



SUBJECT:	Home Economics and Human Ecology
PAPER NUMBER:	I
DATE:	29 th August 2024
TIME:	9:00 a.m. to 12:05 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

1. Roberta and Mark have two children aged ten and fifteen, and are currently in the process of changing their house and choosing a new kitchen.
 - a. Identify **FOUR** factors the family should keep in mind when choosing new appliances. (2)
 - b. List **FOUR** basic appliances and justify the suitability of **each** of the appliances. (2, 4)
 - c. The family bought some of the kitchen appliances through distance shopping. Explain **TWO** consumer rights of distance shopping. (2)

Roberta and Mark both work full-time and are continuously struggling to cope with life's demands and their family's commitments.

- d. Explain, by giving **FOUR** examples, how grandparents can help to enhance the quality of life of young families. (4)
- e. Suggest **TWO** reasons why the involvement of grandparents is important for the wellbeing of elderly. (2)
- f. Explain **TWO** benefits that the involvement of grandparents can have on the:
 - i. children; (2)
 - ii. parents. (2)

(Total: 20 marks)

2. Ruth and Johann are a young couple who have recently joined union and moved to their new house. They bought a maisonette and plan to have two children.
 - a. Identify **SIX** basic housing needs for this family. (3)
 - b. State, by giving **TWO** examples, how having basic housing needs improve the quality of life for this family. (2)

The size of the average household is on the decrease. *(The Malta Independent, May 2005)*

For this reason, one must make the best use of space available.

- c. Explain, by giving **FOUR** examples, how this couple can make better use of space in their newly acquired maisonette. (4)
- d. Outline **FIVE** safety features that should be included in the design of the house. (5)
- e. Provide **TWO** reasons why safety features are important in the design of living accommodations. (2)
- f. Identify **TWO** structural strategies and **TWO** safety equipment to ensure security in the home. (4)

(Total: 20 marks)

Questions continue on the next page.

3. Malta aims to be climate-neutral by 2050 as per the European Green Deal, which is pushing for each member of the EU to secure an economy with net-zero greenhouse gas emissions by 2050. Therefore, with the support of the Energy & Water Agency, Malta is joining forces with other EU Member States to reach this target.

(Source: <https://energywateragency.gov.mt/energy/>)

Alternative sources of energy will help to reach these targets.

- a. Biomass is one of the alternative sources of energy viable locally. Describe what biomass energy is. (2)
- b. Identify **TWO** other alternative sources of energy feasible in Malta. (2)
- c. Outline the alternative **TWO** sources of energy identified in part b. (2)
- d. Explain, giving **TWO** reasons, how these alternative sources of energy impact the:
 - i. local household; (2)
 - ii. nation. (2)

Solid waste disposal is an ongoing problem in Malta. To counteract this problem, engineered landfills are being used.

- e. Name **TWO** locations of engineered landfills. (2)
- f. Differentiate between an engineered landfill and a dumping site. (2)
- g. Explain, giving **TWO** reasons, how engineered landfills are beneficial for the:
 - i. environment; (2)
 - ii. nation's health; (2)
 - iii. Maltese economy. (2)

(Total: 20 marks)

4. A personal budget or household budget is a plan for the coordination of the resources and expenses of an individual or a household.

(Source: https://en.wikipedia.org/wiki/Personal_budget)

- a. Justify, giving **TWO** reasons, why budgeting is important. (2)
- b. Identify **SIX** major expenses of today's families. (3)
- c. Define gross income, disposable income and non-wage income. (3)
- d. Name **TWO** sources of financial advice for saving and investing. (2)

One way to save is to invest in shares, bonds and private pension schemes.

- e. Outline **ONE** advantage and **ONE** limitation of investing in:
 - i. shares; (2)
 - ii. bonds. (2)
- f. Explain, highlighting **TWO** important points, what private pension schemes are. (2)
- g. Justify, giving **THREE** reasons, why it is important to have a private pension plan. (3)
- h. Suggest **ONE** way how the government is encouraging working citizens to apply for a private pension scheme. (1)

(Total: 20 marks)

5. Waste separation is mandatory in Malta and Gozo as from 14 April 2023. Everyone has to properly separate their waste and dispose of it in the right bins, including business, governmental and non-governmental entities, as well as private homes.

