

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

**SECONDARY EDUCATION CERTIFICATE LEVEL**

**MAY 2016**

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| <b>SUBJECT:</b>      | <b>Agribusiness</b>       |
| <b>PAPER NUMBER:</b> | Controlled – Unit 2       |
| <b>DATE:</b>         | 1 <sup>st</sup> June 2016 |
| <b>TIME:</b>         | 10:00 a.m. to 11:35 a.m.  |

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**THIS PAPER SHOULD BE RETURNED TO THE INVIGILATOR  
AFTER THE EXAMINATION.**

**Name of candidate** \_\_\_\_\_

**I.D. number** \_\_\_\_\_

**School** \_\_\_\_\_

**Class** \_\_\_\_\_

**Scenario:**

You are employed by a plant nursery, which is organising an educational open weekend to provide information on vegetable and fruit production to the general public. You have been asked to answer the questions below to help an external designer to prepare the education material.

**Question 1**

**K1 (4 marks)**

Answer the following questions related to the cultivation of two popular crops cultivated in the Maltese Islands.

a. **Tomato** production is carried out between spring and summer.

i. During which months are tomatoes sown?

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ii. How many weeks does a tomato seed takes to become a seedling ready for transplanting?

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iii. Which is the most suitable irrigation system used to water tomatoes in the Maltese Islands?

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b. Underline the fertilizer that farmers should use in greater amounts when cultivating fruit crops. (Nitrogen fertilizer, Phosphorus fertilizer, Potassium fertilizer)

c. During the summer months, a farmer uses \_\_\_\_\_ to control the increased insect populations in the field and herbicides to control weeds.

d. Mention **one** use of tomatoes after harvesting.

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e. **Cabbage** production is carried out all year round.

i. During which months can cabbages be sown?

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ii. Mention **one** activity that a farmer can do to prepare the soil before transplanting.

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iii. The cabbage plant benefits from leaf wetting. Which is the most suitable irrigation system you would suggest to water cabbages?

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iv. Underline the fertilizer that farmers should use in greater amounts when cultivating leaf crops. (Nitrogen fertilizer, Phosphorus fertilizer, Potassium fertilizer)

**Question 2**

**K2 (4 marks)**

Fill in the blanks by choosing **one** word from the following:

*Fats, Carbohydrates, Vitamins, Beans*

- a. Potatoes are a very good source of \_\_\_\_\_.
- b. \_\_\_\_\_ are plants that have seeds rich in proteins.
- c. Olive oil and sunflower oil are good sources of \_\_\_\_\_.
- d. The carrot contains an orange pigment which is a good source of \_\_\_\_\_, important for good eye sight.

**Question 3**

**K4 (4 marks)**

Fill in the blanks by choosing the correct word from the list below. Each word should be used only once.

*Pumpkin, Onion, Potatoes, Stem, Seedling, Carrots, Bees, Seed, Leaves, Fruit*

A \_\_\_\_\_ can be sown in soil to start off the life of a plant. Some crops like the \_\_\_\_\_ are usually grown from tubers. Plants grow into a \_\_\_\_\_ which is a small version of the adult plant. They continue growing, developing new \_\_\_\_\_ and longer \_\_\_\_\_ and roots in the process. In \_\_\_\_\_, the roots develop larger than other crops until they are harvested for consumption. On the other hand, \_\_\_\_\_ develop storage organs at the base of the plant. Flowering crops have \_\_\_\_\_ pollinating their flowers to form a \_\_\_\_\_ which is then harvested. One such example is \_\_\_\_\_.

**Question 4**

**C2 (6 marks)**

Consider the following crops:

*Potatoes, Lettuce, Strawberries, Brussels sprouts, Carrots, Kohlrabi*

From the above list, give **one** example of crop that is cultivated for the following organs:

a. Swollen stem: \_\_\_\_\_

b. Leaf: \_\_\_\_\_

c. Root: \_\_\_\_\_

d. Tuber: \_\_\_\_\_

e. Buds : \_\_\_\_\_

f. Fruit: \_\_\_\_\_

**Question 5**

**K5 (4 marks)**

Crops need different nutrients in different quantities for their optimal growth. Underline the most important nutrient for the growth of each crop below:

a. Lettuce:            Nitrogen / Chlorine / Lead

b. Tomatoes:        Calcium / Sodium / Iodine

c. Potatoes:         Fluorine / Potassium / Lithium

d. Green Peppers:    Phosphorus / Aluminium / Silicon

**Question 6**

**C3 (6 marks)**

State whether the following statements are **advantages** or **disadvantages** of manure use in vegetable production:

- a. The increase of weeds in a field after manure application \_\_\_\_\_
- b. Manure use to increase soil nutrient content \_\_\_\_\_
- c. Soil retains more water when manure is applied to it \_\_\_\_\_
- d. Increase in humus levels in the soil \_\_\_\_\_
- e. Pathogen risk when using manure \_\_\_\_\_
- f. Leaching of nutrients from manure to the water table in the winter season \_\_\_\_\_

**Question 7**

**K7 (4 marks)**

The pesticide and fertilizer record sheets usually contain various information that is essential for the recording of pesticide and fertilizer applications.

Answer the following questions.

- a. A farmer should keep a record of the date of application of a pesticide or fertilizer applications. Give **two** other types of records that the farmer should keep in his/her record sheets.
  - i. \_\_\_\_\_
  - ii. \_\_\_\_\_
- b. Give **two** reasons as to why is record-keeping important in an agricultural enterprise.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**Question 8**

**K9 (4 marks)**

How should the following vegetable species be propagated? Choose **one** propagation method for each vegetable listed below.

*Seed, Root, Clove, Tuber*

- a. Potatoes: \_\_\_\_\_
- b. Spinach: \_\_\_\_\_
- c. Globe Artichoke: \_\_\_\_\_
- d. Garlic: \_\_\_\_\_

**Question 9**

**K10 (4 marks)**

Considering the list below, underline **four** factors that can affect harvesting time.

(air temperature, soil temperature, crop in adjacent field, irrigation, market price, day length, soil pH, field size)

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