

NAME: Memo
GRADE 7: _____
PARENT SIGNATURE: _____

EXAMINER: Mr Jones
SUBJECT HEAD: Ms Mitchley
TOTAL MARKS: 50

INSTRUCTIONS:

This question paper consists of 5 pages including the cover page.

Answer ALL the questions in this question paper.

Write neatly and legibly.

Sketches to be drawn in pencil.

Question 1: Properties of Materials

[13]

1.1 Read each question and circle the letter that shows the correct answer.

(4)

1.1.1 Which one of these is NOT a physical property of materials?

- A. Strength.
- B. Flexibility.
- ☒ C. Cost
- D. Conductivity.

1.1.2 Which of these statements is FALSE?

- A. Matter takes up space and has mass.
- B. Matter can be a liquid, solid or gas.
- ☒ C. Flexible materials break easily.
- D. Materials can be natural or man-made.

1.1.3 Which of these statements is TRUE?

- A. All materials have the same boiling point
- ☒ B. Ice melts at around 0°C.
- C. Water in Johannesburg and water in Cape Town boils at the same temperature.
- D. The boiling point is the same as the melting point of a material.

1.1.4 Which one of these materials is a good conductor of heat?

- ☒ A. Metal.
- B. Wood.
- C. Plastic.
- D. Rubber

1.2 What does the strength of different materials depend on?

(1)

Strength of attractive forces between particles /
thickness of material (Accept alternatives)

1.3 What state change occurs during evaporation?

(1)

Liquid to gas ✓

1.4 Name five physical properties of materials.

(5)

Strength

Flexibility

Electrical conductivity

Heat conductivity

Boiling + Melting P.

1.5 Differentiate between electrical conduction and heat conduction.

(1)

electrical can conduct energy through it ✓. heat conductivity allows heat to pass through it ✓

1.7 Define the term biodegradable.

(1)

A substance can be broken down by bacteria or ✓ prolonged exposure to the sun or elements (Any suitable.)

Question 2: Separating Mixtures

[19]

2.1 Write the word that is being described in the sentence. Only write the answer.

(5)

2.1.1 A mixture made up of a solid that is dissolved into a liquid.

Solution

2.1.2 The property of a solid that does not dissolve into a liquid.

Insoluble

2.1.3 Small, microscopic parts that make up matter.

particles Atoms

2.1.4 The change of state from gas to liquid.

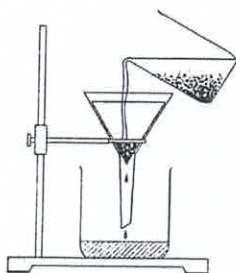
Condensation

2.1.5 A method of separating two liquids that have different boiling points.

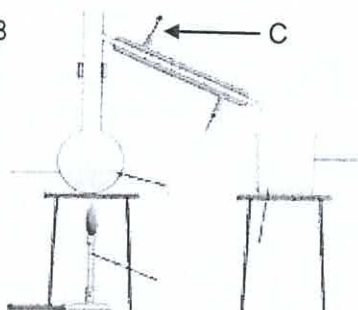
distillation

2.3 Study the diagrams below and answer the questions.

A



B



2.3.1 Name the separation methods illustrated by A and B:

(2)

A: Filtration ✓

B: Distillation ✓

2.3.2 Name the apparatus labelled C:

(1)

C: Liebig Condenser ✓

2.3.3 Give an example of a mixture for which apparatus B would be used for:

(1)

Any 2 liquids. Water and alcohol/Ethanol/paraffin etc.

