Total number of printed pages–4

3 (Sem–4/CBCS) ZOO HC 2

2024

ZOOLOGY

(Honours Core)

Paper : ZOO–HC–4026

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(Animal Physiology : Life Sustaining Systems)

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 capillary network supplying the Loop of Henle is _____.

   (b) The amount of air moving in and out of lungs during each breath is called _____.

   (c) Major portion of CO_2 is transported as _____ in human body.

Contd.

(d) Pacemaker of the heart is _____.

(e) The Plasma protein responsible for blood clotting is _____.

(f) Carrier protein SGLT has two binding sites. One is for glucose and another is for _____.

(g) Zymogen cells are found in _____.

2. Answer very briefly : 2×4=8

(a) What is erythropoesis ?

(b) What is ECG ?

(c) Define vital capacity.

(d) What are uricotelic and ureotelic animals ?

3. Answer the following : ***(any three)*** 5×3=15

(a) Write a note on respiratory pigments.

(b) Write the role of ADH in urine formation.

(c) Write about regulation of heart beat.

(d) Write on ABO blood grouping.

(e) Describe in brief about the regulation of acid-base balance.

4. (a) What is heart beat ? Discuss the process of conduction of heart beat with a labelled sketch. 2+8=10

Or

(b) What do you mean by absorption ? Describe the process of absorption of carbohydrates and proteins. 2+4+4=10

5. (a) What is glomerular filtrate ? Write about the mechanism of urine formation in detail. 2+8=10

Or

(b) Describe the structure and functions of a nephron with a labelled sketch. What is Renin-Angiotensin system ? 7+3=10

6. *(a)* What is blood ? Describe the structure and functions of various components of blood. Add a note on fibrinolytic system. 2+6+2=10

Or

(b) What is clotting of blood ? Write about the process of clotting of blood. 2+8=10