



THE UNITED REPUBLIC OF TANZANIA
PRIME MINISTER'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
TABORA MUNICIPAL COUNCIL



FORM TWO DISTRICT ASSESSMENT

032

CHEMISTRY

TIME 2:30 HRS

SEPTEMBER 2026

Instructions

- This paper consists of section A, B and C with a total of ten (10) questions
- Answer all questions in the space provided; extra answer scripts may be used where necessary
- Section A and C carry fifteen (15) marks each and B carries seventy (70) marks
- All writing must be in black or blue ink except diagrams which must be in pencil
- Write your assessment number at the top right corner of every page
- The following atomic masses may be used H = 1, C = 12, O = 16, N = 14, CL = 35, Na = 23, AL = 27, S = 32

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

SECTION A (15 MARKS)

Answer all question in this section

1. 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. How many protons are there in a molecule of hydrogen gas?
 - A. 2
 - B. 4
 - C. 1
 - D. 3
 - ii. Why water is regarded as the universal solvent?
 - A. Because most of substance dissolve in it
 - B. Because it is found all over the word
 - C. Because it contains a variety of material
 - D. Because it contains hydrogen and oxygen element
 - iii. Which of the following materials can cause fire outbreak?
 - A. Oxygen, carbon – dioxide and fuel
 - B. Oxygen, heat and fuel
 - C. Oxygen, heat and carbon dioxide
 - D. Oxygen, foam and fuel
 - iv. Which of the following is the simplest way for water purification?
 - A. Cooling
 - B. Boiling
 - C. Filtering
 - D. Condensing
 - v. The atomic number for element Q is 9 what is its electronic configuration? $1s^2 2s^2 2p^5$
 - A. 2:4:3
 - B. 2:5:2
 - C. 2:7
 - D. 2:6:1
 - vi. Wind is a promising future source of energy because
 - A. It is easily stored
 - B. It is a renewable source of energy
 - C. It does not involve chemical reactions
 - D. It does not produce harmful gas
 - vii. Which one among of the following is not constituents of first Aid kit in chemistry laboratory
 - A. Cotton wool
 - B. Iodine tincture
 - C. Dropper
 - D. Petroleum jelly

- viii. What should be done if the results obtained from an experiment do not support the hypothesis?
- A new problem should be identified
 - The result should be left out
 - The experiment should be changed
 - Ideas for further testing to find a solution should be given
- ix. When water freezes, it undergoes
- Sublimation
 - A chemical change
 - Vaporization
 - A physical change
- x. What is the best way of separating iron fillings from Sulphur powder?
- Winnowing
 - Evaporation
 - Magnet
 - separating funnel

ANSWER

I	II	III	IV	V	VI	VII	VIII	IX	XI

2. Match the mixtures in list A with the methods of separation in list B writing the letter of the correct response below the corresponding items number in the table provided

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

ANSWER

I	II	III	IV	V

SECTION B (70 MARKS)

Answer all question in this section

3 (a) The change of state of matter is said to be very significant in different aspects of our living activities. Explain four (4) importance of this behaviour of matter-----

(b) Madam Aisha took 1kg of maize to a mortar and pestle for grinding it, after few hours she succeeded to get 1kg of maize flour from those grains

(i) Comment on the change occurred on the maize grains, as it was a physical change or chemical change?

ii) Give four reasons to support your answer in (i)

(c) Three containers A, B and C which contain hydrochloric acid, rat poison and petrol respectively were kept on the table without warning signs. By using the classroom knowledge, draw the warning signs which would appear on containers A, B and C.

4 (a) How the modern atomic theory differs from Dalton's atomic theory? Give two points

- i.
- ii.

(b) Given element Q which has atomic number 11 and it's neutron is 12, Calculate

(i) mass number

(ii) number of protons

(iii) number of electrons

- (c) ³²P Element P exists naturally in three different isotopes which ³¹P (99.76%), ³²P and ³³P (0.20%). Calculate the relative atomic mass of element P (0.04%)

5 (a) MR. Matika is saddened with the reddish-brown substance which occurred in his iron sheets. He wants to find the good ways of protecting his iron sheets so as to prevent it from formation of reddish-brown coat. As your expert in chemistry. Briefly explain any four (4) method which Mr. Matika can use to prevent his iron sheets from damages

- i.
- ii.
- iii.
- iv.

