



SUBJECT:	Home Economics and Human Ecology
PAPER NUMBER:	I
DATE:	4 th October 2021
TIME:	4:00 p.m. to 7:05 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

1. John and Mary are a married couple with two children aged 2 and 4.
John's Father, as well as Mary's mother, are both alive and both over 70 years old.
 - a. i. List **TWO** responsibilities John and Mary have towards their children, each other and their elderly parents. (2, 2, 2)
 - ii. Discuss **TWO** of the family-related shared responsibilities John and Mary have to follow inside and outside the home. (2, 2)
 - b. When having young children, it is important to create a stimulating learning environment through play. This ensures their physical, intellectual, social and emotional development. In addition, parents also have to ensure safety at all times.
 - i. Define what a stimulating environment is. (1)
 - ii. Give **FOUR** reasons to justify the importance of play in a stimulating environment. (4)
 - iii. Identify **TWO** ways how the couple can create a stimulating environment for play. (2)
 - iv. Outline **TWO** safety measures that the couple can make to maximise their children's safety in the bedroom, kitchen and whilst travelling in a car. (1, 1, 1)

(Total: 20 marks)

2. Eman and Jane are a young couple planning to buy a house in which they will build a family together.
 - a. Outline **FOUR** personal factors which might affect the choice of home. (4)
 - b. Identify **TWO** types of dwelling available locally, which are suitable for Eman and Jane. (1)
 - c. State **ONE** advantage and **ONE** disadvantage for **each** dwelling identified in part b. (4)
 - d. Explain **FIVE** of the implications that the area of the home chosen might have. (5)
 - e. Discuss **SIX** basic housing needs which the couple have to keep in mind for the home to be suitable for their future family. (6)

(Total: 20 marks)

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3. "The Europe 2020 strategy includes a target of reaching 20% of gross final energy consumption from renewable sources by 2020, and at least 32% by 2030. The lowest proportion of renewables in 2018 was recorded in the Netherlands (7.4%) Malta (8.0%), Luxembourg (9.1%) and Belgium (9.4%)."

(Eurostat, Renewable energy in the EU in 2018, 17/2020 - 23 January 2020)

- a. Currently, Malta is in desperate need to use more sustainable energy.
- i. Name **THREE** alternative sources of energy viable locally. (3)
 - ii. State **TWO** benefits of these alternative sources for the local households and **TWO** benefits of alternative energy on a national level. (2, 2)
- b. "Until 2011, some 80% of wastewater generated in Malta was discharged untreated into the sea less than 800 metres from the shore."
(https://ec.europa.eu/regional_policy/en/projects/malta/new-sewage-treatment-infrastructure-built-in-malta)
- i. Name **TWO** water treatment plants found on the Maltese islands. (2)
 - ii. Explain the function of water treatment plants and how they are used. (2)
- c. Solid waste generation has increased considerably. Therefore, drastic changes have been implemented worldwide and locally to counteract this problem.
- i. Identify **FOUR** waste collection services in Malta. (4)
 - ii. Due to the increase in waste and lack of space, engineered landfills were created. What is an engineered landfill? (1)
 - iii. Justify the use of engineered landfills by giving **TWO** positive impacts on the environment and on the nation's health. (2, 2)

(Total: 20 marks)

4. There are various factors which impact the consumer's buying behaviour and decisions. Advertising is an example, and aims to increase the sale of a product or service.
- a. Identify the **FIVE** types of influences which affect consumer choices. (5)
 - b. For **each** type of influence, list **TWO** factors. (5)
 - c. Explain **TWO** roles of adverts in today's purchasing industry. (2)
 - d. Name **TWO** features of a misleading advertisement. (2)
 - e. Which organisation in Malta is responsible of regulating misleading adverts? (1)
 - f. Describe **TWO** roles of this organisation to safeguard the consumer's interest. (2)
 - g. Which consumer right is applicable when a consumer is a victim of misleading advertisement? Justify your answer. (1, 2)

(Total: 20 marks)

5. "Online shopping is continuing to increase in the European Union...together with increasing use of the Internet and improving security standards. During the current coronavirus pandemic, with high streets in lockdown and consumers under social distancing restrictions, e-commerce can be expected to grow further." *(Online shopping continues to grow, European Commission, 20/04/2020)*

