education
Department of Education
FREE STATE PROVINCE

GRADE 8 **NATURAL SCIENCES** **MARCH 2015**

TIME: 1 HOUR **MARKS: 50**

INSTRUCTIONS:

1. The paper consists of **TWO SECTIONS** divided into **FOUR** questions. Answer all the questions.
2. Number all questions exactly as in the question paper..

SECTION A

QUESTION 1

1.1 Various options are provided as possible answers to the following questions. Choose the correct answer and write only the letter (A – D) next to the corresponding question number (1.1.1 – 1.1.6).

1.1.1 What are the main products of respiration?

A bacteria

B plants

C fossil fuels

D CO_2

1.1.2 For photosynthesis to take place, the following components are needed:

A food, oxygen and chlorophyll

B energy, light energy and carbon compounds

C oxygen, carbon dioxide and water

D light energy, carbon dioxide and water

1.1.3 The entire section of the Earth's surface that supports life is called:

A biome

B biosphere

C ecosystem

D community

1.1.4 A population is made up of ...

A individuals

B communities

C ecosystems

D different species

1.1.5 Which of the following would probably occur if all primary consumers are removed from a closed ecosystem?

A The producers will be destroyed.

B The secondary consumers will increase.

C Carnivores will start to die.

D Herbivores will decrease.

1.1.6 Micro – organisms that are generally considered to be non – living...

A viruses

B protists

C bacteria

D fungi

1.2 Give ONE word OR term for each of the following statements. Write only the word OR term next to the question number.

1.2.1. A process taking place in living cells whereby energy in the form of ATP is formed. (1)

1.2.2 An organelle in a cell that helps with the release of energy. (1)

1.2.3 Herbivores, carnivores, omnivores and parasites in food chains. (1)

1.2.4 Various populations living together in a particular habitat that depend upon each other. (1)

1.2.5 This disease is caused by a parasite carried by a mosquito. (1)

[5]

1.3 Choose the item from COLUMN B that best matches the description in COLUMN A. Write only the letter (A – E) next to the question number (1.3.1 – 1.3.5).

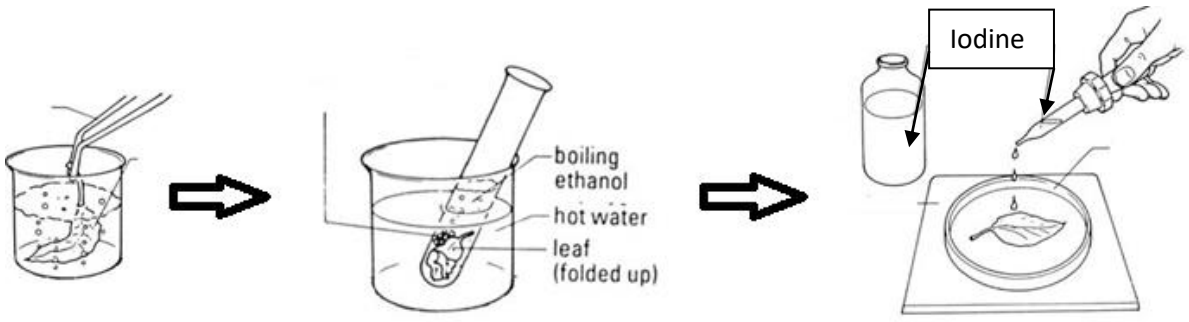
COLUMN A		COLUMN B	
1.3.1	The light energy trapping pigment found in leaves.	A	food web
1.3.2	Soil, air, water, wind and sunlight.	B	iodine solution
1.3.3	A substance that is used to test for carbon dioxide.	C	chlorophyll
1.3.4	An example of a protist.	D	clear lime water
1.3.5	plant→locust→lizard→hawk	E	atom
		F	abiotic
		G	Amoeba
		H	biotic
		I	food chain

[5]

SECTION B

QUSTION 2

The diagram below illustrates apparatus used in an experiment.



Result

Questions 2.1 to 2.3 relate to the experiment that is represented in the diagram:

2.1 Identify the experiment illustrated by the diagrams. (2)

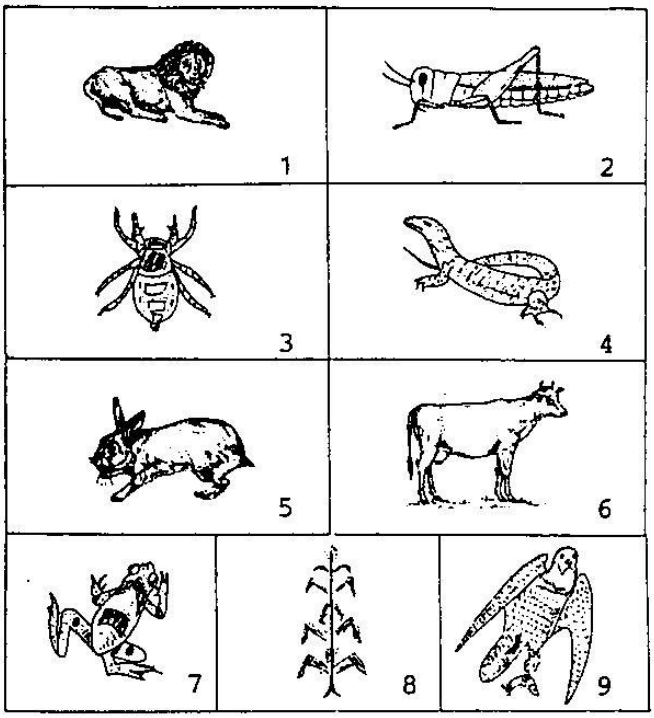
2.2 Why were some plants placed in a well-lit area with direct sunlight and others in a dark area? (3)

