PRESIDENT'S OFFICE

REGIONAL ADMINSTRATION AND LOCAL GOVERNMENT

IRAMBA DISTRICT

CHEMISTRY FORM TWO SERIES 2 EXAMINATION 2023

MARKING SCHEME

1. ANSWERS

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

@1mark=10 marks

2. ANSWERS

i	Ii	iii	iv	v
C	H	E	F	A

@1mark=5marks

3.(a)

i.Fishing

ii.Irrigation

iii.Transport

iv.Manufacture of chemicals

v.Distilled water is used in water drops(field of medicine)

@$01^{1/2}$ mark=6marks

(b)-First Aid saves life

-First Aid reduces pains

-First Aid brings hope

-First Aid prevents further infection

-First Aid shortens recovery time

-First Aid prevents permanent disability

Any five relevant answer @1mark=4marks

4.(a) i.Proton=17

Neutrons=18.5

Electrons=17

ii.Protons=1

Neutrons=0

Electron=1

@01 mark=6marks

(b) i.Atom is a smallest particle of an element that can take part in chemical reaction 01mark

ii.Energy is the ability of the body to do work 01 mark

iii.Atomic number is the number of protons in the nucleus of an atom 01 mark

iv.Isotopes are atoms of the same elements having the same protons number but different atomic masses 1mark

5.(a) The instruction imply SUSPENSION

Suspension is a heterogeneous mixture in which the solid particles settle at the bottom on standing. The gardener was instructed to shake the medicine so as to allow the particles to spread throughout the liquid. 02marks

(b)

MIXTURE	COMPOUND
i.It can be homogeneous or heterogeneous	It is homogeneous in nature
ii.Its constituents can be separated by physical means	Its constituents can be separated by chemical means only
iii.The composition of elements present in the mixture is not fixed	The compositions of elements present in the mixture is fixed
iv.It shows the properties of all its constituent element	The properties of compounds are different from those of its elements

@2marks=8marks

6.(a)i. Periodic table is a table that shows arrangement of elements in order of increasing atomic numbers 01 mark

ii.Periodicity is a regular periodic changes of elements due to their atomic number OR

periodicity is the recurrence of similar properties when elements are arranged according to their atomic numbers 01 mark

iii.The modern periodic table states that, the properties of elements are periodic function of their atomic numbers. 02 marks

6(c)i.A 01mark

ii.E,J 02mark

iii.G 01 mark

iv.B 01mark

v.2:8:8:2 01mark

7.(a)

CHANGE	PHYSICAL CHANGE	CHEMICAL CHANGE
i.Iron sheets rust		√
ii.Water evaporates from the surface of ocean	√	
iii.Drying of wet clothes	√	
iv.Milk turns sour		√
v.Butter melts on warm toast	√	

@01 mark=4marks

(b) i.RAM=M1P1+M2P2+M3P3/100 01 mark

Whereby:

M1,M2 and M3=Atomic masses of isotopes 1,2 and 3 respectively

P1,P2 and P3 are abundances of 1,2 and 3 respectively

RAM=Relative atomic masses

M1=16 P1=99.76% 01 mark

M2=17 P2=0.04%

M3=18 P3=0.03%

Therefore RAM=16X99.76+17X0.04+18X0.3/100=16.02 03 marks

ii.Element X is Oxygen 01 mark

8.i.proton,+1

ii.Electron,-1

iii.Neutron=0

@01 mark =03marks

(b)Modifications of Dalton's atomic theory are;

-Matter is made up of tiny particles called atoms which can split into smaller particles protons, electron and neutrons

-Atoms can either be created or destroyed or split by means of nuclear reactions

-Atoms of the same substances are not necessarily identical in all aspects that is why isotopes exist which differ in mass number

-Atoms of different elements may have the same masses for example argon and calcium

@01mark=4marks

(c) i.$_4$Be=2:2 001/2 mark

Electronic diagram 01 mark

ii.$_{14}$Si=2:8:4 001/2 mark

Electronic diagram=01 mark

9.(a) i.Radical is a group of atoms containing unpaired electrons 01 mark

ii.Oxidation state is a number of electrons that an atom has gained, lost or shared in forming chemical compounds 01 mark

iii.Pesticides are chemical substances that sprayed or sprinkled on crops in order to destroy pests 01 mark

iv.Alchemist is a person who studied chemistry during the ancient times 01 mark

v.Chemistry laboratory is a special room designed for carrying out chemical experiments 01 mark

(b)i.Oxidation state of Al=0

ii.N=+5

iii.S=+6

iv.Cr=+6

v.Al=+3

Correct oxidation state with calculations @1 mark =5marks

10.(i)-Delivery tube

-Conical flask

-Trough

-Beehive shelf

-Gas jar

-Thistle funnel

Any five relevant point @1mark =05 marks

-Hydrogen peroxide 01 mark

-Potassium chlorate 01 mark

(b)Potassium chlorate →Potassium chloride +oxygen gas 01 mark

Hydrogen peroxide Water +oxygen gas 01 mark

(c)Physical properties of oxygen gas are;

-It is colorless, odourless and tasteless gas

-It is slightly soluble in water

-It is slightly denser than air

-Under high pressure, oxygen can be liquefied

Any relevant answer @ 01 mark=4 marks