

PRESIDENTS OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

FORM TWO REGIONAL MOCK I EXAMS MAY-2023

CHEMISTRY MARKING SCHEME

SECTION A: (15 marks)

1. **1mark@=10**

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

2. **1mark@=5**

i	ii	iii	iv	v
E	A	G	B	C

SECTION B:(70 marks)

3.(a) i/. Carbondioxide fire exitinguisher **(1.5 mark@=3)**

.Fire blanket

ii/ Water **1mark**

Reason: Since oil is less denser than water will float over water and speed up the rate of explosion. **3mark**

(b) i/ oxygen

ii/ Heat

iii/ Fuel. **(1 mark @=3mark**

4. (a) Nail B was heavier. **2mark**

Reason: Nail B was heavier due to formation of rust resulting to the increase in mass. **3 mark**

(b) i/ Painting

ii/ Greasing/oiling. **(1 mark @=2)**

(c) i/Combustion is the burning of a substance in air **1mark**

ii

- At school
- At home
- At hospital
- Industries **any two 1@ 2mark**

- 5.(a) i/ It forms soot
 ii/ It is not very hot. **(2 mark@= 4)**

(b). **(1.5 mark@ = 6)**

NON LUMINOUS FLAME	LUMINOUS FLAME
i) It is very hot ii) Does not form soot iii) It makes noise iv) It is very stable	It is not very hot It forms soot It does not make noise It is unstable

6.(a) Atom is the smallest particle of an element which can take part in chemical reaction **2mark**

- (b) i/ protons
 ii/ Neutron. **(1.5 mark@= 3)**
 (c) i/ 10 electrons
 ii/ 10 protons
 iii/ 11 Neutrons
 iv /Nuclide notation $^{21}_{10}\text{Ne}$. **(1.5 mark@= 4.5)**

7(a) i/ Since hydrogen burn with explosive

ii/ Since the air bubbles contain carbon dioxide gas

iii/ Since magnesium more reactive than iron hence magnesium burns with air first **(2mark@6)**

b) i. Combustion

ii. Respiration

(2mark@ = 4)

8.i/ Problem identification

ii/ Formulation of Hypothesis

iii/ Experimentation

iv/ Data collection and Analysis. **(2mark@= 10)**

v/ Drawing of Conclusion. **(Note: 1-- mention and 1-- brief explanation)**

9. (a) Gas Z is Hydrogen

(b) Water trough is missing-- **(1.5 mark@=3)**

(c) Diagram for preparation of hydrogen gas

(4 marks for the diagram)

DIAGRAM FOR PREPARATION
OF HYDROGEN GAS

(d) Zinc+Hydrochloric acid **Zinc chloride + Hydrogen gas (3 mark)**

SECTION C: (15 marks)

(1marks @ =5)

RAW MATERILS	PRODUCTS	PROCESS INVOLVED
i/ Wood	Charcoal	<u>Destructive distillation of wood</u>
ii/ Coal	<u>Coal gas</u>	<u>Destructive distillatin of coal</u>
<u>iiiAnimal bones</u>	Animal charcoal	<u>Destructive distillation of bones</u>

(2marks@=10)

Note:1mark for meaning

1mark for explanation

(b)i. Energy value

Is the amount of heat produced when the fuel is burnt.A good fuel should have high energy value

(ii) Ignatio point

Is the temperature needed to burn a fuel.A good fuel should have a high ignitionbpoint because low ignatio point is dangerous as it may cause a fuel to explode easily.

(iii) Affordability

A good fuel should be affordable (not expensive)

(iv) Verocity of burning

A good fuel should have a moderate velocity of burning for continous supply of heat

(v) Availability

A good fuel should be available as it can be obtained easily when needed.