L-Università ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

ADVANCED MATRICULATION LEVEL
2026 FIRST SESSION

SUBJECT:	**Home Economics and Human Ecology**
PAPER NUMBER:	I
DATE:	14th May 2026
TIME:	9:00 a.m. to 12:05 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

1. a. Identify the **FOUR** different types of children's development. (1)
   b. Outline **each** type of development identified in part (a). (4)
   c. State **TWO** ways how parents can promote **each** type of development when the child is under one year of age. (8)
   d. List **TWO** ways how parents can create a stimulating environment at home that is conducive to learning. (2)
   e. Discuss the importance of play for holistic development, giving **ONE** example. (2)
   f. Identify **ONE** toy that can be made at home using reusable items. (1)
   g. Justify, giving **TWO** reasons, why creating such toys is important for the environment. (2)

(Total: 20 marks)

2. The scheduled vaccines for infants and children up to 16 years are provided free of charge to all Maltese and EU citizens residing in Malta.

https://hpdp.gov.mt

   a. Justify, giving **TWO** reasons, why immunisation is important. (2)
   b. Explain how vaccines work. (2)
   c. Identify **THREE** vaccines that are given to children. (3)
   d. Outline the disease prevented by **each** vaccine identified in part (c). (3)

   Child upbringing, or parenting, involves providing care throughout the day. Parents may decide to take a break from work to stay with their children until the age of three.

   e. List **TWO** advantages and **TWO** disadvantages when children are being cared for:
      i. by their parents; (2,2)
      ii. by a relative. (2,2)
   f. Discuss **TWO** positive effects this decision can have on the quality of life of a family. (2)

(Total: 20 marks)

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3. a. Define sustainability. (2)
   b. Explain what non-renewable resources are, giving **TWO** distinctive features. (2)
   c. Limestone and soil are two of the non-renewable resources. Identify **TWO** other non-renewable resources. (1)
   d. State **TWO** ways in which individuals and families can conserve:
      i. soil; (2)
      ii. limestone. (2)

   Malta is one of the EU countries with lowest shares of renewable energy, according to Eurostat.

   https://www.independent.com.mt/

   e. Give **FIVE** examples how the Maltese Government can improve these statistics. (5)

   Consumers and the environment are closely connected through consumption patterns, which have a significantly impact on the planet.

   f. Suggest **THREE** ways how consumers can safeguard the natural environment when choosing goods and services. (3)
   g. Explain, giving **THREE** ways, how the suggestions mentioned in part (f) help to safeguard the environment. (3)

(Total: 20 marks)

4. a. Outline **TWO** functions of water treatment plants. (2)
   b. Identify **TWO** water treatment plants in Malta. (2)
   c. Suggest **TWO** ways in which an individual can help reduce liquid waste. (2)

   The hospitality industry uses a significant amount of water.

   d. Identify **THREE** ways in which hotels can reduce the production of liquid waste. (3)
   e. State **ONE** way how guests can help conserve water whilst on holiday. (1)

   Due to its geographical position, water scarcity is a natural challenge in Malta. The Mediterranean climate, characterised by low levels of rainfall and high temperatures, results in limited natural water availabilities and significant losses through evapotranspiration.

   https://www.eea.europa.eu/

   f. Justify, giving **TWO** reasons, why it is important to conserve water both locally and globally. (2)

   The Beverage Container Refund Scheme (BCRS) was introduced to encourage citizens to recycle their single use plastic bottles.

   g. Explain briefly how the BCRS system works. (2)
   h. Outline **TWO** benefits of this scheme for the nation. (2)
   i. Identify **TWO** other recent incentives introduced by the government to reduce the use of single-use beverage bottles. (2)
   j. Discuss **ONE** benefit of these incentives for the nation and **ONE** benefit for a household. (1, 1)

(Total: 20 marks)

5. The total amount of waste generated in Malta has doubled over the last 12 years. Malta has been considered at risk of not meeting the 2025 targets for preparing for reuse and recycling of municipal waste.

(Waste management country profile, with a focus on municipal and packaging waste, European Environment Agency,2025)

a. Mention **FOUR** ways in which households in Malta can practice separation at source. (2)
b. Explain what happens to recyclable waste in Malta. (2)
c. State **TWO** ways how a consumer can practice **each** of the 3R's. (6)

Traditional landfills in Malta, where waste was disposed off without being treated, were closed upon joining the EU.

d. Differentiate between traditional landfills and engineered landfills. (1)
e. Discuss **TWO** positive impacts that engineered landfills have on:
   i. human health; (2)
   ii. the environment; (2)
   iii. the economy. (2)
f. Name **TWO** engineered landfills in Malta. (1)

Waste-to-energy (WtE) or energy-from-waste (EfW) refers to a series of processes used to convert waste materials into usable forms of energy.

https://en.wikipedia.org/wiki/Waste-to-energy

g. Discuss **TWO** positive impacts of waste-to-energy at a national level. (2)

(Total: 20 marks)

6. Ivan and Rita have just graduated from University of Malta. Having been together for a long time and now earning a steady income, they have decided to invest in a property together. They aspire for better income and job positions in the future and hope to have children together.

a. Suggest **SIX** factors that might influence Ivan and Rita when choosing the area for their home. (3)
b. Name **TWO** of the most common types of dwellings found in Malta. (1)
c. Outline **ONE** advantage and **ONE** disadvantage of **each** type of dwelling mentioned in part (b). (4)
d. Which dwelling is the most suitable for Ivan and Rita? Justify your answer. (2)

In Malta many people are homeowners, around 82.6%, which means that slightly more than 8 out of 10 people own their own home. The EU average is close to 69%.

