



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 3rd Semester Examination, 2020, held in 2021

FNTACOR05T-FOOD AND NUTRITION (CC5)

NUTRIENTS METABOLISM

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.
Candidates should answer in their own words and adhere to the word limit as practicable.
All symbols are of usual significance.*

Answer any *four* questions from the following

10×4 = 40

1. Differentiate between:

2×5 = 10

- (a) Glucogenic and Ketogenic amino acid
- (b) Essential and non-essential amino acid
- (c) Transamination and Deamination
- (d) Transmethylation and Decarboxylation
- (e) Amino acid and Imino acid.

2. Describe the role of Vitamin C and iron in human body.

5+5

3. What do you understand by 'beta' oxidation? Explain the role of carnitine in the process. Write the full names of NAD and FAD.

2+6+2

4. Explain elaborately the possible fate of pyruvate after glycolysis. Describe the mechanism of action of Pyruvate Dehydrogenase Complex.

5+5

5. Describe the role of zinc in human body. Explain the role of Vitamin C in Iron absorption.

5+5

6. (a) Define Trace elements.

2+(2+3)+3

(b) Name the vitamin that is known as the 'sunshine vitamin' with reason. Explain its functional significance.

(c) Explain the terms: osteomalacia and osteoporosis.

7. Describe the functions of sodium and potassium in human system. Write a note on sodium potassium balance.

5+5

8. (a) Discuss the role of folic acid in metabolism. 5+(3+2)
(b) What are anaplerotic reactions? Explain with suitable examples.
9. (a) What is metabolism? 2+2+2+2+2
(b) What is multienzyme system?
(c) Name two essential amino acids.
(d) Why is Pentose Phosphate Pathway also called as a 'Shunt' Pathway?
(e) What do you understand by amphibolic pathway?

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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