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3 (Sem-4/CBCS) ZOO HC 2

2024

ZOOLOGY

(Honours Core)

Paper : ZOO-HC-4026

(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 CO₂ 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 : $2 \times 4 = 8$

- (a) What is erythropoiesis?
- (b) What is ECG?
- (c) Define vital capacity.
- (d) What are uricotelic and ureotelic animals?

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

- (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.

$2+8=10$