

NAME: ADM NO:

SCHOOL: DATE :

CANDIDATE'S SIGNATURE:.....

233
CHEMISTRY
THEORY
JULY / AUGUST 2016
TIME: 2 HOURS

COMMON EVALUATION TEST – 2016 FORM 1

CHEMISTRY
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- Write your **Name**, **Admission Number** and **School** in the spaces provided above.
- **Sign** and write the **date** of examination in the spaces provided.
- Answer **all** the questions in the spaces provided after each question.
- Mathematical tables and silent electronic calculators may be used.
- ALL working **MUST** be clearly shown where necessary.
- All questions should be answered in **English**.

FOR EXAMINER'S USE ONLY

QUESTIONS	MAX SCORE	CANDIDATE'S SCORE
1 – 16	100	

1. What does each of the following hazards mean?

(3mks)

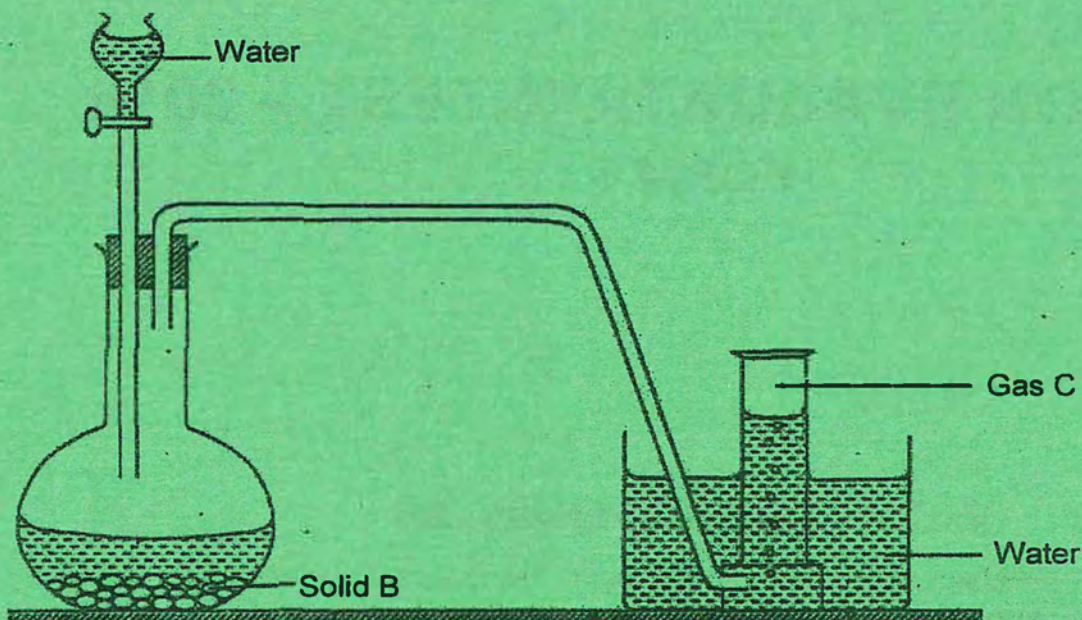


(a) _____

(b) _____

(c) _____

2. The set up below was used to prepare gas C which relights a burning splint.



(a) Identify:

Solid B:.....

(1mk)

Gas C:.....

(1mk)

(b) Name the method of collecting the gas C above.

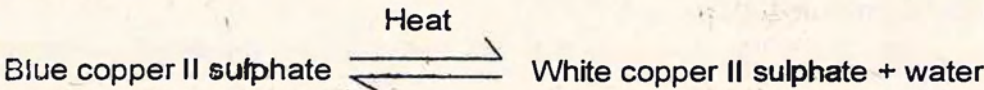
(1mk)

.....

(c) Write the chemical equation for the reaction in the vessel K.

(2mks).

3. Given the equation below.



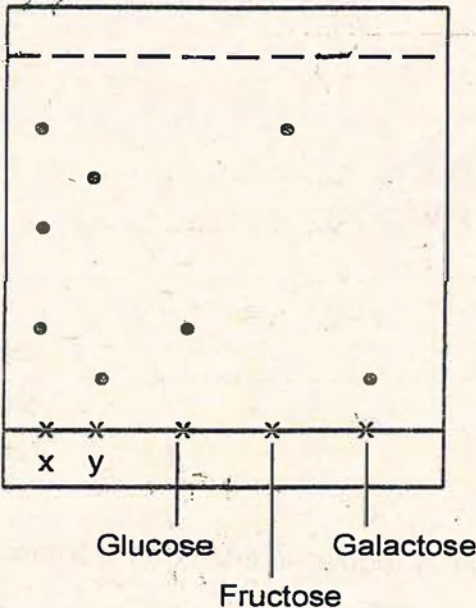
(a) Give the meaning of the symbols as used in the equation:

(i) $\xrightleftharpoons{\hspace{1cm}}$ _____

(ii) + _____

(b) What type of change is demonstrated above? (1mk)

A chromatogram of acid enzymes x and y and three simple sugars are shown below.



