

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

UNIVERSITY OF MALTA, MSIDA

MATRICULATION CERTIFICATE EXAMINATION

ADVANCED LEVEL

SEPTEMBER 2012

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	I
DATE:	4th September 2012
TIME:	9.00 a.m. to 12.00 noon

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

A single mother, with a flair for fashion and good grooming, is considering returning back to work since her child has just started school. Before she started her family, she worked as a hotel receptionist.

- i) Identify **SIX** *responsibilities* and/or *rights* the mother has towards her young family. (6 marks)
- ii) Suggest **FOUR** suitable jobs the mother can consider, such that she can re-enter the labour force, while at the same time being available for her young child. Justify **EACH** of your choices. (4 marks)
- iii) Outline the economic, psychological and intellectual value of paid work. For **EACH** factor, suggest **TWO** benefits of paid work for both the mother and her young family. (2, 2, 2 marks)
- iv) The central government and other non-governmental entities provide various support services to encourage mothers to return to work. Outline **FOUR** such services the mother can avail herself of. (4 marks)

Question 2

- i) Malta is considered to be a *welfare state*. Define the italicised term. Give **ONE** argument against such a state. (1, 1 mark)
- ii) According to statistics published by Eurostat in 2008 (updated in 2010), means-tested benefits are a significant part of social benefits in Malta. Define the term *means test*, and explain the main target of means-tested benefits. (1, 1 mark)
- iii) In the year 2000, the Maltese welfare system was further enhanced, as an important law was enacted with regards to persons with disability. Name this act and outline its main purpose. (1, 2 marks)
- iv) A couple have two children aged 13 and 17. Both children suffer from a disability, the younger son having a sight impairment, whilst his brother being autistic.
 - a) Aġenzija Sapport and Kummissjoni Nazzjonali Persuni b'Diżabilita` are two organisations under the Ministry for Social Policy that can provide assistance to this family. Explain the role of **EACH** organisation with regards to this family. (2, 2 marks)
 - b) List and describe **FOUR** provisions of the welfare system relating to people with special needs. (2, 4 marks)
 - c) Name **TWO** non-governmental organisations which can offer support to this family with disabled children. Briefly explain the role of **EACH** organisation identified. (1, 2 marks)

Question 3

World Health Organisation statistics for the Year 2010 reveal that tobacco smoking prevails amongst 32.1% of Maltese men and 20.7% of Maltese women (aged 15 and over). Smoking has financial, physical, social and health implications for users, their families and the central government.

- i) Outline **FOUR** *social* and **FOUR** *health* implications of tobacco use. (4, 4 marks)
- ii) Identify **TWO** financial implications of smoking on:
 - a) the user;
 - b) their family;
 - c) the central government. (2, 2, 2 marks)
- iii) Outline **TWO** strategies and **TWO** initiatives targeted to cease smoking amongst the public initiated by:
 - a) the government, and
 - b) other entities. (2, 2 marks)
- iv) Smoking is detrimental to an unborn child. Discuss **TWO** physical and/or health impacts of smoking on the unborn child. (2 marks)

Question 4

After spending some time looking at different types of housing, a young couple has decided to sign a *promise of sale* to buy a freehold maisonette.

- i) Define the term *promise of sale* and outline **TWO** of its main functions. (1, 2 marks)
- ii) Before making the final choice, the couple looked at both freehold property and property with a ground rent attached to it. Explain the terms *freehold* and *ground rent*. (1, 1 mark)
- iii) Outline the basic steps in the legal and formal process this couple should go through when buying the maisonette. (6 marks)
- iv) List and describe the costs involved when buying a house. (3 marks)
- v) When applying for the bank loan the couple was instructed to take out insurances. What is the function of an *insurance policy*? List the types of insurances needed by the couple if they are going to purchase the maisonette with the help of a bank loan. Explain the function of **EACH** insurance. (1, 1, 2, 2 marks)

Question 5

Global warming and *climate change* are inter-related issues which are the focus of many fora and headline news. Unfortunately these issues are causing hardships and sometimes even deaths in various populations.

- i) Explain the italicised global concerns, and for **EACH** concern, state **FOUR** contributory factors. (2, 2, 2 marks)
- ii) Discuss **TWO** different impacts of global warming on **EACH** of the following:
 - a) the natural environment;
 - b) human beings;
 - c) the physical human-built environment;
 - d) the world's supply of potable water. (2, 2, 2, 2 marks)

- iii) Outline **FOUR** measures which could be adopted by the state to lessen human-induced global warming and climate change (4 marks)
- iv) Any new structural project legally requires an Environmental Impact Assessment before it is implemented. Define the term *Environmental Impact Assessment* and outline its function. (1, 1 mark)

Question 6

Hypermarkets, shopping malls and *chain stores* are terms which consumers come across quite often in weekly magazines and media.

- i) Define **EACH** of the above italicised terms. Give **ONE** advantage and **TWO** disadvantages of **EACH**. (6 marks)
- ii) *Loyalty cards* and *pre-paid* cards are becoming quite popular amongst local consumers and retailers. Define and explain the function of **EACH** of the italicised terms. (2, 2 marks)
- iii) Banks are now offering the *chip and pin* system as one of the many methods of payment for their customers. Explain this system and outline the basic procedure involved when paying with such a system. (1, 2 marks)
- iv) Online shopping has become one of the most popular methods of shopping. However customers have to be extra cautious when making a payment using their card. Explain the purpose of *secure electronic transactions* and outline its basic features. (1, 4 marks)
- v) List **TWO** advantages and **TWO** disadvantages of online shopping for the seller. (1, 1 mark)

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MATRICULATION CERTIFICATE EXAMINATION
ADVANCED LEVEL
SEPTEMBER 2012

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	II
DATE:	5th September 2012
TIME:	9.00 a.m. to 12.00 noon

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

Proteins are the building blocks of life. Everybody needs a supply of protein daily and inadequate intakes lead to protein deficiency diseases.

