

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD

UNIVERSITY OF MALTA, MSIDA

MATRICULATION EXAMINATION
ADVANCED LEVEL
MAY 2014

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	I
DATE:	5 th May 2014
TIME:	4.00 p.m. to 7.00 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

Question 1

Though it is estimated that by 2050 the global population of people above the age of 60 will exceed the number of younger people, research shows that elderly abuse, neglect, violence, and exploitation are some of the biggest issues facing senior citizens around the world.

- i) Explain **TWO** contributory factors to the ageing of the global population. (2 marks)
- ii) Outline **TWO** causes of neglect and **TWO** exploitation methods elderly people who live in a residential home may experience. (2, 2 marks)
- iii) Describe, giving a concrete example, **THREE** types of abuse an elderly grandfather who lives with his married son and his family, may experience. (3 marks)
- iv) Outline **THREE** services which could be provided by the state and/or NGOs to help avoid the types of abuse you have mentioned in (iii). (3 marks)
- v) Planning for retirement is one of the most important financial decisions which one needs to undertake. A number of retirement schemes are available from most local banks.
 - a. List **FOUR** factors a middle-aged person needs to consider when choosing a retirement plan and name **ONE** other source, other than a bank, where a person can obtain advice about these types of investments. (2, 1 marks)
 - b. Name and describe **TWO** other sources of investments, other than a retirement scheme, which can be considered by this middle-aged person, in order to secure a financially-stable future. Give **TWO** disadvantages of these types of investment. (1, 2, 2 marks)

Question 2

The priority of most adults is acquiring an accommodation which is suitable for their needs and lifestyles.

- i) Name and describe **THREE** main types of accommodations found locally. Identify **TWO** advantages and **TWO** disadvantages for each type of accommodation. (3, 2, 2, 2 marks)
- ii) Outline and explain **THREE** factors that should be considered when choosing location of accommodation. (3 marks)
- iii) List **FOUR** minimum requirements needed for a house to be satisfactorily habitable. Illustrate **TWO** effects on health which result from unsatisfactory housing conditions. (2, 2 marks)
- iv) Maltese homes need to have some structural characteristics which may not be present in homes found in colder countries due to the local weather. Describe **FOUR** of these structural characteristics. (4 marks)

Question 3

Childhood is described as a period of rapid change involving physical, intellectual, *emotional* and *social* development. Simultaneously, several factors in the environment may influence habits developed during childhood.

- i) Define the **TWO** italicised types of development and for each, state **TWO** specific changes which take place during the toddler to pre-school age period. (2, 2, 2 marks)
- ii) Play is essential in childhood as it promotes development. For **EACH** type of development listed above, identify **TWO** activities that can be organised for a pre-school child explaining how each activity would contribute to the child's well-being. (2, 2, 2, 2 marks)
- iii) The rapid physical and psychological changes that children undergo from birth through adolescence often leave parents wondering how best to care for them at each stage. Outline **THREE** local support systems from which parents can seek advice in order to be prepared for **EACH** of the following situations:
 - a. a child being diagnosed as autistic;
 - b. a teenager experimenting with alcohol and smoking. (3, 3 marks)

Question 4

Marketing and retailing influences and *economic* influences, are among the various factors which influence consumer buying behaviour.

- i) Define the italicised terms and justify how **EACH** factor influences consumer buying behaviour. (1, 1, 1, 1 mark)
- ii) Describe **TWO** examples for **EACH** of the influences mentioned above and explain how **EACH** example impacts/affects consumer buying behaviour. (2, 2, 2, 2 marks)
- iii) Nowadays, consumers can make their purchases through various methods other than going personally into a shop. Suggest **ONE** method for purchasing grocery items deemed most appropriate for the following situations. Give a reason for **EACH** of the suggestions:
 - a. A mother of two small children who works a full-time job from 8am till 5pm from Monday to Friday.
 - b. An elderly man who is still very active and has a part-time job from 9am till 1pm three-times-a-week. (2, 2 marks)
- iv) New secure electronic transaction measures against fraudulent payments are emerging in order to protect both the customer and the seller. Explain the basic features of secure electronic transactions and describe how these help protecting the customer. (2, 2 marks)

Question 5

Water (both *potable* and *non-potable*) is a renewable resource, however it has to be carefully safeguarded as its depletion or contamination can cause a disastrous effect on our quality of life.

