

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA
MATRICULATION EXAMINATION
INTERMEDIATE LEVEL
SEPTEMBER 2014

SUBJECT:	HOME ECONOMICS & HUMAN ECOLOGY
DATE:	6th September 2014
TIME:	4.00 p.m. to 7.00 p.m.

SECTION A (40 marks)

ANSWER ALL QUESTIONS

1. Describe **TWO** different strategies which a married couple with two teenagers and a dog who both work full-time could adopt to reduce stress and conflict, with reference to:
 - i) the room layout and furnishings in the house;
 - ii) family routines. (2, 2 marks)

2. Explain the terms *lacto-ovo-vegetarianism* and *veganism*. Name the vitamin that is usually missing in a vegan's diet and give the reason for its absence. Explain how vegans can obtain this vitamin. (2, 2 marks)

3. Outline the difference between *legal* and *commercial guarantee*. List **FOUR** features that you would check in your guarantee if the purchased goods develop a fault within the period of cover. (2, 2 marks)

4. Define *anaemia* and explain **TWO** main causes for the development of this condition. List **TWO** symptoms of a person suffering from anaemia. Suggest **TWO** ways how this condition can be prevented. (1, 1, 1, 1 marks)

5. Explain why teenagers need more carbohydrates than the elderly. Name the vitamin responsible for better absorption and utilisation of carbohydrates. List **TWO** factors which enhance and **TWO** factors which inhibit the metabolism, absorption and utilisation of carbohydrates. (1, 1, 2 marks)

6. Describe the energy intake recommended for (i) a 4-year-old girl, and (ii) a male adult manual worker. Individuals should check their BMI in order to know whether they are in the recommended weight range. What does *BMI* stand for? Give the range considered to be the normal/desired weight range. (1, 1, 1, 1 mark)

7. Explain **FOUR** methods of redress available to consumers when an appliance develops a fault without resorting to legal procedures. (4 marks)

8. Describe *FAD diets*. Give **ONE** advantage and **TWO** disadvantages of FAD diets. (1, 1, 2 marks)

9. Outline **FOUR** measures that consumers should adopt to ensure secure electronic transactions when shopping online. (4 marks)

10. Define the terms *dietary goals* and *dietary guidelines*. Highlight **TWO** Maltese dietary guidelines. Give the recommended nutrient goal for the percentage of total energy intake of fat and complex carbohydrates. (2, 1, 1 mark)

SECTION B (60 marks)
ANSWER ANY THREE QUESTIONS

Question 1

Food-related illnesses are fairly common illnesses.

- a) Define the italicised term and discuss the statement in relation to public health. (1, 1 mark)
- b) Identify the difference between the **TWO** main types of food-related illnesses. (2 marks)
- c) Describe **THREE** causes, **THREE** symptoms and the incubation period of the following bacteria:
i) Salmonella;
ii) Bacillus cereus;
iii) Escherichia coli (E. coli). (3, 3, 3 marks)
- d) Identify **TWO** common situations when a potential food-related illness outbreak may occur, giving a reason for each situation. (2, 2 marks)
- e) State and describe the implications of **THREE** basic strategies for safe food handling when spending a day at the beach. (3 marks)

Question 2

A young mother of two primary school-aged children who worked as a secretary with a banking firm has recently been confined to a wheelchair due to a chronic illness (Muscular Dystrophy). As a result of her illness, she has negotiated with her employers to be able to work from home since the block of apartments in which she resides does not have a lift.

- a) Outline **TWO** advantages and **ONE** disadvantage of working from home for:
i) the young mother;
ii) her family;
iii) her employers. (3, 3, 3 marks)
- b) The young mother aims to lead an independent life as much as possible. Outline **FIVE** ways how the young woman can do this in her own home and outdoors, possibly with the aid of special gadgets. (5 marks)
- c) Outline **TWO** possible types of aid provided by the State which the family could apply for and describe, giving specific examples, **FOUR**, other possible sources of support for the mother and her family. (2, 4 marks)

Question 3

Proteins and carbohydrates are said to be *macro-nutrients*.

- a) Define the italicised term. Give **TWO** general functions of (i) proteins and (ii) carbohydrates. (1, 2, 2 marks)
- b) Briefly explain the chemical composition of carbohydrates. Explain the formation of disaccharides and polysaccharides from monosaccharides. (1, 3 marks)
- c) Explain the health implication for **EACH** the following situations.
 i) Many people consume a diet which is low in dietary fibre.
 ii) People tend to over-consume carbohydrate-rich food on a daily basis.
 iii) Teenagers tend to indulge in soft drinks including ready-made iced tea and fruit drinks. (3 marks)
- d) Identify and explain the main types of protein. Briefly describe the chemical structure of a protein chain. (2, 2 marks)
- e) Explain the nutritional implication for **EACH** of the following statements.
 i) A body builder is told to consume a high intake of egg whites.
 ii) It is often said that the best meal an invalid can take is chicken broth.
 iii) Hummus is a high protein healthy snack.
 iv) Beans on toast contain the same quality of protein as meat. (4 marks)

Question 4

Waste management strategies differ according to the types of waste involved. The overall reduction of waste is a key message in public awareness campaigns.

- a) Explain how the following types of solid waste are currently being managed in Malta:
 i) Construction and demolition waste;
 ii) Organic household waste;
 iii) Cooking oils from catering establishments and some households;
 iv) Household refuse separated and disposed of at bring-in sites;
 v) Waste separated and disposed of at the Civil Amenities sites. (5 marks)
- b) Choose **TWO** of the types of waste listed in (a) and for **EACH** describe different environmental and social benefits of how it is managed. (3, 3 marks)
- c) An initiative taken up by a local entity to manage waste and protect the local environment was the launch of the campaign Battery Buster. School children and the general public were encouraged to collect used batteries and dispose of them in designated bins.
 i) Outline the negative effects of dumping used batteries in a landfill.
 ii) Explain what happens to batteries disposed in these special bins.
 iii) Suggest **FOUR** ways how individuals and families can reduce the use of batteries. (2, 1, 2 marks)
- d) The conservation of non-renewable resources is an integral part of sustainable development. Outline **TWO** ways for **EACH** how the local government and families can conserve *limestone* and *soil*. (2, 2 marks)