

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

UNIVERSITY OF MALTA, MSIDA

MATRICULATION EXAMINATION
ADVANCED LEVEL
MAY 2015

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	I
DATE:	30 th April 2015
TIME:	4.00 p.m. to 7.00 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)**Question 1**

A father of two young children has recently been widowed. Since he has absented himself from work to look after his terminally-ill wife, he is considering making up for the missed hours by opting for *teleworking* or *flexi-time*.

- i) Define the italicised terms. Give **TWO** advantages and **ONE** disadvantage for **EACH** of these family friendly work measures. (1, 4, 2 marks)
- ii) Describe **TWO** state and **TWO** non-governmental additional assistances or services that this family can avail of, to deal with their new family status. (2, 2 marks)
- iii) The Maltese extended family network can be of great emotional, physical and financial support in this situation. Outline how **EACH** type of support can be provided. (2, 2, 2 marks)
- iv) The educational entities which the children attend can also support this family. Outline **SIX** ways how this can be done. (3 marks)

Question 2

A young couple plan to acquire an accommodation as their new home.

- i) Identify and explain **FOUR** economic factors which will influence this couple's choice of accommodation. (4 marks)
- ii) List and describe **FIVE** costs this couple will incur when buying the residence of their choice. (5 marks)
- iii) The couple is still undecided whether to opt for a dwelling in a *shell* or *finished* state. Define the italicised terms. Outline **TWO** advantages and **TWO** disadvantages for each state mentioned. (1, 1, 1 mark)
- iv) The couple also considered buying *on plan*. Give **TWO** reasons why the couple may be interested in such a residence. (2 marks)
- v) The couple needs advice on how to raise money to purchase the dwelling of their choice. Suggest **TWO** ways of raising the money needed. Highlight **TWO** short term and **TWO** long term implications for **EACH** of the suggestions put forward. (2, 2, 2 marks)

Question 3

A Zero-Waste household (which aims to eliminate rather than manage waste) is possible if a family works at it, but this is still far-fetched for Maltese families. Nonetheless, various local macro and micro initiatives are being implemented to reduce the amount of household waste generated.

- i) Outline **FOUR** benefits of reducing household solid waste for **EACH** of the following:
 - a. the family and;
 - b. the local government. (2, 2 marks)
- ii) Describe **TWO** national initiatives that facilitate the reduction of household waste. (2 marks)
- iii) A family with young children is considering adopting a zero-waste household initiative. Describe **FOUR** measures how the family can adopt this when shopping. (4 marks)
- iv) An average of 22 per cent of the weekly food purchased by Maltese residents ends up in the solid waste stream (National Statistics Office, 2014). Explain **FIVE** ways how the above family can reduce the amount of food wasted. (5 marks)
- v) Indoor pollution causes ill-health. Outline **FOUR** causes of indoor pollution. Explain how indoor pollution affects human health and highlight **FOUR** measures that can be taken to minimize this effect. (2, 1, 2 marks)

Question 4

A woman bought a new *labour saving device* to help her with the housework.

- i) Define the italicised term. Explain **THREE** ways how such devices can help in today's households, apart from the kitchen. (2 marks)
- ii) Identify **TWO** types of safety labels these types of appliances should carry to certify that they are in accordance with EU law. Explain each label briefly. (2 marks)
- iii) Appliances come with **TWO** types of guarantees. List and describe these guarantees. (1, 2 marks)
- iv) The labour saving device was packed in a cardboard box. List and explain **THREE** eco-labels that can be found on the packaging box. (1, 1, 1 mark)
- v) The young woman paid for the appliance by *debit card* using EPOS.
 - a. Define the italicised term. Identify **TWO** advantages and **TWO** disadvantages of this type of card. (0.5, 2 marks)
 - b. What does the abbreviation EPOS stand for? Explain this process. (0.5, 1 mark)
- vi) The appliance developed a fault and stopped working after first time use. The woman plans to file a complaint. Explain in detail **THREE** methods of redress. (6 marks)

Question 5

A full time employed professional earns a monthly wage and also has an additional non-wage income allowing him to have extra money to invest for future plans. After seeking advice from a financial consultant and a stockbroker, the professional is considering investing his money in one or more of the following: a *fixed deposit bank account*, a *retirement plan* or *shares*.

