

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD  
UNIVERSITY OF MALTA, MSIDA  
MATRICULATION EXAMINATION  
INTERMEDIATE LEVEL  
SEPTEMBER 2013

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<b>SUBJECT:</b>	HOME ECONOMICS & HUMAN ECOLOGY
<b>DATE:</b>	7th September 2013
<b>TIME:</b>	4.00 p.m. to 7.00 p.m.

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## SECTION A

### ANSWER ALL QUESTIONS (Total 40 marks)

1. Play contributes to a child's *physical, social, emotional, intellectual* and *artistic development*. Choose **TWO** of the italicised types of development and identify **TWO** activities that can be organised for a 4 year old to promote these types of development. Explain how each activity would contribute to the child's well-being. (2, 2 marks)
2. A low intake of fat is essential for a healthy diet. State **FOUR** reasons for including fat in the diet of a teenager and describe, giving reasons, the recommended type of fat to consume. (4, 2 marks)
3. Describe **THREE** state support services for teenagers who have finished their compulsory education, do not want to pursue tertiary education and need extra educational support to find employment. (3 marks)
4. Name **FOUR** micronutrients that are important for a pregnant woman and describe the specific physiological requirements for each of these nutrients. (4 marks)
5. Highlight the short and long-term negative impacts on the health status of a young girl whose diet is low in calcium and iron. (2, 2 marks)
6. Name **TWO** types of micro-organisms that may contaminate food. By making reference to **TWO** food products, outline the benefits of using micro-organisms in food production. (½, ½, 2 marks)
7. Outline **THREE** nutritional impacts that may arise as a result of the consistent use of convenience and take away foods by families with young children. (3 marks)
8. Outline **TWO** reasons why a single male professional should save part of his income. Identify **TWO** suitable methods of investment that will render financial security for his retirement years, highlighting the advantages of both investment options chosen. (1, 2 marks)
9. List **FOUR** protein-rich foods which could serve as a suitable school snack for a lacto-vegetarian child. State **FOUR** factors you would keep in mind in order to cater for the special dietary needs of this child. (2, 4 marks)
10. Explain the ethical issues underlying Fairtrade products. List **TWO** Fairtrade foods that are available on the local market and explain how consumers can identify these products. (2, 1, 1 marks)

## Section B

ANSWER ANY **THREE** QUESTIONS (20 marks each)

### Question 1

Proteins are macronutrients that are required daily in one's diet. Intake requirements vary from one person to another depending on various factors. Proteins are available from two different categories of food sources; however, some sources do not contain adequate amounts of all the essential amino acids.

- i) State **FOUR** chemical elements present in all proteins and describe the basic structure of a protein. (2, 1 mark)
- ii) Identify the role of protein in the human diet and explain why proteins are labelled as macronutrients. Identify, giving reasons, **FOUR** groups of individuals who require a higher intake of protein in their diet. (2, 1, 4 marks)
- iii) Define '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 **FOUR** foods containing adequate amounts of all the essential amino acids. Explain, giving examples, how complementary protein foods function. (2, 2 marks)
- v) *Low intakes* as well as daily *excessive intakes* of protein can be harmful. Explain this statement. (2, 1 mark)

### Question 2

A young family is in the process of changing their washing machine. There are several ways how this family can be informed about products and services, including product labelling and advertising.

- i) Identify **FOUR** ways how the young family can obtain information about automatic washing machines available on the market. For **EACH** identified source of information, list **THREE** advantages for the young family. (2, 2, 2, 2 marks)
- ii) Explain how social media, including social network sites, can impact the shopping behaviour of the young family when deciding upon their choice of washing machine. Outline the advantages of social network sites in this regard. (1, 2 marks)
- iii) Describe, including simple graphics if desired, the type of labelling that a consumer would expect to find on the automatic washing machine. (3 marks)
- iv) Outline **FOUR** features/measures that the family can look out for/adopt to minimize the use of energy when using the automatic washing machine. (4 marks)
- v) Explain how the family can dispose of their old washing machine in an eco-friendly manner. (2 marks)

### Question 3

During these past years, Malta has made huge improvements in the waste management sector. A number of bring-in sites and civic amenity sites have been located in various parts of the island.

- i) Describe the functions of *civic amenity sites* and *bring-in sites*, and identify **TWO** similarities and **TWO** differences between them. (2, 2, 2 marks)
- ii) The waste collected in the black bags is taken to Sant' Antnin waste treatment plant. Outline **FOUR** benefits of having such a waste treatment plant in Malta. (4 marks)
- iii) The grey bags scheme was established as an alternative method of collecting recyclable waste. These are taken for processing to the *Material Recovery Facility* within the Sant' Antnin waste treatment plant.
  - a) List **SIX** ways how the contents of the grey bag that are collected from our doorstep can be prepared before they are taken out for collection. (3 marks)
  - b) Name the waste that is processed at the *Material Recovery Facility* and outline the procedure that takes place as soon as the waste arrives at the plant. (2, 1 mark)
- iv) A textile recycling initiative launched in 2011, collects and receives textile items. The students who started this project aimed at reducing their ecological footprint by collecting clothes, shoes, curtains, handbags and other textiles to be either reused or recycled. Describe **FOUR** ways how one can recycle or re-use textile items in order to be a sustainable citizen. (4 marks)

### Question 4

A 50-year old widow having two teenage sons, had to stop working due to a long term illness. Prior to stopping work, she had a managerial post in a private company.

- i) Describe **FOUR** different strategies that the teenage sons have to follow in order to manage the household successfully in the absence of their mothers' ability to help out. (4 marks)
- ii) The mother has become confined to a bed for a few months. Describe **FOUR** ways how to ensure that she is *comfortable* and *safe* when her sons are not at home. (4 marks)
- iii) Suggest **FOUR** ways how the mother can keep intellectually busy during the day and at the same time cope with her illness. (4 marks)
- iv) Although the mother has received unemployment benefits, her income has been drastically reduced.
  - a) Describe **SIX** ways how the family can decrease the family expenses in order to make up for some of the lost income incurred by the mother's illness. (6 marks)
  - b) Outline **TWO** ways how the mother can help with the economic situation of the family. (2 marks)