



L-Università
ta' Malta

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL
2021 SUPPLEMENTARY SESSION**

SUBJECT:	Agribusiness
PAPER NUMBER:	Synoptic – Unit 2
DATE:	1 st November 2021
TIME:	9:00 a.m. to 11:05 a.m.

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

Answer ALL questions in the space provided.

Scenario

- The director of a chain of agribusiness outlets, needs new personnel at two outlets; an aquarium shop, and a nursery.
- The personnel require periodical training to serve customers as efficiently as possible.

Question 1

K-2 (6 marks)

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

- i. _____ (0.5)
- ii. _____ (0.5)
- iii. _____ (0.5)
- iv. _____ (0.5)

b. Describe the following feeds used in fish husbandry.

- i. Dry feed _____

_____ (1)
- ii. Frozen feed _____

_____ (1)

c. Outline the roles of **FOUR** nutrients for healthy fish growth.

Question 2

C-1 (12 marks)

a. Describe **TWO** reasons why it is important to use live feed in fry/larva.

Reason 1: _____

_____ (2)

Reason 2: _____

_____ (2)

b. Explain why fish have different nutritional requirements at the following life stages.

i. juvenile stage: _____

_____ (2)

ii. adult stage: _____

_____ (2)

c. Select **ONE** feed for healthy fish growth at the following different life stages of an angel fish.

daphnia	artemia	rotifers	flakes
pellets	granules	molluscs	fish by-products

i. Fry/Larva: _____ (2)

ii. Adult: _____ (2)

Please turn the page.

Question 3

K-3 (8 marks)

a. List **FOUR** common fish health problems apart from fin rot and ich.

- i. _____ (0.5)
- ii. _____ (0.5)
- iii. _____ (0.5)
- iv. _____ (0.5)

b. Outline **TWO** symptoms of **TWO** fish health problems mentioned in Question 3a.

- i. _____ (1)
- ii. _____ (1)

c. Identify a correct treatment procedure from the box below, to control fin rot and ich:

Antifungal medicinal	Antibiotics	Lower water temperature	Raise water temperature
Steroidal treatment	Culling	Antiprotozoal agent	Anti-nematode medication

Question 4

K-5 (8 marks)

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

i. _____ (1)

ii. _____ (1)

b. Describe the **TWO** plant structures that are involved in the:

i. Intake of water and soil nutrients: _____

_____ (1)

ii. Internal transport of water and soil nutrients: _____

_____ (1)

c. Outline the **FIVE** steps as part of the process by which water travels from soil to the atmosphere via transpiration.

(4)

Question 5

K-6 (8 marks)

a. Define photosynthesis.

(2)

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

i. Light intensity: _____

(1)

ii. Temperature: _____

(1)

c. Describe how a plant reacts to the following external stimuli to maximise photosynthesis.

Gravity	Light direction
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Question 6

C-3 (12 marks)

a. Explain **TWO** ways how the environment can be modified in a protected cultivation.

Way 1: _____

(2)

Way 2: _____

(2)

b. Compare **TWO** characteristics of drip and mister/fogger irrigation systems.

This question continues on next page.

c. Discuss how light can be used to control the following plant processes in horticulture.

germination	growth rate
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(4)

Question 7

K-9 (8 marks)

a. Mention the **TWO** different types of germination.

- i. _____ (1)
- ii. _____ (1)

b. Outline **FOUR** conditions required for optimum propagation of plants.

- i. _____ (0.5)
- ii. _____ (0.5)
- iii. _____ (0.5)
- iv. _____ (0.5)

b. Outline the benefits obtained through the following practices that slow down the process of natural product spoilage and decay:

i. _____

_____ (1)

ii. _____

_____ (1)

c. Describe suitable packaging for the following products, in order to avoid spoilage and decay:

Potatoes	Herbs
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_____ (4)

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