(Environment and Resource Authority 2023)

- a. Justify, giving **FOUR** reasons, why it is important to practice waste separation at source. (4)
- b. One example of municipal waste is clothes and textile materials. Identify **FOUR** ways how an individual can get rid of good unwanted clothes. (4)
- c. Outline **TWO** benefits of the WasteServ's Roadshow Truck. (2)
- d. Fines are being issued to people disposing of waste incorrectly, both domestically and commercially. Discuss **ONE** reason why such fines were required on the Maltese Islands and **ONE** reason why the issue of fines will help to reduce incorrect waste disposal. (1, 1)

Separate collection of waste during 2021 showed an increase for civic amenity sites (4.9 %). Decreases were registered for bring-in sites (5.5 %) and the door-to-door organic waste collection (12.5 %), glass collection (8.1 %) and the grey/green bag collection (3.5 %).

(National Statistics Office, February 2023)

- e. Explain **TWO** contributing factors for the decrease in the waste collection methods mentioned above. (2)
- f. Explain what happens to glass and plastic materials once these are collected. (4)
- g. Outline how organic waste is treated in Malta and how it is used after treatment. (2)

(Total: 20 marks)

Questions continue on the next page.

6. A label is an essential feature of a product. Its main function is to communicate information about the product to customers to convince them to buy the product.
- a. Identify **FOUR** other functions of a label. (4)
 - b. Animal activists continuously work towards products that are animal friendly. Draw the symbol 'not tested on animals.' (1)
 - c. Identify **TWO** products on which the symbol named in part b can be found. (2)
 - d. Explain the label below and give **TWO** examples of products on which it can be found. (1, 1)



- e. Justify, giving **ONE** reason, why it is important to choose products with these types of labels. (1)

Some labels are mandatory by the European Union, to ensure that the products are safe to be used.

- f. Identify **ONE** label that is mandatory on toys. (1)
- g. Justify, giving **TWO** reasons, why it is important to have this mark on toys. (2)
- h. Draw, name and describe **TWO** other labels that help consumers choose a safe toy for a child. (1, 1, 2)
- i. List **THREE** features that ensure that a toy is safe for a toddler. (3)

(Total: 20 marks)



SUBJECT:	Home Economics and Human Ecology
PAPER NUMBER:	II
DATE:	30 th August 2024
TIME:	9:00 a.m. to 12:05 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

1. Protein is an important macronutrient considered as the building blocks of the body.
 - a. Name the **FOUR** chemical elements found in protein. (2)
 - b. Compare dispensable and indispensable amino acids. (2)
 - c. Identify **TWO** foods containing adequate amounts of all the indispensable amino acids. (1)
 - d. Explain, giving an example, how complementary protein foods function. (2)
 - e. Describe in detail the digestion and absorption of protein, referring to both the physical and chemical processes involved. (4)
 - f. Protein is important for children.
 - i. Give **TWO** justifications for the above statement. (2)
 - ii. Choose **TWO** food items rich in protein suitable for a 7-year-old child's birthday party where the guest list includes lacto-vegetarians. State **TWO** factors you would keep in mind to cater for the special dietary needs of these guests. (1, 2)
 - iii. Suggest **FOUR** different healthy snacks which are high in protein and can be taken to a family picnic. Provide the nutritional analysis of **ONE** of the lunches suggested, explaining how this meets the dietary needs of children. (2, 2)

(Total: 20 marks)

2. Some vitamins are known to act as *antioxidants* in the body.
 - a. Identify the antioxidant vitamins, by giving their scientific name. (3)
 - b. Outline **TWO** ways how antioxidant vitamins defend the human body. (2)
 - c. For **each** of the identified vitamins in part a. above:
 - i. State **ONE** function, other than that of an antioxidant. (3)
 - ii. Highlight **ONE** deficiency disease. (3)
 - iii. List **TWO** significant food sources. (3)
 - d. Identify the **TWO** different forms of Vitamin A. (2)
 - e. Justify the following statements, by giving a nutritional scientific explanation:
 - i. Vegans should consume Vitamin C-rich foods with meals that contain green leafy vegetables, lentils and tofu. (2)
 - ii. Consuming foods rich in Vitamin D together with dairy products is important for children. (2)

(Total: 20 marks)

Questions continue on next page.

