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 begining stage.

    (b) _____ plays important role in fat digestion.

    (c) The exchange of gases occurs in the _____ of the lungs.

(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 intenstine.

2. Answer very briefly : 2×4=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)* 5×3=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

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Or

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

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