

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024  
(First Semester)

Branch - CLINICAL NUTRITION AND DIETETICS  
CONTEMPORARY NUTRITION

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 × 1 = 10)

| Question No. | Question                                                                                                                                                                                                                                                                                                                                            | K Level | CO  |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|
| 1            | Which nutrient is particularly important for immune function during emergencies?<br>a) Carbohydrates      b) Fats      c) Proteins      d) Vitamins                                                                                                                                                                                                 | K1      | CO4 |
| 2            | What strategy is essential for food distribution in emergencies?<br>a) Random distribution of food supplies in affected area<br>b) Targeted assistance based on nutritional needs<br>c) Exclusively providing packed processed formulated foods<br>d) Focusing only on rural areas                                                                  | K2      | CO4 |
| 3            | Choose a typical dietary recommendation for sea travel to mitigate seasickness.<br>a) High-calorie low fat meals      b) Protein foods<br>c) Small, frequent meals      d) Skipping meals                                                                                                                                                           | K1      | CO1 |
| 4            | Why is hydration critical at high altitudes?<br>a) It helps with further progression<br>b) It compensates for increased fluid loss<br>c) It reduces hunger and provides energy<br>d) It enhances muscle gain and strength                                                                                                                           | K2      | CO2 |
| 5            | In the context of nutrigenomics, what does genotype refer to?<br>a) The environmental factors affecting health<br>b) The observable traits of an organism<br>c) The genetic makeup of an individual<br>d) The lifestyle choices of a person                                                                                                         | K1      | CO3 |
| 6            | What is the significance of penetrance in nutrigenetics?<br>a) It determines the severity of a genetic disease<br>b) It indicates how often a genotype expressed phenotypically<br>c) It ensures the specific nutrient intake<br>d) It evaluates the effectiveness of a diet                                                                        | K2      | CO3 |
| 7            | Identify the impact of immune suppression on health during a pandemic.<br>a) Increased energy levels      b) Higher susceptibility to infections<br>c) Enhanced recovery rates      d) Improved overall health                                                                                                                                      | K1      | CO4 |
| 8            | According to WHO recommendations during the COVID-19 pandemic, what is essential for maintaining health at home?<br>a) Herbal foods      b) Balanced diet with diverse foods<br>c) Intermittent Fasting      d) Frequent meals                                                                                                                      | K2      | CO4 |
| 9            | How can mobile and wearable technology enhance molecular nutrition practices?<br>a) By delineating molecular nutrition information<br>b) By providing real-time data on health metrics<br>c) By encouraging interaction with health professionals<br>d) By jettisoning the need for personalized nutrition                                          | K1      | CO5 |
| 10           | In a case scenario involving molecular nutrition, who benefits from the collaboration between the end user, health professional, and nutrition company?<br>I. The food companies<br>II. The end users<br>III. The health professionals<br>IV. Nutritionists and Dietitians<br>a) Only I      b) I and II      c) I, II and III      d) I, II and IV | K2      | CO5 |

Cont...

**SECTION - B (35 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks (5 × 7 = 35)

| Question No. | Question                                                                                                                                 | K Level | CO  |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|
| 11.a.        | Analyze the specific nutritional and health problems that arise in war and conflict situations.                                          | K4      | CO4 |
|              | (OR)                                                                                                                                     |         |     |
| 11.b.        | Examine the most effective food distribution strategies during emergencies.                                                              |         |     |
| 12.a.        | Inspect the common nutritional problems encountered during sea and air travel. What strategies can be employed to mitigate these issues? | K4      | CO2 |
|              | (OR)                                                                                                                                     |         |     |
| 12.b.        | Discover the specific nutritional needs during high altitudes.                                                                           |         |     |
| 13.a.        | Explain the role of genotype in nutritional assessment.                                                                                  | K5      | CO3 |
|              | (OR)                                                                                                                                     |         |     |
| 13.b.        | Evaluate the impact of genetic variability on the risk of cardiovascular disease.                                                        |         |     |
| 14.a.        | Interpret the effects of prebiotics and probiotics on immune response.                                                                   | K5      | CO4 |
|              | (OR)                                                                                                                                     |         |     |
| 14.b.        | Assess the key components of the Strategic Preparedness and Response Plan (SPRP) 2021 related to nutrition.                              |         |     |
| 15.a.        | Elaborate the protocols used in molecular nutrition research and practice.                                                               | K6      | CO5 |
|              | (OR)                                                                                                                                     |         |     |
| 15.b.        | Discuss the role of modern consumer technologies and explain how these technologies facilitate personalized dietary strategies.          |         |     |

**SECTION -C (30 Marks)**

Answer ANY THREE questions

ALL questions carry EQUAL Marks (3 × 10 = 30)

| Question No. | Question                                                                                                                                                                                          | K Level | CO  |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----|
| 16           | Examine any one successful nutritional interventions steered during a flood.                                                                                                                      | K4      | CO1 |
| 17           | Analyze the dietary intake strategies for astronauts during space missions. List the challenges of maintaining nutrition in space.                                                                | K4      | CO2 |
| 18           | Explain the concept of personalized nutrition. Nutrigenomics facilitate the development of tailored dietary plans based on genetic profiles – Justify.                                            | K5      | CO3 |
| 19           | Assess the role of specific nutrients in both immune suppression and immune promotion. Dietary choices impact immune health during a pandemic – Prove the statement .                             | K5      | CO4 |
| 20           | Discuss a case scenario involving a nutrition company implementing molecular nutrition strategies. What innovative approaches have been taken, and infer the impacts they had on consumer health? | K6      | CO5 |