

U.G. 3rd Semester Examination-2020**FOOD & NUTRITION****[HONOURS]****Course Code : F&N-H-CC-T-5**

Full Marks : 40

Time : $2\frac{1}{2}$ Hours*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 from the following: $2 \times 5 = 10$

- a) State difference between coenzyme and cofactor. $1+1=2$
- b) Mention the important source and one biological function of vitamin K. $1+1=2$
- c) State the factors that influence the enzyme activity. 2
- d) Write the characteristic of peptide bond. 2
- e) Write two major biological functions of magnesium. 2
- f) Mention the functions of biological lipid. 2
- g) Differentiate between saturated and unsaturated fatty acids. $1+1=2$

- h) What are the differences between reducing and non-reducing sugars? $1+1=2$

2. Answer any **two** questions from the following: $5 \times 2 = 10$

- a) What do you mean by competitive and non-competitive Inhibition? Explain graphically. $3+2=5$
- b) Describe allosteric enzymes in brief. Does it follow Michaelis-Menten equation? $4+1=5$
- c) Explain the factors that stabilize the helical structure. 5
- d) What do you mean by epimers? Give example. What is mutarotation? $2+1+2=5$

3. Answer any **two** questions from the following : $10 \times 2 = 20$

- a) Mention the enzyme classification according to IUB system. What is Michaelis constant? State the significance of K_m value. $6+2+2=10$
- b) Write short note on secondary structure of protein. Write the differences between fibrous protein and globular protein. $5+5=10$
- c) Why vitamins are called micronutrient? Ascorbic acid is treated as vitamin for human but not for other animal. Why? Write important

[Turn Over]

biological functions of vitamin C. Which vitamin is destroyed upon microwave cooking and why?

$$2+2+4+2=10$$

- d) What is glycolysis and glycogenolysis? Briefly describe the steps of TCA cycle and enumerate the ATP generation in this process. What is oxidative phosphorylation?

$$2+6+2=10$$
