



Province of the
EASTERN CAPE
EDUCATION

**NELSON MANDELA BAY
DISTRICT**

**MARCH CONTROLLED
TEST**

GRADE 8

NATURAL SCIENCES

LEARNER'S NAME & SURNAME:

MARKS: 50

TIME: 1 Hour

INSTRUCTIONS

1. This question paper consists of TWO sections. Answer both sections.
 2. Answer all questions on the paper in blue or black ink.
 3. Answer all questions on the spaces provided.
 4. Read each question carefully before answering it.
 5. Pay attention to the mark allocation.
 6. Plan your time carefully.
 7. Follow the diagram rules.
 8. Write neatly and legibly.
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The question paper consists of 6 pages excluding the cover page.

SECTION A**QUESTION 1**

Four options are provided as possible answers for each question. Each question has only ONE correct answer. Write the correct answer in your ANSWER SHEET.

1.1 Which of these is NOT needed to make food in a plant?

- A. Flowers
 - B. Sunlight
 - C. Carbon dioxide
 - D. Chlorophyll
- (1)

1.2 Harmful microorganisms damage cells and tissues of the organism by...

- A. eating down the cells
 - B. Reproducing
 - C. Hibernating
 - D. Camouflaging
- (1)

1.3 This describes all the living things in an area where plants and animals live.

- A. Habitat
 - B. Population
 - C. Community
 - D. Mutualism
- (1)

1.4 What does parasitism in an ecosystem mean?

- A. Both organisms benefit.
 - B. One organism benefits and the other organism is not harmed
 - C. One organism benefits and the other one is harmed.
 - D. Organisms cannot make their own food.
- (1)

1.5 The micro-organisms Fungi (yeast) can be used in the industry to manufacture:

- (i) Beer
- (ii) Bread
- (iii) Medicine
- (iv) Fermentation drinks

Choose the correct combination for the answer to QUESTION 1.5

- A. (i) and (ii)
 - B. (ii) and (iii)
 - C. (iii) and (iv)
 - D. All of the above
- (1)

QUESTION 2

Indicate which of the descriptions in **Column A** matches with which term in **Column B**. Write your answer next to the question number in your ANSWER SHEET. E.g. 2.6 J.

COLUMN A	COLUMN B
2.1 A substance that is used to test for carbon dioxide	A. Iodine
2.2 All the non-living things in an ecosystem	B. Vaccine
2.3 Can protect against diseases caused by viruses	C. Clear lime water
2.4 An organism that breaks down the remains of dead plants and animals	D. Abiotic
2.5 The study of the interactions between organisms and with their physical environment	E. Ecology
	F. Decomposer
	G. Respiration

[5]**QUESTION 3**

Give the correct scientific term for each of the following descriptions. Write your answer in the spaces provided in your ANSWER SHEET.

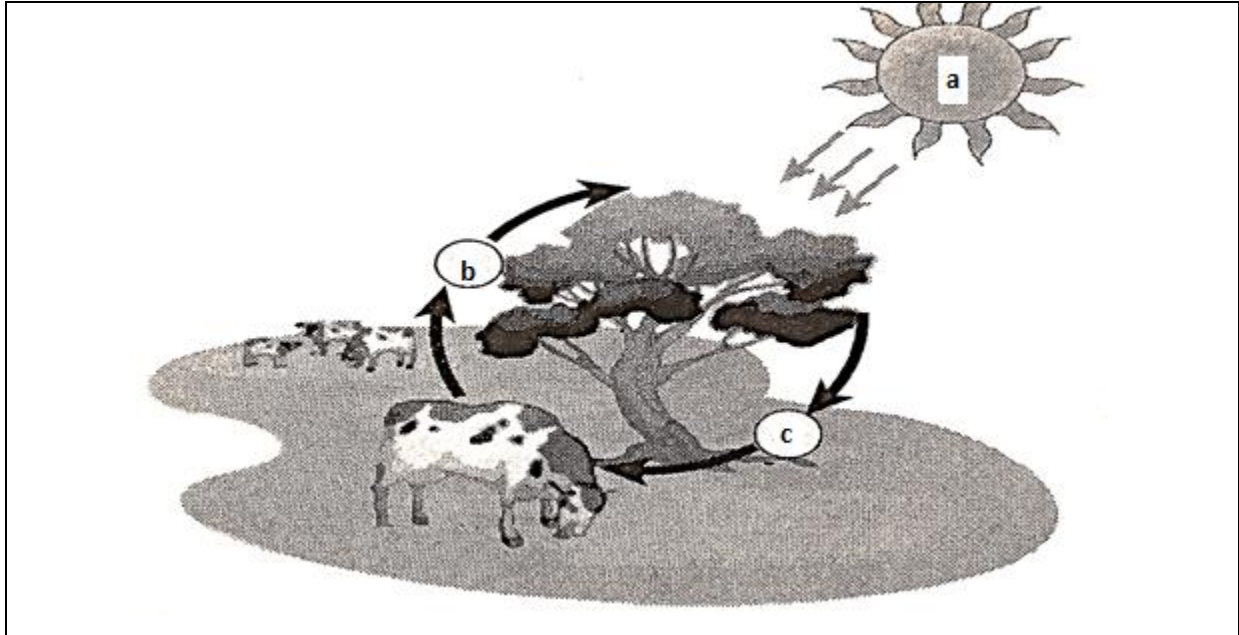
- 3.1 Organisms using their colour to blend with the environment. (1)
- 3.2 Animals that eat grass only. (1)
- 3.3 Plants that produce their own food. (1)
- 3.4 The type of micro-organism that causes AIDS. (1)
- 3.5 An organelle in a cell where respiration takes place. (1)

