

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

SUBJECT:	HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER:	I
DATE:	3rd September 2013
TIME:	9.00 a.m. to 12.00 noon

ANSWER ANY FIVE QUESTIONS (20 marks each)

Question 1

Labels on goods and services should be informative and easy to read. In addition, adverts promoting these goods and services should be legal, decent, honest and truthful.

- i) Justify **EACH** of the above statements. (1, 1 mark)
- ii) Highlight and explain **TWO** provisions of the local legislation regarding the labelling of textiles. (1, 1 mark)
- iii) List **TWO** ways how an advertisement can be deceptive. (1 mark)
- iv) The misleading nature of advertisements depends on a set of criteria. Highlight **TWO** of these criteria. Describe **TWO** examples of misleading advertisements identifying **ONE** of these criteria in **EACH** example. (1, 2, 2 marks)
- v) Name the local authority which monitors adverts. Describe the main role of this authority and include **ONE** penalty outlined in the Consumers Affairs Act, which this authority can take or implement to combat misleading adverts. (1, 1, 1 mark)
- vi) A busy young man living on his own needs to buy clothes detergent. Outline **TWO** ways how one can obtain more information about these detergents. For **EACH** mode of information, list **TWO** advantages and **TWO** disadvantages. (1, 2, 2 marks)
- vii) Identify and explain **TWO** labels which can be found on the packaging of a detergent for clothing items. (2 marks)

Question 2

A form of credit card system was first used in the US in the 1920s, and was specifically designed to sell fuel to a growing number of automobile owners. Nowadays, credit cards and credit facilities have an unlimited use: from effecting fuel payments, to shopping online, to acquiring short/long-term loans.

- i) Justify, by giving **THREE** reasons why living on credit has nowadays become a more accepted practice than 30 years ago. (3 marks)
- ii) Illustrate **THREE** common situations which may lead to debt. Explain the implication of **EACH** situation. (3, 3 marks)
- iii) Highlight **TWO** benefits of credit options available locally, giving a reason for **EACH** benefit outlined. Explain **FOUR** limitations of these credit options. (1, 2, 2 marks)
- iv) Financial companies advertise various investment schemes to promote saving and investment within households. Identify **ONE** common investment scheme found locally. Describe and explain the features of this investment scheme. (1, 2 marks)
- v) List **THREE** sources where one can obtain financial advice for saving, investing and borrowing. Describe the main function of **EACH** source. (3 marks)

Question 3

The *ozone layer depletion* and *fossil fuel depletion* are two major global concerns which have a direct impact on our quality of life.

- i) Explain the function of the *ozone layer* and outline **TWO** factors that are contributing towards its depletion. (1, 1 mark)
- ii) Outline the negative impacts of the ozone layer depletion on:
 - a) human health;
 - b) the global environment. (2, 2 marks)
- iii) Describe actions that can be taken by the following individuals to reduce the effect of *ozone layer depletion* and *fossil fuel depletion*.
 - a) A homemaker
 - b) A teenage student
 - c) An architect planning a house (2, 2, 2 marks)
- iv) Biological energy, such as *biomass*, *biogas*, *methane/landfill gas* and *biodiesel* are new fuels that can be used as a substitute for fossil fuels. Describe how each italicised bio-energy is produced, and state what it can be used for. (2, 2, 2, 2 marks)

Question 4

Although consumer experts and associations stress the importance of *consumer rights*, *consumer responsibilities* are equally important. Consumers need to be fully aware of both these rights and responsibilities in order to make informed choices.

- i) Define the italicised terms. Describe **TWO** rights and **TWO** responsibilities of consumers. (2, 2, 2 marks)
- ii) Justify, by giving **TWO** reasons, why online shopping is becoming ever so popular. Highlight and explain **TWO** rights pertaining to this type of shopping. (1, 2, 2 marks)
- iii) Consumer goods and services are protected by guarantee. List and define the **TWO** types of guarantees available locally. Describe their function highlighting the legal provision of **EACH** type of guarantee. (1, 2, 2 marks)
- iv) Sometimes consumers need to approach the *Consumer Association* and/or the *European Consumer Centre* (ECC Malta). Explain what the italicised entities are and describe the main function of **EACH**. (2, 2 marks)

Question 5

A young family with two school aged children is looking for a terraced house as their two bedroom apartment has become too small for their present needs.

- i) Outline **FOUR** ways how this family can search for their new house. For each method mentioned, highlight **ONE** advantage and **ONE** disadvantage. Answers provided must vary. (2, 4 marks)
- ii) Having found a suitable house, *a promise of sale* and a *contract* have to be drawn up. Define the italicised terms and give the function of each. (2, 2 marks)
- iii) Outline the costs that the family will incur when purchasing the house (from the promise of sale to when the contract is drawn). (5 marks)
- iv) Suggest **TWO** legal means which the family can use to raise money to buy and finish their new home. For **EACH** method mentioned, give **TWO** advantages and **TWO** disadvantages for the family. (1, 2, 2 marks)

Question 6

Babies grow into infants, toddlers and school children at a fast rate. If they are well-cared for and treated properly, they have a better chance of becoming healthy, good and responsible adults.

- i) List and describe the key development stages in a child between 0 – 4 years. Highlight **TWO** basic needs and give **TWO** examples for **EACH** stage of development. (2, 2, 2, 4 marks)
- ii) Explain, giving reasons, how play helps with the different types of motor development in a child. Give **TWO** examples of activities or play that develop **EACH** type of motor development. (1, 1, 2 marks)
- iii) Illustrate how play helps in **EACH** of the other areas of development. List **TWO** examples of play which help in **EACH** of these areas. (3, 3 marks)

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SUBJECT: HOME ECONOMICS AND HUMAN ECOLOGY
PAPER NUMBER: II
DATE: 4th September 2013
TIME: 9.00 a.m. to 12.00 noon

ANSWER ANY FIVE QUESTIONS (20 marks each)

Question 1

Food provides the body with both macro and micronutrients. Each nutrient has a specific function in the body and absence of any nutrient will negatively impact the well-being of an individual.

