CHEMISTRY FORM TWO NECTA 2014

Solutions from: Maktaba by TETEA

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1.

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

2.

i	ii	iii	iv	v	Vi	vii	viii	ix	x
I	F	A	J	B	H	K	N	C	M

3. (a)(i)Emulsion is the layer that is formed when oil mixesd with water

(ii)A solution is the miscible mixture of solute and solvent that mixes completely.

(iii)Atom is the smallest particle that cannt be split furthermore.

(iv)Radical is the group of atoms that acts as asingle element during chemical reaction.

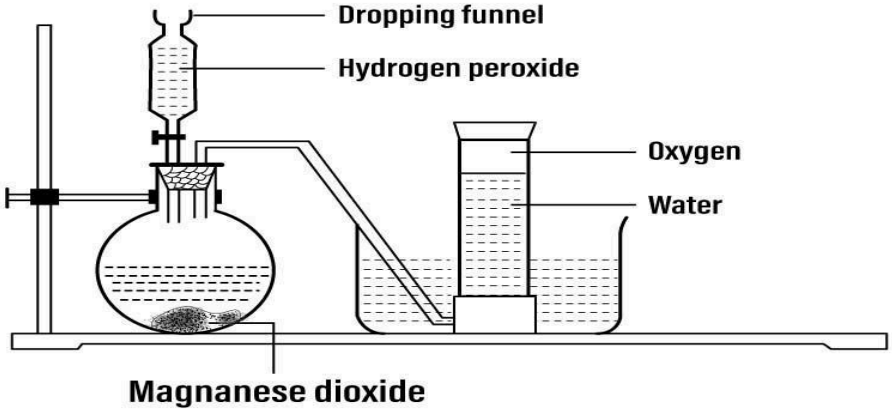
(b)(i)Na_2S

(ii)$BeCl_2$

(iii)Cu_2O

(iv)K_2O

4.L**aboratory preparation of oxygen using hydrogen peroxide.**



(b)pure oxygen relight the glowing wood, while ordinary air does not.

(c)chemical properties of oxygen gas

-it racts with hydrogen to form water

-it reacts with more reactive metals to form basic oxides

-it reacts with non metals to form acidic oxides

5. (a)(i)cupper (II)oxide

(ii)phosphorus (III) cloride

(iii)dinitrogen tetraoxide

(iv)sodium carbonate

(b)(i)

Physical change	**Chemical change**
-no new product formed	-new product is formed
-reversible	-not reversible
-no energy changes	-involve energy changes

(ii)

mixture	**compounds**
-mixed at any ratio	-formed at fixed ratio
-easy to separate	-difficult to separate
-no energy changes	-energy changes

6. (a)Physical properties of water

-it is colourless

-it is ordourless

-it is tasteless

- has density of 1000 kg/m^3

(b)**Molar mass = total atomic mass of elements in a compound**

(i) 23x 3 + 31 + 16 x 4

Molar mass is 164

(ii)(1 x 2) + 32 + (16 x 4)

Molar mass = 98

(iii)40 + 12 + (16 x 3) = 100

7. (a) S = belliryum, Be

W = Sodium, Na

X = phosphorus, P

Z = potasiun, K

(b)(i)toothbrushes, perfumes

(ii)diesel, petrol

8. (a)(i)$H_2SO_3^-$

2 x 1 + S + -2 x 3 = -1

S = +3

(ii)NO_2^-

N + (-2 x 2) = -1

N = +3

(b)(i)used to hold hot objects

(ii)used for crystalline substances

(iii)used to measure specific volume

(iv)used to heat at high temperature

9. (a)(i)it is decomposed on heating during the experiment.

(ii)cobalt papers wll turn white due precence of moisture.

(iii)decomposition of copper (II) oxide

(b)chemical properties of hydrogen gas

-it reacts with oxygen to produce water

-it is the reducing agent

10. (a)(i)covalent bond is the bond formed due to sharing of electrons

(ii)Electrovalent bond is the bond formed when metals rect with non metals.

(b)case 1, divide each composition by its molar mass

Carbon 82.8/12 = 6.9, hydrogen 17.2/2 = 8.6

Case 2, divide by smallest value

Carbon 6.9/6.9 = 1, hydrogen 8.6/6.9 = 1.25

(i)Empirical formular is CH

(ii)molecular formula

Let be $(CH)_x$ but molar mass = 2 x vapour density

$(CH)_x = 58$

$12x + 2x = 58$

$X = 4$

Molecular formula is C_4H_4