

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

UNIVERSITY OF MALTA, MSIDA

MATRICULATION EXAMINATION
ADVANCED LEVEL
SEPTEMBER 2014

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	I
DATE:	2 nd September 2014
TIME:	9.00 a.m. to 12.00 noon

ANSWER ANY FIVE QUESTIONS (20 marks each)

Question 1

A trend that is gaining popularity in the housing sector is demolishing bungalows and large houses and replacing them with semi-detached villas and/or block of apartments.

- i) Account for the above trend and outline **FOUR** benefits of this trend for the nation. (3, 4 marks)
- ii) Describe how having more families living in apartments rather than houses will impact on the lifestyles, comfort and security of;
 - a. individual family members;
 - b. the local neighbourhood. (6, 3 marks)
- iii) A foreign elderly couple is buying an apartment for long winter holidays on this island. Outline **FOUR** security measures that the couple can adopt or install to ensure that the property is not subjected to theft, vandalism or squatters. (4 marks)

Question 2

Adolescents develop both emotionally and socially in order to be ready for adulthood.

- i) State **TWO** characteristics of emotional development and social changes a teenager experiences. (2 marks)
- ii) Outline **FOUR** ways how parents can support their teenage children during emotional and social changes. (4 marks)
- iii) Teenagers also undergo physical changes. Describe **TWO** ways how parents can help their teenage children during these changes. (2 marks)
- iv) *Peer pressure* and *conflicting values* are two of the most important issues an adolescent faces on a daily basis. Define the italicised terms and explain how the adolescent can resolve **EACH** of the issues mentioned. (2, 2 marks)
- v) Explain with a reason how adolescents can become responsible adults. (2 marks)
- vi) Unfortunately adolescence may be the time for some teenagers to start experimenting with addictive substances. Comment on this statement. (2 marks)
- vii) From recent findings, it is suggested that alcohol abuse among adolescents is on the increase. Highlight the implications of alcohol abuse on:
 - a. physical health;
 - b. social health. (2, 2 marks)

Question 3

Acid precipitation and the *depletion of the stratospheric ozone layer* are two air pollution problems that draw regional and global concerns.

- i) Define the italicised terms and for **EACH** outline the major causes. (2, 2, 2 marks)
- ii) Considering the local situation, explain how **EACH** of the air pollution problems mentioned above will impact:
 - a. human health;
 - b. the natural and urban environment. (3, 3 marks)
- iii) Outline strategies for reducing the above mentioned global concerns which could be adopted by:
 - a. Maltese households;
 - b. local farmers;
 - c. the State. (3, 3, 2 marks)

Question 4

Family units and households change their nature over the years.

- i) Explain what makes a family unit. Apart from fewer off springs in a family, illustrate **TWO** other family units which have evolved locally over the past few years. Give a reason why **EACH** of these family units resulted. (1, 2, 2 marks)
- ii) Describe one implication with a reason when:
 - a. parents decide to have one child;
 - b. parents decide to have six or more children.(2, 2 marks)
- iii) In addition to efficient management of resources, the household itself needs to be managed well by its members. Describe **THREE** contributions made by different family members which can contribute to the efficient running of the household. (3 marks)
- iv) Describe **ONE** repercussion that can result from an ill-managed household on the following family members:
 - a. school-age children;
 - b. working mother.(2, 2 marks)
- v) Spending leisure time as a family and doing voluntary work help the family members for personal development and family quality of life. Justify this statement and suggest **ONE** leisure activity and **ONE** voluntary activity for the family. Give a reason for **EACH** of the suggestions given. (1, 1, 2 marks)

Question 5

A retired couple are moving from their two storey terraced house to a one floor apartment since their children have moved away to start their own families and hence need less living space. The couple needs to buy *a new automatic washing machine*.

- i) Outline, giving reasons, **EIGHT** factors the couple would need to keep in mind when choosing this appliance. (4 marks)
- ii) Identify **FOUR** different sources of information the elderly couple can refer to before purchasing the automatic washing machine. Give **ONE** advantage and **ONE** disadvantage for **EACH** information source. (2, 4, 4 marks)
- iii) The couple has decided on the new automatic washing machine. Explain **FOUR** consumer responsibilities that they have to observe to ensure a smart purchase and protect their consumers' rights. (4 marks)
- iv) After a few months, the newly purchased washing machine develops a fault. Outline a procedure of redress that the couple could take without resorting to legal procedures. (2 marks)

Question 6

Over the years, local governments invested substantially in infant and child health and safety.

- i) Outline **THREE** improvements with regard to children that resulted over the past years from these government initiatives. (3 marks)
- ii) The provision of rules and regulations of child care centres and carers was one of the latest government projects in order to ensure infant and child safety. List **FOUR** rules and regulations of child care centres, giving a reason for **EACH**. Outline **TWO** requisites the regulations state for a person to qualify and work as a child carer. (4, 2 marks)
- iii) Immunisation programmes for children under the age of 18 years offer a range of vaccines which need to be taken. Explain the main legal function of these programmes. List and describe **THREE** vaccines that need to be taken by a 2-month old infant. (1, 3 marks)
- iv) The local government also set up a good welfare system which takes care of children in all types of family settings. Name and give the function of **TWO** government organisations which provide for children's safety within the family and community. (2, 2 marks)
- v) Though child health and safety is one of the government's priorities, families also have to give utmost importance to this matter. Explain, giving a reason, **THREE** measures parents can take in a playroom so that their two-year-old toddler keeps safe. (3 marks)

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MATRICULATION EXAMINATION
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SEPTEMBER 2014

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	II
DATE:	3 rd September 2014
TIME:	9.00 a.m. to 12.00 noon

ANSWER ANY FIVE QUESTIONS (20 marks each)

Question 1

Since it is very important that individuals take an adequate intake of fluid in order to function well, water is the best fluid to drink.

