YESMARK TUITION SERVICES

CHEMISTRY C.A.T.
FORM 1
TIME: 1HR MARKS: 40

NAME _____

INSTRUCTIONS
Attempt ALL the questions provided in the spaces provided on the question paper.

1) Write chemical formula of the following compounds (2 Mks)
   i) Calcium hydroxide

   ii) Ammonium carbonate

   iii) Copper (ii) sulphate

   iv) Iron (iii) oxide

2) Write balance chemical equation for the following chemical equations (5 Mks)
   i) Reaction of zinc metal with dilute sulphuric acid

   ii) Reaction of carbon with excess air

   iii) Reaction of sodium hydrogen carbonate with dilute hydrochloric acid

   iv) Reaction of copper (ii) oxide with dilute nitric acid

   v) Reaction of sodium hydroxide with dilute hydrochloric acid

3) The following tables shows some solutions and PH values of the given solution

Solution	PH values
K	8
L	2.5
M	5
N	1
O	13
P	7

i) Classify the solutions into (2 Mks)

a) Weak acid

b) Weak base

c) Strong acid

d) Strong base

ii) Which of solutions is likely to be (5 Mks)

a) Wood ash

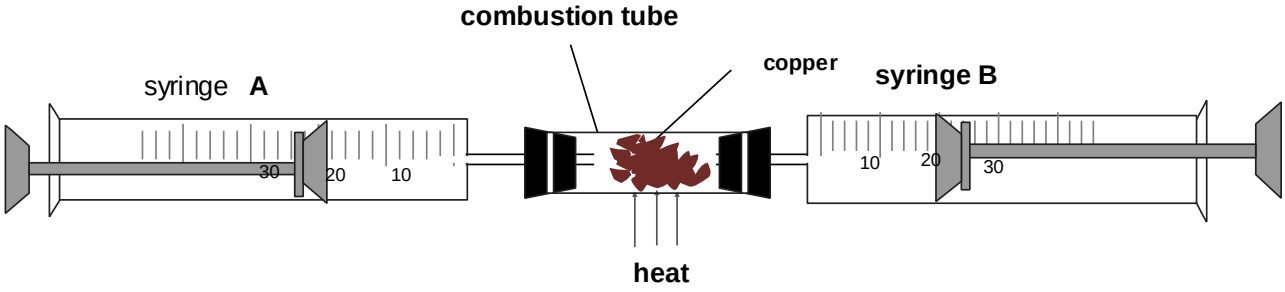
b) Potassium hydroxide

c) Fresh water

d) Hydrochloric acid

e) Lemon juice

4) The following set up is used to determine the quantity of air that react with copper
About 40cm^3 of air was passed to and fro syringe A and B for some time until a constant volume of about 32cm^3 remained.



a) Determine the percentage of air that reacted with copper (2Mks)

b) Give one possible observation made in the combustion tube (1 Mk)

c) Write the chemical reaction taking place in the combustion tube (1 Mk)

5) Give two differences between mixtures and compounds (2 Mks)

Mixtures	**Compounds**

6) When a solid is heated, it undergoes changes shown in the diagram below

Solid $\xrightarrow[A]{\text{Process}}$ Liquid $\xrightarrow[B]{\text{Process}}$ Gas

i) In terms of kinetic theory explain the changes that occur in process A and process B (3 Mks)

ii) Name process A and B (1 Mk)

7) Balance the following chemical equations (5 Mks)

i) $C_3H_{8(g)} + O_{2(g)} \rightarrow CO_{2(g)} + H_2O_{(g)}$

ii) $NaOH_{(aq)} + CO_{2(g)} \rightarrow Na_2CO_{3(aq)} + H_2O_{(l)}$

iii) $CuSO_4 \cdot 5H_2O_{(s)} \rightarrow CuSO_{4(s)} + H_2O_{(l)}$

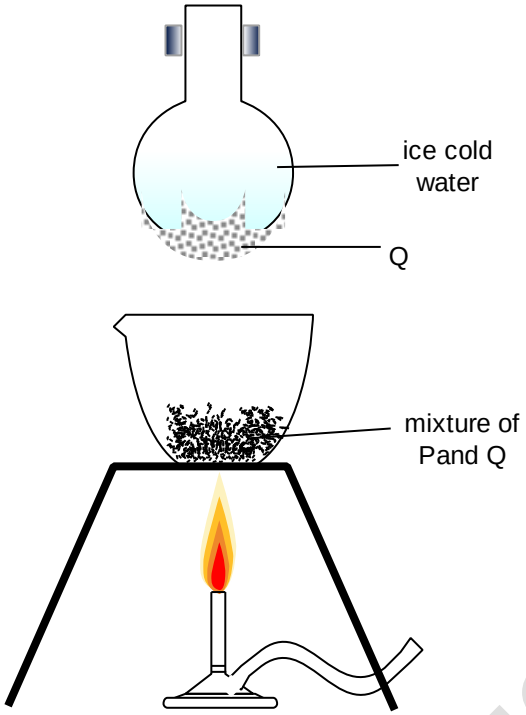
iv) $ZnO_{(s)} + HCl_{(aq)} \rightarrow ZnCl_{2(aq)} + H_2O_{(l)}$

v) $H_2S_{(g)} + O_{2(g)} \rightarrow H_2O_{(l)} + SO_{2(g)}$

8) A form 1 students was working with dilute nitric acid in the laboratory, suddenly the nitric acid splash into the eyes. Suggest the first aid measure the student needed to take immediately (1 Mk)

9) What is rust? Give 4 methods of preventing rusting process (3 Mks)

10) Study the diagram below and answer the questions that follow



a) What is the use of ice- cold water? (1 Mks)

b) Give two examples of solid Q. (1mark)

c) Name this method of mixture seperation. (1 Mk)

d) State one industrial application of the technique used to separate the mixture above. (1 Mk)

11) Air is a mixture of many gases. Describe simple experiments to shows that air contain (2 Mks)

a) Carbon (iv) oxide

b) Water vapour.