- i) Name the **FOUR** chemical elements found in all proteins. Name another **TWO** chemical elements that may be found in some protein foods. (2, 1 marks)
- ii) For **EACH** of the following, outline **TWO** different functions of proteins, and give the Recommended Daily Allowance:
 - a) a young child;
 - b) a healthy adult. (1, 1, 1 mark)
- iii) Outline **THREE** stages in the life cycle where the demands of dietary protein increase. For **EACH** stage, suggest **ONE** reason for such an increased protein requirement. (3 marks)
- iv) Differentiate between 'essential' and 'non-essential amino acids'. Name **THREE** amino acids essential for adults and **ONE** different amino acid essential only for children. (1, 2 marks)
- v) A vegan school child often feels left out when activities are organised at his/her school. The next school event is Ftira Day, where tuna fish is used as a filling. Outline **FOUR** different healthy snacks that parent helpers can prepare for this student to enjoy during the event. Highlight the nutritional analysis of **ONE** of the snacks identified, explaining how this meets the dietary needs of this young child. (1, 3 marks)
- vi) In detail, describe the digestion of protein, referring to both the physical and chemical processes involved. (4 marks)

Question 2

A diabetic elderly woman has been advised by the doctor to take care of her general health by consuming a nutritionally sound diet, and caring for her skin namely during injury.

- i) Define and give the aetiology of diabetes. (1, 2 marks)
- ii) List and explain the **TWO** types of diabetes that may exist in this elderly woman. (1 mark)
- iii) Highlight, giving reasons, the main nutritional needs for this elderly woman. (6 marks)

- iv) This elderly woman has now been diagnosed with diverticulosis. Define diverticulosis. (1 mark)
- v) Explain with the aid of diagrams how diverticulosis results. (2, 2 marks)
- vi) Suggest **ONE** main meal suitable for this elderly woman, underlying the method of cooking and the principles involved, as well as the nutritional value of the meal. (5 marks)

Question 3

People who have high blood cholesterol are at a greater risk of contracting coronary heart disease, also referred to as coronary artery disease.

- i) Define and explain the role of *LDL* and *HDL cholesterol* in the body. Give **FOUR** food sources of both the above-mentioned types of cholesterol. (2, 2 marks)
- ii) Give the recommended daily intake of cholesterol. Outline **TWO** positive functions of cholesterol in the body, and explain **TWO** negative implications that a daily high intake of cholesterol can lead to. (1, 2, 2 marks)
- iii) Explain how coronary heart disease develops and give its aetiology. (3 marks)
- iv) Omega-3 and Omega-6 fatty acids can be beneficial to heart health.
 - a) Explain the difference between Omega-3 and Omega-6. Illustrate your explanation using simple diagrams. (2, 2 marks)
 - b) Outline **FOUR** benefits of consuming these omega fatty acids. Identify **TWO** food sources for each. (2, 2 marks)

Question 4

About two-thirds of the energy which the average person spends a day supports the body's basal metabolism.

- i) Explain the above statement, and highlight the effects of energy imbalance in the body. (1, 2 marks)
- ii) Outline the criteria by which a healthy body weight can be defined. Explain how a person's body weight can be assessed and monitored over time. (3, 2 marks)
- iii) Highlight the changing energy needs with regards to level of activity, rate of growth, and body size in **EACH** of the following life cycle stages:
 - a) babies 0 to 1 year of age;
 - b) toddlers 1 to 2 years;
 - c) toddlers 2 to 3 years;
 - d) children 4 to 5 years. (1, 1, 1, 1 mark)
- iv) Describe, with reasons, the changing energy needs of a:
 - a) pregnant mother;
 - b) lactating mother. (2, 2 marks)
- v) Outline **TWO** healthy weight management practices for **EACH** of the situations:
 - a) babies to children;
 - b) pregnant and lactating mothers. (2, 2 marks)

Question 5

Food spoilage indicates a change in the original nutritional value, texture, and flavour of food. As a result, the food becomes damaged, and may become unfit for consumption.

- i) Describe **THREE** types of food spoilage and outline **ONE** process for each. (3, 3 marks)
- ii) Name **THREE** types of micro-organisms that cause food spoilage, and for **EACH**, outline the conditions for growth and multiplication. (3 marks)
- iii) Explain the scientific principles involved in yeast growth and multiplication. (2 marks)
- iv) Outline **FOUR** precautions a homemaker should follow to ensure minimal food spoilage and thereby prevent food wastage. (4 marks)
- v) Describe the step-by-step process of yoghurt production, outlining the scientific principles underlying the process. (5 marks)

Question 6

The debate on whether consumers should buy and consume *genetically modified products* is ongoing and will probably still be a hot debate in the coming years.

- i) Define *genetically modified organisms* GMOs. List and explain **THREE** advantages of genetically modified organisms. (1, 3 marks)
- ii) Outline the basic scientific principles involved in the production of GMOs. (3 marks)
- iii) One major concern of GMOs is safety to humans and human health. Highlight **FOUR** other common concerns of GMOs. (4 marks)
- iv) Outline **THREE** aspects of safety to humans and human health which consumers are concerned about. (3 marks)
- v) Describe **THREE** alternate practices which can be adopted in the absence of genetically modified products. (6 marks)