Mode of Examination: Open Book Examination

Unique Paper Code : 42234301

Name of the Paper : Physiology and Biochemistry

Name of the Course : **B.Sc. (P) Life Science Zoology Examination, 2021-LOCF**

Semester : Semester- III, Theory Examination

Duration : 3 hours

Maximum Marks : 75 Marks

Instruction for Candidates

1. Write your Roll No., Name of the paper, Course, Semester, UPC and Date of examination on the first page of answer sheet.
2. Attempt **ANY FOUR** questions in all, **TWO** each from Section A and Section B.
3. Use separate sheet for **Section A** and **Section B**.
4. All questions carry equal marks.
5. Draw well labelled diagrams wherever required.

SECTION A

Q1. Define pacemaker. Write in detail the origin, conduction and regulation of heartbeat. Describe the various events associated with the Cardiac cycle. (18.75)

Q2. Explain the detailed structure of pituitary gland. Give the names and functions of hormones secreted by it. Discuss the hormonal control of the menstrual cycle. (18.75)

Q3. Describe the mechanism of dilute urine formation in kidney nephron. Add a note on hormones of adrenal gland. (18.75)

SECTION B

Q4. Describe the various steps involved in oxidation of fatty acids. Discuss in brief components of Electron Transport Chain. (18.75)

Q5. What is an enzyme? Explain the action of enzymes with special reference to induced fit theory. Derive the Michaelis Menten equation for single enzyme single substrate reaction. (18.75)

Q6. Give an account of Citric Acid Cycle. Explain the process of glycogenolysis. How is it regulated? (18.75)