



SUBJECT: **Home Economics & Human Ecology**
DATE: 11th December 2020
TIME: 9:00 a.m. to 12:05 p.m.

SECTION A

Answer ALL questions.

1. Name **FOUR** micronutrients that are essential for the mineralisation of bones and teeth. Name **ONE** rich source of each micronutrient. (2, 2)
2. Define the term cross-contamination. Outline **THREE** precautions a food handler should take to avoid cross-contamination. (1, 3)
3. Salmonella and Clostridium botulinum are bacteria that can cause food poisoning. Name **ONE** food source that could harbour each of these bacteria. Outline **THREE** strategies that should be adopted when one has food poisoning to recover quickly and/or to prevent spread of the illness. (1, 3)
4. Malta, in line with the targets of the European Commission, is working towards eliminating single-use plastic. Identify **THREE** negative impacts of plastic on the environment. Suggest **THREE** strategies that individuals can adopt to minimise use of single-use plastic. (3, 3)
5. Describe **FOUR** strategies that a parent can implement to increase the intake of fruit and vegetables in a toddler's diet. (4)
6. Meat balls are suitable for a healthy snack or a meal. Identify the biological value of protein in meat and in onions, present in meat balls. State **TWO** functions of protein for children's development. (1, 2)
7. Define the term complementary proteins. Discuss **TWO** health benefits of including complementary proteins in one's diet. Give **TWO** examples of snacks or dishes that have complementary proteins. (1, 2, 1)
8. Give the chemical name of vitamin D. Name the deficiency disorders of this vitamin in children and elderly. Suggest a breakfast for a child that ensures an adequate intake of vitamin D. Justify your choice. (1, 1, 2)
9. List **THREE** functions of water in the body. Give the recommended daily intake of water as stipulated by the European Food Safety Authority (EFSA). (3, 1)
10. What is the difference between gross income, disposable/net income and non-wage income? (3)

(Total: 40 marks)

SECTION B

Answer ANY THREE questions.

1. "Saturated fatty acids intake should be as low as possible within the context of a nutritionally adequate diet" (EFSA, 2017, p.16).
 - a) List the chemical elements of lipids. State **THREE** functions of fat in the body. (1, 3)
 - b) What is the main distinction between a saturated, a monounsaturated and a polyunsaturated fatty acid? Name **ONE** diet-related condition that is associated with a high intake of food rich in saturated fatty acids. (3, 1)
 - c) How do the high-density lipoprotein (HDL) cholesterol and low-density lipoprotein (LDL) cholesterol function in the body in relation to heart disease? What type of test could be done to check the levels of lipids in the blood? (2, 1)
 - d) Outline **THREE** strategies in meal planning that could improve the lipid profile of a middle-aged person. Give **ONE** reason for each choice. (3)
 - e) In relation to Body Mass Index (BMI) define the terms underweight, healthy weight, overweight and obese. (4)
 - f) Explain why following a slimming diet or FAD diet without professional supervision is **not** recommended. (2)

(Total: 20 marks)

2. The intake of fat-soluble and water-soluble vitamins is recommended by health professionals.
 - a) What is the difference between fat-soluble and water-soluble vitamins in terms of absorption and daily intake? (2, 2)
 - b) Give the chemical name and function of:
 - i. vitamin A;
 - ii. vitamin B1;
 - iii. vitamin C;
 - iv. vitamin E. (2, 4)
 - c) What is the common relationship between Vitamin A, C and E? (1)
 - d) Why is Beta-Carotene referred to as a precursor of Vitamin A? (1)
 - e) Why should vitamin supplements be prescribed by a doctor? Name, giving a reason, **ONE** population group that could need a vitamin supplement. (1, 1)
 - f) List **THREE** factors that affect vitamin retention in foods. Describe how each factor could be controlled during food storage, food preparation or serving of food. (3, 3)

(Total: 20 marks)

3. A single person is furnishing his newly bought apartment.
- a) Outline **THREE** factors that the individual needs to consider when choosing kitchen and/or laundry appliances. (3)
 - b) Give **ONE** advantage and **ONE** disadvantage of paying by:
 - i. cash; (2)
 - ii. cheque; (2)
 - iii. hire purchase; (2)
 - iv. contactless credit card. (2)
 - c) Compare and contrast the legal guarantee and a commercial guarantee that are given when buying different appliances. (2)
 - d) List **THREE** pieces of information that are essential for a guarantee to be valid. (3)
 - e) Identify **FOUR** rights a consumer has when buying goods using distance selling methods. (4)
- (Total: 20 marks)**

4. Financial literacy is highly important for all age groups.
- a) Define the term budgeting. Discuss the importance for an adolescent to develop this lifeskill. (1, 1)
 - b) Outline **THREE** strategies that adults should consider when planning for their financial security in their senior years. (3)
 - c) Discuss **THREE** challenges that elderly people could experience if they rely solely on the state's contributory pension scheme. (3)
 - d) Lack of financial literacy increases the risk for an individual to run into debt. Outline **THREE** responsibilities that young adults should take to avoid living on credit. (3)
 - e) A young couple who have just had a baby are evaluating their expenses. Outline **THREE** strategies that would help them to have enough money to pay the monthly instalment of their home loan. (3)
 - f) A group of teenagers are planning a get together at the home of one of them. Identify **FOUR** factors that they need to consider to save money and be eco-friendly. (4)
 - g) Discuss **TWO** disadvantages of credit cards from the perspective of card holders. (2)
- (Total: 20 marks)**