

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD  
UNIVERSITY OF MALTA, MSIDA

MATRICULATION CERTIFICATE EXAMINATION  
INTERMEDIATE LEVEL  
SEPTEMBER 2012

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<b>SUBJECT:</b>	HOME ECONOMICS & HUMAN ECOLOGY
<b>DATE:</b>	10th September 2012
<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. Describe the relationship between monosaccharides, disaccharides and polysaccharides and name **TWO** examples for each group. (3, 3 marks)
2. Explain the difference between a *vegan* and a *lacto-vegetarian* and outline **THREE** dietary strategies, giving reasons, of how a vegan could ensure the consumption of a balanced diet. (1, 3 marks)
3. High Density Lipoprotein (HDL) and Low Density Lipoprotein (LDL) are two compounds that carry blood cholesterol. Explain the difference between HDL and LDL. Describe **ONE** function of each in the diet. (2, 2 marks)
4. Multicultural families are on the increase in Malta. Outline **THREE positive** implications these families have on the local family lifestyle. (3 marks)
5. Several commercial banks are encouraging adolescents to save money. List **TWO** different bank accounts that are being advertised for these adolescents. Describe **THREE** benefits, other than saving purposes, of opening such bank accounts. (1, 3 marks)
6. Outline **THREE** benefits of consuming soya protein over animal protein. Identify **TWO** micronutrients that soya protein foods are deficient in when compared to meat products. (3, 1 marks)
7. Define hydrogenation and explain **TWO** similarities between hydrogenated vegetable oil and saturated fatty acids. (1, 2 marks)
8. Regular physical exercise, together with a balanced diet, is essential for the well-being of individuals of all ages. Identify **FOUR** benefits of regular physical exercise and outline **TWO** diet-related factors and **TWO** non-diet related factors that need to be kept in mind when engaging in professional athletic sports. (2, 2 marks)
9. Describe the different functions of the Consumer Claims Tribunal and the European Consumer Centre. Name **TWO** documents that the consumer would need to submit to make a claim. (2, 1 marks)
10. A friend has been suffering from *lactose intolerance* since birth. Recently, he has been diagnosed as being *coeliac*. Define the italicized terms, explaining the causes for **EACH** condition and list **TWO** symptoms in the body. (1, 2, 2 marks)

## SECTION B

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

## Question 1

It is becoming more common for Maltese people to take food and vitamin supplements. *Vitamin supplements* cannot replace the variety of foods that are important in a healthy diet.

- a) Define the term *vitamin supplements* and describe their role in the diet of a healthy adult. (1, 2 marks)
- b) Describe **ONE** benefit and **TWO** disadvantages of consuming *vitamin supplements*. (1, 2 marks)
- c) Outline, giving reasons, **TWO** factors a consumer should consider before taking a dietary supplement. (2 marks)
- d) List **FOUR** groups of individuals who may need to take vitamin or mineral supplements in their diet. Describe the benefits of taking such supplements by **TWO** of the above mentioned groups of individuals. (2, 4 marks)
- e) External conditions that affect vitamin stability are *storage*, *preparation* and *processing*. Explain how these **THREE** external conditions can be controlled to ensure maximum retention of vitamins in food. (2, 2, 2 marks)

## Question 2

A number of residential homes for the elderly have opened in various localities in Malta and Gozo. These are often used by those elderly who for various reasons are unable to remain in their homes.

- a) Outline the implications that the process of moving from one's own home to a residential home has for the elderly and his/her relatives. (2, 2 marks)
- b) Describe **FOUR** possible reasons why a couple would opt to move to a residential home for the elderly. (4 marks)
- c) Describe, by giving examples, how the elderly couple can maintain their well-being within the residential home. (4 marks)
- d) Outline **TWO** services that are provided by the state and/or non-state organisations to support this elderly couple before they move to the residential home. (4 marks)
- e) Outline the main aim of providing *night shelters* for elderly people in Malta and describe **THREE** facilities available for these elderly who make use of them. (1, 3 marks)

**Question 3**

A food retailer is determined to reduce financial losses of his entrepreneurship by cutting down on food spoilage and ensuring no food poisoning outbreaks occur in his establishment.

- a) Describe **TWO** micro-biological and **TWO** chemical factors or processes which could lead to food spoilage. (2, 2 marks)
- b) Outline **SIX** measures that can be taken by the retailer to avoid food spoilage in his food establishment. (6 marks)
- c) Name **FOUR** micro-organisms potentially responsible for outbreaks of food poisoning. Choose **ONE** of these micro-organisms and a) state its high risk foods, and b) describe typical symptoms of food poisoning experienced by humans. (2, 1, 2 marks)
- d) Popular food items with the clients of this food establishment are *beefburger with chips* and *chicken rice salad*. Discuss, stating the underlying scientific principles, the necessary precautions which need to be observed when storing the ingredients for these food items and when preparing these food items simultaneously. (5 marks)

**Question 4**

Food is the fuel for the human body, supplying it with the energy necessary for its basal body functions and other physical activities. The right *energy balance* is essential to ensure a healthy body with the appropriate *BMI*.

- a) Define *energy balance* and *BMI*, and explain their link with weight status. (2, 3 marks)
- b) Describe **THREE** factors that affect the energy requirements of an adolescent. (3 marks)
- c) Adolescence can be a difficult period for *obese*, *anorexic* or *bulimic* individuals.
  - i. Describe the impact of obesity on adolescents' health and the national economy, and describe **THREE** possible strategies families could adopt to reduce the risk for obesity among their teenagers. (2, 2, 3 marks)
  - ii. Outline the difference between the nutritional disorders of *anorexia* and *bulimia*. For **EACH** of these conditions, describe **TWO** short-term and **TWO** long-term impacts on the girls' health. (1, 2, 2 marks)