**ST.JOSEPH’S UNIVERSITY, BENGALURU -27**

Registration Number:

Date& session: 8-12-22

**M.Sc (ZOOLOGY) – I SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2022**

**(Examination conducted in December 2022)**

**ZO 7322 – ANIMAL PHYSIOLOGY AND BIOCHEMISTRY**

**Time: 2 Hours Max Marks: 50**

**This paper contains ONE printed page and four parts**

**PART-A**

Answer **all the five** questions **5X 1 = 5**

1. The 1M NaCl solution is prepared by dissolving ---------- of NaCl in 1000 mL of distilled water (Molecular weight of NaCl – 58.44g/mol).
2. Define electro-chemical gradient.
3. Draw the structure of cyclic AMP.
4. What are aquaporins?.
5. Silk fibroin exhibits ------- type of secondary structure of a protein.

**PART-B**

Answer **all the five** questions **5X 2 = 10**

1. Draw a neat labeled diagram of ATP synthase.
2. Define osmolarity.
3. Define **‘lethal temperature’** and explain the effect of temperature on rate of respiration.
4. How B form of DNA is different from A form of DNA?.
5. What are Nernst and Goldman equations?.

**PART-C**

Answer **any three** of the flowing questions **3X 5 = 15**

1. Explain the structure of t-RNA with neat labeled diagram.
2. Explain Krebs-Henseleit cycle of urea synthesis in hepatocytes.
3. Write a short note on excretory patterns in vertebrates.
4. Explain Anfinsen’s experiment to prove that the amino acid sequence determines the structure of a protein.

**PART-D**

Answer **any two** of the following questions **2X 10 = 20**

1. Explain Embden–Meyerhof pathway of conversion of glucose into pyruvate.
2. Explain the mechanism of skeletal muscle contraction add a note on neuro-muscular junction.
3. Describe axonal and synaptic transmission of nerve impulse.

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