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**St Aloysius College (Autonomous)  
Mangaluru**

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

**May - 2024**

**Clinical and Therapeutic Nutrition**

**Time: 3 hrs.**

**Max Marks: 70**

**I. Answer any SIX of the following:**

**(6x3=18)**

1. What are the markers of oxidative stress in the biochemical parameters?
2. Write a short note on diagnostic test for vitamin A deficiency.
3. Write a short note on cultural aspects of diet planning.
4. Write a note on positive phase respondents related to protein energy malnutrition.
5. Define enteral feeding and list the complications during enteral feeding
6. How will you determine the relationship between the amount of cooked food stuff and raw food stuff?
7. Differentiate between primary and secondary malnutrition in acute and critical illness.

**II. Answer any FOUR of the following:**

**(4x7=28)**

8. Discuss the motivational interviewing as nutritional counseling model.
9. Analyze the challenges and benefits of using dietary interventions in the treatment of food allergies. Provide examples of how dietitians can collaborate with other healthcare professionals in managing allergies.
10. What are surgically placed enterostomies? Describe the methods involve in the tube placement in this type of enteral support.
11. Write a detailed note on important guidelines in the diet planning.
12. List and discuss each domains of nutrition care process.

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

**(2 x12=24)**

13. Critically evaluate the ethical considerations in nutritional counseling, discussing potential challenges and proposing solutions.
14. Elaborate on behavior change models in nutritional counseling.
15. Describe the nutrient consideration during enteral feeding and elucidate how fluid needs can be calculated in EN giving an assumption or an example.

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

**May - 2024  
DIETETICS**

Time: 3 hrs.

Max Marks: 70

**I. Answer any SIX of the following:**

(6x3=18)

1. Define enteral nutrition.
2. Define refeeding syndrome.
3. Define nutritional immunity
4. What is the concept of food insecurity and its relationship to the spread of communicable diseases during disasters?
5. Name one common dietary recommendation for individuals with hypertension. What is the primary classification of hypertension based on blood pressure readings?
6. Define tropical sprue.
7. Define rheumatoid arthritis.

**II. Answer any FOUR of the following:**

(4x7=28)

8. Discuss nutrition therapy in immunosuppression in acutely ill patients.
9. Compare and contrast the pathophysiological processes involved in burns and multiple organ failure, highlighting key differences in systemic responses and organ dysfunction.
10. Explain the importance of phosphorus restriction in the diet of individuals with renal failure, including sources of dietary phosphorus and its impact on renal function.
11. List and discuss the immuno-nutrias in enteral nutrition.
12. Discuss the metabolic alterations associated with diabetes mellitus, including insulin resistance, impaired glucose metabolism, and dyslipidemia, and outline dietary interventions aimed at improving metabolic control and reducing the risk of complications.

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

(2 x12=24)

13. Discuss the role of diet in the prevention and management of diverticular disease, including recommendations for increasing dietary fiber intake, fluid intake, and potential dietary restrictions to reduce symptoms and prevent complications like diverticulitis.
14. Discuss the complex interplay between dietary factors, stress, and hypertension development. Evaluate the evidence supporting lifestyle modifications in the prevention and management of hypertension.
15. Discuss the nutrient recommendations in detail when managing individuals infected with HIV virus as a result of nutrient deficiencies.

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**May - 2024**

**RESEARCH METHODOLOGY AND ETHICS**

**Time: 3 hrs.**

**Max Marks: 70**

**I. Answer any SIX of the following:**

**(6x3=18)**

1. Define the term "research" and differentiate between quantitative and qualitative research methods.
2. Define what constitutes a research problem and differentiate it from a research question.
3. Classify the following as primary or secondary data: a) Census records, b) Survey responses, c) Laboratory experiments.
4. Define statistical computation and explain its importance in research.
5. List three regulations governing the ethical use of animals in research and briefly explain their importance.
6. Define standard deviation (SD) and range Calculate the SD and range for the given dataset: 10, 15, 20, 25, 30.
7. Define research design and explain its significance in the research process.

**II. Answer any FOUR of the following:**

**(4x7=28)**

8. Examine the role of international treaties and agreements in harmonizing intellectual property laws across different countries.
9. Explain the difference between probability sampling and non-probability sampling methods. Provide examples of each.
10. Examine the application of the Chi-square test for goodness of fit in genetics research, providing a relevant example.
11. Explain the advantages and disadvantages of mean, median and mode.
12. Discuss the role of peer review in ensuring quality of scientific reports.

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

**(2 x12=24)**

13. Evaluate the impact of sampling errors on the validity and generalizability of research findings. Provide examples to support your discussion.
14. Provide a step-by-step guide on how to conduct research using research process.
15. Perform a two-sample t-test for the following data: Group 1 (n=10, mean=65, SD=9) and Group 2 (n=12, mean=60, SD=8). Interpret the results.

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

**May - 2024**

**NUTRITION THROUGH LIFE CYCLE**

**Time: 3 hrs.**

**Max Marks: 70**

**I. Answer any SIX of the following:**

**(6x3=18)**

1. List three factors that affect lactation and briefly explain their influence on milk production.
2. What is pSGA, dSGA and LGA?
3. What is Infant milk substitute act?
4. What are the challenges associated with geriatric nutrition assessment?
5. What are two key nutrients that play a crucial role in bone development during adolescence?
6. What are the physiological changes associated with adolescent age group?
7. What are the special nutritional needs of elderly individuals, considering factors such as energy requirements and protein intake?

**II. Answer any FOUR of the following:**

**(4x7=28)**

8. Discuss the nutritional requirements for pregnant women and write about the physiological changes during pregnancy.
9. Discuss the nutritional requirements for infants. Write the composition of human milk.
10. Discuss the role of protein in the growth and development of preschool children.
11. Describe the nutrient requirements for young adults, including macronutrients and micronutrients, and explain why they are important.
12. Based on the physiologic changes in the elderly, recommend dietary modifications to improve nutrient absorption and utilization in this population.

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

**(2 x12=24)**

13. How obesity, negative energy balance and diabetes will affect fertility? Explain.
14. Discuss the different types of weaning food and its progress.
15. Discuss reference man and woman in relation to the adult nutrient requirements. add a note on adult nutrition related concerns.