



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

- What do you mean by Tidal volume and state its value in an adult human?
- What is the role of Sinoatrial node in heart beat?
- What is juxtaglomerular apparatus?
- Explain the term 'fibrinolysis'.
- What is acclimatization?
- Mention the function of basophil.
- Define endothermy.
- What is lactose intolerance?
- What is chloride shift?
- Differentiate between hyperthermia and fever.
- What is vasa recta?
- What do you mean by buffer solution?
- Compare between osmoconformers and osmoregulators.
- What is systolic blood pressure?
- What is Rh factor?

2. Answer any **three** questions from the following:

3×3 = 9

- Where does digestion of protein begin? What is essential amino acid? In which organ urea is synthesized? 1+1+1
- What is cardiac output? State factors affecting cardiac output.  $1\frac{1}{2} + 1\frac{1}{2}$
- What is GFR? Mention the factors determining GFR. 1+2
- Explain heterothermy with a suitable example. 3
- Distinguish between R and T forms of Hemoglobin. 3
- 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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