

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA
MATRICULATION EXAMINATION
INTERMEDIATE LEVEL
SEPTEMBER 2017

SUBJECT:	HOME ECONOMICS & HUMAN ECOLOGY
DATE:	1st September 2017
TIME:	9:00 a.m. to 12:05 p.m.

SECTION A

Answer ALL questions

1. Outline **TWO** roles of carbohydrates in a balanced diet and explain **TWO** negative implications of a high carbohydrate diet. (2, 2)
2. Identify, giving reasons, **TWO** types of individuals who may require a high sodium intake. Describe the link between sodium and arterial health. (2, 1)
3. Outline **THREE** dietary measures which could be adopted to safeguard colon health. (3)
4. Define trans fats and briefly explain how they are produced by food manufacturers. Identify **TWO** sources of trans fats in the diet of an adolescent, and outline **TWO** long-term effects that a diet high in trans fats could have on their health. (1, 1, 1, 2)
5. Explain the basic scientific process in the development of Genetically Modified Organisms (GMO). Name **TWO** foods that can be genetically modified. Give **TWO** negative environmental consequences of GMOs. (1, 1, 2)
6. Define the term financial planning and describe **THREE** factors which should generally be considered when planning a financial portfolio. (1, 3)
7. Outline **THREE** safety precautions that should be observed when using a microwave oven. Describe what could happen if **TWO** of these precautions are not observed. (3, 2)
8. Outline **TWO** different impacts of global warming on each of the following:
 - a) the natural environment; (2)
 - b) human beings. (2)
9. The State has introduced a financial incentive for people who take care of their elderly parents in their own homes. Outline **TWO** benefits of this incentive for an elderly person and **ONE** benefit for the state. (2, 1)

10. Identify **TWO** eating disorders from which teenagers may suffer. State **TWO** symptoms that might indicate that one is suffering from such a disorder. Explain briefly **ONE** emotional effect that suffering from an eating disorder could have on:
- a) the teenager;
 - b) other family members.

(1, 2, 2)

(Total: 40 marks)

SECTION B

Answer **ANY THREE** questions

Question 1

Proteins are nutrients essential at any stage in human life, but particularly important for growing children.

- a) Describe **FOUR** functions of proteins in the human body and explain the effects of its deficiency on children and adults. (4, 2)
- b) List **FOUR** protein-rich foods that are derived from animal sources and **FOUR** protein foods (other than legumes and nuts) derived from plant sources. (2, 2)
- c) Explain, giving **TWO** specific examples, how plant sources could be used in a complementary manner to make high value protein dishes for children. Give the nutritional analysis of **ONE** of such dishes, explaining how this meets the dietary needs of young children. (2, 3)
- d) Name an amino acid essential for children's growth. (1)
- e) Legumes are often sold as dried and canned products. Describe the basic processes that should be followed when preparing these ingredients for use in different dishes, and explain the underlying scientific reasons for these processes. (1, 3)

(Total: 20 marks)

Question 2

Vegetarianism is gaining popularity among younger generations.

- a) Define vegetarianism and outline the difference between vegetarians and vegans. (1, 2)
- b) Identify **THREE** factors that influence a person to become vegetarian. (3)
- c) Identify **FOUR** nutrients needed by a vegetarian pregnant woman. State **ONE** function and **ONE** food source of each nutrient. (2, 4, 2)
- d) Identify **FOUR** food products that should be avoided by a pregnant woman, who is not a vegetarian, giving reasons for your choice. (2, 4)

(Total: 20 marks)

Question 3

There are various labour saving devices available on the local market that help in food preparation.

- a) Identify **FOUR** labour saving devices that may be used in food preparation and suggest **TWO** reasons why these may make food preparation less stressful. (2, 2)
- b) Suggest **ONE** way how the environment could be affected negatively by appliances at the following stages, and suggest **ONE** measure that could be taken at each stage to ensure that such negative impacts are minimised:
 - i. production of appliance by manufacturer;
 - ii. purchase by consumer;
 - iii. use of appliance at home;
 - iv. disposal of the appliance. (4, 4)
- c) Identify a suitable labour saving device and describe **TWO** ways in which this device could facilitate work in the preparation of a meat pie. (2)
- d) Identify **FOUR** sources of information that are available to local consumers who would want to purchase the labour saving device mentioned in part (c) above. Outline **ONE** advantage and **ONE** disadvantage of **TWO** of the sources of information. (2, 4)

(Total: 20 marks)

Please turn the page.

Question 4

Middle-aged persons sometimes have to face the challenge of maintaining a healthy weight.

- a) Suggest **TWO** reasons why maintaining a normal body weight is more challenging at this stage in life. (2)
- b) Suggest **FOUR** diet-related guidelines that middle-aged persons should follow in order to maintain a healthy weight. (4)
- c) Discuss **THREE** benefits of physical activity for middle-aged people. (3)
- d) Describe **TWO** initiatives that could be adopted by the local media to encourage people to opt for a healthy lifestyle. (1½, 1½)
- e) Hypertension and diabetes Type II are **TWO** common diet-related diseases suffered by many Maltese elderly people. Discuss what causes each of these diseases and briefly explain how each disease develops. (2, 2, 2, 2)

(Total: 20 marks)