3. Milk and milk products remain a staple food in the Maltese Islands.
- a. Justify why milk must be pasteurised before being sold for human consumption. (2)
 - b. Analyse the effect that heat treatment has on the colour, flavour and Vitamin B content of milk. (3)
 - c. Justify the difference in shelf life of pasteurised milk and UHT milk. Highlight how both types of milk should be stored once opened. (2, 1)
 - d. Outline **TWO** points one should keep in mind when buying fresh pasteurised milk. (2)
 - e. Name **FOUR** dairy products popular in the Maltese Islands. (2)
 - f. List **TWO** traditional Maltese recipes which include milk products as a main ingredient. (2)
 - g. Justify the following statements from a scientific perspective:
 - i. An allergy to milk is more dangerous than an intolerance to milk. (2)
 - ii. Common symptoms of milk intolerance are mostly centralised in the colon. (2)
 - iii. People with an intolerance to milk can often tolerate yoghurt. (2)

(Total: 20 marks)

4. Convenience foods are a popular choice amongst consumers. The market for convenience food is expected to keep growing in the coming years.
- a. Give **TWO** reasons for this trend. (2)
 - b. Outline **TWO** advantages and **TWO** disadvantages of this trend for working adults. (4)
 - c. Outline **FOUR** factors that need to be considered when planning family meals. (4)
 - d. Justify, giving **TWO** reasons, why home-cooked meals are more sustainable for the environment when compared to convenience foods. (2)
 - e. Highlight **FOUR** negative health implications of consuming convenience foods. (4)
 - f. Many people dine out in restaurants on a regular basis. Suggest **FOUR** ways how people can ensure a healthy, balanced meal and at the same time enjoy dining in a restaurant with their family and friends. (4)

(Total: 20 marks)

5. According to the Maltese Dietary Guidelines, we should opt for a wide variety of fruits of different colours and textures.
- a. Outline **FOUR** benefits of consuming fruits. (2)
 - b. Suggest **FOUR** ways how fruits can be used and prepared in different meals during the day, not only as a dessert ingredient. (2)
 - c. Give the suggested daily number of servings of fruit and vegetables, based on the Maltese dietary guidelines. Justify why the suggested number of serving of fruit and vegetables differ. (1,1)
 - d. Explain the scientific principles underlying the following statements:
 - i. Lemon and orange juice helps sliced apples from turning brown. (2)
 - ii. Frozen berries are richer in vitamins than fresh berries that have been harvested for a long time. (2)
 - iii. Dried fruit and fruit juices are not recommended, especially for children. (2)
 - e. Citrus fruit is abundant in the Maltese Islands between November and February. Outline **TWO** advantages of buying citrus fruit when they are in season. (2)
 - f. Outline **FOUR** ways how citrus fruit can be preserved. (4)
 - g. Suggest **TWO** recipes where preserved citrus fruit can be used. (2)

(Total: 20 marks)

6. The 16th of May has been recognised as the international day for coeliac disease as more awareness has become evident about this condition.
- a. Explain what coeliac is. (1)
 - b. List **FOUR** symptoms of coeliac disease. (2)
 - c. Name **TWO** long-term complications of coeliac disease. (2)
 - d. Describe **ONE** way how coeliac disease is diagnosed. (1)
 - e. During the past scholastic years, ITAMA project was running in Malta and Sicily to screen more than 20,000 children before any symptoms developed. Justify, giving **TWO** reasons, why such screening is important. (2)
 - f. Many schools are doing their best to cater for coeliac students during different events.
 - i. State **TWO** factors they need to keep in mind when catering for coeliac students. (2)
 - ii. Suggest **FOUR** food items suitable for a Christmas party which schools can offer to coeliac students. (4)
 - g. Explain the following statements:
 - i. Once diagnosed with coeliac disease, one will be a coeliac for life. (1)
 - ii. Coeliac disease can only be controlled by a strict diet. (1)
 - h. A main ingredient which coeliacs must omit is wheat flour. Outline the **FOUR** main steps involved in the production of wheat flour. (4)

(Total: 20 marks)