

**THE UNITED REPUBLIC OF TANZANIA
PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION & LOCAL GOVERNMENT
CHEMISTRY
FORM II – PRE – MOCK EXAMINATION
MAY 2022**

032

Time: 2:30 Hours**INSTRUCTIONS**

- ☐ This paper consists of section A and B with a total of ten (10) questions
- ☐ Answer all questions in the spaces provided
- ☐ Section A carries twenty (20) marks and section B carries eighty (80) marks
- ☐ All writing must be in black or blue ink except diagrams which must be in pencil.
- ☐ Cellular phones and any unauthorized materials are not allowed in the assessment room
- ☐ Write your Assessment number at the top right corner of every page

FOR ASSESSOR'S USE ONLY		
QUESTION NUMBER	SCORE	ASSESSOR'S INITIALS
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
TOTAL		
CHECKER'S INITIALS		

SECTION A – (20 Marks)*Answer all questions in this section*

- For each of the items (i) – (x), choose the correct answer from among the given alternatives and write its letter in the box provided.

- i. Wind is promising future source of energy because _____
 - A. There are no chemical reactions involved in harnessing wind power
 - B. It does not produce harmful gases that pollute the environment
 - C. It is renewable
 - D. It cannot be seen
 - ii. The process by which water is converted into vapour or steam is called _____
 - A. Condensation
 - B. Precipitation
 - C. Transpiration
 - D. Evaporation
 - iii. The maximum number of electrons in the innermost shell of an atom is _____
 - A. 2
 - B. 1
 - C. 4
 - D. 8
 - iv. What type of fire is associated with electrical equipment?
 - A. CLASS B
 - B. CLASS F
 - C. CLASS E
 - D. CLASS C
 - v. Loose or floppy clothing is not allowed in the laboratory. Why?
 - A. Movement has to be fast
 - B. It will get wet when water splashes
 - C. It may catch fire or cause one to fall
 - D. It causes poor ventilation in the body
 - vi. Fainting is a sudden loss of _____
 - A. Consciousness
 - B. Weight of body
 - C. Confidence
 - D. Water in the body
 - vii. In simple distillation process the apparatus used to cool vapour is known as _____
 - A. Dessicator
 - B. Liebig condenser
 - C. Kipp's apparatus
 - D. Conical flask
 - viii. The following are the uses of oxygen except _____
 - A. Breathing and respiration
 - B. Manufacture of margarine
 - C. Mining and purification
 - D. Welding
 - ix. Hydrogen reacts with sulphur to yield _____
 - A. Hydrogen sulphate
 - B. Hydrogen sulphide
 - C. Sulphur trioxide
 - D. Sulphur dioxide
 - x. How do the chemists refer to a mixture of milk and water?
 - A. Suspension
 - B. Miscible solution
 - C. Immiscible solution
 - D. Emulsion
2. (a) The main uses of hydrogen can be linked to its various properties. Match each use in List A with related property in List B by writing the letter of the correct response below the corresponding item number in the table provided.

LIST A		LIST B	
i.	Manufacture of ammonia	A.	It is lighter than air
ii.	Production of oxy – hydrogen flame	B.	Readily reacts with other chemical substance
iii.	Manufacture of hydrochloric acid	C.	It is highly flammable
iv.	In weather balloons	D.	Readily combines with element eg nitrogen
v.	Manufacture of margarine	E.	It is colourless
		F.	It burns with a blue flame
		G.	It is a reducing agent

ANSWERS

LIST A	i.	ii.	iii.	iv.	v.
LIST B					

- (b) Answer the given questions by writing the correct answer in the blank spaces provided
- Burns caused by hot liquids or vapor are called _____
 - Which is the condition of a body being hot? _____
 - Which factor in the experiment that does not affect the outcome of the experiment?

 - The movement of particles from an area of high concentration to one of low concentration is called _____
 - Catalyst used to catalyze decomposition of hydrogen peroxide is called _____

SECTION B

Answer all questions

- (a) Changes of states of matter in life processes is not avoidable. Give two importance of changes of states of matter.

 - _____
 - _____

(b) What types of change are these?

 - Burning charcoal _____
 - Cloud changing into rain _____
 - Rotting mangoes _____
 - Decaying of teeth _____
 - Rusting of iron _____
- (a) Oxygen is prepared in the laboratory by different common methods. Give two methods

 - _____
 - _____

(b) (i) When a lit candle is lowered into a gas jar oxygen, it burns more brightly; which chemical property confirms the statement?

(ii) What is the importance of the following items in the first aid kit?

“Iodine tincture” _____

“Whistle” _____
- (a) State what is observed when the following simple experiment are performed.

 - A glowing splint is lowered into a gas jar containing oxygen gas

 - A lighted splint is lowered into a gas jar containing hydrogen

- iii. Iron reacts with oxygen in the presence of moisture _____
iv. White anhydrous copper (II) sulphate is added in water _____

(b) (i) Why water is a universal solvent?

(ii) Give the reason why water is a neutral compound?

6. (a) Give three rules governing after practical activities:

- i. _____

ii. _____

iii. _____

(b) Write down four qualities of a good laboratory.

- i. _____

ii. _____

iii. _____

iv. _____

7. (a) State three properties of the neutrons with relation to proton and electrons by considering "Chadwick as a scientist.

- i. _____

ii. _____

iii. _____

(b) Atom Q has a mass number of 49 and an atomic number of 24. What is

- i. Neutron number?

- ii. The number of electrons in atom Q?

8. (a) Give the chemical symbols of the following elements:

- i. Manganese
 ii. Argon
 iii. Aluminium
 iv. Mercury

- (b) Calculate the oxidation number of the underlined elements

- i. $\text{Na}\underline{\text{O}}\text{H}$

- ii. $\underline{\text{C}}\text{O}_3^{2-}$

- iii. $\text{Na}_3\underline{\text{P}}\text{O}_4$

9. (a) Distinguish empirical formula from molecular formula

- (b) A certain compound K contains 52.2% carbon, 13% Hydrogen and the rest is oxygen; if the molecular mass of K 138, calculate:

- i. Empirical formula

ii. Molecular formula

10. (a) Give two examples of chemical bonding demonstrated in your daily life situation.

i.

ii.

(b) A metal Z of atomic number 12 combines with chlorine to produce a metal chloride.

i. By means of diagram illustrate the arrangement of electrons in metal Z and chlorine before and after the reaction.

ii. What type of bond is formed between Z and chlorine, and give two properties of bond formed.

1.

2.

Index Number: -----

“End”