

**U.G. 4th Semester Examination - 2021****ZOOLOGY****Course Code : BZOCCHC402****Course Title : Animal Physiology :****Life Sustaining Systems**

Full Marks : 30

Time : 2 Hours

*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 **ten** questions from the following:

1×10=10

- a) Why glomerulus is highly reduced or absent in marine fishes?
- b) Name the cell through which ultrafiltration occur.
- c) What do you mean by vasa recta?
- d) How does CO affect oxygen dissociation curve?
- e) What is the progenitor of platelets?
- f) What is the difference between cortical and juxtamedullary nephrons?

- g) What is Botzinger complex?
- h) Write one important character of stem cell.
- i) What is the significance of tubular reabsorption?
- j) What is the site of hemopoiesis in early embryo?
- k) What is the function of chylomicrons?
- l) What do you mean by "Christmas factor"?
- m) Mention the functions of agranulocytes.
- n) What is reserve Pacemaker?
- o) In addition to Iron, which nonmetallic mineral compound present in Haemoglobin?

2. Answer any **five** questions of the following:

2×5=10

- a) Why endotherms must eat more than ectotherms especially in the cold weather?
- b) What do you mean by GFR? What is its ideal value in a healthy adult?
- c) How kidney helps to control Blood Pressure (BP)?
- d) How does "counter current heat exchange" prevents heat loss in mammals living in the cold?

- e) What is macula densa? Mention its function.
- f) What do you mean by vital capacity and dead space?
- g) Mention the role of  $\text{Ca}^{2+}$  in coagulation.
- h) How does body maintain its acid-base equilibrium?

3. Answer any **two** questions of the following:

$$5 \times 2 = 10$$

- a) What is cardiovascular center? Where is it located? Describe how cardiovascular center regulates BP.  $1+1+3=5$
- b) How do you differentiate Bohr effect and Haldane effect? Describe the process of transportation of metabolic  $\text{CO}_2$  to the Lungs with a suitable diagram..  $1+1+3=5$
- c) Write about the process of Fibrinolysis.

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