[5]**TOTAL SECTION A:15**

SECTION B

QUESTION 4

The diagram below represents the relationship between two processes that takes place in living organisms.



4.1 Name the process taking place in:

4.1.1 The cells of the tree. (1)

4.1.2 The cells of the cow. (1)

4.2 Supply labels for gases **b** and **c**. (2)

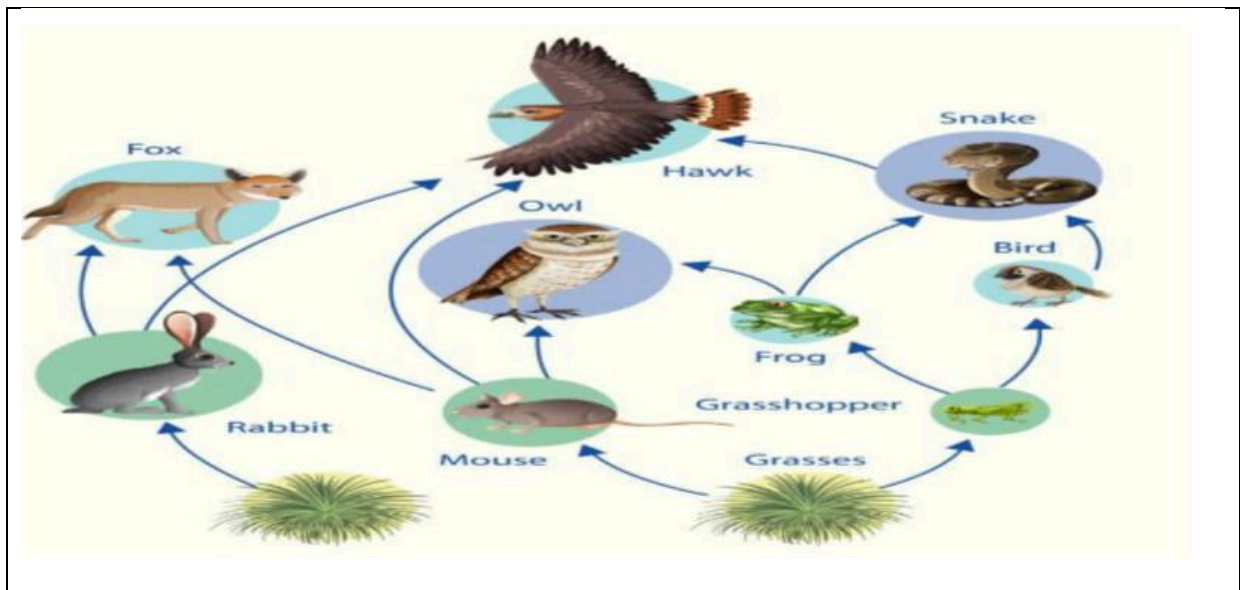
4.3 Write the chemical formula for photosynthesis in words. (2)

4.4 Photosynthesis produces glucose. Name TWO substances that glucose is converted into in a plant. (2)

[8]

QUESTION 5

Study the diagram below and answer the questions that follow.