- i) Explain the difference between:
 - a. wage and non-wage income;
 - b. gross and net income;
 - c. a financial consultant and a stockbroker. (1, 1, 1 mark)

- ii) State **TWO** monthly deductions that are typically deducted from an individual's wage as regulated by the state and explain how these are calculated. (1, 1 mark)

- iii) Define **EACH** of the above italicised types of investment, and for **EACH** type outline **TWO** different advantages and **ONE** disadvantage which the professional ought to consider before investing his savings. (3, 3 marks)

- iv) Describe **THREE** factors which should generally be considered when planning a financial portfolio. (3 marks)

- v) Outline the benefits of having a mixed asset portfolio. Give **TWO** reasons why investment and saving schemes should be reviewed annually. (2, 2 marks)

- vi) Describe the role of the Malta Financial Services Authority. Explain how this entity could assist the male professional on financial matters before and after investing. (1, 1 marks)

Question 6

Social, cultural, technological, economic, and leisure activities have an influence on family life. Such factors change over time in order to satisfy the family members' needs.

- i) Discuss the *social influence* on the family life in the following situations:
 - a. An eighteen-year-old teenager moved out from his family home to live in a residence shared by a friend.
 - b. A family will experience a change in family lifestyle as young children grow older as teenagers.

- ii) A young couple where the male is of African origin and the female is Maltese have just got married. Explain the *cultural influence* on this young couple and their respective families.

- iii) A couple with three young children both work full-time. In addition the father has a part-time job. Discuss the *economic influence* on this family.

- iv) Nowadays, parents expose their children to a variety of extracurricular activities and facilities. Explain how *leisure activities* have an impact on this family. (4, 4, 4, 4 marks)

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MATRICULATION EXAMINATION
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MAY 2015

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	II
DATE:	2 nd May 2015
TIME:	4.00 p.m. to 7.00 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

Question 1

One of the main ingredients used in the making of the traditional Easter sweet ‘figolla’ filling is almonds. These form part of the food commodity group nuts.

- i) Outline **SIX** nutritive properties of nuts. Describe the general role of **EACH** nutrient mentioned. (3, 3 marks)
- ii) Highlight **SIX** modifications that can be carried out in the following recipe to create a healthier version of this Easter sweet. Justify **EACH** modification: (6 marks)

<u>Pastry</u>	<u>Filling</u>
400g self-raising white flour	400g ground almonds
400g sugar	200g sugar
1 teaspoon vanilla essence	200ml water
400g margarine	Almond essence
3 eggs	
250ml full-fat milk	
Zest of a lemon	
Juice of 1 lemon	

- iii) Health experts advise adding nuts to meals. Suggest **FOUR** ways of including nuts in main meals. (2 marks)
- iv) Some people can either be intolerant or allergic to nuts. Define *food intolerance* and *food allergy*. List **ONE** main symptom for **EACH**. (1, 1, 1 mark)
- v) Suggest **THREE** traditional desserts other than ‘figolli’ where nuts are included. Modify **EACH** of the desserts outlined to obtain a healthier version. (3 marks)

Question 2

Carbohydrates are essential for an individual to keep fit.

- i) Outline **FOUR** roles of carbohydrate in the diet and explain **FOUR** negative impacts of a long term diet rich in carbohydrates. (2, 2 marks)
- ii) Explain in detail the difference between **simple** and **complex** carbohydrates, highlighting their chemical structure and formation. (2, 4 marks)
- iii) Outline the chemical and physical changes that occur to the structure of carbohydrates when:
 - a) toasting bread;
 - b) boiling potatoes;
 - c) baking a cake flour mixture. (2, 2, 2 marks)
- iv) Explain the physical and chemical processes that occur during the digestion and absorption of a high fibre home-made cereal bar. For each stage identify the body organ and enzymes involved. (4 marks)

Question 3

A Home Economics student has decided to prepare, pack and store a selection of homemade 'gbejniet' which are intended to be served during a party three days later.

