B.Sc. Second Year **Model Paper-1**

Zoology
Animal Physiology and Biochemistry
Paper-Second

Time: Three Hrs. **Maximum Marks: 33**

Attempt Four question from part II selecting at least one question from each section and part first is compulsory. (Part-I 9×1 and Part-II, 6 ×4)

Part-I

1. Answer the following questions in brief (Maximum 25 words).
   a. What do you mean by blood pressure?
   b. Name the four factors which shift the hemoglobin oxygen dissociation curve to right side
   c. Which hormone is commonly known as salt retaining hormone?
   d. How does bile juice help in digestion of fats?
   e. How many types of respiration occur in animals?
   f. What are the important sources of calcium? Describe the functions of calcium in animals.
   g. What is muscle fatigue?
   h. What is role of stomach is absorption?
   i. What is muscle tone?

Part-II

Section-A

2. Explain the structure of mammalian kidney and mechanism of urine formation.
3. Write short notes on-
   a. Digestion of carbohydrates.
   b. Exchange of Co_2 and O_2
4. What is nerve impulse? How is a transmitted through a nerve fiber?

Section-B

5. Describe the structure of skeletal muscle and explain the mechanism of muscle contraction.
6. Explain in detail about types and significance of Lipids.
7. What is reflex action? Describe the mechanism of reflex action.

Section-C

8. Describe structure and functions of carbohydrates and write a short note on Kreb's cycle.
9. Write an essay on iodine or iron metabolism.
10. Write about Beta oxidation pathway of fatty acids.

B.Sc. Second Year **Model Paper-II**

Zoology
Animal Physiology and Biochemistry
Paper-Second

Time: Three Hrs. **Maximum Marks: 33**

Attempt Four question from part II selecting at least one question from each section and part first is compulsory. (Part-I 9×1 and Part-II, 6 ×4)

Part-I

1. Answer the following questions in brief (Maximum 25 words).
   a. Give examples of reflex action.
   b. Write the names of factors used in blood clotting.
   c. What is the meaning of balance diet?
   d. What is pace-maker and where is it situated?
   e. What are neurohormones?
   f. Define the term 'synapse'?
   g. What are trace elements?
   h. What is difference between essential and non-essential amino acids?
   i. What is resting membrane potential?

Part-II

Section-A

2. Describe the mechanism of blood clotting in mammals in details.
3. What is difference between ammonoteleic uricotelic and urocotelic animals? Describe the structure of uriniferous tubules (nephron)
4. Write short notes on any two-
   a. Active transport
   b. Dissociation of oxyhaemoglobin
   c. Bilo juice

Section-C

5. Describe the functions of hormones released by pituitary gland.
6. Write an essay on Insect hormones.
7. Describe functional architecture of a neuron and explain origin and propagation of nerve impulse along a nerve fiber.

Section-C

8. Write short notes on any two-
   a. Role of insulin in carbohydrate metabolism.
   b. Essential and non-essential amino acids.
   c. Glycolysis
9. Describe the enzymatic reactions of Kreb's cycle and add a note on its importance.
10. Write an account of transamination and seamination process and explain this importance.