



SUBJECT: **Home Economics & Human Ecology**
 DATE: 5th September 2023
 TIME: 9:00 a.m. to 12:05 p.m.

SECTION A

Answer ALL questions.

1. A group of teenagers decided to get a food delivery service by ordering online. Name **ONE** healthy food option and **ONE** healthy beverage they can choose. Outline how **each** food and beverage mentioned can be of benefit to these teenagers. (1, 2)
2. LDL and HDL are types of cholesterol. For **each** of these types of cholesterol, give the full name and list **ONE** food source. Outline the role of HDL cholesterol in the body. (1, 1, 1)
3. Outline **TWO** roles which grandparents could share with their adult children and **TWO** roles they could take with their grandchildren to improve quality of life. Choose one of the roles you have outlined and describe how it may help the grandparent improve either physical, intellectual, emotional or social development. (2, 2, 1)
4. As part of the Healthy Plate Guidelines, foods are divided into six groups. Describe **TWO** ways how one can follow these guidelines when consuming vegetables and fruit. Describe **TWO** ways how one can follow these guidelines when consuming foods from the milk and milk products food group. (2, 2)
5. Last year, Wasteserv launched a reusing initiative. Reuse Centres in various civic amenity sites were established where the public could donate used items that are still in good condition. The money collected from the sale of the items goes to a fund set up by WasteServ, which will be used for environmental initiatives. Apart from this initiative, describe **THREE** ways how one can re-use items to be a sustainable citizen. (3)
6. The recent changes in the Retirement Pensions Act highlighted the importance of saving for retirement. Identify **ONE** suitable method of investment that will render financial security for retirement years and highlight **ONE** advantage of the investment option chosen. (1, 1)
7. Define diverticulosis and describe **ONE** course meal (highlighting the main ingredients) which would be suitable for a 65-year-old woman who suffers from diverticulosis. Include an analysis of the main nutrients present in the meal. (1, 1, 1)
8. Name the **FOUR** chemical elements found in **all** proteins. Name another **TWO** chemical elements that may be found in some protein foods. (2, 1)
9. Describe **THREE** ways how a teenager can maintain a healthy weight without resorting to slimming diets. (3)

Please turn the page.

10. Briefly explain the meaning of the Green Dot symbol on goods. Identify and explain **TWO** labels which can be found on the packaging of a laundry detergent. (1, 2)
11. Bacteria have been used in the production of food for many years.
- Explain the scientific principle underlying the use of beneficial bacteria in the production of yoghurt during the fermentation stage.
 - Explain the scientific principle underlying the use of enzymes in cheese production.
 - Suggest **ONE** strategy that could be implemented when opening a jar of olives to prevent food spoilage by mould. (2, 1, 1)
12. Foods have calorific value. Explain calorific value and give the **TWO** units used to measure it. Determine the calorific value of 1 g of protein and 1 g of fat. Describe **TWO** factors that make food high in calorific value. (1, 1, 1, 1)

(Total: 40 marks)

SECTION B

Answer ANY THREE questions.

1. Vitamins are micronutrients needed by the body to perform a variety of tasks. Nevertheless, these micronutrients are not made in the body and must be obtained from food.
- Explain micronutrients and name the **TWO** units of measurements in which they are usually recommended. (1, 1)
 - Outline **TWO** properties of water-soluble vitamins and **TWO** properties of fat-soluble vitamins. (2, 2)
 - The following are some important vitamins: Cholecalciferol, Tocopherol, Pyridoxine and Ascorbic acid.
 - Give the main function of **each** of the above vitamins. (4)
 - List **TWO** natural food sources for **each** vitamin given. (4)
 - Vitamin supplements should be prescribed by a medical professional.
 - Name **ONE** population group that could need a vitamin supplement. (1)
 - Name the vitamin supplement that the doctor usually prescribes to the population group chosen. (1)
 - Give **ONE** reason why a medical professional should prescribe these vitamin supplements to this population group. (1)
 - Name **ONE** effect of insufficient intake of each of the following vitamins:
 - vitamin A; (1)
 - vitamin B₁; (1)
 - vitamin C. (1)

