UNDERGRADUATE FOURTH SEMESTER (HONOURS) EXAMINATION, 2021-22

Subject: Nutrition **Course ID: 42311**

Course Title: Nutritional Biochemistry II **Course code: SH/NUT/401/ C-8**

Full Marks: 40 **Time: 2 hours**

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer all the questions

UNIT - I

1. Answer *any five* of the following questions: 2x5 = 10

a) What is ribozyme?

b) Write the functions of DNA SSB protein in replication?

c) State the function of poly A tail.

d) What are exons?

e) Mention two major functions of Zn in human body?

f) Name the pyrimidine nucleotides present in RNA.

g) What is "rho" protein?

h) State two biochemical functions of magnesium.

UNIT - II

2. Answer *any four* of the following questions: 5x4 = 20

a) What is folate trap? 5

b) Name the co-enzyme forms of riboflavin. Explain with reaction the conversion of this vitamins into the active co-enzyme forms. 1+4

c) What is Chargaff's rule? Describe DNA base-pairing. 1+4

d) Discuss the biochemical role of calcium in human body. 5

e) Give the secondary structure of t-RNA. What is Wobble hypothesis? 3+2

f) Write the biochemical role of Vitamin B12. 5

UNIT - III

3. Answer *any one* of the following questions: 10x1 = 10

a) What is replication? What is replicon? Mention the names of enzymes with their functions involved in eukaryotic replication process? Describe the 3-step transcription process in eukaryotes. 1+1+3+5

b) Describe the process of ascorbic acid biosynthesis. Why do humans require this vitamin as an essential dietary component? What are the major biochemical functions of ascorbic acid? 5+1+4

xxxxxxxxxxxxxxxxxxxxxxxx