(b) Scientific procedures are steps used by scientists when finding answer to scientific problem. As form two student who are familiar to the scientific process, write the steps which corresponding to each of the following phenomena

- i. Kyoga was not feeling well, she wants to see medical doctor at Misigiri dispensary
- ii. The doctor confirmed that kyoga has malaria and prescribed medical for her
- iii. The laboratory technician diagnosed malaria parasite in kyoya's blood
- iv. Doctor ordered kyoga's body temperature, blood and urine sample for observation in the laboratory
- v. The doctor asked kyoga several questions about how she was feeling.

6 (a) What do you understand about the following terms?

(i) Renewable source of energy

(ii) Biogas

(iii) Water gas

(iv) Producer gas

(b) Give three alternative sources of renewable of energy

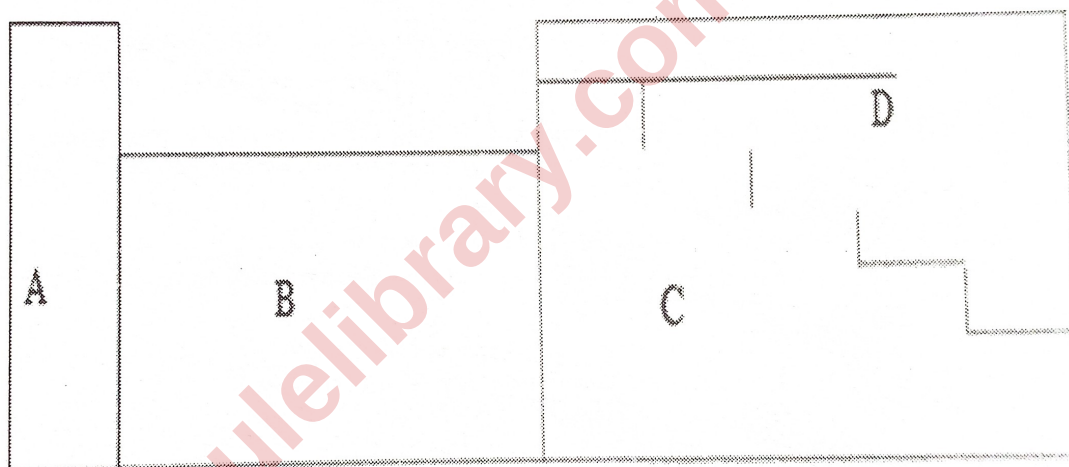
i.

ii.

iii.

(c) Explain four (4) environmental effects of using fire wood and charcoal.

7 (a) The following diagram represents the part of periodic table with four areas denoted by letter A, B, C and D



- i. Which area is most likely to contain non – metals?
- ii. Which area is most likely to contain elements whose oxides dissolve in water?
- iii. Which area contain transition elements?
- iv. Which area is likely to contain element with both metallic and non-metallic characteristics?

(b) Given the elements Calcium, Sulphur, Chlorine helium and neon, Write down their Period numbers, group numbers, atomic number and electronic configurations as shown in the table below.

ELEMENT	PERIOD	GROUP	ELECTRONIC CONFOGURATION
Calcium			
Sulphur			
Chlorine			
Helium			
Neon			

(c) Which of the above elements would you expect to have similar properties? Give reason two reasons.

8 The teacher Kidaru of chemistry subject planned to conduct an experiment for preparation of gas X which have the following properties. It supports combustion, it is tasteless, also its strong oxidizing agent

- Identify gas X.....
- Name the most preferred reagent used for preparation of gas X.....
- Draw a well labeled diagram for the preparation of gas X in the laboratory

d) Write the word equation for preparation of gas X using reagent named in 8(b)

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9 (a) By giving four points differentiate the flames produced by a candle and gas stove

S/N	Candle	Gas stove
i		
ii		
iii		
iv		

(b) Form one student were conducting an experiment in the laboratory at 8:00pm and suddenly the light goes off. As form two student give two reasons to justify the fact that form one student would consider luminous flame rather than non-luminous as an alternative source for lighting.

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(c) Explain how Bunsen burner can produce both luminous flame and non-luminous flame

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SECTION C (15 MARKS)

Answer question number ten (10)

10 (a) Differentiate

(i) Valency from oxidation state

(ii) Empirical formula from molecular formula

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b) Write the chemical formulae of the following compounds

- i. Aluminium oxide.....
- ii. Dinitrogen pentoxide.....
- iii. Carbon dioxide.....
- iv. Calcium carbonate.....
- v. Sodium chloride.....

(c) An organic compound contains 26.70% carbon, 2.20% hydrogen and the rest is oxygen. If its vapour density is 45. Determine its molecular formula.

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