

Blouberg Ridge Primary School

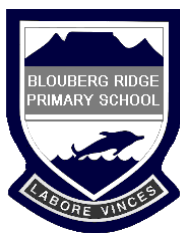
Natural Science

Name: Marking Guideline

Date: 29 June 2021

Examiner: L. Lopes

Task 4: Test



Marker and date: L.Lopes

Grade 6

Time allocation: 1 hour

Moderator:

Total: 45

Instructions:

- This test paper consists of 5 pages.
- Read through all the questions before starting.
- Good luck! 😊

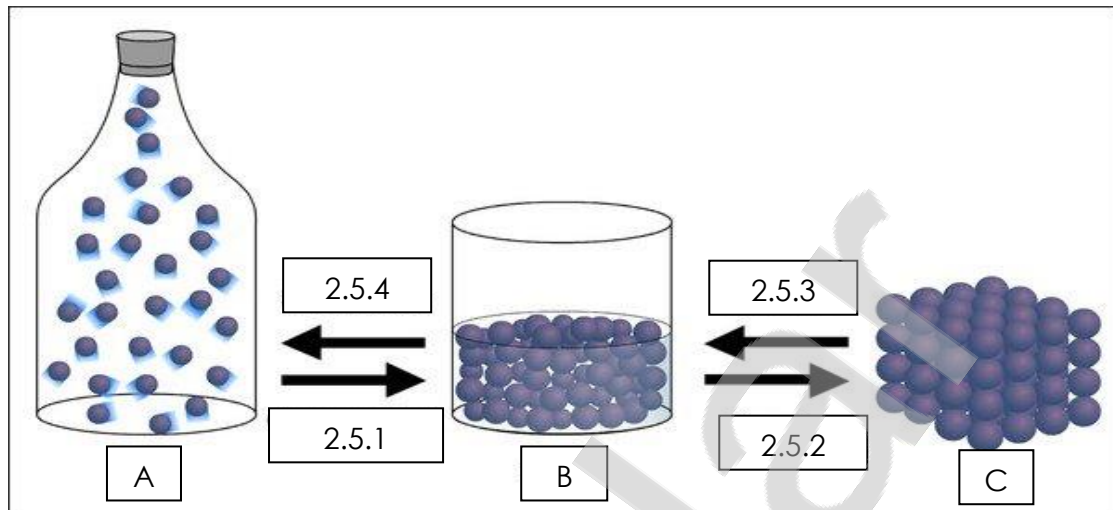
Question 1: Indicate the correct answer by marking a cross(x) over the appropriate letter. (LO) [5]

- 1.1) Which of the following properties is TRUE for the arrangement of particles in a liquid?
- Particles are very far apart
 - Particles can move freely in all directions
 - Particles have a fixed pattern
 - Small spaces between particles ✓**
- 1.2) When dissolving sugar in water, the water component is called the.....
- Solute
 - Solvent ✓**
 - Solution
 - Soluble
- 1.3) Sieving refers to...
- Separating a liquid and a substance by pouring it through a material like a mesh or fabric.
 - Use a tool with holes that allows pieces of a certain size to pass through. ✓**
 - Allow a substance mixed with a liquid, to settle at the bottom.
 - Break up a mixture into the substances mixed.
- 1.4) Which of the following statements is FALSE
- You can separate a mixture of coins by hand sorting.
 - You can separate a mixture of salt and water by evaporating the water.
 - You can separate a mixture of oil and water by filtering it. ✓**
 - You can separate a mixture of sand and water by filtering it.

- 1.5) Which one of the following statements is TRUE
- Matter is made of tiny particles that can be seen with the eye.
 - Particles of matter have spaces between them. ✓**
 - Not all particles of matter vibrate or move.
 - All of the above.

Question 2: MATTER.

