



L-Università
ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL
2022 SUPPLEMENTARY SESSION**

SUBJECT: **Agribusiness**
PAPER NUMBER: Synoptic – Unit 2
DATE: 31st October 2022
TIME: 5:30 p.m. to 7:35 p.m.

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

For examiners' use only:

Question	1	2	3	4	5	6	7	8	Total
Score									
Maximum	6	8	8	8	8	12	8	12	70

Answer **ALL** questions in the space provided.

Scenario:

- Ray produces crops and ornamental fish.
- He needs to gather some knowledge on fish keeping and horticulture.
- Also, Ray will be exploring post-harvest practices.

Question 1

K-2 (6 marks)

a. List **TWO** nutrients required for fish to grow.

Nutrient 1: _____ (1)

Nutrient 2: _____ (1)

b. Describe the following feeds used in fish husbandry:

i. Live feed _____

_____ (1)

ii. Dry feed _____

_____ (1)

c. Outline the role of the **TWO** nutrients you listed in Question 1a for the healthy growth of fish.

_____ (2)

6

Question 2

K-3 (8 marks)

a. List **TWO** common fish health problems apart from lateral line disease and ich.

Common fish health problem 1: _____ (1)

Common fish health problem 2: _____ (1)

b. Outline **ONE** symptom of each common fish health problem you listed in Question 2a.

Symptom of fish health problem 1: _____
_____ (1)

Symptom of fish health problem 2: _____
_____ (1)

c. Indicate the correct treatment procedure to control each of the **TWO** fish health problems you listed in Question 2a.

_____ (4)

8

Question 3

K-5 (8 marks)

a. List **TWO** processes by which water travels through soil.

Process 1: _____ (1)

Process 2: _____ (1)

b. Describe the following plant structures that are involved in the intake and internal transport of water and soil nutrients.

Rooting System: _____

_____ (1)

This question continues on next page.

Xylem: _____

_____ (1)

- c. Outline the process through **FIVE** steps, by which water travels from soil to the atmosphere via transpiration.

_____ (4)

8

Question 4

K-9 (8 marks)

- a. Mention the different types of germination.

Germination type 1: _____ (1)

Germination type 2: _____ (1)

- b. Outline the conditions below that are required for optimum propagation of plants.

Temperature: _____

_____ (1)

Suitable Growing medium: _____

_____ (1)

- c. Describe the following propagation techniques used:

i. Rhizome cutting for ginger: _____

_____ (2)

ii. Layering for mint: _____

_____ (2)

8

Question 5

K-6 (8 marks)

a. Define photosynthesis.

_____ (2)

b. Describe how the following factors affect the rate of photosynthesis.

i. Temperature: _____

_____ (1)

ii. Water availability: _____

_____ (1)

c. Describe how a plant reacts to light direction and gravity to maximise photosynthesis.

ii. Growth rate: _____

_____ (2)

12

Question 7

K-8 (8 marks)

a. List **TWO** factors that contribute towards natural product spoilage and decay.

Factor 1: _____ (1)

Factor 2: _____ (1)

b. Outline **TWO** practices that slow down the process of natural product spoilage and decay.

Practice 1: _____ (1)

Practice 2: _____ (1)

c. Describe suitable packaging for the following products:

i. Strawberries (soft fruit): _____

_____ (2)

This question continues on next page.

ii. Potatoes: _____

_____ (2)

8

Question 8

C-5 (12 marks)

a. Outline the importance of keeping suitable levels of hygiene in post harvesting processes.

_____ (4)

b. Explain why the following post harvesting processes are required to present the product on the market.

i. Grading:

_____ (2)

ii. Labelling:

_____ (2)

c. Consider the following fresh tomatoes that were purchased.

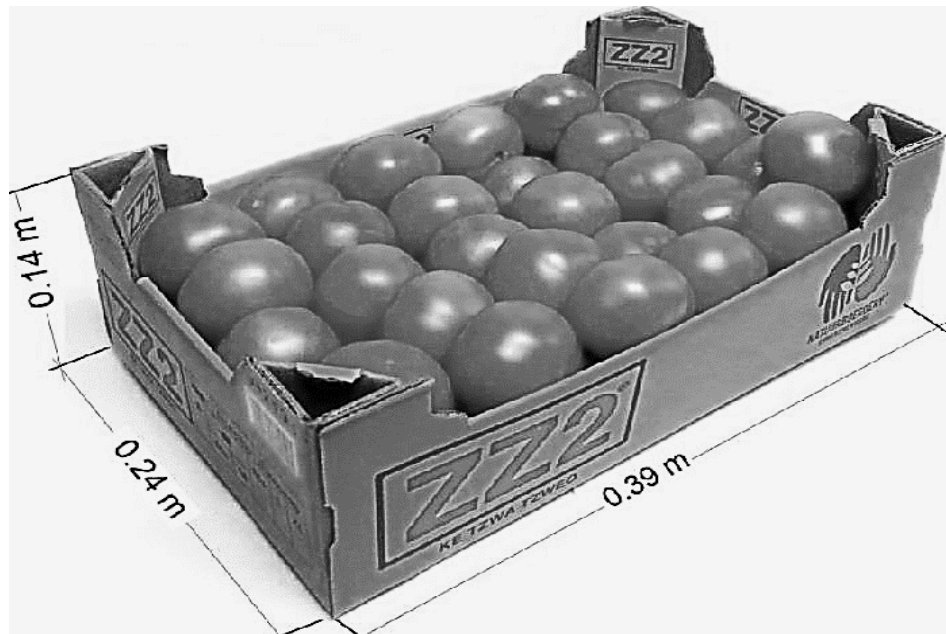


Figure 1 (Source: <https://www.researchgate.net>)

Evaluate the presentation of these tomatoes in terms of:

The grading of the product: _____

_____ (2)

The packaging of the product: _____

_____ (2)

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