



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 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC

Coimbatore - 641 043, Tamil Nadu, India

Master's Degree Examination - May 2025

IV Semester

Class : II PG

Major : Food Science and Nutrition

Time: 3 Hours

Max. Marks: 100

23MFCN21 Advances in Nutrition - II

Course Outcomes:

CO1: Identify the role of micronutrients in health and disease.

CO2: Associate the inter relationship between vitamins and minerals.

CO3: Develop intervention strategies to combat micronutrients malnutrition.

CO4: Exhibits professionalism in micronutrients research.

CO5: Interpret the significance of gut microbiome in human nutrition.

Part A

10 x 1 = 10

Choose the Correct Answer

1. The biological activity of Vitamin -K is exhibited by all EXCEPT CO1K1
a. Phylloquinone b. Menaquinone c. Melantoin d. Menadione
2. The photosensitive dermatitis is characteristic feature of deficiency of. CO1K1
a. Choline b. Niacin c. Riboflavin d. Biotin
3. Wernicke-Korsakoff syndrome is associated with the deficiency of CO2K2
a. Thiamine b. Riboflavin c. Niacin d. Biotin
4. Hypercalcaemia, hepatomegaly, ataxia, desquamation of skin and alopecia are symptoms of hypervitaminosis of CO2K2
a. Vitamin -A b. Vitamin -E c. Vitamin -B1 d. Vitamin -C
5. Active transport of Calcium from intestine is associated with CO3K2
a. Ergosterol b. Calciferol c. Calcitriol d. All
6. Magnesium deficiency is related to CO3K1
a. Cirrosis and cancer b. Diabetes and hypertension
c. Hypertension and nephrosis d. Nephrosis and hypersensitivity
7. The trace element necessary for the sense of smell and taste is CO4K1
a. Iron b. Manganese c. Cobalt d. Zinc
8. The only Vitamin with a metal ion at its core is CO4K1
a. B1 b. B2 c. B5 d. B12
9. Unbalanced or unhealthy microbiome is called CO5K5
a. Abiotics b. Ameobiosis c. Dysbiosis d. Faulty gut
10. Symptoms of gut microbiome imbalances are CO5K5
a. Headache b. Bloating c. Polyphagea d. UTI

Part B
Answer ALL questions
Each answer should not exceed 400 words or two pages

5 x 6 = 30

11. a. Examine the interaction of Vitamin-A with other nutrients. CO1K3
(or)
11. b. Express the role of pseudovitamins. CO1K3
12. a. Explain the chemistry and functions of Vitamin-E. CO2K3
(or)
12. b. Express the functions and deficiency of folic acid. CO2K2
13. a. Justify the statement that Vitamin D is a hormone. CO3K3
(or)
13. b. Explain the interrelationship between calcium and phosphorus. CO3K4
14. a. Evaluate the stages of iron poisoning. CO4K4
(or)
14. b. Sketch out the functions of chromium. CO4K3
15. a. Explain the composition and functions of gut microbiome. CO5K3
(or)
15. b. Examine the importance of gut microbiome. CO5K3

Part C
Answer ALL questions
Each answer should not exceed 800 words or four pages

5 x 12 = 60

16. a. Write the history of water soluble Vitamins and Write about the functions, deficiency of Thiamine. CO1K4
(or)
16. b. Review the functions metabolism of Vitamin D. CO1K3
17. a. Illustrate the functions and deficiency of Vitamin B12 and folic acid. CO2K4
(or)
17. b. Outline the functions and deficiency of Pyridoxine and Vitamin C. CO2K3
18. a. Judge the importance of sulphur and chloride in human health. CO3K3
(or)
18. b. Analyse the functions deficiency and toxicity of potassium and sodium in body. CO3K4
19. a. Illustrate the functions and deficiency of Iron. CO4K4
(or)
- 19.b. Outline the interaction between iron and copper on absorption. CO4K5
20. a. Point out the significance of human microbiome project. CO5K4
(or)
20. b. Outline the future perspectives for gut microbial research. CO5K4
