B.Sc. Semester-IV Examination, 2022-23

NUTRITION [Honours]

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

Course Title : Nutritional Biochemistry II

Time : 2 Hours Full Marks : 40

The figures in the right-hand margin indicate 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: 2×5=10

a) What is nucleotide and nucleoside?

b) Write two biochemical functions of niacin.

c) Write two functions of rRNA.

d) What is genetic code?

e) Mention any two biochemical roles of zinc.

f) What is polyploidy?

g) Draw the structure of cytidylic acid.

h) Write two functions of vitamin B-12.

UNIT–II

2. Answer any **four** of the following questions: 5×4=20

a) Give a brief account on the biochemical roles of folic acid. 5

b) What is pre-mRNA? Briefly explain the functions of SnRNA in mRNA modification. 1+4

c) State the antioxidant properties of vitamin C in human cell detoxification. Write four biochemical roles of vitamin B-2 in human body. 3+2

d) Name the different types of DNA. Mention the Chargaff's rule of DNA base pairing. DNA replication is semi-discontinuous– justify. 1+2+2

e) Give the clover leaf model of t-RNA. What is Wobble hypothesis? 3+2

f) Write the biochemical role of thiamine. 5

UNIT–III

3. Answer any **one** of the following questions: $10 \times 1 = 10$

a) What is central dogma of life? What is transcription? Describe the transcription process in eukaryotes. Give the B-band DNA physical structure. 1+1+5+3

b) Write two important biochemical functions of Mg. Write the role of iron in oxygen transport. Describe briefly, the biochemical roles of Ca and Zn in human body. 2+2+3+3

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