(a) Which two sugars must be present in x and y? (1mk)

(b) What does the dotted line represent? (1mk)

(c) State a property that makes galactose move a short distance from the original spot. (1mk)

Given are the symbols of the chemical species, give their names. (5mks)

(a) Pb:.....

(b) Co:.....

(c) Fe₃O₄:.....

(d) H₂:.....

(e) Fe³⁺:.....

6. Give the elements present in this compound.

(3mks)

Copper II Nitrate

7. (a) Which PH corresponds with the substances in the table.

Substance	PH
Sour Milk	
Nitric V Acid	
Tooth Paste	
Distilled water	
Sodium Hydroxide	

PH = 13

PH = 9

PH = 7

PH = 1

PH = 6.5

(b) Complete the equations below.

(i) Copper Carbonate + Dilute Sulphuric Acid $\longrightarrow$

(2mks)

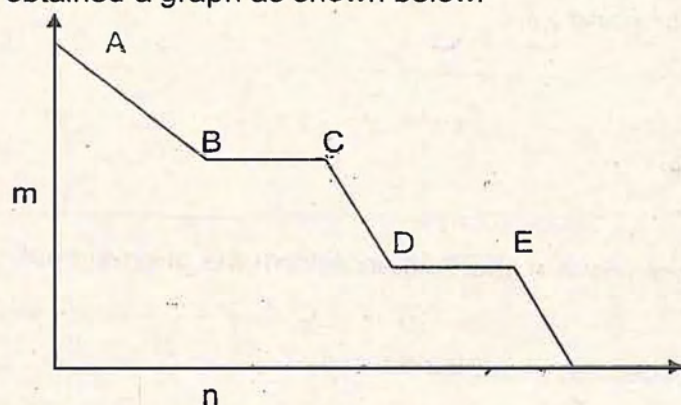
(ii) Sodium Hydroxide + Hydrochloric Acid $\longrightarrow$

(2mks)

(iii) Zinc Metal + Hydrochloric Acid $\longrightarrow$

(2mks)

8. A student recorded the temperature of a gaseous substance at regular interval and it cooled to a solid and obtained a graph as shown below.



(a) Identify the curve above.

(1mk)

(b) Label the graph as represented by:

(2mks)

m:

n:

(c) Which region of the curve corresponds to:-

(i) Liquid state (1mk)

(ii) Gaseous state (1mk)

(d) Which region of the curve represents:

(i) Melting point (1mk)

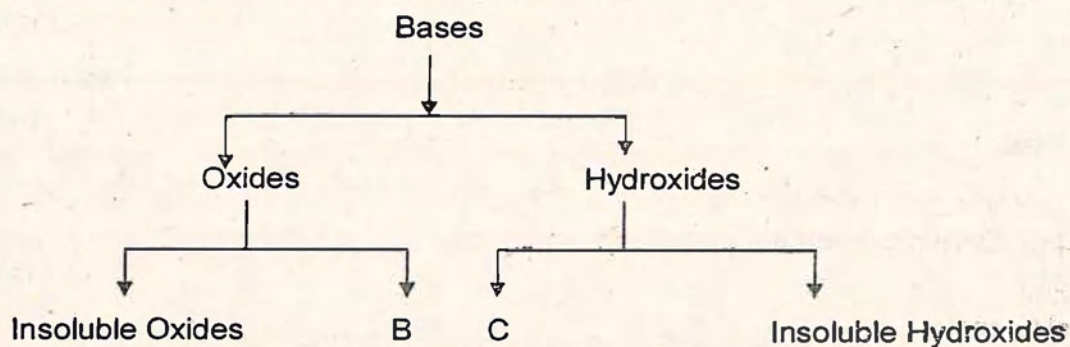
(ii) Boiling point (1mk)

(e) In terms to kinetic theory, what happens to the speed of the particles and inter-particle distance between region AB. (2mks)

(f) What happens to the particles at regions BC and CD? (4mks)

9. Students were provided with groundnut seeds and asked to extract oil from the seeds. Describe briefly the process they would use to obtain the oil. (10mks)

10. Below is a chart used for classification of bases.



(a) Give substances: (2mks)

B:

C:

(b) Give an example of each of the following:- (3mks)

(i) Insoluble oxide:

(ii) Insoluble hydroxide:

(iii) Alkali:

(c) Define the term neutralization. (2mks)

.....

