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**St Aloysius College (Autonomous)
Mangaluru**

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

**May - 2024
Nutritional Biochemistry**

Time: 3 hrs.

Max Marks: 70

(6x3=18)

I. Answer any SIX of the following:

1. Write a short note on thyroid hormones.
2. A note on ATP & GTP?
3. What are amino acids? Add a Note on peptide bond formation.
4. Write a short note on transamination & deamination.
5. Write a note on hypothalamic neuro peptide hormones.
6. Write a short note on lipoproteins.
7. Write a short note on competitive inhibition of enzymes.

II. Answer any FOUR of the following:

(4x7=28)

8. Illustrate and explain the glucose metabolism.
9. Illustrate and explain Purine metabolism
10. Explain in detail the DNA replication and enzymes involved.
11. Write a detailed note on the classification of enzymes based on their functional properties.
12. Explain the general properties of enzymes.

III. Answer any TWO of the following:

(2 x12=24)

13. Illustrate and explain
 - a) HMP
 - b) glucuronic acid pathway
14. Elaborate on the factors affecting enzyme activity.
15. Illustrate and Discuss the Biosynthesis & degradation of cholesterol.

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**St Aloysius College (Autonomous)
Mangaluru**

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

**May - 2024
Community Nutrition**

Time: 3 hrs.

Max Marks: 70

I. Answer any SIX of the following: (6x3=18)

1. Provide two examples of interventions that public nutritionists may implement to address community health concerns.
2. Write a short note on Ethical Responsibility in CSR.
3. Discuss inter-relationship between vulnerability, preparedness and building capacity in the context of disaster management.
4. Compare and contrast the advantages and limitations of using weight-for-height and height-for-age as anthropometric indicators in emergencies.
5. What is the core objective of the National Institute of Nutrition (NIN)?
6. Provide a brief explanation of the importance of evaluation in the context of nutritional counseling. Name two evaluation methods that can be employed.
7. Write about the process of communication

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II. Answer any FOUR of the following: (4x7=28)

8. Explain in detail the anthropometric method of nutritional status assessment
9. Discuss the importance of maintaining sanitation and hygiene in tackling nutritional emergencies situation. Add a note on food distribution.
10. Elaborate on the SNP and Balwadi Nutrition Programme.
11. Compare and contrast two models, highlighting their strengths and weaknesses in facilitating behavior change related to nutrition.
12. Illustrate communication process and explain the different media used.

III. Answer any TWO of the following: (2 x12=24)

13. How do demographic changes influence the link between nutrition and public health?
14. What are food-aid interventions? Discuss on the principles of the different types of feeding programmes and the factors to be considered in ration planning.
15. Discuss the significance of health based intervention in preventing nutritional deficiencies. Evaluate the challenges and ethical considerations with these programs. Propose strategies to enhance acceptance of these interventions in the community.

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**St Aloysius College (Autonomous)
Mangaluru**

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

**May - 2024
Sports Nutrition**

Time: 3 hrs.

Max Marks: 70

I. Answer any SIX of the following:

(6x3=18)

1. Define exercise physiology and explain its significance in understanding the human body's response to physical activity.
2. Write a short note on energy derivation from ATP-CP system.
3. Enumerate three key components of health and fitness commonly assessed in athletes.
4. Describe the role of rest in the recovery process of sports injuries.
5. Why iron supplementation is important for endurance and strength athletes?
6. Identify and briefly explain three potential consequences of mineral deficiencies on physical performance.
7. List three potential challenges athletes may face when following high-energy diets.

II. Answer any FOUR of the following:

(4x7=28)

8. Design a preventive strategy to avoid overtraining in athletes. Include both training and recovery components.
9. Compare and contrast different motivational interviewing techniques used in nutritional counseling.
10. Analyze the role of dietary fats in promoting sustained energy during prolonged physical activity. Discuss the optimal ratio of dietary fats for endurance athletes.
11. Based on the nutritional considerations for vegetarian athletes, create a sample meal plan that ensures adequate protein intake and nutrient balance.
12. Compare and contrast the nutritional needs of athletes participating in endurance sports versus those in strength-based sports.

III. Answer any TWO of the following:

(2 x12=24)

13. How energy requirements are calculated for athletes? Explain important factors of Exercise /training that affect energy requirements.
14. Discuss pre-game and post-game nutritional strategies for long distance runners.
15. Evaluate the effectiveness of low-glycemic index diets in managing blood sugar levels and improving performance in athletes with diabetes.

ST. ALOYSIUS COLLEGE
MANGALURU
P.G. DEPT.
M.Sc. FOOD SCIENCE NUTRITION AND DIETETICS

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**St Aloysius College (Autonomous)
Mangaluru**

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

May - 2024

FOOD SAFETY AND QUALITY CONTROL

Time: 3 hrs.

Max Marks: 70

I. Answer any SIX of the following:

(6x3=18)

1. Write a short note on interrogated pest management.
2. What are food hazards? Give examples.
3. What are the four pillars of GAP? Write a short note.
4. Write a short note on the objectives of good hygiene practices.
5. Discuss the significance of cleaning and sanitation agents in food establishments. Give Examples.
6. Make a short note on organic farming and its relevance
7. What are the primary objectives of food safety regulations?

II. Answer any FOUR of the following:

(4x7=28)

8. Explain the key elements of food labels. Discuss on nutritional labeling.
9. Discuss the importance of consumer awareness in preventing food adulteration. Provide two examples of how consumers can be vigilant against adulterated food products
10. Give the classification of pests. Explain the importance of IPM in food systems.
11. Explain the significance of the Codex Alimentarius Commission (CAC) in international food safety standards. What is the primary objective of the CAC, and how does it contribute to ensuring the safety and quality of food products on a global scale?
12. Explain the seven principles of HACCP in detail.

III. Answer any TWO of the following:

(2 x12=24)

13. Elaborate on food traceability in detail.
14. Critically examine the role of GLP in the pharmaceutical industry, focusing on its impact on drug development and regulatory compliance
15. Describe the WTO agreements in detail.