- i) Describe how 'gbejniet' are produced and highlight the different types of 'gbejniet' produced locally for retailing. (3, 2 marks)
- ii) Explain how the cheeselets should be packed and stored for the remaining three days. Suggest **TWO** Maltese traditional recipes where cheeselets can be included. (1, 1 mark)
- iii) There are several types of 'gbejniet' commonly found on the market. Suggest **FOUR** other ingredients that can be used when producing 'gbejniet' to create new varieties. (2 marks)
- iv) Cheese, of which 'bejniet' make part of, can be classified into **TWO** main types of textures. Identify and describe **EACH** of these types. Outline the changes that result in cheese when this is cooked. (2, 1 mark)
- v) Outline **FIVE** nutritive properties of cheese, and accompany **EACH** nutrient identified with its respective function. (5 marks)
- vi) List and describe **THREE** food products which vegetarians can make use of instead of milk and dairy products in order to meet their daily nutritional needs when preparing meals. (3 marks)

Question 4

Following a routine check-up, Robert (a university student) was advised to increase his daily water and dietary fibre consumption.

- i) Outline **FOUR** functions of *water* and *dietary fibre* in the human body. For **EACH**, highlight **FOUR** situations where the consumption of water and fibre should be increased. (2, 2, 2, 2 marks)
- ii) Explain **FOUR** health impacts that may arise as a result of a diet lacking in water. Highlight **FOUR** main symptoms that may indicate insufficient water consumption and give the recommended daily intake of water for a young adult. Outline how this recommendation can be implemented other than by drinking water. (2, 2, 1 marks)
- iii) Explain, in detail, the difference between *soluble* and *insoluble* fibre. Identify **TWO** food sources for each. (2, 2 marks)
- iv) Suggest **SIX** strategies Robert can adopt to increase his consumption of water and dietary fibre whilst on the university campus. (3 marks)

Question 5

Consumers are always considering whether to buy imported fruit and vegetables or source local products.

- i) List **FOUR** advantages of sourcing local produce. Give the implication for **EACH** advantage. (2, 4 marks)
- ii) List **TWO** disadvantages of buying imported produce. Explain the implication for **EACH** disadvantage. (1, 2 marks)
- iii) GM crops have increased over the past years. Explain what *GM crops* are. Give **ONE** example of GM food crops. (1 mark)
- iv) List **FOUR** benefits and **FOUR** issues of GM crops. (2, 2 marks)
- v) Notwithstanding the abrupt and rapid changes of the local weather, citrus fruit is still abundant and can be purchased in bulk. Outline briefly **FOUR** ways how citrus fruit can be preserved. Suggest **FOUR** recipes where these preserved fruits can be used. (4, 2 marks)

Question 6

Food production, packaging, distribution and consumption patterns have been extensively developed. Consumers have become used to convenient, comfortable shopping facilities, and a large range of quality products, suitably labelled, available all the year round.

- i) Discuss health, social and economic issues resulting from this fact. (2, 2, 2 marks)
- ii) State **FOUR** measures that a food storage and transportation plan should include to ensure that food reaches the consumer fit for consumption. (4 marks)
- iii) In accordance with local and EU legislation, explain **SIX** information points that should be included on a food product's label sold on the local market. (3 marks)
- iv) Explain the scientific procedure involved in **FOUR** of the following statements frequently found on food labels. Outline the food's health benefit for **EACH**.
 - a) Contains plant sterols;
 - b) Enriched with probiotics;
 - c) Free from trans fatty acids;
 - d) Enriched with Omega-3;
 - e) Contains No Nitrites/Nitrates. (4 marks)
- v) Sustainable consumers are conscious about reducing food miles. Define the term '*food miles*' and suggest **FOUR** strategies to help with their reduction. (1, 2 marks)