WEST BENGAL STATE UNIVERSITY

B.Sc. Honours 4th Semester Examination, 2021

ZOOACOR09T-ZOOLOGY (CC9)

Time Allotted: 2 Hours | Full Marks: 40

The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.

1. Answer any ***eight*** questions from the following: 2×8 = 16

(a) What do you mean by Tidal volume and state its value in an adult human?
(b) What is the role of Sinoatrial node in heart beat?
(c) What is juxtaglomerular apparatus?
(d) Explain the term 'fibrinolysis'.
(e) What is acclimatization?
(f) Mention the function of basophil.
(g) Define endothermy.
(h) What is lactose intolerance?
(i) What is chloride shift?
(j) Differentiate between hyperthermia and fever.
(k) What is vasa recta?
(l) What do you mean by buffer solution?
(m) Compare between osmoconformers and osmoregulators.
(n) What is systolic blood pressure?
(o) What is Rh factor?

2. Answer any ***three*** questions from the following: 3×3 = 9

(a) Where does digestion of protein begin? What is essential amino acid? In which organ urea is synthesized? 1+1+1
(b) What is cardiac output? State factors affecting cardiac output. $1\frac{1}{2}+1\frac{1}{2}$
(c) What is GFR? Mention the factors determining GFR. 1+2
(d) Explain heterothermy with a suitable example. 3
(e) Distinguish between R and T forms of Hemoglobin. 3
(f) Mention the name of the muscles involved in Inspiration and Expiration. What do you mean by dead space in respiration? 2+1

3. Answer any ***three*** questions from the following: 5×3 = 15

(a) Describe the countercurrent mechanism of urine formation in kidney. 5

(b) State the role of hypothalamus in regulating body temperature in human. Explain the mechanism of non-shivering thermogenesis. 2+3

(c) How oxygen is transported in blood? 5

(d) Define cardiac cycle and describe the course of circulation of blood through human heart during each cardiac cycle with a neat diagram. 3+2

(e) How do marine elasmobranchs maintain salt and water balance? 5

(f) Describe the steps involved in breakdown and absorption of carbohydrates. 3+2

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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