

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE  
EXAMINATIONS BOARD**SECONDARY EDUCATION CERTIFICATE LEVEL  
2025 SUPPLEMENTARY SESSION**

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SUBJECT: **Agribusiness**  
PAPER NUMBER: Synoptic – Unit 2  
DATE: 3<sup>rd</sup> November 2025  
TIME: 2:30 p.m. to 4:35 p.m.

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**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	12	8	8	8	8	12	70

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



**Scenario**

Ben is researching information on crop science and cultivation and fish husbandry for a school project.

**Question 1**

**K-1 (6 marks)**

a. Match the **TWO** fish species in Figure 1 to their respective habitat, by drawing a line between them.

Fish species	Habitat
<p>Goldfish</p> 	<p>cold fresh water</p>
<p>Cardinal tetra</p> 	<p>Tropical planted fresh water</p>

(2)

Figure 1: Fish and their habitats

(Source: <https://www.deepai.org>)

b. Label the caudal fin and the pectoral fin on Figure 2 below, by drawing an arrow pointing to each fin, together with its name. (2)

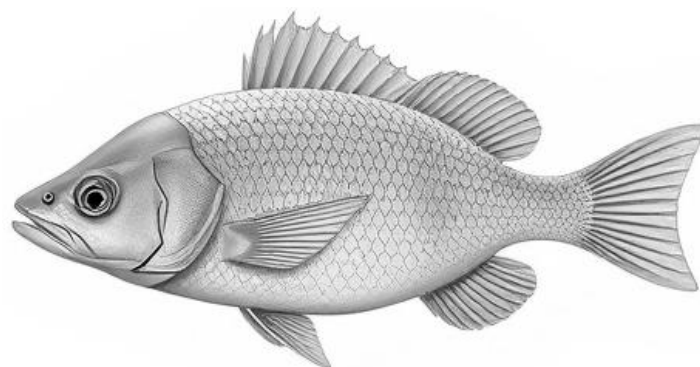


Figure 2: Internal and external morphology of a typical fish

(Source: <https://www.deepai.org>)

c. Outline the following fish habitats in terms of salinity and temperature.

Marine tropical	Cold fresh water
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6

(2)

**Question 2**

**K-4 (8 marks)**

a. Outline the use of the following basic accessories required in setting up a typical aquarium or tank.

Water Pump: \_\_\_\_\_  
\_\_\_\_\_ (1)

Air pump: \_\_\_\_\_  
\_\_\_\_\_ (1)

b. Outline the need for the following décor and lighting components in the setting up of an aquarium.

Decorative lighting: \_\_\_\_\_  
\_\_\_\_\_ (1)

Substrate: \_\_\_\_\_  
\_\_\_\_\_ (1)

c. Describe **TWO** tank requirements for goldfish and **TWO** cage requirements for seabream.

Tank requirements for goldfish: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2)

***This question continues on next page.***

Cage requirements for seabream: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (2)

8

**Question 3**

**C-2 (12 marks)**

a. Justify the selected aquarium size in terms of fish size and aggression, using the information provided in the box below.

Fish	Aquarium
20 dwarf African cichlids	200 litre tank

Fish size: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (2)

Aggression: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (2)

b. Explain **TWO** benefits of water change of a fish tank apart from replenishing trace minerals.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (4)





c. Water travels from soil to the atmosphere by transpiration. Outline this process in **FIVE** steps in order.

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(4)

8
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**Question 6**

**K-6 (8 marks)**

a. Define 'photosynthesis'.

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(2)

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

i. Carbon dioxide concentration:

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(1)

ii. Temperature:

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(1)

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c. Describe how a plant will react to the direction of light and gravity in order to maximise photosynthesis.

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(4)

8

**Question 7**

**K-7 (8 marks)**

a. List **TWO** common plant health problems apart from aphids and blossom end rot.

Plant health problem 1: \_\_\_\_\_ (1)

Plant health problem 2: \_\_\_\_\_ (1)

b. Identify the plant health problem in Figure 3, that is common in cruciferous plants like cabbage and broccoli.



Figure 3: Plant health problem  
(Source: <https://www.shutterstock.com>)

Plant health problem: \_\_\_\_\_ (2)



c. Figure 4 shows an image of carrots packaged in a plastic bag. These are for sale in a supermarket.



Figure 4: Carrots  
(Source: <https://www.chatgpt.com>)

Evaluate the presentation of these carrots in terms of:

The grading of the product: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2)

The packaging of the product: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2)

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