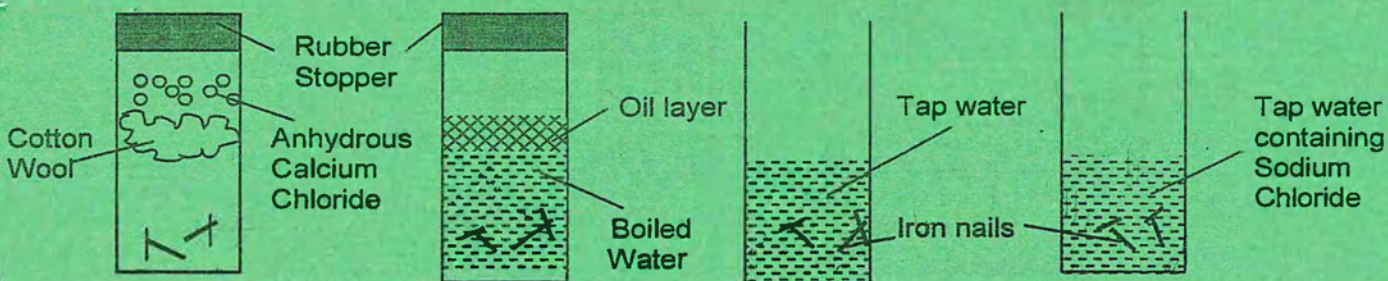
(d) Give two importances of buses. (2mks)

.....

11. The table below shows when elements were burnt in air. Study it and fill the spaces.

Element	Colour of flame	Other observation	Equation
Copper			
Sulphur	Blue		
Sodium		White solid formed	
Carbon			
Phosphorous			$\text{Phosphorous} + \text{Oxygen} \longrightarrow \text{Phosphorous V Oxide}$

12. Students performed the experiments below to investigate the conditions necessary for a given chemical process.



(a) Which phenomenon were the students investigating? (1mk)

(b) Explain the purpose of:

(i) Anhydrous calcium chloride. (2mks)

(ii) Oil layer (2mks)

(iii) Boiling the water (2mks)

(c) In which of the four test tubes will rusting:

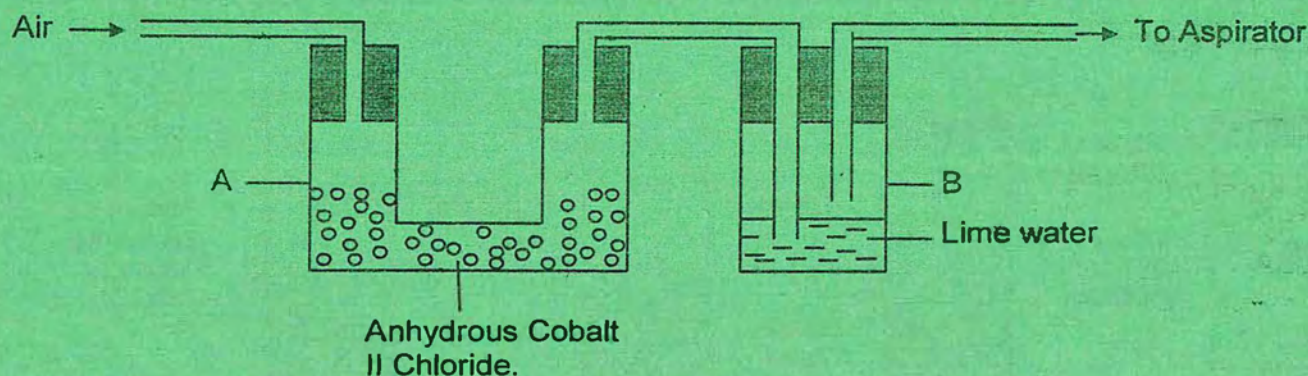
(i) Occur (1mk)

(ii) Occur faster (1mk)

(d) Name the condition necessary for rusting to occur. (3mks)

(e) Write an equation to illustrate rusting. (2mks)

13. The set up below was used to demonstrate the presence of two components of air.



(a) What observation will be made in A and B? (2mks)

A:.....

B:.....

(b) Explain the observation in (a) above. (2mks)

.....

.....

14. Sodium hydrogen carbonate is one of the components found in tooth paste. Explain its role.

(2mks)

.....

.....

15. Two immiscible liquids X and Y with densities 1.0g/cm^3 and 0.659g/cm^3 respectively are accidentally mixed. Draw a labeled diagram of the apparatus that can be used to separate them.

(2mks)

16. Given the flame, give the names of regions:

(3mks)

I.

II.

III.