- a. Give **TWO** features of online shopping. (2)
- b. List **TWO** advantages and **TWO** disadvantages of online shopping. (4)
- c. Name **FOUR** different methods of payment a consumer can make use of whilst shopping online. (4)
- d. Discuss **SIX** security measures which should be followed when effecting electronic transactions. (6)
- e. Identify **TWO** consumer rights when purchasing online. (2)
- f. Evaluate the importance of these **TWO** rights identified in part e. (2)

(Total: 20 marks)

6 a. "In the EU Strategy for Youth, the term 'youth' refers to teenagers and young adults aged between 13 and 30 years. The term 'adolescent' refers to the time when a child develops into an adult." *(Age of Majority, European Union Agency for Fundamental Rights, 2017)*

- i. Outline the **THREE** types of changes that adolescents go through. (3)
- ii. Suggest **ONE** way how guardians of adolescents can ensure positive changes in **each** of the three types of changes mentioned in part ai. (3)
- iii. Identify **TWO** ways how the household environment can encourage adolescents to gain independence and **TWO** ways how it can help adolescents become responsible adults. (2, 2)

b. "Alcohol use and drunkenness, along with other risk-taking behaviours, tend to emerge during the adolescent years. Most young people begin using alcohol between the ages of 12 and 16, an age at which they gain increasing independence and spend more time outside the home unsupervised." *(Adolescents Alcohol related behaviours, WHO, 2018)*

- i. Discuss **THREE** implications that alcohol abuse can have on both the adolescent and on one's family. (3, 3)
- ii. Mention **TWO** positive parenting skills that can help avoid alcohol abuse in adolescents. (2)
- iii. Name **TWO** services offered in Malta for people who require help with alcohol addiction. (2)

(Total: 20 marks)



SUBJECT:	Home Economics and Human Ecology
PAPER NUMBER:	II
DATE:	5 th October 2021
TIME:	4:00 p.m. to 7:05 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

1. Fats is one of the main five nutrients found in food. It should provide us with 30% of the total energy intake needed.
 - a. Triglycerides are a type of fat found in our blood. What is a triglyceride composed of? (1)
 - b. Fats are divided into saturated and unsaturated. Describe **TWO** main differences. (2)
 - c. Unsaturated fat is further divided into two types. Identify these **TWO** types. (1)
 - d. List **THREE** saturated and **THREE** unsaturated food sources. (3)
 - e. The liver produces cholesterol. Mention the **TWO** types of cholesterol. (1)
 - f. Name **TWO** differences between the two types of cholesterol. (4)
 - g. Consuming too much fat can lead to several diet-related disorders such as heart disease. Identify **TWO** other diet-related disorders associated with high intake of fat. (1)
 - h. Mention **FIVE** ways how a health conscious person can reduce the amount of fat consumed. (5)
 - i. Explain the role of Omega-3 and Omega-6 in preventing heart disease. (2)

(Total: 20 marks)

2. Vegetarianism is the practice of abstaining from the consumption of meat. It may also include abstention from animal products. There can be several reasons for following such a diet.
 - a. i. There are different types of vegetarian diets. One of them is veganism. List other **THREE** different types of vegetarian diets. (1½)
 - ii. Describe the **FOUR** different vegetarian diets, highlighting their variant feature. (4)
 - iii. Identify **THREE** health benefits when following a vegetarian diet. (3)
 - iv. Mention **TWO** reasons, other than health, why people choose to follow a vegetarian diet. (2)
 - v. Which mineral is most commonly deficient in vegetarian people? (½)
 - vi. Explain the role of this mineral in our body. (1)
 - b. Vegetarians usually rely on complementary protein intake to ensure the consumption of a complete protein.
 - i. Describe what a complementary protein is, giving **ONE** example. (2)
 - ii. Create a **THREE** course meal suitable for a vegan person. (3)
 - iii. Justify **each** dish chosen in part bii above. (3)

(Total: 20 marks)

