

GRADE 7 NATURAL SCIENCES TASK 10 - OPEN BOOK TEST

TOTAL: 50 MARKS

DURATION : 60 MINUTES

QUESTION ONE

(3)

Choose the correct answer for each incomplete sentence from the options provided.
Write down the number and the correct letter.

E.g. 1.5. E

1.1) Blue litmus paper

(1)

A) turns red in the presence of acid✓

B) turns blue in the presence of acid

C) turns red in the presence of a base

1.2) The periodic table of elements.....

(1)

A) is a classification system for elements and plants

B) is a classification system for metals

C) is a classification system for elements✓

1.3) Metals.....

(1)

A) are all gases

B) have a variety of different properties - either solids or gases

C) are strong, ductile, malleable solids and have a high boiling point✓

QUESTION TWO

(8)

Describe what the following words mean.

2.1) Flexibility

(2)

Refers to materials that can bend easily without breaking ✓✓

2.2) Electrical conductivity

(2)

Is the ability of a material to allow an electric current to flow through it ✓✓

2.3) Boiling point

(2)

The temperature at which a substance begins to boil and changes from a liquid to gas. ✓✓

2.4) Homogenous mixture

(2)

A mixture that has the same properties throughout. ✓✓

QUESTION THREE

(16)

Answer the following questions

3.1) Identify two (2) examples of how you would separate mixtures

(2)

Evaporation ✓, distillation ✓, filtration, sieving, using a magnet, chromatography, hand sorting (Any 2)

3.2) State THREE negative consequence of poor waste management and explain.

(6)

- Pollution of water, soil and environment ✓
- Health hazards and diseases ✓
- Blockage of sewerage and water drainage systems ✓
- Waste of land used for landfills
- Wastage of valuable materials that could be recycled.

(Any 3; 1 mark for identifying consequences and 1 mark for explanation)

3.3) Explain how the transport of oil could affect the habitat of marine animals?

(2)

The transport of oil can cause serious environmental problems if things go wrong. If an oil tanker runs aground or is damaged in some way, then this could cause an oil spill, ✓ which will send oil into the habitats of many marine animals, causing the deaths of many animals and plants. ✓ An oil spill could also be the result if a pipe carrying oil is damaged in the sea.

3.4. You have a mixture of sand, iron filings, and sawdust in a beaker of water. Explain how you can separate this mixture (step by step) and WHY you chose these methods. (6)

- The sawdust will float on top of the water, ✓ so it can be removed by hand or by using a small net. ✓
- Then use filtration to separate the water from the rest of the mixture ✓ - pour the mixture into a funnel with filter paper and collect the water in a beaker. Filtration will work because the iron filings and sand are large pieces that will not be able to get through the filter paper. ✓
- Finally, the iron filings and sand can be separated by using magnetism ✓ - hold a magnet over the mixture once it is dry. The sand will stay in the container and the iron filings will be attracted to the magnet, because they have magnetic properties. ✓

QUESTION FOUR (4)

Describe the colour change that will occur when:

4.1. Red litmus paper is placed in vinegar (2)

Stays red ✓✓

4.2. Blue litmus paper is placed in toothpaste (2)

Stays blue ✓✓

QUESTION FIVE (4)

5.1. Write down the elements for the following symbols.

5.1.1. He - Helium ✓ (1)

5.1.2. Na - Sodium ✓ (1)

5.2. Provide the atomic number for:

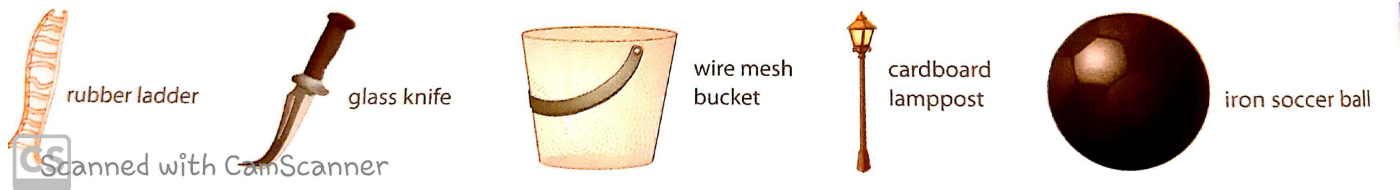
5.2.1. Nitrogen - 7 ✓ (1)

5.2.3. Magnesium - 12 ✓ (1)

QUESTION SIX

(15)

Study the objects that are made from different materials.



6.1. For each object, explain why the material used is not suitable. (5)

6.2. Copy the table below and complete it. (10)

<u>Object</u>	<u>Property that material must have</u>	<u>Suitable material</u>
Ladder	Strength, inflexibility, not too heavy ✓	Wood, aluminium ✓
Knife	Ability to be sharpened/sharp ✓	High-grade steel ✓
Bucket	Waterproof sides, resistant to rust, be able to hold materials without falling through ✓	Plastic ✓
Lamp post	Water resistant, strong, rigid ✓	Steel/wood ✓
Soccer ball	Can be inflated, has flexible sides, not too heavy ✓	Leather/plastic ✓
