

NAME: \_\_\_\_\_ CLASS: \_\_\_\_\_ ADM: \_\_\_\_\_

**INSTRUCTIONS:**

1. Write your name, adm. And class in the space provided above.
2. Answer all questions in the spaces below each question. (30 Marks)

1. The element Y is represented as

a) What does letter Y represent? (1mk)

b) What name and symbol is given to the superscript and what does it represent. (2mks)

c) What name and symbol is given to the subscript and what does it represent. (2mks)

d) Complete the table

Isotope	Number of		
	Protons	Neutrons	Electrons
207 82 Pb			

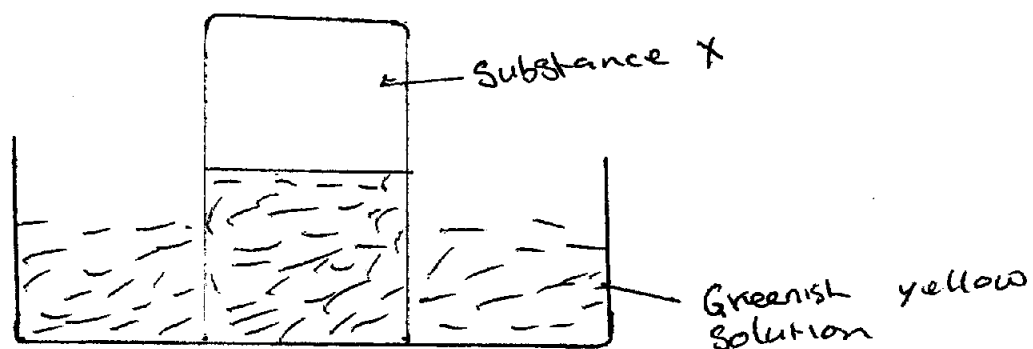
2. Write the equation for the reaction between magnesium and:

a) Steam (1mk)

b) Cold Water (1mk)

c) Air (2mks)

3. Chlorine gas was bubbled through water for sometime. The greenish yellow solution formed; was transferred into a boiling tube as shown in the diagram below.



a) Write an equation for the reaction between chlorine and water. (1mk)

b) What is responsible for the greenish yellow colour? (1mk)

c) What condition is necessary for formation of substance X? (1mk)

d(i) Identify substance X. (1mk)

ii) Write an equation to show how substance X is formed. (2mks)

4. Using dot ( • ) and cross ( x ) draw the diagram of the following compounds.

a) Sodium chloride (NaCl) (Na = 11 : Cl = 17) (2mks)

b) Magnesium Nitride ( $Mg_3N_2$ ) (Mg = 12, N = 7) (2mks)

c) Define the following terms

i) Covalent bond (2mks)

ii) Dative bond

(2mks)

d) Using dots (•) and crosses (x) diagrams: show the structure of the following compounds:

i) Oxygen molecule (  $O_2$  ) (  $O = 8.$  ) (2mks)

iii) Carbon (II) oxide (  $CO$  ) (  $C = 12,$   $O = 8$  ) (2mks)

5. Define the following terms

a) Allotropy

(1mk)

b) Allotropes

(1mk)

c) Name the two crystalline allotropes of carbon.

(2mks.)

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