



Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)

Re-accredited with an 'A++' Grade by NAAC CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment Test I – August 2025

Semester- V

23BBCDE2- Concepts of Nutritional Biochemistry

Class: III UG

Time: 2 hours

Major: Biochemistry and Biotechnology

Max. Marks: 60

CO1: Acquire the understanding of the basic concept of nutrition for maintaining normal health

CO2: Realize the biochemical and physiological functions of macronutrients and their integrated role.

CO3: Understand the significance of protein quality and assess the nutritive value of proteins.

CO4: Recognize the importance of micronutrients and the effects of nutritional deficiencies.

CO5: Evaluate the effects of drugs and the therapeutic role of key nutrients in maintaining health under various disease conditions.

PART-A

6 X 1 = 6

Circle the correct answer

1. An energy bar with 45 g glucose and 5 g fat will contain ___ kilocalories
a) 200 b) 440 c) 225 d) 125 CO1K4
2. BMI of a person weighing 50 kg and measuring 155 cm is
a) 20.8 c) 29.6 b) 16.6 d) 19.0 CO1K4
3. BMR is measured during
a) rest b) brisk walk c) sleep d) exercise CO1K2
4. Which toxic compound is found in *Lathyrus sativus*?
a) Aflatoxin b) ODAP c) Solanine d) Cyanogenic glycoside CO2K3
5. Linoleic acid is an omega-___ fatty acid.
a) 3 b) 5 c) 9 d) 6 CO2K2
6. Protein quality of foods is a measure of the amount of _____
a) essential amino acids b) all amino acids
c) non essential amino acids d) proline, lysine and phenylalanine CO3K2

Part-B

6 x 3 = 18

Answer any two questions

Each answer should not exceed 400 words or two pages

7. a. Write role of nutrition in maintaining health CO1K2
(or)
b. Give note on basic concepts of energy expenditure. CO1K3
8. a. Give the nutritional significance of lipids. CO2K1
(or)
b. What are essential fatty acids? Add a note on their significance. CO2K2
9. a. Write a note on essential amino acids CO2K3
(or)
b. Write a note on Single Cell Proteins CO3K2

Part-C

3 x 12 = 36

Answer any one question

Each answer should not exceed 800 words or four pages

10. a. What is BMR? How it is determined? List out the factors influencing BMR. CO1K2
(or)
b. Explain the basic food groups- energy yielding, body building and Protective foods. CO2K2
11. a. Explain the dietary sources, physiological, nutritional significance of protein CO2K2
(or)
b. Describe the digestion, absorption, storage and metabolism of lipids CO2K3
12. a. Discuss in detail evaluation of protein by nitrogen balance method CO2K2
(or)
b. Compare and contrast the biological value of animal and plant proteins CO3K3