https://tvmnews.mt/en/news/

e. State **TWO** reasons why Maltese people continue to prefer buying property rather than renting. (2)
f. Identify **ONE** advantage and **ONE** disadvantage of buying a property, and **ONE** advantage and **ONE** disadvantage of renting a property. (2,2)

Two out of every three households, 66.4 per cent, owned their home in 2024, according to data released by the National Statistics Office. This reflects a decrease of 5.7 percentage points in just one year. In 2021, home ownership rates stood at 78.1 per cent.

https://timesofmalta.com/

g. Outline, giving **TWO** reasons, why purchasing and renting trends are changing in Malta. (2)
h. Identify **TWO** government incentives that provide financial support when buying a property. (2)

(Total: 20 marks)

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ADVANCED MATRICULATION LEVEL
2026 FIRST SESSION

SUBJECT:	**Home Economics and Human Ecology**
PAPER NUMBER:	II
DATE:	15th May 2026
TIME:	9:00 a.m. to 12:05 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

1. Lipids play essential structural and metabolic roles in the body, influencing energy balance, hormone production, and cardiovascular health.

   a. Define saturated, monounsaturated and polyunsaturated fats. (3)
   b. List **TWO** dietary sources for **each** type of fat mentioned in part (a). (3)
   c. Explain **TWO** benefits of omega-3 and omega-6 essential fatty acids. (2)
   d. Analyse how a high intake of saturated fat affects:
      i. Body Mass Index; (2)
      ii. cardiovascular health. (2)
   e. Suggest **TWO** meal modifications that could reduce saturated fat, giving a scientific justification for **each**. (4)
   f. Analyse how a knob of butter is digested and metabolised in the body. In your answer, list the main enzymes involved and state the **TWO** end products of lipid digestion. (2, 1, 1)

   (Total: 20 marks)

2. Carbohydrates are the body's primary source of energy, and their type and quality strongly influence blood glucose control, particularly in the managements of diabetes.

   a. State the difference between simple and complex carbohydrates. (2)
   b. Name **TWO** food sources of **each** type of carbohydrates mentioned in part (a). (2)
   c. Describe the glycaemic index and explain its relevance to diabetes. (2)
   d. Explain how insulin regulates blood glucose levels following a carbohydrate-rich meal. (4)
   e. Provide **THREE** scientific reasons why a dinner consisting of a plate of spaghetti with homemade white sauce for dinner is unsuitable for a person who suffers from diabetes. (6)
   f. Suggest **TWO** suitable main courses that could be served for dinner to a person with diabetes. Justify your choice. (4)

   (Total: 20 marks)

3. Economic meal planning is essential for balancing nutrition, cost, and efficient use of household resources.

   a. Define the term economical meal. (1)
   b. List **FOUR** factors that should be considered when planning economical meals. (2)
   c. Outline **TWO** factors to consider when choosing a good quality cut of meat. (2)
   d. List **THREE** characteristics of slow-cooking cuts of meats. (3)
   e. Explain **FOUR** advantages of slow-cooking. (4)
   f. Analyse, giving **TWO** practical examples, how the sensible use of energy-saving appliances support economical meal planning. (1, 4)
   g. Plan a slow-cooked meal, justify your choice by giving **TWO** nutritional benefits. (1, 2)

   (Total: 20 marks)

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4. Food packaging plays a crucial role in food safety, preservation, and sustainability throughout the entire food supply chain.

   a. Suggest **TWO** food safe material that can be used for food packaging. (2)
   b. Describe **FOUR** safety functions of food-safe packaging. (4)
   c. Outline **TWO** reasons why packaging materials must be food safe. (2)
   d. Justify **TWO** uses of tamper-proof seals. (2)
   e. Suggest **THREE** reasons why **each** of the following are important during distribution and transportation of food:
      i. temperature-control; (3)
      ii. food hygiene. (3)
   f. Suggest **TWO** sustainable improvements in food packaging. Justify your answers. (4)

(Total: 20 marks)

5. Food spoilage is influenced by biological, chemical, and environmental factors that directly impact food safety and shelf life.

   a. Define biological and chemical spoilage. (2)
   b. List **FOUR** signs of microbial spoilage. (2)
   c. Outline **THREE** conditions that accelerate food spoilage. (3)
   d. Provide **THREE** reasons why leaving cooked food at room temperature is dangerous. (3)
   e. Justify the following principles of safe food handling and preservation:
      i. Store perishable foods in the refrigerator at 0–5°C. (2)
      ii. Use airtight containers for leftover foods and dry goods. (2)
      iii. Follow the FIFO method (First In, First Out) when organising stored food. (2)
   f. Outline **TWO** beneficial effects of microorganisms in food production. (2)
   g. Explain briefly **TWO** practical examples of food produced using microorganisms. (2)

(Total: 20 marks)

6. Cereals form a major part of the global diet, and understanding their composition, processing, and nutritional value is essential for making healthy food choices.

   a. Describe the structure of a cereal grain by outlining the functions of the bran, germ, and endosperm. (3)
   b. Identify **SIX** commonly consumed cereals, other than rice. (3)
   c. Outline **TWO** health benefits associated with the regular consumption of wholegrain cereals. (2)
   d. Explain briefly why rice, despite being a staple food, is not classified as a complete food. (1)
   e. Provide **THREE** guidelines to ensure freshness and quality of cereal grains during purchasing and storage. (3)
   f. Suggest **TWO** cereal-based breakfasts, justify how **each** aligns with the principles of The Healthy Plate. (2, 2)
   g. Outline the key steps involved in the production of flour, highlighting the difference between wholegrain products and refined products. (2, 2)

(Total: 20 marks)