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

**B.Sc. (ZOOLOGY) – II SEMESTER**

**SEMESTER EXAMINATION: APRIL 2022**

**(Examination conducted in May 2023)**

**ZO 221 – Biochemistry and Physiology**

**(For current batch student only)**

**Time: 2 Hours Max Marks: 60**

**This paper contains two printed pages and four parts**

**NOTE: Draw neat labeled diagram wherever necessary**

**PART-A**

Answer the following: **5 X 1 = 5**

1. The modification of biomolecule by the addition of phosphate group is mediated with the help of \_\_\_\_\_\_ class of enzyme.
2. Sucrose, consist of a molecule of glucose and a molecule of fructose, they are linked together by \_\_\_\_\_\_\_\_ linkage.
3. What does native confirmation of protein mean?
4. Define Cardiac output.
5. Name the instrument in the image-



**PART-B**

Answer the following: **5 X 2 = 10**

1. Define Ketogenesis.
2. Draw the structure of Amylopectin.
3. List any four differences between smooth and skeletal muscles.
4. Identify the hormonal disorder in the image given below and mention its causes.



1. Draw and label the parts of stomach.

**PART-C**

Answer any **THREE** of the flowing**:** **3 X 5 = 15**

1. Add a note on the different levels of organization of proteins.
2. Mention the biological importance of the following

Vitamin A, Vitamin B12, Vitamin C, Vitamin D, Vitamin K

1. Explain cardiac cycle and cardiac output.
2. Draw and label the structure of a nephron. Add a note on JGA.

**PART-D**

Answer any **THREE** of the followingquestions **3 X 10 = 30**

1. Schematically represent Pentose Phosphate Pathway.
2. Give a brief account on the different classes of enzymes with a suitable example for each.
3. Explain the antagonistic action of Calcitonin and PTH in calcium metabolism
4. Explain the propagation of nerve impulse across the nerve fiber