- i) Outline **TWO** differences between macronutrients and micronutrients. (1 mark)
- ii) Micronutrients are vital for different body functions.
- a) Outline **FOUR** chemical names of micronutrients required for the following functions in the body:
- i. healthy blood;
 - ii. strong bones and teeth. (2, 2 marks)
- b) For **EACH** micronutrient mentioned above, list another function of the nutrient in the body and **TWO** food sources rich in the nutrient. (4, 4 marks)
- iii) Suggest **FOUR** strategies, which could be implemented to reduce micronutrient losses during:
- a) storage of food;
 - b) food preparation . (2, 2 marks)
- iv) Give the recommended daily intakes of Vitamin A, C and D for a pregnant woman. For each specified vitamin, outline the effects of high and low intakes for the pregnant woman. (3 marks)

Question 2

After a series of medical tests, a 14-year-old female, already suffering from coeliac disease was further diagnosed with lactose intolerance.

- i) Define and give the aetiology of lactose intolerance. List **TWO** common symptoms associated with this condition. (1, 1, 1 mark)
- ii) Define coeliac disease and explain how this affects the functioning of the human body. (1, 2 marks)
- iii) Outline **TWO** important eating habits this teenager should adopt to cater for her conditions. (2 marks)
- iv) Highlight, giving reasons, the main nutritional needs of an underweight female teenager. (6 marks)
- v) Explain **THREE** different situations which may influence the food choices of a female teenager. Outline the nutritional implications of **EACH** choice made. (6 marks)

Question 3

Maintaining an appropriate energy balance is vital to ensure maintenance of body weight.

- i) Define *energy balance* and describe the effects of an energy imbalance in the body and its implications on human health. (1, 2 marks)
- ii) Describe **TEN** factors that determine energy requirements of individuals. (5 marks)
- iii) National efforts are being made to address the overweight and obesity status across the various Maltese age groups. Identify **FOUR** different national projects (specifying the target group) that have been launched to deal with obesity. Outline **TWO** economic and **TWO** social benefits of such projects. (4, 2 marks)
- iv) Baked lasagne is a popular dish in the Maltese islands. Outline **TEN** modifications that can be made to the traditional recipe to make it suitable for individuals on a weight reducing diet. Give nutritional justifications for **EACH** modification suggested. (6 marks)

Question 4

Anaemia is a condition which unfortunately can go undetermined in many people, and symptoms can be minor or vague.

- i) Define the italicised term. Identify and explain **TWO** main causes of anaemia. Identify **TWO** symptoms of anaemia. Describe the role of diet in the development and prevention of anaemia. (1, 4, 1, 1 mark)
- ii) State the recommended intakes of iron for the following groups of people, supporting your answer with a valid reason.
 - a) A 26-year-old male.
 - b) A woman between 19 years and 51 years.
 - c) A 60-year-old woman.
 - d) A 40-year-old male who has just undergone surgery. (2, 4 marks)
- iii) Illustrate how the body absorbs and metabolises iron. (2 marks)
- iv) Differentiate between haem iron and non-haem iron and identify a food source for each. (2, 1 mark)
- v) List **FOUR** different iron-rich snack foods that a parent can prepare for a primary school child as school lunch to ensure an adequate supply of iron. (2 marks)

Question 5

People do not eat glucose and glycogen directly; they eat carbohydrate-rich foods which their bodies then convert into *glucose* for immediate energy and into glycogen for reserve energy.

- i) With the aid of a labelled diagram, describe the chemical (physical) structure of a glucose unit. (1, 2 marks)
- ii) Explain the formation of disaccharides and polysaccharides from monosaccharides. (2, 2 marks)
- iii) Outline the main steps involved in the production of wheat flour. (3 marks)
- iv) Highlight the main difference between unrefined and refined cereals. (2, 2 marks)
- v) Outline **TWO** different types of fibre and highlight **TWO** benefits of fibre in the body. (1, 1 mark)
- vi) Illustrate the chemical and physical changes that occur to the structure of carbohydrates during the cooking of food. (2, 2 marks)

Question 6

Modern food biotechnologies, such as *genetic modification* and *irradiation*, pose environmental and health concerns amongst consumers.

- i) Define the italicised terms and explain the basic scientific processes involved. Give **TWO** food items that can be subjected to each biotechnological process given and explain how consumers can identify genetically modified and irradiated foods. (2, 2, 2 marks)
- ii) Outline **TWO** positive impacts of genetic engineering of crops and **TWO** positive impacts of food irradiation for:
 - a) the food producers;
 - b) the world population. (2, 2 marks)
- iii) Describe **TWO** negative impacts of the process of GMO production or of the actual GM product for **EACH** of the following:
 - a) the natural environment;
 - b) human health. (2, 2 marks)
- iv) *Free range* and *battery* are two chicken-egg producing methods. Explain the difference between these two chicken-egg farming methods and account for the shift in consumer preference for free range chicken meat and eggs. (2, 2 marks)
- v) Outline **FOUR** precautions that should be taken by farms and slaughter houses to avoid the transmission of animal diseases such as Avian flu and Bovine Spongiform Encephalopathy (BSE) to humans. (2 marks)