- i) Outline the difference between *potable* and *non-potable* water and give **TWO** sources of each. (1, 1, 1 marks)
- ii) Describe the process involved in producing the **TWO** main sources of potable tap-water in Malta and outline the safety issues of these water sources. (2, 2, 2 marks)
- iii) A number of families opt to filter tap-water. Give **TWO** reasons why a number of families opt to filter tap-water. Compare and contrast **TWO** methods of in-home filtration from the economic and environmental perspectives. (2, 2, 2 marks)
- iv) Describe how waste water is being treated locally and explain how this treated water is beneficial to **TWO** types of local industries. (4, 1 marks)

Question 6

Living on credit is becoming a way of living for a lot of people.

- i) Define the italicised term and suggest **TWO** groups of people who are most likely to adopt this way of living. (1, 1 mark)
- ii) State the reason why **EACH** group mentioned in (i) are living on credit. (1, 1 mark)
- iii) List and describe **TWO** main sources of financial advice that one may wish to seek when considering obtaining a credit. (1, 2 marks)
- iv) Borrowing money is also quite common. Describe the use of the following credit systems and list **TWO** features for **EACH**:
 - a. Overdrafts;
 - b. personal loans. (2, 4 marks)
- v) Outline **THREE** reasons why young adults may run in debt. (3 marks)
- vi) Explain the importance of budgeting for the following groups of people:
 - a. a single mother with a 4-year-old child;
 - b. an adult who will retire within 3 years;
 - c. a 16-year-old teenager who just started post-secondary school;
 - d. a couple with three children aged 10, 12 and 14 years. (4 marks)

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MATRICULATION EXAMINATION
ADVANCED LEVEL
MAY 2014

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	II
DATE:	6 th May 2014
TIME:	4.00 p.m. to 7.00 p.m.

ANSWER ANY FIVE QUESTIONS (20 marks each)

Question 1

Common *meal patterns* and *dietary practices* change over the years.

- i) Define the italicised terms and explain the above statement. (1, 1, 1 mark)
- ii) A common meal pattern in adolescence and young adults is the prevalence of snacking. Demonstrate how the following concerns may be turned into benefits to teenagers and young adults.
 - a. Snacks spoil teenagers' appetite for meals.
 - b. Snacking causes dental cavities.
 - c. Snacks are fattening. (3 marks)
- iii) Unfortunately *fad diets* and *eating disorders* are common in the adolescence and young adult stages. Define the italicised terms and outline why these food issues are more predominant during these age stages. (1, 1, 1 mark)
- iv) Explain **ONE** eating disorder and describe **TWO** health-related repercussions of this disorder. (2, 2 marks)
- v) List **FOUR** characteristics of fad diets and explain, giving a reason, **TWO** health repercussions of these fad diets. (2, 2 marks)
- vi) Outline **THREE** strategies that adolescents and young adults can adopt in order to lose weight without resorting to dieting. (3 marks)

Question 2

Food production is one of the major industries in the world. It affects producers, manufacturers and consumers in every way.

