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3 (Sem-4/CBCS) ZOO HC 2

2023

ZOOLOGY

(Honours Core)

Paper : ZOO-HC-4026

(Animal Physiology; Life Sustaining System)

Full Marks : 60

Time : Three hours

The figures in the margin indicate full marks for the questions.

1. Fill in the blanks : 1×7=7
- (a) The digestion of milk is catalysed by the enzyme _____ at the beginning stage.
- (b) _____ plays important role in fat digestion.
- (c) The exchange of gases occurs in the _____ of the lungs.

Contd.

- (d) The formation of carbonic acid is more in the RBC due to the presence of the enzyme _____ in RBC.
- (e) The formation of concentrated or dilute urine is due to the presence of a hormone _____.
- (f) Our heart is _____ type of heart.
- (g) Inactive trypsinogen is converted to active trypsin by the catalytic action of the enzyme _____ from small intestine.

2. Answer very briefly : $2 \times 4 = 8$

- (a) What is Bohr effect ?
- (b) What is the O_2 -Hb dissociation curve ?
- (c) What are the salivary glands in mouth ?
- (d) What is cardiac cycle ?

3. Answer the following : **(any three)** $5 \times 3 = 15$

- (a) State what are different types of WBC in detail.
- (b) What is the role of pancreas in digestion ?

- (c) How monosaccharides are absorbed after digestion of carbohydrates ?
- (d) Write the different stages of blood coagulation in detail.
- (e) Write about control of respiration.

4. (a) What are different enzymes secreted from pancreas for digestion of different types of food ? How the inactive pancreatic enzymes are activated and how digestion occurs by their catalytic action ? $3+4+3=10$

Or

- (b) How secretion of digestive juices in alimentary canal is regulated by different hormones in different parts of the canal and in digestive glands ? 10

5. (a) Write about formation of RBC and WBC in details. Also functions of RBC and WBC. $5+5=10$

Or

- (b) Write about blood group and blood transfusion with special reference to Rh factor. Write about erythroblastosis fetalis. $2+4+4=10$

6. (a) What do you mean by chloride shift ?
Explain with reactions. What are the factors that cause the Bohr effect?
Write with diagrams. $4+6=10$

Or

- (b) Write about the mechanism of respiration in detail and also describe the different parts that participate in respiration. $6+4=10$