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**St Aloysius (Deemed to be University)  
Mangaluru**

**Semester II – P.G. Examination – M.Sc. Food Science Nutrition and Dietetics  
April - 2025**

**Clinical and Therapeutic Nutrition**

Max Marks: 60

Time: 2 ½ hrs.

Note: Draw neat labeled diagrams/schematic sketches/structures wherever necessary.

I. **Write short notes on any FIVE of the following.** (5x3=15)

1. What is the relationship between the standard measures and portion sizes?
2. Define nutritional deficiency and sequentially deduced the areas in which assessment can help identify problems.
3. Write a note on ferritin and transfer in as biomarkers of anemia
4. Explain the role of sodium intake in blood pressure regulation.
5. Define enteral feeding and list the complications during enteral feeding
6. What is enteral nutrition, and how does it differ from parenteral nutrition? List three common delivery methods for enteral nutrition.
7. Discuss the importance of psychological considerations in patient care, specifically in relation to dietary counseling. Provide an example of how a dietitian can address psychological factors.
8. What are the factors that determine food behavior?

II. **Write explanatory notes on any FIVE of the following:** (5x5=25)

9. Discuss macro nutrient consideration in enteral nutrition support.
10. Evaluate the principle and advantages and disadvantages of gravity-based vs. pump-based enteral nutrition delivery systems.
11. Differentiate between food allergy and food intolerance with examples of common trigger foods.
12. Evaluate the impact of chronic alcohol abuse on cardiovascular health. Discuss potential mechanisms that contribute to alcohol-induced cardiovascular toxicity.
13. Discuss dietary guidelines for Indians.
14. Explain the role of Medical Nutrition Therapy (MNT) in weight management and its impact on metabolic health and requirements.
15. Elucidate the nutrient components of a parenteral nutrition.
16. Discuss with example on how a drug's therapeutic effect is modified by specific dietary choices.

III. **Answer any TWO of the following:** (2 x10=20)

17. Discuss the importance of Clinical assessment as part of nutritional assessment component and explain the physical indicators of Nutritional status
18. Briefly discuss the laboratory test as part of nutritional status assessment. Elaborate on the biochemical test for PEM.
19. Discuss on the type of Naso routes and elaborate the osmolality and fluid needs of patients on enteral nutrition support with an example.
20. Develop a comprehensive guide for individuals diagnosed with food allergies. Include dietary recommendations, coping strategies, and potential sources of hidden allergens in food.

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**St Aloysius (Deemed to be University)****Mangaluru****Semester II – P.G. Examination – M.Sc. Food Science Nutrition and Dietetics****ST.ALOYSIUS COLLEGE PG LIBRARY April - 2025****MANGALORE-575 002 Dietetics****Time: 2 ½ hrs.****Max Marks: 60****Note: Draw neat labeled diagrams/schematic sketches/structures wherever necessary.****I. Write short notes on any FIVE of the following. (5x3=15)**

1. What are the primary metabolic changes observed in patients with tuberculosis?
2. State the approximate energy requirement (in kcal/kg/day) recommended for MOF patients.
3. List three key dietary changes to be followed in chronic diarrhea.
4. What are the key dietary modifications for ulcerative colitis during flare-ups?
5. Why is protein intake monitored in kidney transplant patients?
6. What are the primary components of the Mediterranean diet?
7. What is the primary metabolic defect in Wilson's disease?
8. Identify a key symptom in nephrotic syndrome that impacts nutritional status.

**II. Write explanatory notes on any FIVE of the following: (5x5=25)**

9. Discuss on the nutrient guidelines for second and third degree burns. Provide the rationale for the guidelines.
10. Evaluate the effects of long-term use of immune suppressants on the body.
11. Design a diet plan for a patient diagnosed with peptic ulcer disease, considering nutrient modifications.
12. Explain the role of dietary fat modification in managing cholecystitis and cholelithiasis
13. Explain the rationale behind the TLC (Therapeutic Lifestyle Changes) diet for patients with atherosclerosis and ischemic heart disease.
14. Outline a nutritional plan for a patient recovering from acute renal failure as per ESPEN guidelines
15. Discuss the pathophysiological features of Myasthenia Gravis and explain how these features influence nutritional care strategies.
16. Explain how an anti-inflammatory diet can benefit patients with rheumatoid arthritis.

