

## U.G. 4th Semester Examination - 2021

## ZOOLOGY

## [HONOURS]

Course Code : ZOOL-H-CC-T-9

Full Marks : 20

Time : 1 Hour

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*1. Answer any **five** of the following questions:

1×5=5

- What do you mean by *residual volume* in lungs?
- What is internal respiration?
- Distinguish between serum and plasma.
- Name the major site of Haematopoiesis in a normal adult person.
- What is the function of SA node in mammalian heart?
- Which blood groups are called *Universal Donor* and *Universal Recipient* respectively?

g) Which organ produce bile and where it is stored?

h) What do you mean by a poikilothermic animal?

2. Answer any **one** of the following questions: 5×1=5a) Describe the process of breathing in (*inspiration*) with flow chart. Discuss the Hb specific effect of CO-poisoning. 3+2=5

b) Explain the intrinsic mechanism of blood coagulation with the help of a flow diagram. 5

c) Elaborate the structure of a mammalian heart with neat diagram. 5

3. Answer any **one** of the following question:

10×1=10

a) Why O<sub>2</sub> – Hb dissociation curve is sigmoid in shape? What is Hamburger Phenomenon? What do you mean by Haldane Effect? Discuss about the short term regulatory mechanisms of blood pressure control. 2+3+2+3=10

b) Describe the counter-current multiplier mechanism of urine concentration. What do you mean by Vasa Recta? What will happen if someone has a problem in ADH receptors in the nephrons? What is the anatomical position of human kidneys? 5+2+2+1=10

- c) What do you mean by thermogenesis? What are the advantages of being an endothermic animal? Differentiate between torpor and hibernation. How blubber works as heat exchangers in seals and whales? Why do dogs pant in hot weather?  $1+2+3+3+1=10$

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