Undergraduate 4th Semester (Honours) Examination, 2020-21

Subject: NUTRITION

Course ID: 42311 **Course Code: SH/NUT/401/C-8**

Course Title: Nutritional Biochemistry II

Full Marks: 40 **Time: 2 hrs.**

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 polyploidy?

b) Write the role of magnesium in bone formation.

c) Write the functions of tRNA.

d) What is genetic code?

e) Mention the biochemical role of calcium in blood coagulation.

f) What is snRNA?

g) Draw the structure of adenine and thymine. (1+1)

h) What are DNA polymerases?

UNIT II

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

a) Give a brief account on the biochemical role of iron. 5

b) Briefly explain the transcription process in eukaryotes. 5

c) State the biochemical role of vitamin in collagen formation. 5

d) Name the different types of DNA. Describe the structure of B-form DNA. 1+4

e) Mention the structural differences between DNA and RNA. What is Wobble hypothesis? 3+2

f) Write the biochemical role of vitamin B_{12}. 5

UNIT III

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

a) What is translation? How is amino acid activated during translation? Describe the three steps of translation in eukaryotes. 2+2+6

b) Name the coenzyme form of thiamine. How is it synthesized from thiamine? Write the biochemical role of this coenzyme. 1+3+6