

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
FORM ONE MIDTERM EXAMINATION AUGUST 2023
CHEMISTRY

CODE: 032

Time: 2:30 Hours

INSTRUCTIONS:

1. This paper consists of sections A and B with a total of ten (10) questions.
2. Answer all question in the space provided.
3. Writing must be in black or blue ink **except** diagram which must be in pencil.

SECTION A (20 MARKS)

1. *For each of the items (I –X) choose the correct answer from among the given alternatives and write its letter beside the item number.*
 - i. Which of the following is not a man-made product of applying chemistry?

A. Fertilizer	C. Sugar
B. Milky	D. Vaccines
 - ii. How is the amount of entering in the Bunsen burner controlled?

A. By adjusting the opening of the barrel	C. By adjusting the opening of the jet
B. By adjusting the openings of the collar	D. By adjusting the opening of the base
 - iii. How do the chemists refer to a mixture of a milk and water?

A. Emulsion	C. Miscible solution
B. Suspension	D. Immiscible solution
 - iv. How can one prevent rusting in fragile instrument like cameras?

A. By using silica gel	C. By using galvanization
B. By using ethanol	D. By using oil
 - v. What is the best way of keeping a clean test tube after use?

A. Keep it in water	C. Keeping it in basin for test tube
B. Keeping it on test tube order	D. Keeping it on test tube rack
 - vi. Which is the suitable alternative heat source to be used in absence of Bunsen burner?

- A. Torch and spirit burner
 - B. Torch and kerosene stove
 - C. Kerosene stove and sprit burner
 - D. Fire wood and torch
- vii. What happens when substance A react with substance B to form a new substance C?
- A. Substance A and B said to have formed a solution
 - B. Substance A and B are said to have undergone a physical change
 - C. Substance A and B are said to have undergone a chemical change
 - D. Substance A and B are said to have undergone a dissolution
- viii. Which components make the fire triangle?
- A. Oxygen, fuel and heat
 - B. Oxygen, nitrogen and heat
 - C. Oxygen, fuel and carbon dioxide
 - D. Oxygen, heat and hydrogen
- ix. When a small amount of sugar is dissolved in a glass of water the mixture formed is;
- A. Heterogeneous
 - B. Immiscible
 - C. Suspension
 - D. homogenous
- x. Fainting is a sudden loss of
- A. Confidence
 - B. Weight of the body
 - C. Water in the body
 - D. Consciousness

ITEM	I	II	III	IV	V	VI	VII	VIII	IX	X
ANSWER										

2. Match the mixtures in list A with the methods of separation in list B by writing the letter of the correct response below.

LIST A	LIST B
i. Ammonium chloride crystals in sand ii. Muddy water iii. Oil in sunflower iv. Sodium chloride in water v. Spirit in water	A. Decantation B. Chromatography C. Evaporation D. Fractional distillation E. Layer separation F. Sublimation G. Solvent extraction

LIST A	I	II	III	IV	V
LIST B					

(b) Give one function for each of the following apparatuses in the chemistry laboratory.

i. Spatula

ii. Gas jar

iii. Liebig condenser

iv. Mortar and pestle

v. Wire gauze

SECTION B (80 MARKS)

3. Assign each of a property to either luminous or non-luminous flame by putting a tick on the respective column in the following table.

PROPERTY OF FLAME	LUMINOUS FLAME	NON-LUMINOUS FLAME
i. Gives plenty of smoke and soot		
ii. Blue in color and		
iii. almost invisible		
iv. Yellow zone is		
v. bigger than blue zone		
vi. Formed when the		

vii.	air holes are completely closed		
viii.	Blue zone is large than yellow zone		
ix.	Produces the hottest flame.		

(b) Assume that you are doing an experiment in the laboratory at 07:30 pm and suddenly the light go off. Give two reasons to justify the fact that you would consider luminous flame rather than non-luminous flame as an alternative source for lighting

- A. _____
 B. _____

(c) Identify two properties of the flame produced by the Bunsen burner (air holes full opened) that cannot be found in the flame produced by the spirit lamp.

- i. _____
 ii. _____

4. Distinguish the following substance

- i. Saturated from unsaturated solution

- ii. Miscible from immiscible liquids

- iii. Homogenous from heterogeneous mixture

(b) How can you separate each of the following mixture?

- i. Kerosene and water

ii. Pure water and muddy water

iii. Ethanol and water

iv. Iodine and sand

v. A mixture of sulphur and iron fillings

5. Explain the role of chemistry in the following fields;

i. Agriculture

ii. Human health

iii. Industry

iv. Transport and communication

(b) Fill the following table by giving at least three products that are made by the application of chemistry in each of the field shown;

FIELD	PRODUCTS
a) Medicine	
b) Transport	
c) Manufacturing industry	
(d) Food and beverage	

6. Draw and give one function of the following apparatus;

APPARATUS	DRAWING	FUNCTION
(i) Measuring cylinder		
(ii) Conical flask		

(b) Explain each of the following terms and how you can give a first Aid to an insured person.

I) Burn

II) Bruises

III) Fainting

7. (a) Suppose water in the pond in your area is contaminated and has caused people to get sick. How would you solve this problem using the scientific procedures?

- (b) What are the advantages of using the scientific procedures in doing science experiments?

8. (a) Briefly explain the kinetic nature of matter (with the aid of diagram)

- (b) Differentiate metals from non-metals.

9. Briefly explain the five classes of fires based on the nature of the burning materials and the extinguisher required. Give one example for each class.

10. Aska conducted an experiment to demonstrate condition necessary for rusting, the results observed after two days.

- Test tube A = He put two clean nails, cotton wool and 5cm^3 of tap water

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a) What is observed in each test tube at the end of the two days?

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