[14]



- What do we call the solid state of water? **ice ✓ (LO)** (1)
- What do we call the liquid state of water? **water ✓ (LO)** (1)
- What do we call the gas state of water? **Water vapour/steam ✓ (LO)** (1)
- Provide labels for the states of matter found at A, B and C. **(LO)** (3)

A: gas ✓ B: liquid ✓ C: solid ✓

- What processes take place at: **(MO)** (4)
 - condensation ✓**
 - freezing / solidifying ✓**
 - melting ✓**
 - evaporation ✓**

- 2.6) Explain the difference between solids and gases by referring to the particles (and how they behave) **(MO)** (4)

<u>Solids</u>	<u>Gases</u>
<i>EG: Very small spaces between the particles</i>	<i>EG: Big spaces between the particles.</i>
* Fixed position ✓	* No fixed position or shape ✓
* cannot move freely ✓	* can move freely in all directions ✓

Question 3: Mixtures and solutions. [13]

- 3.1) Explain the difference between a mixture and a solution?**(MO)** (2)

Mixture: made of two or more substances that are combined, you can still see✓ **the substances.**

Solution: two or more substances that are combined but one has dissolved into the other one. No longer able to see ✓ **the different substances in the mixture.**

- 3.2) Give an example of a mixture of solids that can clearly be seen after mixing and that can be sorted by hand. **(LO)** (1)

Eg: smarties and astros (any other reasonable answer) ✓

- 3.3) Give an example of a mixture of solids where the substances cannot be seen easily after mixing, but they can be separated by sieving. **(LO)** (1)

Eg: flour and rice (Any other reasonable answer) ✓

- 3.4) In a mixture of oil and water, which substance do you think is lighter: oil or water? Give a reason for your answer. **(MO)** (2)

✓**Oil. Because it floats on the water / water sinks to the bottom**✓

- 3.5) Draw and label a diagram of a mixture of oil and water.**(LO)** (2)

Award a mark for correct placement of oil✓

Award a mark for the correct placement of water✓

3.6) When Michael had finished drinking his tea, he noticed that there was still some sugar left in the bottom of his cup. He had used boiling water and he had stirred his tea before drinking it.

3.6.1) Provide Michael with a possible explanation for this. **(HO)** (1)

The solution is saturated/ it can no longer hold any more sugar/ no more space in the liquid for the sugar to dissolve. ✓

3.6.2) Michael stirred the hot solution to speed up the rate of dissolving. Mention another factor that would affect the rate at which the sugar would dissolve. **(MO)** (1)

Grain size ✓

3.7) Complete the following sentences by filling in the missing words. **(LO)**

3.7.1) When the sugar dissolved in the water, it formed a **solution**. ✓ (1)

3.7.2) The sugar is known as the **solute** ✓ because it dissolved in the water (1)

3.7.3) The water is known as the **solvent** ✓ because it is the liquid into which the sugar dissolved. (1)

Question 4. WETLANDS [6]

4.1) Explain why wetlands are so important? **(HO)** (3)

They provide a habitat and breeding ground for many different plants and animals

They are a source of water for plants and animals.

They remove both soluble and insoluble substances from the water.

They act like giant sponges which store water and prevent flooding during heavy rains.

They help to keep water in streams and rivers flowing during a dry season.

(Any 3) ✓✓✓

4.2) *As the world's population increases, more and more wetlands are being drained. The world has lost half of its wetlands in the last hundred years.*

4.2.1) Why are wetlands being destroyed? **(LO)** (2)

To build more housing/ or to build more roads or factories/ for agriculture (like growing rice)

(Any 2) ✓✓

4.2.2) How is the biodiversity effected when wetlands are destroyed? **(HO)** (1)

The plants and animals will no longer have a home. (Any 1) ✓

Some of the plants and animals will die.

Some animals might move away.

Study the picture below and answer the questions that follow.



5.1) Name 2 insoluble pollutants that could be found in this river. (LO) (2)

Plastic, fishing line, glass, paper, tins (Any other correct answer) ✓✓

5.2) Mention two reasons why you think it is important to keep our rivers clean. (HO) (2)

Humans and animals need clean water to drink to stay healthy.

Plants need water for photosynthesis.

Some plants and animals need clean water in which to live and grow.

Humans need clean water for cooking, cleaning and recreational activities like swimming.

(Any other reasonable)

(Any 2) ✓✓

5.3) The water from a tap does not start out clean and fresh. It may come from a river or dam, or it may even be waste water that was used by a community or in a factory.

5.3.1) Mention the five processes (in order) used by municipalities to treat water so that it can be safe for us to drink. (MO) (3)

- **Screening** ✓
- **Settling**
- **Aeration** ✓
- **Filtering** ✓
- **Disinfection**