

U.G. 4th Semester Examination - 2022

ZOOLOGY

[HONOURS]

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

Full Marks : 40

Time : 2½ 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

- What do you mean by micelles?
- What is forced vital capacity?
- What do you mean by cyanosis?
- List two major differences between pulmonary and systemic circulation.
- Define pacemaker potential.
- Differentiate between osmoregulator and osmoconformer.
- Why second and fourth heart sound is produced?

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

- How iron absorption is taking place in duodenum? 5

b) Distinguish between anatomical dead space and physiological dead space. State catabolism of haemoglobin. 2+3

c) How thermoregulation of endotherms is taking place? What is the role of protein C in fibrinolytic system? 2+3

d) Describe the waves of the ECG 5

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

a) Discuss the molecular basis of blood groups and the reason for transfusion reaction. 10

b) Outline the tubular handling of Na⁺ and water. How salmons survive in both salt and fresh water? 5+5

c) Explain the pressure, volume and flow changes that occur during the cardiac cycle. Draw and describe resting state and active state of parietal cell. 5+5

d) Discuss in brief the mechanisms of glomerulotubular balance and tubuloglomerular feedback. Explain the role of salt glands as extra renal osmoregulatory organs in vertebrates.