



SUBJECT: **Home Economics & Human Ecology**
DATE: 5th September 2019
TIME: 4:00 p.m. to 7:05 p.m.

SECTION A

Answer ALL questions.

1. Explain the difference between nutrient goals and dietary guidelines. Give **TWO** reasons why it is more beneficial to use unrefined, rather than refined, rice when making baked rice. (2, 2)
2. Name, giving reasons, **TWO** groups of individuals who may require a high sodium intake, and describe the link between sodium and arterial health. (2, 1)
3. Give **THREE** reasons why breakfast should not be skipped. (3)
4. State what the abbreviation GMO stands for and define GMO. Discuss **TWO** negative implications of GMOs on human health. (1, 2)
5. Define hydrogenation, and explain **TWO** similarities between hydrogenated vegetable oil and saturated fatty acids. (1, 2)
6. Outline the benefits of increasing calcium in the diet for the following individuals:
 - a) a toddler; (1)
 - b) an adult man who has fractured his hand; (1)
 - c) a middle aged woman who is in menopause. (1)
7. For an 18-month old toddler, describe and explain the benefits of **TWO** activities that foster:
 - a) language development; (2)
 - b) the development of motor skills. (2)
8. Define the term life insurance policy, and explain how it differs from a life assurance policy. (2, 1)
9. Describe **THREE** ways how attending a Day Centre could enhance the social wellbeing of a widowed elderly woman. (3)
10. Describe the role of the Consumer Claims Tribunal, and state **TWO** documents a consumer would have to submit when filing a claim. (2, 1)
11. State **TWO** benefits of:
 - a) civic amenity sites; (2)
 - b) engineered landfills. (2)
12. Define the term sustainability. Suggest **THREE** ways how a family can cut down on food expenses whilst ensuring sustainability. (1, 3)

(Total: 40 marks)

SECTION B

Answer ANY THREE questions.

1. The label below is from a wholemeal bread roll available locally. It is going to be consumed by an overweight 50-year-old female with diabetes type 2.

<p>WHOLEMEAL BREAD ROLL</p> <p>Ingredients: Wholemeal flour, water, soy flour, hydrogenated palm kernel oil, salt, dextrose, yeast, sesame seeds, Flour Treatment Agent E300, Emulsifier E472, Preservative E282</p> <p>USE BY: 02/05/2019 LOT: 5057</p> <p>This product contains NO ANIMAL FAT</p>

- a) Identify **THREE** nutrients present in the bread roll, and state how each could affect the health of the female. (3)
- b) Suggest **ONE** suitable filling for this bread roll to be consumed by the female, and give reasons for your choice. What type of beverage do you recommend, and why? (1, 2, 1, 2)
- c) In order to inform the middle aged woman:
 - i. briefly explain the cause of diabetes type 2; (2)
 - ii. list **TWO** symptoms of diabetes type 2; (2)
 - iii. name **ONE** consequence that could be developed if diabetes type 2 is not controlled; (1)
 - iv. identify **ONE** test that could be carried out for diabetes type 2. (1)
- d) In the list of ingredients, the bread roll contains additives.
 - i. Outline the purpose of the list of ingredients. (2)
 - ii. List **THREE** functions of additives in foods. (3)

(Total: 20 marks)

2. The availability and consumption of food is influenced by a number of factors.
- a) List **THREE** factors that impact food choice that are:
 - i. family/individual dependent; (3)
 - ii. **not** family/individual dependent. (3)
 - b) Outline **THREE** advantages of purchasing and consuming local fruit and vegetable produce for:
 - i. the consumer; (3)
 - ii. the local economy. (3)

- c) Outline **TWO** social and **TWO** technological developments that have influenced the type of food consumed by different population groups. (2, 2)
- d) Explain the term food miles, and explain how food miles affect environmental sustainability. (1, 1)
- e) Define the term organic farming, and discuss **ONE** factor that could affect consumers in choosing such products or not. (1, 1)

(Total: 20 marks)

3. A traditional dessert during the Easter period in Malta is the Figolla. This almond dessert shaped in different forms is made in many households and confectioneries. The following is a traditional recipe of Figolli.

For the Pastry

350 g castor sugar, 500 g plain flour, 400 g butter, grated rind of 1 lemon, 4 egg yolks, Maltese honey and pistachio nuts or additional almonds

For the Almond paste

600 g caster sugar or icing sugar, 2-3 egg whites, grated rind of 1 lemon, a few drops of orange flower water, 600 g ground almonds

To finish

Glacé icing, Royal icing, small Easter egg

Source: www.ilovefood.com.mt/recipes/figolli/

- a) List **FOUR** ingredients that could be changed in this recipe to bring it in line with the local dietary guidelines. Give reasons for choice. (2, 4)
- b) Outline how the Figolla pastry and a different filling could be used to create a dessert suitable for:
- an individual with the coeliac condition; (1)
 - a person with nut allergy; (1)
 - a person with diabetes type 2. (1)
- c) In relation to food preservation and food spoilage:
- suggest how the Figolla can be kept fresh after baking; (1)
 - name **ONE** type of a microorganism that could spoil the Figolla; (1)
 - list **THREE** conditions that enhance microbial growth. (3)
- d) This recipe contains protein.
- Outline **TWO** functions of protein in the body. (2)
 - Explain the difference between high and low biological value protein. (2)
 - From the recipe, identify **ONE** ingredient that provides high biological value protein and **ONE** ingredient that has low biological value protein. (2)

(Total: 20 marks)

Please turn the page.

4. The national waste management campaign Sort it Out encourages families and individuals to manage their waste wisely.
- a) List **TWO** benefits of good waste management:
- i. for families; (2)
 - ii. for the local government; (2)
 - iii. for the natural environment. (2)
- b) List **THREE** measures families and individuals may take when:
- i. shopping for food to be sustainable; (3)
 - ii. cooking to reduce waste; (3)
 - iii. shopping for appliances or devices to be eco-friendly. (3)
- c) In terms of effective waste management, outline **THREE** strategies (other than engineered landfills and civic amenity sites) that are implemented in Malta. (3)
- d) Describe **TWO** ways how the Maltese population can have an impact on water conservation. (2)

(Total: 20 marks)