**III. Answer any TWO of the following: (2 x10=20)**

17. Evaluate the interplay between the immune response, pathophysiology, and nutritional therapy in managing typhoid fever.
18. Examine the metabolic and physiological changes occurring in liver cirrhosis. Develop a nutritional care plan to manage its complications.
19. Analyze the relationship between chronic pancreatitis and diabetes mellitus. Explain the metabolic alterations that occur and propose a dietary management strategy for such patients.
20. Describe the clinical implications of osteomalacia on overall bone health and quality of life, and explain how targeted nutritional modifications can help mitigate these effects.

## St Aloysius (Deemed to be University)

Mangaluru

Semester II – P.G. Examination – M.Sc. Food Science Nutrition and Dietetics

April - 2025

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## Life Cycle Nutrition

Time: 2 ½ hrs.

Max Marks: 60

Note: Draw neat labeled diagrams/schematic sketches/structures wherever necessary.

**I. Write short notes on any FIVE of the following. (5x3=15)**

1. Discuss the components of weight gain during pregnancy and their physiological significance
2. Discuss how nutrient requirements vary based on physiological conditions like pregnancy and lactation
3. Describe the principles of complementary feeding.
4. Why is breast milk considered the best source of nutrition for infants during the first six months?
5. How do lifestyle choices impact the long-term nutritional status of young adults?
6. Discuss the importance of hydration and fiber intake for geriatric health
7. Why breakfast is considered the most important meal for school-age children.
8. Discuss the common eating disorders in adolescents and their nutritional implications.

**II. Write explanatory notes on any FIVE of the following: (5x5=25)**

9. Explain the physiology of Lacto genesis and let down reflex.
10. Explain how sarcopenia and osteoporosis impact nutritional needs in the elderly.
11. Discuss common discomforts of pregnancy (such as nausea, heartburn, and constipation) and dietary strategies to manage them.
12. How does protein-energy malnutrition (PEM) in pre-schoolers contribute to long-term growth retardation?
13. Evaluate the advantages of breast feeding for the mother and infant.
14. Explain the impact of micronutrient deficiencies on school-age children's academic performance.
15. What are the nutritional concerns in adolescents? Explain.
16. Compare and contrast the energy and Protein requirement of ICMR and WHO guidelines.

**III. Answer any TWO of the following: (2 x10=20)**

17. Compare the different methods used to compute nutrient requirements.
18. Explain the relationship between poor diet and childhood obesity. What interventions can schools implement to combat this issue?
19. Critically analyse the micronutrient and macronutrient requirements during pregnancy.
20. Compare the nutritional needs of adolescent boys and girls and discuss the implications of diet choices during this stage.

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**Mangaluru**

**Semester II – P.G. Examination – M.Sc. Food Science Nutrition and Dietetics**

**April - 2025**

**Research Methodology and Ethics**

**Max Marks: 60**

**Time: 2 ½ hrs.**

**Note: Draw neat labeled diagrams/schematic sketches/structures wherever necessary.**

**I. Write short notes on any FIVE of the following.**

**(5x3=15)**

1. Why is it important to identify research gaps in a literature review?
2. Define the range of a dataset and explain how it is calculated.
3. Differentiate between grouped and ungrouped frequency distribution.
4. Define sampling procedure.
5. Give an example where correlation and regression is useful.
6. What is T-test and how is it interpreted?
7. What is an impact factor, and why is it important for academic journals?
8. What are the different types of research?

**II. Write explanatory notes on any FIVE of the following:**

**(5x5=25)**

9. Explain the importance of sampling in research.
10. Given a scenario where a researcher wants to test whether a sample mean is different from a known population mean, explain how they would conduct a hypothesis test for the population mean.
11. Discuss the importance of the literature review in both scientific reports and theses. How is it structured?
12. What are the key responsibilities of ethics committees when reviewing research proposals? How do they ensure the ethical integrity of research?
13. Discuss the criteria for selecting a good research problem.
14. Discuss the importance of diagrams and graphs
15. Explain about standard deviation, Coefficient of Variation and Hypothesis.
16. Discuss the different types of intellectual property rights that are relevant to research (e.g., patents, copyrights, trademarks).

**III. Answer any TWO of the following:**

**(2 x10=20)**

17. What are the essential constituents of a literature review? Explain how to write an effective literature review.
18. Discuss in detail the various methods of collecting primary and secondary data.
19. A researcher collected data on household incomes in a city. Calculate the mean, median, and mode for the data provided: 30,000, 35,000, 40,000, 50,000, 100,000, 200,000
20. Explain in detail the ethical and legal consequences of plagiarism in research and publication. Provide real-world examples.