



L-Università
ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL
2023 SUPPLEMENTARY SESSION**

SUBJECT: **Agribusiness**
PAPER NUMBER: Synoptic – Unit 2
DATE: 2nd November 2023
TIME: 11:30 a.m. to 1:35 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	12	8	12	8	8	70

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

Scenario

- Mary is gathering information to make a leaflet for the Agricultural Directorate.
- She will be needing information on aquaculture, plant physiology and propagation as well as methods to preserve fresh products' shelf life.

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. Dry feed: _____

_____ (1)

ii. Live feed: _____

_____ (1)

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

Role of nutrient 1: _____ (1)

Role of nutrient 2: _____ (1)

6

Question 2

K-3 (8 marks)

a. List **TWO** common fish health problems, apart from fish pop eye and lateral line disease.

Fish health problem 1: _____

Fish health problem 2: _____ (2)

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

_____ (4)

8

Question 3

K-6 (8 marks)

a. Define photosynthesis.

_____ (2)

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

i. Factor 1 – Temperature: _____

_____ (1)

ii. Factor 2 – Carbon dioxide concentration: _____

_____ (1)

This question continues on next page.

c. Discuss how light can be used to control:

Flowering: _____

_____ (2)

Germination: _____

_____ (2)

12

Question 5

K-8 (8 marks)

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

Factor 1: _____ (1)
Factor 2: _____ (1)

b. Outline how the following **TWO** practices can slow down the process of natural product spoilage and decay:

i. rapid reduction in temperature: _____

_____ (1)

ii. suitable storage: _____

_____ (1)

This question continues on next page.

c. Consider the presentation of the following strawberries that were purchased.



Figure 1. Packaged product.
(Source: <https://shorturl.at/oBCIR>)

Evaluate the presentation of these strawberries in terms of:

The grading of the product: _____

_____ (2)

The packaging of the product: _____

_____ (2)

12

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Question 7

K-9 (8 marks)

a. Mention the different types of germination.

Germination type 1: _____ (1)

Germination type 2: _____ (1)

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

i. Sheltering: _____
_____ (1)

ii. Free from pathogens/pests: _____
_____ (1)

c. Describe **TWO** different techniques used to propagate plants.

_____ (4)

8

Question 8

K-10 (8 marks)

a. List **TWO** growing media used for plant propagation and growth.

Growing medium 1: _____ (1)

Growing medium 2: _____ (1)

b. State a suitable growing medium for:

Open field production: _____ (1)

Production of seedlings: _____ (1)

c. Outline the characteristics of **ONE** of the growing media listed in Question 8a.

Growing Medium chosen: _____

Water drainage: _____
_____ (1)

Pathogen/pest free: _____
_____ (1)

Nutrient-holding capacity: _____
_____ (1)

Aeration: _____
_____ (1)

8

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