

**UNITED REPUBLIC OF TANZANIA**  
**PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**



**SONGEA MUNICIPAL COUNCIL**  
**MANICIPAL FORM ONE ANNUAL EXAMINATION**

**SUBJECT: CHEMISTRY CODE: 032**

**Time: 02:30 HRS**

**Nov 2023**

|                       |  |                    |  |  |  |  |  |  |
|-----------------------|--|--------------------|--|--|--|--|--|--|
| <b>Student name's</b> |  | <b>School reg:</b> |  |  |  |  |  |  |
|-----------------------|--|--------------------|--|--|--|--|--|--|

**INSTRUCTIONS**

1. This paper consists of ten (10) questions in section A, B and C
2. Answer **ALL** questions from both sections
3. Write your full name and stream on top of every page of your answer sheets
4. Cellular phones or calculators are not allowed in the examination room

**FOR ONLY EXAMINER**

| QN: | Initial | Marks(scored) |
|-----|---------|---------------|
| 01  |         |               |
| 02  |         |               |
| 03  |         |               |
| 04  |         |               |
| 05  |         |               |
| 06  |         |               |
| 07  |         |               |
| 08  |         |               |
| 09  |         |               |
| 10  |         |               |

**SECTION A (15MARKS)**

01. For each of the items (i)-(x), choose the correct answer among the given alternatives and write the correct letter in the box provided
- i) A form one student from Juhudi secondary school discovered that, it is impossible to light up the fire in a vacuum due to the absence of a certain gas. Which gas do you think is missing?  
A. Nitrogen                      B: Carbon dioxide                      C: Hydrogen                      D: Oxygen
  - ii) Kenyatta obtained the results from his experiment which did not support the hypothesis. What should Kenyatta do?  
A. To change the experiment                      B: To identify a new problem  
C: To leave out the results                      D: To give the ideas for further testing and find a solution
  - iii) Identify the set of material products made by application of chemistry knowledge which are used in domestic cleanliness

- A. Tooth paste, oil, detergent and deodorant  
 B. Soap, deodorant, tooth paste and oil  
 C. Detergent, deodorant, soap and tooth paste  
 D. Drugs, tooth paste, soap and oil
- iv) Mrs. Shomari was washing the school uniforms of her children. She put wet uniforms on sunlight to dry. What change of state of matter involved when drying wet school uniforms?  
 A. Gas to liquid                      B. Solid to gas                      C. Liquid to gas                      D. Gas to liquid
- v) Mr. Kamuzu went into laboratory to test for components of air. he put small amount of lime water into watch glass and left it for two days. After two days, he observed that lime water turned milky. You as a form one best student in chemistry, what do you think was the cause of this milky in limewater?  
 A: Water vapour                      B: Oxygen                      C. Noble gases                      D: Carbon dioxide
- vi) Mwatumu, a form one student at a certain school has a great pleasure to know the chemical composition of agents of portable fire extinguishers. Imagine she is your best friend, use Dry Chemical/powder to tell her  
 A. Potassium acetate                      B. Proteins and fluoro-proteins  
 C: Bromochloro-difluoromethane.                      D. Fine sodium bicarbonate powder pressurized by nitrogen
- vii) Which method is used to separate the mixture from the following liquids?

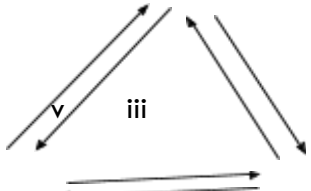
| Liquids  | Boiling points |
|----------|----------------|
| Methanol | 65 °C          |
| Water    | 100 °C         |
| Butanol  | 118 °C         |

- A. Evaporation                      B. Filtration                      C. Fractional distillation                      D. Layer separation
- viii) Ashura finished the practical activity for a day. She was testing the solubility effect of salt in water using test tube. You as form one student, what Ashura used to clean the test tubes and where should test tubes be kept for future use?  
 A. Clean cloth and put them into the beakers  
 B. Test tube brush and put them into test tube holders  
 C. Clean cloth and put them into test tube rack  
 D. Test tube brush and put them into test tube rack
- ix) Madenge prepares a family dinner. Accidentally the hot water burns her hand. What name is given to this burn?  
 A: injury                      B: Scar                      C: Scald                      D: Wound
- x) Which of the following you think is not important to be in the first aid kit?  
 A: Petroleum jelly                      B: First aid guide                      C: Safety goggles                      D: Torch

| Question | i | ii | iii | iv | v | vi | vii | viii | ix | x |
|----------|---|----|-----|----|---|----|-----|------|----|---|
|----------|---|----|-----|----|---|----|-----|------|----|---|

|               |  |  |  |  |  |  |  |  |  |  |
|---------------|--|--|--|--|--|--|--|--|--|--|
| <b>Answer</b> |  |  |  |  |  |  |  |  |  |  |
|---------------|--|--|--|--|--|--|--|--|--|--|

02. Match the items of changes of states of matter in Column A with their responses from Column B by writing the correct letter in the box drawn below

| COLUMN A                                                                                                                                  | COLUMN B                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Solid</p> <p>iv    ii</p> <p>Liquid Gas</p> <p>i</p>  | <p>A. Freezing point</p> <p>B. Condensation</p> <p>C. Melting point</p> <p>D. Sublimation</p> <p>E. Boiling point</p> <p>F. Evaporation</p> <p>G. Deposition</p> <p>H. Freezing</p> <p>I. Melting</p> |

|                 |   |    |     |    |   |
|-----------------|---|----|-----|----|---|
| <b>COLUMN A</b> | i | ii | iii | iv | v |
| <b>COLUMN B</b> |   |    |     |    |   |