(Total: 20 marks)

2. Families nowadays are different from the traditional family which included a mother, a father, children and possibly grandparents living together. The family unit structure has changed and created 'new' types of families.
- a) Name **FOUR** types of family units (other than the nuclear family and the extended family) and describe **each** of these family types. (2,4)
 - b) Choose **TWO** of the families you have mentioned in part (a) and describe **TWO** implications that these 'new' types of families have on their lifestyles. (4)
 - c) Alison is a young mother of two children aged 3 and 15-year-olds. Alison has just recovered from a drug overdose. She lost her job and she cannot afford to buy food and pay rent. The eldest son has very challenging behaviour at school and often gets suspended because he gets alcohol in his school bag. This family was given a social worker for help.
 - i. Outline **THREE** possible support services provided by Aġenzija Appoġġ within the Foundation for Social Welfare Services, which the social worker could apply for to help the children. (3)
 - ii. Alison aims to improve her life. Outline **FIVE** ways how she can do this with the help of support services. (5)
 - iii. Name **TWO** other possible sources of support for Alison and her children. (2)

(Total: 20 marks)

3. A recent report published by an EU-funded project 'Smart Protein' showed that Europe's plant-based food industry grew an astonishing 49 % overall in 2 years.

(<https://cordis.europa.eu/article/id/429495-europe-s-plant-based-food-industry-shows-record-level-growth>)

- a) Define the term vegetarianism. Outline **THREE** reasons, not related to health, why a person might opt for a vegetarian diet. (1, 3)
- b) Justify, giving **FOUR** reasons, why choosing plant-based food rather than food coming from animals is healthier for our body. (4)
- c) Differentiate between lacto-ovo vegetarians, lacto-vegetarians and pesco-vegetarians. (3)
- d) Plant sources of proteins are fundamental in a vegetarian diet as an alternative to high biological value protein.
 - i. Identify **FOUR** plant sources of protein. (2)
 - ii. Define high biological value protein and explain, through an example, what can be done to ensure that vegetarian meals are complementary. (1, 2)
- e) A child who is a vegan often feels left out when activities are organised at his/her school. The next school event is Ftira Day, where tuna fish is used in the filling.
 - i. Define vegan diet. (1)
 - ii. Outline **TWO** different healthy fillings that parent-helpers can use for this student. (1)
 - iii. Highlight the nutritional analysis of **ONE** of the snacks identified, explaining how this meets the dietary needs of this young child. (2)

(Total: 20 marks)

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4. Psychological, cultural, technological, economic and social factors all play an important role when choosing food.
- a) Explain how **each** of the above is important when making food choices. (5)
 - b) Food availability, marketing and accessibility are amongst the main causes of changing dietary patterns. Explain the main implications of marketing and accessibility on the dietary patterns of individuals. (4)
 - c) In the past couple of years there has been an enormous increase in take-out food delivery service providers.
 - i. Suggest **FOUR** reasons why people are opting for take-out food delivered at their home. (2)
 - ii. Give a brief critical analysis of most take-out foods in relation to nutrient and energy value. (4)
 - d) According to the Health Department Colorectal cancer is one of the most common forms of cancer in Malta, and around 110 people die each year from the disease in the Maltese islands.
(<https://deputyprimeminister.gov.mt/en/phc/nbs/Pages/Screening-Programmes/Colorectal-Screening.aspx>)
 - i. Highlight **FOUR** reasons for this new phenomenon and suggest **TWO** dietary recommendations that assist in the reduction of such cancer risks. (2, 1)
 - ii. People between 56 to 72 years of age are invited by the Health Department for a Faecal Immunochemical Test (FIT) screening. Justify why this is important. (2)

(Total: 20 marks)