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3. An increase in the progesterone hormone during pregnancy causes the relaxation of the body's muscles, resulting in slower moving digestive system, which can lead to constipation. One way of preventing constipation is by consuming cereal products rich in dietary fibre.
- a. Compare, giving **TWO** differences, between refined and unrefined cereals. (2, 2)
 - b. Distinguish between the **TWO** different types of dietary fibre and highlight **ONE** function of **each**. (1, 2)
 - c. Outline **FOUR** nutrients which must be increased during pregnancy. For **each** nutrient:
 - i. Give a detailed nutritional justification for the increased need. (4)
 - ii. Identify **TWO** food sources suitable for a pregnant mother. (4)
 - d. Mention **FIVE** foods that a pregnant mother should avoid. Justify your answer. (5)

(Total: 20 marks)

4. According to a report by the Food and Agriculture Organisation of the United Nations, 1.3 billion tons of edible food, which is enough to feed 3 billion people, is wasted annually in the world. This could be prevented with better planning and appropriate food preservation, such as refrigerating and freezing.
- a. Compare refrigerating and freezing by explaining the effect of these preservation methods on food. (1, 1)
 - b. Outline **TWO** benefits and **THREE** concerns of food preservation. (2, 3)
 - c. Advise how a family could store the following foodstuff in a refrigerator: (3)
 - i. raw chicken breast;
 - ii. a prepared vegetable salad;
 - iii. fresh fruit smoothie.
 - d. Food stored in a freezer must have proper packaging materials to protect its flavour, colour, moisture content and nutritive value from the cold, dry climate surrounding it.
 - i. List **FOUR** qualities of good packaging material for freezing. (2)
 - ii. Outline **FOUR** rules for successful freezing. (4)
 - e. Peaches have a very short shelf life but can be bought very cheap when in season. Outline **ONE** preservation method suitable for this fruit by highlighting **FOUR** main steps involved in this process of preservation. (4)

(Total: 20 marks)

5. According to the EFSA, the Average Requirement (AR) for young adults (18–24 years), who still accumulate calcium in bones, is 860 mg/day. *(EFSA Journal 2015: Volume 13 – Issue 5)*

- a. Suggest **FOUR** ways how one can ensure a good supply of calcium in the diet. (4)
- b. Outline **TWO** food components which would inhibit the absorption of calcium. (2)
- c. Apart from a good supply of calcium from food, outline **TWO** ways to support bone health. (2)
- d. Outline the scientific principles behind the following:
 - i. The relationship between Vitamin D and calcium.
 - ii. The AR of calcium changes according to the life stage one is at. (2)
- e. Persons with lactose intolerance are at a higher risk of calcium deficiency.
 - i. Describe what lactose intolerance is. (2)
 - ii. Outline **TWO** ways how a lactose intolerant teenager could make sure to have enough intake of calcium. (2)
- f. Mention **ONE** type of screening being done by the Health Department which is closely related to calcium absorption and retention by the body. (1)
- g. Outline **ONE** benefit for such screening for women in middle to late adulthood. (1)
- h. Osteomalacia and rickets are two other bone conditions which could be related to nutrient deficiency.
 - i. Explain what these **TWO** bone conditions are and what their main cause is. (2)
 - ii. Outline in which specific groups of people these conditions most commonly occur. (2)

(Total: 20 marks)

6. Statistics compiled by Eurostat have revealed that only 51 per cent of the Maltese population eat vegetables on a daily basis, placing Malta amongst the lowest countries in terms of vegetable consumption and well below the European Union average. In contrast, however, Malta registered strong numbers when it came to the consumption of fruit.

(Malta Independent: July 2019)

- a. Fruits and vegetables should be a major food commodity. List **FOUR** ways how one can increase the consumption of fruits or vegetables in the diet. (4)
- b. Outline **THREE** points to consider when purchasing fresh fruits and vegetables. (3)
- c. Outline **THREE** ways to retain nutrients when:
 - i. storing fruits or vegetables; (3)
 - ii. preparing and cooking fruits or vegetables. (3)
- d. Fruits and vegetables can also be preserved. List **TWO** ways how fruits and vegetables may be preserved and give **ONE** advantage and **ONE** disadvantage for **each** preservation method chosen. (1, 4)
- e. List **FOUR** traditional Maltese recipes which use vegetables as their main ingredients. (2)

(Total: 20 marks)