



SUBJECT: **Home Economics & Human Ecology**
DATE: 11th June 2021
TIME: 4:00 p.m. to 7:05 p.m.

SECTION A

Answer ALL questions.

1. Define the term sustainability and explain **TWO** ways consumers can be sustainable when buying fruit and vegetables. (1, 2)
2. Explain single-use plastic and list **TWO** ways how a family with young children can cut down on the use of single-use plastic. (1, 2)
3. Outline **TWO** basic strategies of handling food safely that parents should observe when preparing a school packed lunch for their children. (2)
4. Briefly compare the Healthy Plate and the National Dietary Guidelines for Maltese adults. (2)
5. Anorexia and bulimia nervosa are two eating disorders common in teenage years. Explain anorexia and bulimia nervosa. (2)
6. Explain the term calorific value and give the **TWO** units used to measure it. Outline **TWO** factors that make food high in calorific value. (1, 1, 2)
7. Identify **TWO** benefits of play for the emotional development of children. (2)
8. The parents of a three-year old are planning to buy a tricycle for their child. Outline **TWO** safety features they should look for when buying the tricycle. (2)
9. List the **THREE** chemical components of carbohydrates and give the general formula of this macronutrient. Describe the **THREE** main groups of this macronutrient. (1½, ½, 3)
10. Elderly individuals are encouraged to remain active and involve themselves in voluntary activities. Outline **THREE** benefits that voluntary activities have on the quality of life of the elderly. (3)
11. Justify the need of the following food combinations:
 - i. vitamin D and calcium;
 - ii. beans and rice/ bread;
 - iii. fat-soluble vitamins and healthy fats. (3)
12. Outline **TWO** measures which could be adopted by a family to lessen human-induced global warming and climate change. (2)

13. Compare Omega-3 and Omega-6 fatty acids. Briefly outline the role in the body of each one. (2, 2)
14. Outline **THREE** strategies that a married couple, both working full-time, could adopt to help ensure financial security in their senior years. (3)

(Total: 40 marks)

SECTION B

Answer ANY THREE questions.

1. a) List the **FOUR** basic elements of all proteins and name **TWO** other elements that may vary in different proteins. (2, 1)
- b) Outline **THREE** functions of protein in the body. (3)
- c) Choose **THREE** of the following individuals and explain why each require a higher intake of protein:
- i. Growing children.
 - ii. A person who has undergone surgery.
 - iii. A convalescing individual.
 - iv. An athlete. (3)
- d) All proteins are composed of amino acids which can be classified as essential or non-essential amino acids. Outline the difference between these two groups of amino acids and name **TWO** examples for each group. (2, 1, 1)
- e) Proteins derived from plant sources are referred to as proteins of low biological value. Explain the term low biological value and outline how plant protein can be combined to supply a high quality source of protein, giving **ONE** specific food example. (1, 1, 1)
- f) A teenage vegan needs to ensure an adequate intake of proteins on a daily basis. Plan a vegan lunch menu to ensure an adequate intake of this macronutrient. Justify your choice of food. (2, 2)

(Total: 20 marks)

2. The Covid-19 pandemic brought about changes in the method of purchasing and payment of items. Many individuals and families opted for online-shopping and teleshopping.
- a) Compare and contrast online shopping and teleshopping. (2)
- b) Outline the environmental benefits of using these **TWO** methods of shopping. (2)
- c) For each method of shopping, give **TWO** different advantages and **TWO** different disadvantages of such practices. (2, 2)
- d) Payments are mainly effected via Internet money transfers, debit and credit cards, as well as contactless cards.
- i. Explain the difference between debit and credit cards. (2)
 - ii. Outline **THREE** benefits of contactless payment for the customer. (3)

- e) Outline **THREE** security measures that a consumer should consider when effecting electronic transactions. (3)
- f) Consumers have rights when conducting off-premises contracts and distance shopping. Describe **TWO** such rights. (2)
- g) Outline **TWO** factors that should be considered when purchasing items of personal hygiene to ensure minimal environmental impact. (2)

(Total: 20 marks)

3. The prevalence of osteoporosis and anaemia among women in pre-menopausal age are worrying health problems in many nations.

- a) For each of the above conditions:
 - i. explain how it develops; (2)
 - ii. give the mineral related to the condition, and recommendations by the European Food Safety Authority on the intake of these minerals for this age group; (2)
 - iii. name **TWO** observable symptoms. (2)
- b) Other than taking dietary supplements, for both osteoporosis and anaemia, outline **TWO** dietary preventive measures and **ONE** non-dietary measure which could be adopted by healthy women to lessen their risk of suffering from these conditions. (3, 3)
- c) Baked Macaroni is a traditional dish that is frequently prepared by Maltese families.

Recipe for Baked Macaroni	
400 g macaroni pasta	2 eggs
200 g corned beef	A canned tin of peas
20 g butter	A canned tin of carrots
A tin of tomatoes	1 small onion
A stock cube	Some garlic
50 g tomato paste	100 g grated cheddar cheese
100 g bacon	Salt and pepper

- i. Outline **SIX** ways how you would modify the recipe for this traditional dish to improve the content and absorption of the minerals related to osteoporosis and anaemia which you identified in part (a.ii) above. (3)
- ii. Suggest **TWO** other ingredients that can be added to the recipe to improve its nutritive value for women. (2)
- iii. Describe, stating reasons for your choice, what could be served with this dish in order to present a balanced packed lunch suitable for an individual who suffers from constipation. (3)

(Total: 20 marks)

Please turn the page.

4. Parents of children with developmental disorders encounter a variety of severe hardships in caring for their children's needs.
- a) Outline **TWO** emotional and **TWO** physiological response symptoms that parents may experience in such situations. (2, 2)
 - b) Describe **TWO** positive effects that the experience of caring for a child with disability can have on the entire family. (2)
 - c) Outline **TWO** benefits of inclusive education for children with special needs and for other children. (2)
 - d) The government provides educational support to children with development disorders and their families. Outline **FOUR** support systems that are being offered in state schools. (4)
 - e) i. Outline **TWO** benefits of **TWO** initiatives taken by the government to assist parents of children with motor disabilities. (2, 2)
ii. Assistance and support to such families can also be given by community members. Describe **TWO** ways how community members can help:
 - (i) children with autism and their families; (2)
 - (ii) wheelchair bound children and their families. (2)

(Total: 20 marks)