'Villi' and 'Microvilli'? State their location and function.
- f) Name two duodenal hormones. What stimulates their secretion?
- g) What are the different components of the blood?

Q3. Write short notes on **any one** from the following:

5x1=5

- a) Regulation of gastric secretion.
- b) Transport of oxygen and carbon dioxide in blood.
- c) Structure of the heart.
- d) Structure of the nephron and its associated capillaries.

Q5. Answer **any one** from the following:

10x1=10

- a) Describe the process of lipid digestion and absorption in the small intestine.
- b) Elucidate the process of pulmonary ventilation.
- c) Discuss the mechanism of urine formation.