- i) Justify the above statement. (1 mark)
- ii) Discuss in detail the following roles of water in the body:
a. water helps maintains blood volume and blood pressure;
b. water helps maintaining body temperature and cools it where necessary;
c. water helps cleanse the body. (2, 2, 2 marks)
- iii) Identify **FOUR** minerals found in drinking water. State **TWO** roles and **TWO** deficiency symptoms for **EACH** mineral stated. (2, 4, 4 marks)
- iv) Give **ONE** reason why the following groups need a higher intake of fluid:
a. athletes on a high-protein diet;
b. people on a high-fibre diet;
c. people suffering from diabetes. (3 marks)

Question 2

Proteins are *macronutrients* required daily in the diet and are available from two different categories of food sources.

- i) State **FOUR** chemical elements present in all proteins and explain the different chemical structures of proteins. (2, 2 marks)
- ii) Identify **TWO** main roles of protein in the human diet and explain why proteins are labelled as *macronutrients*. Identify **THREE** groups that require higher protein intakes in their diet, giving reasons. (2, 1, 3 marks)
- iii) Outline the difference between *essential* and *non-essential amino acids*. Name **THREE** amino acids essential for adults and **ONE** different amino acid which is essential only for children. (1, 2 marks)
- iv) Identify **TWO** foods containing adequate amounts of all the essential amino acids and explain, giving examples, how complementary protein foods function. (1, 2 marks)
- v) Choose **TWO** food items suitable for a child's birthday party where the guest list includes both coeliacs and lacto-vegetarians. State **THREE** factors you would keep in mind in order to cater for the special dietary needs of these guests. (1, 3 marks)

Question 3

Over the years Malta saw and adopted changes in dietary patterns.

- i) Explain **THREE** changes in local dietary patterns that took place over the years. Highlight **TWO** causes and **THREE** implications for these changes. (3, 2, 3 marks)
- ii) The nutrient goals and dietary guidelines for the Maltese are updated from time-to-time. Comment on this statement. (1 mark)
- iii) Analyse and discuss **TWO** Maltese dietary guidelines and give the recommended daily intake of dietary fibre, sodium, fluoride and cholesterol. (4, 2 marks)
- iv) State, giving a reason for the daily nutritional needs for a diabetic lacto-vegetarian elderly person. (5 marks)

Question 4

The globalisation of the food chain has necessitated the creation of different food packaging systems and food labeling to guarantee optimal food transportation and provide consumer assistance in food choice.

- i) Outline **THREE** functions of food packaging and identify **TWO** negative effects of food packaging on human health and the environment. (3, 2, 2 marks)
- ii) Describe initiatives that can be taken by consumers and the national government to reduce such negative impacts of food packaging. (2, 2 marks)
- iii) Food is frequently vacuum-packed to increase its shelf life. Describe how vacuum packing works and explain why vacuum packing is ideal for prolonging the shelf life of non-perishable dry foods. (2, 1 marks)
- iv) According to EU legislation, food packaging should provide essential information to the consumer. List **SIX** points of information which consumers would expect to find on food packaging. Outline the impact of claims and endorsements found on food labels on consumers' food choice and health. (3, 3 marks)

Question 5

Eggs are a type of food commodity used in a wide variety of recipes for different reasons. Two main roles of eggs are for *aeration* and as *emulsifiers*.

- i) Define and explain the principles of the italicised terms. List and explain briefly **TWO** other roles of eggs in recipes. (4, 2 marks)
- ii) With the aid of a diagram, describe in detail the structure of the egg. (5 marks)
- iii) Describe in detail the nutritional value of eggs. (5 marks)
- iv) Illustrate the effects of heat on the egg white and the egg yolk whilst a whole egg is boiling. (2, 2 marks)

Question 6

Menu and meal planning involves a delicate process where various factors have to be taken into consideration. The large selection of pre-prepared and convenience foods available in shops have made it possible for people with limited cooking skills to prepare appetizing meals.

- i) Outline **SIX** factors that need to be considered when planning meals. (3 marks)
- ii) The use of convenience foods is on the increase, give **FOUR** reasons for this trend. Outline **TWO** advantages and **TWO** disadvantages for family life as a result of this trend. Explain how the use of convenience foods can have a negative impact on the environment. (2, 4, 2 marks)
- iii) *Convenience Foods – Inconvenient for our Health* is a title of an article about convenience foods. Explain this article's title, outlining specific short-term and/or long-term negative health implications of convenience foods consumption. (5 marks)
- iv) Families with young children may be confused by the selection of unhealthy dishes/snacks listed in the kids' menu available in local restaurants. Describe **FOUR** ways how parents can ensure a balanced meal for their children and at the same time enjoy a meal in a restaurant. (4 marks)