2.4 Name the separation method and explain how the following items can be separated.

2.4.1 Iron filings and flour mixed.

(2)

Use of a magnet. Useful for materials with magnetic properties. Iron will be attracted to magnet. (Any suitable)

2.4.2 Purifying sea water.

(2)

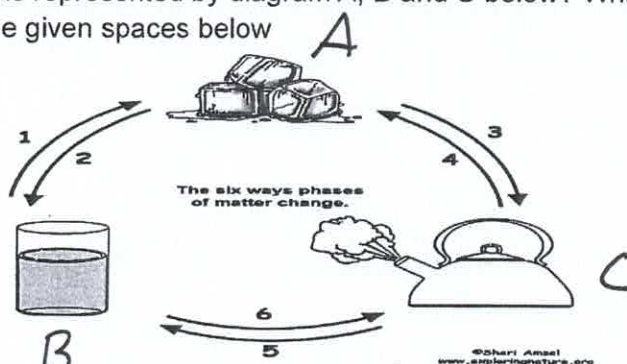
Distillation. Combining boiling and condensation. To separate substance with different boiling points. Evaporation (A.S.).

2.4.3 Tea leaves and boiling water

(2)

Filtration. Large particles will stay behind while small particle passing through tiny holes (A.S.)

2.5.1 Which state of matter is represented by diagram A, B and C below? Write your answer next to the letter in the given spaces below



A Solid B Liquid C Gas

(3)

2.5.2 What is the process 1 called when a liquid changes into a solid?

($\frac{1}{2}$)

Freezing Solidify

2.5.3 What is the process 5 called when gas changes into a liquid?

($\frac{1}{2}$)

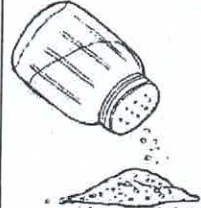
Condensation

Question 3: Acids, Bases and Neutrals

[9]

3.1 Look at the pictures below and identify the 4 primary tastes associated with each.

($\frac{1}{2} \times 4 = 2$)

 <u>Sweet</u>	 <u>Salty</u>	 <u>Sour</u>	 <u>bitter</u>
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3.2 Read the following statements and say whether each one is true or false:

(5)

3.2.1 Indicators are dyes that change colour in acids and bases.

T

3.2.2 Acids can be corrosive.

T

3.2.3 Citric acid is found in stomach juices.

F

3.2.4 Bases are the opposite of acids and can never be dangerous.

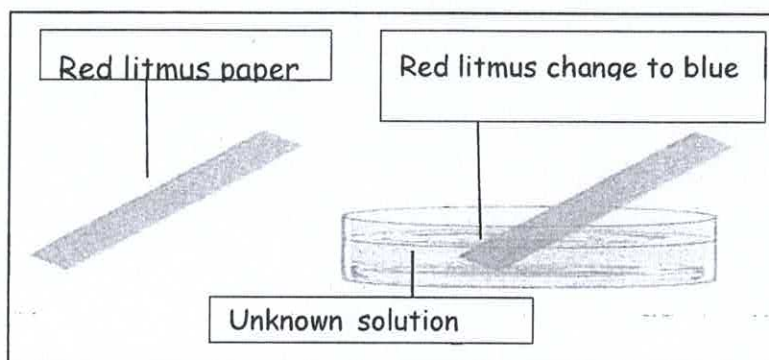
F

3.2.5 Bases can be caustic and can burn organic tissue.

T

3.3 Red and blue litmus paper can be used to test whether a substance is an acid, a base or a neutral.

Study the diagram below where red litmus paper changes to blue when dipped into an unknown solution.



3.3.1 Study the illustration and decide if the unknown solution is an acid or a base.

(1)

Base ✓

3.3.2 Give ONE characteristic of an acid

(1)

tastes sour, feels watery etc. ✓

Question 4: The Periodic Table

[9]

Answer the following questions about the periodic table of elements.

4.1 Write down the symbol for each of the following elements:

a.) Titanium

Ti ✓

b.) Radium

Ra ✓

c.) Sodium

Na ✓

d.) Cobalt

Co ✓

(4)

4.2 Write down whether the following elements are *metals*, *semimetals* or *non-metals*: a.) Arsenic

Semi-metal

b.) Neon

Non-metal

c.) Plutonium

Metal

d.) Zirconium

Metal

(4)

4.3 True or false. All symbols' names match their abbreviations, for example Helium is He. Give a reason for your answer. (1)

False, Some have abbreviations from Latin or Greek words.