

## PART A: MULTIPLE CHOICE (10 MARKS)

Choose the best response in each case and place your answer in the appropriate space on your answer sheet.

1. What does the following HPS symbol represent?

- (a) danger - poisonous  
(b) warning - poisonous  
(c) caution - poisonous  
(d) none of the above



2. The basic unit of measure for length is the:

- (a) metre (b) millimetre  
(c) gram (d) kilogram

3. "When water is heated, it begins to boil at a temperature of 100°C." This statement is best described as:

- (a) a quantitative observation  
(b) a qualitative observation  
(c) a conclusion  
(d) a hypothesis

4. Which of the following characteristics is true for gases?

- (a) definite shape; definite volume  
(b) variable shape; variable volume  
(c) definite shape; variable volume  
(d) variable shape; definite volume

5. Which physical property below can not be observed with the senses?

- (a) clarity (b) density  
(c) colour (d) odour

6. What property is best described by the following statement, "Copper metal can be pulled into long, thin wire?"

- (a) hardness (b) malleability  
(c) ductility (d) lustre

7. Which statement best describes the process of "evaporation"?

- (a) A change in state from solid to liquid.  
(b) A change in state from gas to liquid.  
(c) A change in state from solid to gas.  
(d) A change in state from liquid to gas.

8. Which of the following is an indicator of a chemical change?

- (a) The substance dissolves in water.  
(b) Heat or light is given off.  
(c) The substance changes to a gas.  
(d) The change is easy to reverse.

9. Which of the following is an example of a physical change?

- (a) a car rusts (b) silver tarnishes  
(c) garbage rots (d) a snowflake forms

10. What is the mass of a block of wood if its density is 0.75 g/cm<sup>3</sup> and it has a volume of 1.0 cm<sup>3</sup>?

- (a) 75 g (b) 7.5 g  
(c) 0.75 g (d) 0.075 g

## PART B: MATCH (5 MARKS)

Match the definition from the 1<sup>st</sup> column to the best term in the 2<sup>nd</sup> column and place the matching letter in the appropriate space on your answer sheet.

- Anything that has mass and takes up space.
- A substance resulting from a chemical reaction.
- A pure substance that cannot be broken down into simpler substances.
- Another name for a homogenous mixture.
- A mixture that contains two or more pure substances and only one component is visible.

- compound
- element
- heterogeneous mixture
- homogenous mixture
- matter
- mixture
- product
- pure substance
- reactant
- solution

## PART A: MULTIPLE CHOICE (10 MARKS)

1	2	3	4	5	6	7	8	9	10
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## PART B: MATCH (5 MARKS)

1	2	3	4	5
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## PART C: SHORT ANSWER (25 MARKS)

Answer the following questions in the space provided. If more space is needed, use the back of this sheet.

- {4} 1. Indicate whether each of the following changes is a (P) physical change or a (C) chemical change.
- |  |                     |
|--|---------------------|
| ___ a car rusting                          | ___ garbage rotting |
| ___ sugar dissolving in a cup of hot water | ___ ice melting     |

- {4} 2. Identify the following diagrams as an (E) element, (C) compound, or a (M) mixture.



- {4} 3. List (a) 2 categories of physical properties of an object and (b) 2 clues that a chemical change has happened.

#	PHYSICAL PROPERTY
①	
②	

#	CHEMICAL PROPERTY
①	
②	

- {3} 4. A friend tells you that an antacid tablet bubbling in water is a chemical change, but the water bubbling in a kettle and turning to steam is not. Do you agree? Explain.

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- {10} 5. Find the missing quantity in each of the following density problems, given any two of mass, volume, and density. Be sure to show your work (GRESS)!

(a) volume =  $3.0 \text{ m}^3$  ; density =  $2.0 \text{ kg/m}^3$

(b) mass =  $30 \text{ g}$  ; volume =  $3.0 \text{ cm}^3$