5.1 Identify the above diagram. (1)

5.2 From the diagram above, provide your own food chain with FOUR trophic levels. (4)

5.3 Explain what happens to the energy levels as you move up the food chain. (2)

5.4 From the above diagram, name the following:

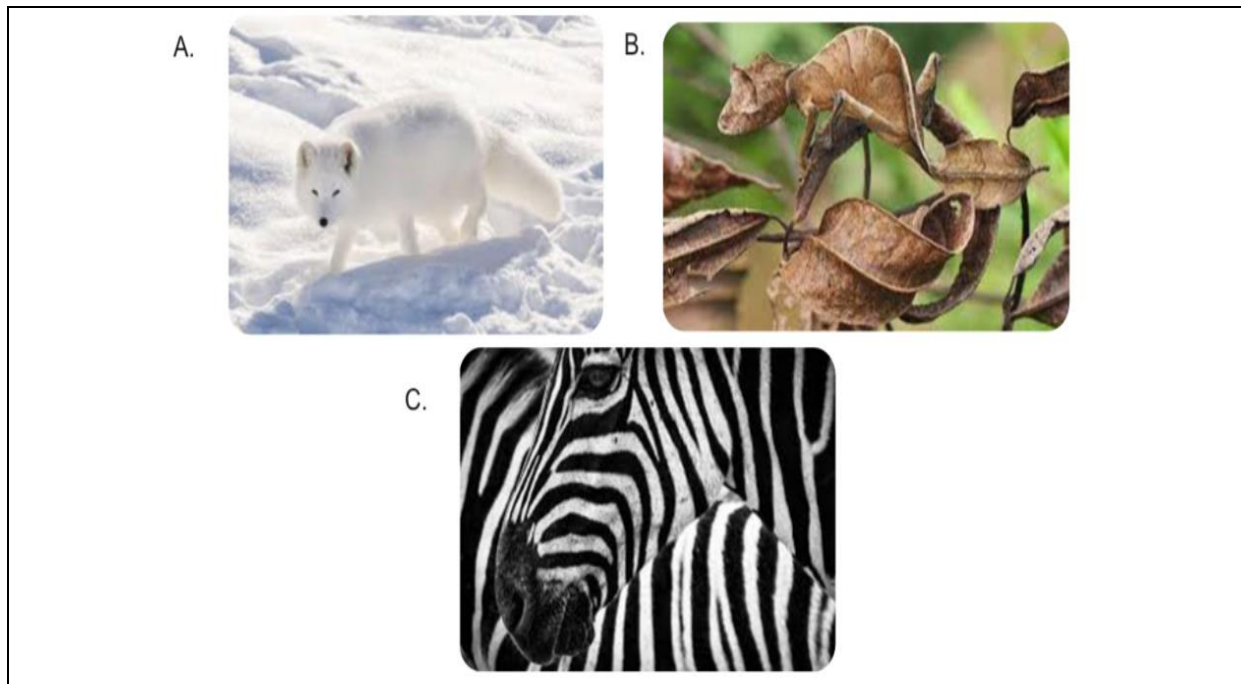
(a) A producer (1)

(b) A herbivore (1)

(c) A carnivore (1)

[10]

5.5 Animals must adapt to different environments to ensure their survival. Study the following photos and answer the questions that follow.



5.5.1 Define the term *adaptation*. (2)

5.6 Distinguish between physical and behavioural adaptation. (2)

5.7 Explain the difference between camouflage and mimicry. (2)

5.8 Which of the photographs (A to C) suggest:

(a) Camouflage (1)

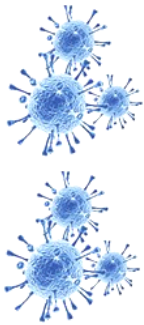
(b) Mimicry (1)

5.9 Name TWO methods by which you can contribute to the conservation of the ecosystem. (2)

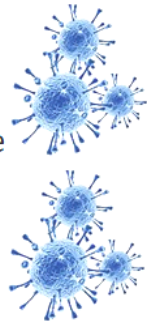
[10]

QUESTION 6

Read the passage and answer the questions that follow.

*Omicron*

The Omicron Corona variant is known to spread faster than all known variants so far, worse, it is also affecting those who have been vaccinated. Research shows that only a small percentage of those infected would need hospitalization or could die from the variant and it also causes mild disease. (CDC)



- 6.1 What is Omicron? (1)
- 6.2 Does the virus infect people who have been vaccinated? (1)
- 6.3 Discuss how harmful microorganisms can cause diseases. (2)
- 6.4 Which virus does Omicron originate from? (1)
- 6.5 Provide TWO ways to prevent the spread of a virus (2)
- [7]

TOTAL SECTION B:35

GRAND TOTAL:50