CHEMISTRY FORM TWO NECTA 2015

Solutions from: Maktaba by TETEA

By Yohana Lazaro

1.

i	ii	iii	iv	v	vi	vii	viii	ix	x
B	A	D	A	A	C	D	A	D	C

2.

i	ii	iii	iv	v	vi	vii	viii	ix	x
F	E	L	N	G	D	B	M	D	A

3. (a)(i)Oxidation state is the number that indicates the combining power of an element.

(ii)An element is the substance formed when two or more atoms combine together.

(iii)A compond is the substance formed when two or more elements combine together.

(iv)Fainting is the tendency of a person to lose concious.

(b)(i)Na_2SO_4

(ii)NaCl

(iii)$Ca(NO_3)_2$

(iv)CaO

4. (a)Oxygen gas

(b)-it is less dense than water

-it is colourless

-it is ordourless

-it is tasteless

(c)-it reacts with hydrogen to form water

-it forms basic oxides with metals

-it forms acidic oxides with non metals

(d)(i)used in hospitals

-used by organisms for respiration

-used by divers

5. (a)(i)Ammonium carbonate

(ii)calcium chloride

(iii)sodium carbonate

(iv)potasium chlorate

(b)(i)

Electrovalent compounds	**Covalent compounds**
-metal + non metal	-non metal + non metal
-no sharing of electrons	-sharing of electrons
-disolves in water	-don't disolve in water

(ii)

solutions	**suspensions**
-complete mixing	-not completely mixed
-separated by vaporization	-separated by filtration

6. (a)(i)Chemical properties of water

-it is neutral

- it reacts with reactive metals to form their respective hydroxides

(b)**Molar mass = sum of all masses of elements in the compound**

(i)$Al_2(SO_4)_3$

= (27 x 2) + (32 x 3) + (16 x 4 x 3)

= 342

(ii)$NaHCO_3$

23 + 2 + 12 + (16 x 3)

= 85

(iii)Fe_2O_3

(56 x 2) + (16 x 3)

=160

(c)(i)chemical change

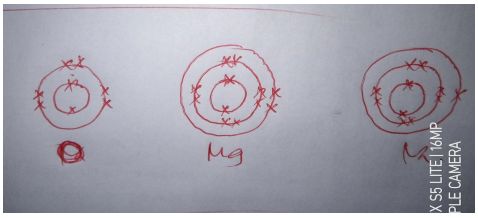
(ii)chemical change

7. (a)(i)C –belliryum, G –magnesium

B – helium

(ii)A – hydrogen, B – helium, C – belliryum, D – chlorine

(iii)



(b)(i)antibiotics, pain killers

(ii)soft drinks, canning

8. (a)(i)$K_2C_2O_4$

$(2 \times +1) + 2C + (-2 \times 4) = 0$

$C = +3$

(ii)SO_3^{2-}

$S + (-2 \times 3) = -2$

$S = +4$

(b)(i)used to direct liquid into a container

(ii)used to measure fixed volume

(iii) used to prevent direct contact of apparatus with flame during heating

(iv)used to measure specific volumes

9. (a)gas Z is Hydrogen gas

(b)phsical properties of gas Z

(i)it is ordourless, colourless and tasteless

(ii)it is less dense than air

(iii)collected by downward displacement of water

©uses og gas Z

-used as fuel on rockets

-used on welding since it provide hottest flame

10. (a)(i)Empirical formula is the simplest formula which expresses its composition by mass.

(ii)Molecular formula is the formula that shows the actual number of atoms present in the compound.

(b) case 1, divide each by atomic mass

Carbon 85.7/12 = 7.14, hydrogen 14.3/2 =7.15

Case 2, divide each by smaller value

Carbon 7.14/7.14 = 1, hydrogen 7.15/7.14 = 1

(i)Empirical formula is CH

(ii)let molecula formula be $(CH)_x$

But total molar mass, $(CH)_x = 56$

$12x + 2x = 56$

$X= 4$

Molecular formula is C_4H_4