



# TOM NEWBY SCHOOL EXAMINATION



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<b>Subject</b>	<b>Natural Science</b>	<b>Examiner</b>	<b>Mr Hudson, Mrs Fourie</b>
<b>Date</b>	<b>4 June 2018</b>	<b>Total marks</b>	<b>60</b>
<b>Grade</b>	<b>7</b>	<b>Duration</b>	<b>1 ½ Hours</b>
		<b>Moderator</b>	<b>Mrs Fourie, Ms Mpesu</b>
<b>Special instructions/ Equipment</b>	<ol style="list-style-type: none"><li>1. Answer all the questions on the answer sheet provided.</li><li>2. Read and answer ALL questions thoroughly.</li><li>3. Write neatly and legibly in blue pen.</li><li>4. Use a pencil for any drawings.</li><li>5. Good luck! Think before you INK!</li></ol>		
This assessment has been compiled using notes and information contained in the Tom Newby School resource material. The marking memorandum has been compiled accordingly. While alternative responses will be given due acknowledgement, the official memorandum will be considered a priority document to ensure uniformity of marking.			

Name:	Surname:	Class:
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## SECTION A – LIFE AND LIVING

### QUESTION 1

Choose the correct answer from the possible answers given in each statement. Write down only the correct letter next to the relevant number. (5)

1. All of life on Earth exists in an area known as the .....

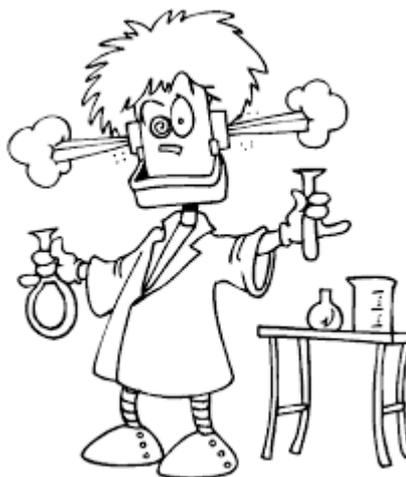
  - a) Hydrosphere
  - b) Atmosphere
  - c) Biosphere
  - d) Litosphere

2. Soil is non-living, so we say soil is ...

  - a) Biotic
  - b) A mixture of air
  - c) Abiotic
  - d) An organism

3. During respiration ...

  - a) Food is produced
  - b) Growth occurs (happens)
  - c) Energy is released
  - d) Energy is needed



4. The stamen is the male structure of the flower. It is made up of ...
- The stigma and style
  - The receptacle and sepal
  - The ovary and the sticky stigma
  - The anther and filament
5. Crustaceans are classified to have the following body parts:
- Four pairs of jointed legs
  - Book lungs and they produce, silk webs
  - Soft-bodied animals with a head and foot region
  - A soft exoskeleton with only an abdomen

(5)

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_

**QUESTION 2**

Match the given information in Column B with the term in Column A. Write the alphabet letter next to the given number in the space provided.

(5)

COLUMN A	COLUMN B
1. Gymnosperms	A. Statement explaining what will happen in experiment.
2. Vertebrates	B. Process of scattering seeds.
3. Variation	C. Plants that produce cones.
4. Hypothesis	D. Differences between living things of the same species.
5. Seed dispersal	E. Animals that have a backbone.

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_

**QUESTION 3.1**

Look at the image of the animal. Answer the questions on the next page.

(5)



1. What type of body covering does this animal have? (1)  
\_\_\_\_\_
2. Is this animal cold-blooded or warm-blooded? Why do you say so? (1)  
\_\_\_\_\_  
\_\_\_\_\_
3. What organs does this animal use for breathing? (1)  
\_\_\_\_\_
4. What types and how many limbs does this animal have? (1)  
\_\_\_\_\_
5. What class is this animal? (1)  
\_\_\_\_\_

### **QUESTION 3.2**

Take a closer look at the image of a plant. Answer the questions by filling in the missing information or choosing the correct answer. (5)



1. What kind of plant is this?  
A monocotyledon or a dicotyledon. (1)  
\_\_\_\_\_
2. What kind of roots does this plant have? (1)  
Tap roots or Fibrous roots.  
\_\_\_\_\_
3. Do you think this plant has parallel leaves or net-veined leaves? (1)  
\_\_\_\_\_

4. What is the name of this plant? (1)

\_\_\_\_\_

5. How many multiples of flowers will this plant have? (1)

4 / 5 multiples or 3 / 6 / 9 multiples.