2.3 Explain what the results of the iodine indicate? (4)

[9]

QUESTION 3

3.1 Study the following diagram and answer the question that follows:

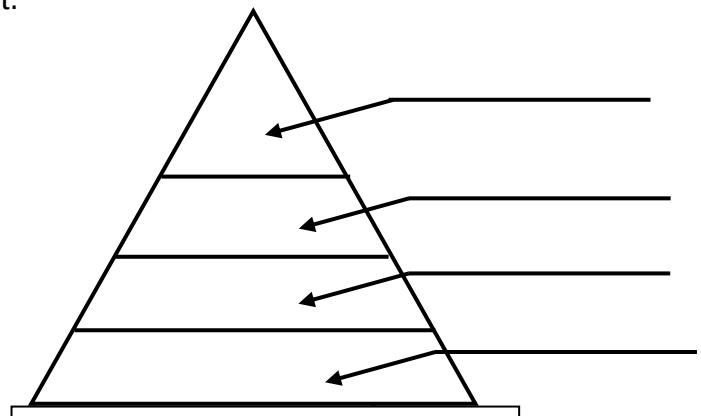


3.1.1 Identify TWO secondary consumers from the diagram.
Write the numbers of these two consumers in your answer sheet. (2)

3.2 Refer to the following list of organisms and answer the questions which follow:

Locust, Egret, Frog, Green leaves.

3.2.1. Re-draw the following food pyramid in your answering book and label the four levels of the pyramid with the correct NAME of the organism, selected from the list. (4)



Pyramid of a certain food chain

3.2.2. What would happen to the other organisms mentioned in question 3.2.1 if all the secondary consumers were destroyed? (3)

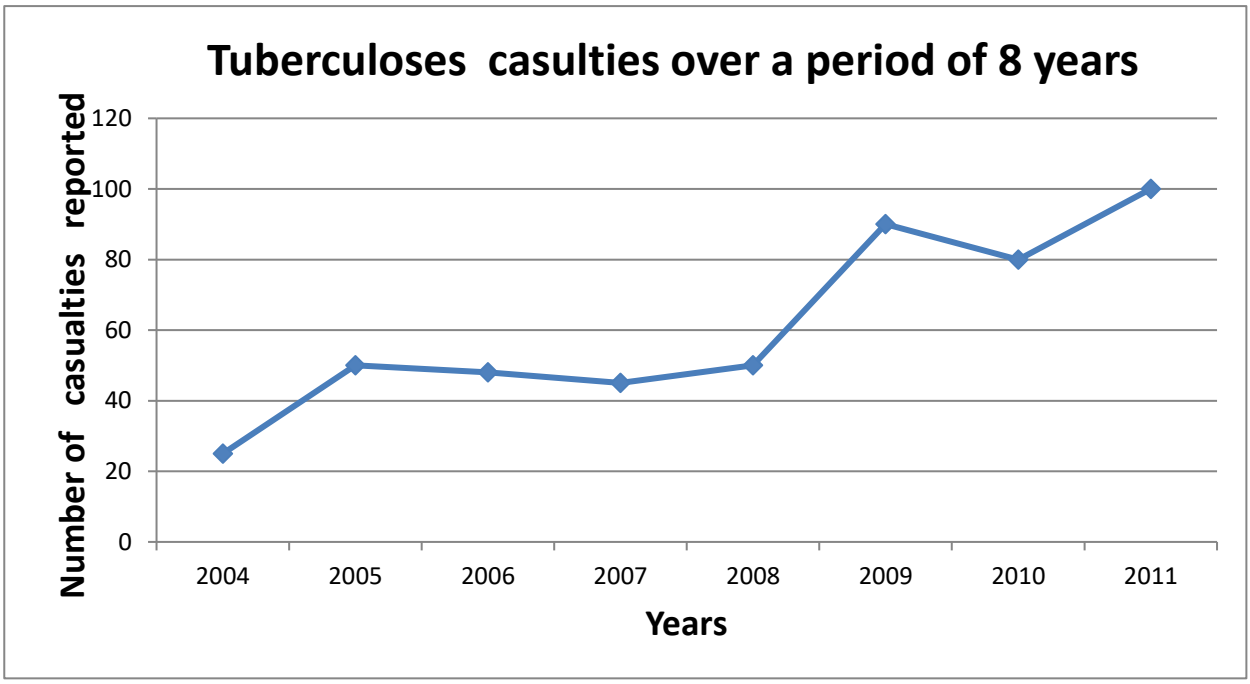
3.3 How do temperature changes in a certain area affect plant life? (3)

3.4 Littering is the result of carelessness and lack of concern and respect for the environment. Name two ways in which garbage, spread over the landscape, can be harmful to the environment.

(2)
[14]

QUESTION 4

4.1 The graph below shows the prevalence of tuberculoses casualties over a period of 8 years.



4.1.1 How many casualties due to tuberculoses were recorded in 2007? (1)

4.1.2 In which TWO years were the same number of casualties due to tuberculoses, reported? (2)

4.1.3 Use the graph and identify the following:

4.1.3.1 the dependant variable

4.1.3.2 the independent variable (2)

4.1.4. Which year shows highest the number of tuberculoses casualties? Write down the year and the number of casualties. (2)

4.1.5 During which year was the most rapid increase of tuberculoses casualties reported, and with how many casualties? (2)

4.1.6 Study the graph and estimate what the minimum number of tuberculoses casualties will be in 2016. (2)

[11]

SECTION A = 16
SECTION B = 34
TOTAL = 50