- i) List and explain **THREE** concerns with regard to the use of pesticides in the production of fruit and vegetables. Outline **ONE** main health concern for the producers when using pesticides on crops. Describe **ONE** benefit of using pesticides. (3, 1, 1 mark)
- ii) The production of *functional foods* is rapidly increasing. Define the italicised term, and explain why such foods have created a revolution in the food production industry. (1, 1 mark)
- iii) *Aquaculture* and *hydroponics* are two popular methods for producing food without the excessive use of artificial fertilisers and pesticides. Define the italicised terms. Describe briefly **EACH** of the methods. Give **TWO** examples of aquaculture farming. (1, 1, 1, 1, 1 mark)
- iv) Outline **FOUR** advantages of hydroponics. List and explain **TWO** disadvantages of hydroponics as a method of production. (2, 2 marks)
- v) There is a continuous debate on the impact of source and transportation of food on the environment. List **FOUR** advantages and **FOUR** disadvantages of sourcing imported fruit and vegetables over local produce. (2, 2 marks)

Question 3

Perishable foods are more susceptible to *food spoilage*.

- i) Define the italicised terms and justify the above statement. (1, 1, 1 mark)
- ii) Describe the main scientific conditions needed for the growth and control of moulds which cause food spoilage. (5 marks)
- iii) The use of micro-organisms and enzymes is useful in specific foods. Define the term *enzyme* and explain the scientific principles involved when making hard cheese. (1, 6 marks)
- iv) Identify the enzyme used in processing hard cheese and briefly highlight its function. (1 mark)
- v) Describe in detail the nutritive value of hard cheese. (4 marks)

Question 4

Maintaining an *energy balance* in pregnancy and lactation entails many physiological adaptations to support foetal growth, child delivery and lactation.

- i) Define *energy balance* and explain the relationship between weight and energy balance. (1, 2 marks)
- ii) Explain **THREE** requirements for an energy increase in pregnancy and lactation. (3 marks)
- iii) Describe **FOUR** health implications of energy imbalance during pregnancy and lactation for:
 - a. the mother;
 - b. the child before and after birth.(4, 4 marks)
- iv) Plan a lunch menu for a hypertensive pregnant woman who has developed a food aversion to meat and fish during her pregnancy. Present a nutritional analysis of your menu to explain how it meets her various nutritional needs. (2, 4 marks)

Question 5

Some vitamins are considered to be *anti-oxidants*.

- i) Define the term *anti-oxidant* and list the chemical name of the vitamins which have anti-oxidant properties in the human body. (1, 1 mark)
- ii) Explain in detail the role of anti-oxidants in the human body. (2 marks)
- iii) List and describe **TWO** chief functions for **EACH** vitamin you have listed in (i) and identify **TWO** significant sources for **EACH**. (2, 1, 2, 1 marks)
- iv) Highlight **TWO** deficiency symptoms and **TWO** excess effects for **EACH** of the vitamins mentioned. (1, 1 mark)
- v) One source of calciferol is exposure to the sun. Explain briefly how the human body can obtain calciferol from the sun. (3 marks)
- vi) Calciferol works with various particular minerals in the human body. Identify **TWO** of these minerals and explain how these nutrients work together. (1, 2 marks)
- vii) List **THREE** other natural occurring food sources of calciferol and describe **ONE** deficiency symptom. (2 marks)

Question 6

The consumption of seafood is highly recommended for health reasons. Moreover, the unique taste, the wide variety available and the various methods how seafood can be prepared, add to its popularity.

- i) Seafood can be classified as *white fish*, *oily fish* and *shellfish*. For **EACH** italicised category:
- name **ONE** fresh and **ONE** processed variety;
 - describe the physical characteristics of **EACH** variety mentioned in (a);
 - state **TWO** main nutritive properties and their relation to health for **EACH** of the three categories. (3, 3, 6 marks)
- ii) Outline **FOUR** factors that consumers should consider when buying fish to:
- ensure freshness, and
 - support sustainable fishing practices. (2, 2 marks)
- iii) *Lampuki* (dorado) is a very popular seasonal local fish. Outline **TWO** different methods how *lampuki* can be cooked to make traditional Maltese dishes, explaining the physical and nutritional effects of the different cooking methods of fish. (1, 3 marks)