

**U.G. 4th Semester Examination - 2020****ZOOLOGY****[HONOURS]****Course Code : ZOOLOGY(H)-CC-T-9**

Full Marks : 40

Time :  $2\frac{1}{2}$  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 **five** questions of the following:

2×5=10

- a) Differentiate between beta and delta cells of pancreas.
- b) How does Chloride shift work in blood?
- c) State the essentiality of gastric rugae and intestinal villi .
- d) Distinguish between intrapulmonary and intrapleural pressure.
- e) Split the term Erythropoiesis. What is its stem cell?
- f) Why is Portal triad an important structure of liver?

g) Show how homeostasis correlates with osmoregulation.

h) How does a fetal heart differ from that of new born?

2. Answer any **two** of the following: 5×2=10

a) How do you explain Hemoglobin's buffering action? Why is bicarbonate formation much speedy in RBC? 3+2

b) What is H antigen? How is it related to ABO blood group system? 2+3

c) Why and how is RAAS a regulatory system of blood pressure? What do you mean by the term Juxtaglomerular? 4+1

d) Compute the Cardiac output of a person whose heart rate is 72 beats/min and stroke volume 70ml/beat. How is Myocardial infarction more serious than Angina pectoris? 2+3

3. Answer any **two** of the following: 10×2=20

a) Citing an example, deduce how the partial pressure of a gas is calculated from atmospheric pressure. Drawing comparisons prove that carbon monoxide is more harmful than carbon dioxide. 3+7

- b) How do skin and kidneys operate in osmoregulation? What are the mechanisms adopted by ecto- and endothermic animals in regulating heat? 5+5
- c) Give notes on:
- i) Chyme and bolus
  - ii) Blood clotting system 5+5
- d) Describe how Haldane and Bohr effects work in transportation of gases. Mention the difference of oxygen-affinity between hemoglobin and myoglobin. 7+3
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