



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 3rd Semester Examination, 2022-23



FNTACOR05T-FOOD AND NUTRITION (CC5)

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 the following: 2×5 = 10
 - (a) Transamination and Deamination
 - (b) Glycogenesis and Glycogenolysis
 - (c) Transketolase and Transaldolase
 - (d) Oxidative phosphorylation and Substrate-level phosphorylation
 - (e) Glucogenic and Ketogenic amino acids.

2. (a) Why is TCA cycle called a Amphibolic pathway? Substantiate with two examples. (3+3)+4
(b) Explain the function of vitamin C in human system.

3. (a) Explain the physiological importance of Sodium and Potassium. 3+3+4
(b) What is Gout? How it is developed?
(c) Describe the oxidative phase of PPP.

4. (a) Write a short note on Trace elements. 3+3+4
(b) State the function of vitamin B₁₂.
(c) Mention two reactions where Niacin acts as a coenzyme.

5. (a) What is hypervitaminosis? Explain with examples. (3+1)+4+2
(b) What are anaplerotic reactions?
(c) Why is Denovo synthesis of Purines a costly process?

6. Write short note on any two inborn errors of metabolism of your choice. 5+5

7. (a) Explain the role of Vit D in calcium and phosphorus metabolism. 4+4+2
(b) Explain the formation of ATP during oxidative phosphorylation.
(c) State the function of vitamin A in human system.
8. (a) Write a note on the rate limiting enzymes of glycolytic pathway. 4+3+3
(b) Give a reaction in which TPP acts as a co-enzyme.
(c) State the role (physiological + biochemical) of Iron.
9. (a) Write the steps of the payoff phase of glycolysis. 4+3+3
(b) Give example of Decarboxylation reaction.
(c) Give the structure of two essential amino acids.

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