

**B.Sc. Semester-IV Examination, 2022-23****PHYSIOLOGY [Honours]**

Course ID : 42511 Course Code : SH/PHY/401/C-8(T)

Course Title : Energy Balance, Metabolism and Nutrition

Time : 1 Hour 15 Minutes Full Marks : 25

*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:

1×5=5

- Mention one significance of Cori cycle.
- What do you mean by omega oxidation?
- What do you mean by 'pellagra preventing factor'?
- Write any two major roles of sodium in our body.
- Write the names of any two glycogen storage disease.
- Why proteins have more SDA than other food stuffs?

- Define transamination.
- Write the names of any two ketogenic amino acids.

2. Answer any **two** questions of the following:

5×2=10

- Describe the cori cycle. Define RDA. 4+1
- State the role of transketolase in HMP shunt process. Write the significance of HMP shunt pathway. 3+2
- Briefly discuss the pathway of glycolysis mentioning enzymes. 5
- Discuss the biosynthesis of ketone bodies in human. What is ketoacidosis? 4+1

3. Answer any **one** question of the following:

10×1=10

- What do you mean by  $\beta$ -oxidation of fatty acid? Write the steps of  $\beta$ -oxidation of palmitic acid and mention its energetics. 1+(6+3)
- Write the parent structure of all steroids. Discuss the biosynthesis of cholesterol in our body. 2+8