\_\_\_\_\_

### **QUESTION 4.1**

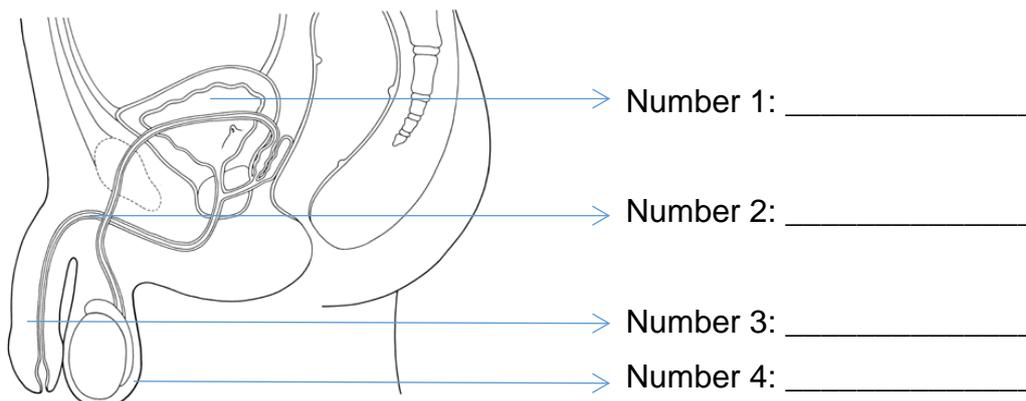
Complete the following sentences by choosing the correct word/s in brackets. Write the correct word/s next to the given number. (5)

1. A flower's (petals, buds, structures) are usually brightly coloured to attract pollinators, such as butterflies and bees. \_\_\_\_\_ (1)
2. Animals that are cold-blooded and also terrestrial are (mammals, fish, reptiles). \_\_\_\_\_ (1)
3. Plants/Plantae release a gas called (methane, carbon dioxide or nitrogen) \_\_\_\_\_ (1)
4. HIV or Human Immunodeficiency Virus attacks the (cells only, the immune system, bodily fluids). \_\_\_\_\_ (1)
5. The seeds of gymnosperms form in (flowers, fruit, cones) of plants like cycads and pine trees. \_\_\_\_\_ (1)

### **QUESTION 4.2**

Fill in the missing words in the statements or images below. (5)

1. A female is pregnant for \_\_\_\_\_ months. (1)
2. The process when a baby changes from immature to an adult is called the \_\_\_\_\_ (1)
3. An unborn baby that is still developing in the uterus is called a \_\_\_\_\_ (1)
4. Label the missing parts of the male body: (½ mark each)



**SECTION B – MATTER AND MATERIALS****QUESTION 5**

Identify if the following statements are **TRUE** or **FALSE**. (5)

1. Materials that are flexible can be brittle and break easily. \_\_\_\_\_
2. Metals are shiny and strong. \_\_\_\_\_
3. The best method to separate a mixture of sugar and water is through magnetism.  
\_\_\_\_\_
4. The pH scale measures how strong an acid or a base is. \_\_\_\_\_
5. When we melt something it means a liquid changes into a gas. \_\_\_\_\_

**QUESTION 6**

Give one word to describe the following: (5)

1. Strong \_\_\_\_\_ will not bend, break or shatter easily.
2. A very good conductor of electricity that can be shaped into jewellery \_\_\_\_\_.
3. Substances that taste bitter and feel soapy, are \_\_\_\_\_.
4. Materials that cannot carry an electric current are called \_\_\_\_\_.
5. Many fizzy cold drinks are in cans made from \_\_\_\_\_.

**QUESTION 7**

Answer the following questions on mixtures/methods of physical separation:



1. List and explain two physical properties of the Colgate toothpaste seen in the image above. (2)

\_\_\_\_\_

\_\_\_\_\_

2. At what temperature does water boil? (1)

\_\_\_\_\_

3. What is a mixture?

(1)

4. If one substance is magnetic and the other substance is not, what can be used to separate the mixture? (2)

Look carefully at the Periodic table to answer the questions.

**Periodic Table of the Elements**

**Legend:**

- Metals (Blue)
- Transition Elements (Yellow)
- Radioactive (Red)
- Synthetic (Light Blue)
- Noble Gases (Orange)
- Actinide Series (Purple)
- Lanthanide Series (Green)
- Nonmetals (Pink)

**Callout for Oxygen (O):**

- Group notation: VIA
- Atomic Number: 8
- Number of electrons in each shell: 2, 6
- Symbol: O
- Name: Oxygen
- Atomic Mass: 15.9994
- Period: 2

5. The elements in the Periodic table are arranged into three main categories, namely metals, semi-metals and \_\_\_\_\_ (1)

6. Look at the left side of the Periodic table. Find number 20. Give the name of the element in number 20. \_\_\_\_\_ (1)

7. Is this element a metal/semi-metal or alkali metal? \_\_\_\_\_ (1)

8. Give this element's atomic number. \_\_\_\_\_ (1)

9. What is the function of this element in the human body? \_\_\_\_\_ (1)

10. Give symbols / names for the following elements (2)

a) Boron = \_\_\_\_\_ (½)

b) Iodine = \_\_\_\_\_ (½)

c) He = \_\_\_\_\_ (½)

d) Pb = \_\_\_\_\_ (½)

### **QUESTION 8**

Look at the pictures below which show us the environmental impact of mining and pollution. Answer the questions below:



1. Air pollution is caused by... (2)

\_\_\_\_\_

\_\_\_\_\_

2. What do oil spills in the ocean do to sea-life? (1)

\_\_\_\_\_

\_\_\_\_\_

3. Give two reasons why you think plastic is harmful to our environment. (2)

\_\_\_\_\_

\_\_\_\_\_

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4. How long does it take for bio-degradable items to break down? (1)

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5. What is recycling? (2)

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6. What can we do to help with recycling? Mention two ways. (2)

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**Total: 60**