



**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. 1½ + 1½
  - (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.*

—×—