CHEMISTRY FORM TWO NECTA 2013

Solutions from: Maktaba by TETEA

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1.

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

2.

i	ii	iii	iv	v	vi	vii	viii	ix	x
C	I	O	B	N	H	L	J	F	A

3. (a)(i)Empirical formula is the simplest formula that expresses its composition by mass

(ii)Relative atomic mass is the $1/12^{th}$ of carbon mass of asubstance

(b)

Carbon 15.8/12 = 1.32 sulphur 84.2/32 = 2.63

Then, carbon 1.32/1.32 = 1, sulphur 2.63/1.32 = 1.99 = 2

(i)simplest formula is CS_2

(ii)molecular formula

Let $(CS_2)_x = 76$

$12x + 32(2x) = 76$

$X = 1$

Molecular formula is CS_2

4.(a)(i)Flame is the burning of a substance that produces heat and light

(ii)Bunsen burner is the device used as source of heat in the laboratory

(iii)Laboratory is the special room where scientific experiments are conducted

Luminous flame	**Non luminous flame**
-produces soot	-no soot
-less heat	-more heat
-bright	-invisible flame

-not suitable for welding	-suitable for welding

(c)(i)Na_2CO_3

(ii)$Ca(NO_3)_2$

(iii)NH_3Cl

5.(a)***REMARKS;*** *there is no any underlined element on the given compounds*

(b)(i)Plaster is used to cover small wounds

(ii)Pair of scissors used to cut dressing materials

(iii)Cotton used to clean wounds

(iv)gloves used to cover hands from being touching wounds directly.

(c)(i)physical change

(ii)chemical change

(iii)chemical change

(iv)physical change

6. (a)(i)Chemistry is the branch of science that deals with the study of composition and decomposition of matter.

(ii)Element is a pure subatance that cannot be splited into more simoler form

(iii)Catalyst is any substance that can alter the rate of a chemical reaction

(b)(i)compound vs mixture.

compound	**mixture**
-compounds are chemically bonded	-mixtures are not chemically bonded
-ratio of components is fixed	-ratios of components is not fixed
-energy is given out or absorbed	-no energy is given out or absorbed

(ii)Suspension vs solution

-suspension involve components that do not mixed completely, solution contains components that mixes compleyely.

7.(a) A is melting

B is freezing

C is condensation

D is vaporization

(b)(i)$^{+}3$

(ii) 0

(iii)$^{-}2$

(iv)$^{+}1$

(c)(i)$Mg_3(PO)_2$

(ii)$Fe_2(SO4)_3$

8. (a)(i) calcium + oxygen gas ——→ calcium oxide

(ii)sodium + water ——→ sodium hydroxide.

(b)(i)Water treatment is the process of adding chemicals in water in order to kill microorganism in it

(ii)Water purification is the process of removing unwanted dust particles from water.

(c)uses of water

- ✔ For drinking
- ✔ For washing clothes
- ✔ For swimming
- ✔ For shipping
- ✔ For irrigation

9.(a)Hydrogen gas

(b)method is downward displacement of water

Reason; it is less denser than water

(c)uses

- ✔ In welding
- ✔ In ballons

- ✔ Used as fuel in rockets
- ✔ Used in margarine production

10. (a)chemical properties of oxygen

- ✔ Reacts with hydrogen to form water
- ✔ Reacts with free most reactive metals to form basic oxides
- ✔ Reacts with non metals to form acidic oxides
- ✔ Can form amphoteric oxides

(b)(i)$KClO_3$

$+1 + Cl + (-2 \times 3) = 0$

$Cl = 5+$

(ii)$Cr_2O_7^{2-}$

$2Cr + 7(-2) = -2$

$Cr = 6+$

(c)(i)copper (II) oxide

(ii)Calcium Sulphate

(iii)nitric acid

(iv)zinc chloride