

## CHEMISTRY FORM 1

### END OF TERM 3

#### MARKING SCHEME

1. – Forms foundation for professional training. (1mk for any one)
  - Provides man with knowledge necessary for manufacture of basic necessities
  - Enables man to understand and deal with environmental factors affecting him

2. a) Heroin

Cocaine

Mandrax

Morphine

Bang

Any other drug abused


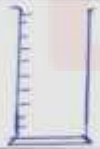


b) Proper use of all medicinal drugs

Never use any illegal drug

Stay away from those who use or sell drugs

Involving in any other useful work

3

Apparatus	name	use
i 	Beaker	For holding liquids
ii 	Measuring cylinder	measuring appropriate volume of a liquid
iii 	Filter funnel	For filtering
iv 	Spatula	Scoping solid substances

4. Laboratory safety rules

-no running in the lab

-no performing an authorized practical

-no smelling gases directly

-no eating in the laboratory

Any other laboratory rule

5 (a) The apparatus below were used to separate a mixture of liquid A and B. State **two** properties of liquids that make it possible to separate using such Apparatus. (2 marks)

- Immiscible
- Different densities

(b) Give the name of the above apparatus. (1 mark)

- Separating funnel

6. Add water to the mixture and stir, **v**<sub>1</sub> common salts dissolves while sand insoluble.

- Filter **v**<sub>1</sub> to obtain sand as residue and common salts as filtrate. ✓ 1
- Evaporate the filtrate to obtain crystals **v**<sub>1</sub> of common salts.

**NB: Steps must be systematic, otherwise penalize fully.**

7 i. B - unburnt gas/colorless region ✓ 1

C - Pale blue region ✓ 1

ii. Regulate the amount of air entering the chimney by Closing and opening of air holes ✓ 1

### 8. Physical                      Chemical

- No new substance is formed -New substance is formed
- No energy is either given out or absorbed - Energy is usually given out or absorbed
- Mass of the substance does not change - Mass of the substance changes
- Change is usually reversible - Change is usually irreversible

### 9. i.

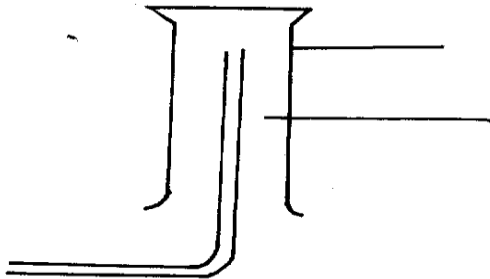
Acids	Bases
(i) Reacts with bases to give salt and water only	(i) Reacts with acids to give salt and water
(ii) Have a PH of less than 7	ii)Have PH more than 7
(iii)Changes blue litmus paper red	(iii)changes red litmus paper blue

Any other correct difference.

ii. a) Z,

b) M

10. i.



ii) **P** – Manganese (IV) oxide

Q – Anhydrous calcium chloride /calcium oxide



iv)– Colorless

– Odorless

– Slightly soluble in water

v. – Used in hospitals by patients with breathing difficulties

- Used when mixed with helium in deep sea divers & mountain climbers

- Burn fuels that propel rockets

- mixed with acetylene used for welding

- remove impurities during steel making

- remove impurities during

11 (a) shiny-black crystals are iodine crystals

-white crystals are sodium chloride solid

(b). to cool and condense the iodine vapour to form iodine solid.

(c) . Iodine sublimes when heated.

(d). iodine sublimes while sodium chloride does not.

12 (a) to allow all oxygen to be used up and also to allow the gas to contract/  
Cater for any expansion of gases

(b) To absorb carbon (IV) oxide which was produced by the burning candle

(c) % of oxygen  $90 - 70 \times 100 = 22.2\%$

90

13-Iron will be covered by a reddish brown substance/coating/rust

-Water in test tube rise and water in a beaker drops

Explanation:

Iron Combines with oxygen in a presence of moisture to form hydrated Iron (III) oxide /

Rust water rises up to occupy the space which was occupied by oxygen in the tube.

14 (a) (i) Over water

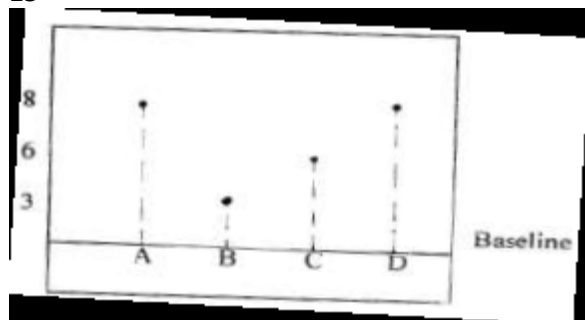
(ii) Upward delivery/ downward displacement of air

(iii) Downward delivery/ upward displacement of air

(b) (i) Over water : it is slightly soluble in water

(ii) Upward delivery: It is less dense than air

15



(ii) A and C

b) Since  $\text{NH}_4\text{Cl}$  sublimes but  $\text{CaCl}_2$  does not; sublimation process would do. Heat the mixture. Ammonium chloride sublimes into vapour and condenses on the cooler part of the heating tube. Calcium chloride will remain on the bottom of the heating tube.

c) i) Fractional distillation

ii) Separating funnel method

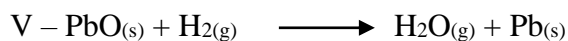
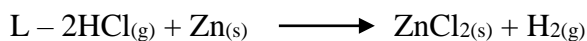
Since the two liquids are immiscible, pour both the liquids in a separating funnel and Allow settling, the denser liquid will settle down and the less dense will form a second Layer on top. Open the tap and run out the liquid in the bottom layer leaving the liquid In the second layer in the funnel.

16a) =sodium chloride+ carbon IV oxide+ water  
 =Zinc sulphate+ hydrogen gas  
 =Potassium nitrate+ water

17 What is the function of the water in the flask?

– To dissolve the unreacted Hydrogen chloride gas.

(i) Write equations for the reactions that took place in the tubes.



(ii) – Darts on surface of water

- Spontaneously burns with a purple flame
- Produces a hissing sound