### **SECTION B:( 70 marks)**

03. (a) Some elements have their symbols completely different from their common English names

i. Where are their symbols derived from?

ii. List down any four elements of this kind with their symbols

| Element                | Symbol |
|------------------------|--------|
| <b>Example:</b> Sodium | Na     |
| i                      |        |
| ii                     |        |
| iii                    |        |
| iv                     |        |

(b) During Chemistry session, Teacher Mkolo told Anitha to list the elements she knows. Anitha wrote N and Ca.

i. What are full names of these elements? N\_\_\_\_\_ and Ca\_\_\_\_\_

ii. Why did Anitha use letters instead of writing full names? Give any three (03) reasons

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_  
\_\_\_\_\_

04. (a) (i) Define  
fire \_\_\_\_\_

\_\_\_\_\_

(ii) What are components of fire? Mention down

\_\_\_\_\_

(b) (i) In a certain school laboratory, there were two openly big tanks A and B. Tank A was carrying petrol and tank B was carrying Sodium metals. Suddenly both tanks caught fire. Put a tick (✓) for suitable and cross (x) for not suitable fire extinguisher from extinguishing these fire

| Fire extinguisher    | Container A | Container B |
|----------------------|-------------|-------------|
| <b>Example:</b> Foam | ✓           | ✓           |
| Water                |             |             |
| Wet chemical         |             |             |
| Carbon dioxide       |             |             |

05. (a) Imagine your chemistry teacher provides you the following bottles with different mixtures. The bottles were labelled from A to E with their mixtures, Suggest the method you could to separate the mixtures

A. Sand and iodine

\_\_\_\_\_

B. Cooking oil and  
water \_\_\_\_\_

C. Maize and beans

\_\_\_\_\_

D. Table salt and water (salt  
solution) \_\_\_\_\_

E. Sulphur powder and iron fillings

(b) Is chemistry useful in your life? Say YES\_\_\_\_ or NO\_\_\_\_ and give any five (05) reasons

i. \_\_\_\_\_

\_\_\_\_\_

ii. \_\_\_\_\_

\_\_\_\_\_

iii. \_\_\_\_\_

\_\_\_\_\_

iv. \_\_\_\_\_

\_\_\_\_\_

v. \_\_\_\_\_

06. (a) Asumani takes a spoonful of sugar and adds into water to prepare a tea for breakfast. Tell Asumani that, which is compound and which is mixture between water and tea?

A compound is \_\_\_\_\_ and mixture is \_\_\_\_\_, differentiate between water and tea using concept of compound and mixture

| Water | Tea |
|-------|-----|
| i     |     |
| ii    |     |
| iii   |     |
| iv    |     |

(b) Changes of states of matter is very important in our daily lives. How this statement is correct?

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

07. Bunsen burner is able to produce both types of flames. One flame is formed when air hole is full open and the other is formed when air hole is full closed.

(a) Differentiate these types of flames, (05) differences

| When air hole is full opened | When air hole is full closed |
|------------------------------|------------------------------|
|                              |                              |
|                              |                              |
|                              |                              |
|                              |                              |

(b) Give one use from each flame

When air hole is  
opened \_\_\_\_\_  
When air hole is  
closed \_\_\_\_\_

08. (a) Madam Catherine guided her students to conduct an experiment to distinguish the types of solution. Students added a spoonful of common salt into water and salt dissolved. They continued adding salt until no more salt can dissolve. Then they heated up this solution and the salt completely dissolved.

- i. What type of solution formed when spoonful of salt added into water and dissolved?  
\_\_\_\_\_
  - ii. What type of solution formed which no more salt can dissolve into water?  
\_\_\_\_\_
  - iii. What was final solution formed when the solution heated up?  
\_\_\_\_\_
- (b.) Distinguish between solution and suspension just by their appearances

09. A laboratory technician wants to label the warning signs on the containers of chemicals. Name and draw the warning signs do you think the laboratory technician could label the containers containing the following chemicals.

| Chemical contained    | Name of warning sign | Its diagram |
|-----------------------|----------------------|-------------|
| Rat poison            |                      |             |
| Radioactive materials |                      |             |
| Hydrogen peroxide     |                      |             |
| Concentrated acid     |                      |             |
| Kerosene              |                      |             |

### **SECTION C (15MARKS)**

10. Villagers of Mitumba argued on what happened on their bridge which constructed last year started to change its colour to reddish-brown on its surface. Imagine you are needed to tell them the cause, answer the following questions

(a) (i) is formation of reddish-brown color a chemical or physical change?

(ii) if it's physical or chemical change, give any four (04) reasons

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

(iii) Give any two examples of this change

(b) (i) What chemical process do you think was taking place on the surface of bridge?

(ii) Give the name of reddish-brown color formed \_\_\_\_\_

(iii) What conditions necessary for the reddish-brown color to appear?

(c) Suggest any five (05) methods which can be used to prevent this reddish-brown colour from happening in any material like in bridges