

## PART A: MULTIPLE CHOICE (10 MARKS)

1	2	3	4	5	6	7	8	9	10
c	a	a	b	b	c	d	b	d	c

## PART B: MATCH (5 MARKS)

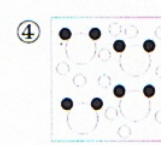
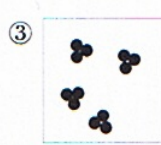
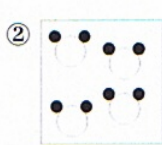
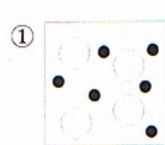
1	2	3	4	5
E	G	B	J	D

## 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.
- |                          |   |                            |
|--------------------------|---|----------------------------|
| <u>C</u> ✓ a car rusting | <u>P</u> ✓ sugar dissolving in a cup of hot water | <u>C</u> ✓ garbage rotting |
|                          |   | <u>P</u> ✓ 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.

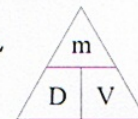
#	PHYSICAL PROPERTY
①	* see notes! * ✓✓
②	colour, lustre, density, ...

#	CHEMICAL PROPERTY
①	* see notes! * ✓✓
②	new colour appears ...

- {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.

Yes ✓ - water turning to steam is physical - it is still water (cool the steam & you get water) - the antacid tablet is undergoing a chemical change (bubbles of gas are being produced & a new substance is being produced) ✓

- {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 =  $2.0 \text{ kg/m}^3$

$$V = 3.0 \text{ m}^3 \quad \checkmark$$

$$D = 2.0 \text{ kg/m}^3$$

$$m = DV \quad \checkmark$$

$$= (2.0 \frac{\text{kg}}{\text{m}^3})(3.0 \text{ m}^3)$$

$$m = 6.0 \text{ kg} \quad \checkmark \checkmark$$

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

$$m = 30 \text{ g} \quad \checkmark$$

$$V = 3.0 \text{ cm}^3$$

$$D = \frac{m}{V} \quad \checkmark$$

$$= \frac{30 \text{ g}}{3.0 \text{ cm}^3} \quad \checkmark$$

$$D = 10 \text{ g/cm}^3 \quad \checkmark \checkmark$$