THE UNITED REPUBLIC OF TANZANIA

PRESIDENT'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

HOME PACKAGE FORM TWO EXAMINATION, APRIL 2020

CODE NA: 032 CHEMISTRY

TIME: 2:30 HOURS

INSTRUTIONS

1. This paper consists of section **A** and **B.**
2. Answer **All Questions** in both sections
3. Calculators and cellular phones are **Not Allowed** in the examination room.
4. The following atomic masses may be used :
   C=12, S= 32

FOR EXAMINER'S USE ONLY

QUESTION NUMBER	SCORE	EXAMINER'S INITIALS
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
TOTAL		

SECTION A: (30%)

1. Write the letter of the correct answer in the box provided for each of the following questions.

(i) A substance that can easily be compressed in its container is:
(A) Greese (B) stone (C) water (D) gas

(ii) Which of the following is not true about hydrogen?
(A)It is lighter than air (B) It burns with blue flame
(C) It support combustion (D) it is odorless.

(iii)A branch of science related to the study of matter and its properties is called:-
(A) Physics (B) Chemistry (C) Chemist ((D) Biology

(iv)Which of the following statement is not true
(A) A good fuel should have high energy value
(B) A good fuel should burn with moderate velocity
(C) A good fuel should have an average ignition point.
(D) A good fuel should have a high content of non-combustible materials

(v) A class of fire associated with flammable liquids
(A) Clan A (B) Clan B (C) Clan D (D) Clan E

(vi)The process of distillation involves: -
(A) Filtration and decantation (B) Evaporation and filtratric
(C)Evaporation and condensation (D) None of the above

(vii) The element which are found in group vii of the periodic table are known as:-
(A)Metals (B)Non-metals (C) Halogens (D)Noble gases

(viii) Bunsen Burner producers a non –luminous flame when
(A) Air holes are closed (B) Air holes are opened
(c) Air holes are half opened (D) It forms soot.

(ix) The maximum member of electrons in the inner most shell of an atom is
(A) 3 (B) 1 (C) 4 (D) 2

(x) The percentage of mass of nitrogen in $(NH_4)_2\ CO_3$ is
(A) 28.0 (B) 37.5 (C) 29.2 (D) 96.0.

2. Match each item in list A with a response in list B by writing its letter bellow the number of the corresponding item in the table provided.

LIST A	LIST B
(i) Mercury	A. Galvanization and painting
(ii) group O element.	B. Uniform mixture of two or more substances
(iii) Luminous flame	C. Non-metal
(iv) Chemical change	D. Pop-sound
(v) Identification of Hydrogen	E. Liquid metal
(vi) Catalyst	F. Produced soot
(vii) Formed by electron straining	G. New substance is formed
(viii) First Aid	H. Covalent bond
(ix) Preventing rusting	I. Neon
(x) Solution	J. A substance that alters the rate of reaction
	K. Any help to a sick or injured person
	L. Electrovalent bond
	M. Oxygen
	N. No new substance is formed
	O. Water and kerosene
	P. Periodicity

3. Write "**TRUE**" for a correct statement and " **FALSE**" for a wrong statement beside the item number.
(i) Oiling is one of the preventive measures against rusting …….
(ii) If glowing splint is put in a gas jar containing oxygen gas it will go off ……..
(iii) You should induce vomiting if a person has swallowed kerosene……..

(iv) The vallency of mercury in $Hg(NO_3)_2$ is 2…..…….
(v) Water is a chiversal solvent because it dissolves all solute ……
(vi) Magnet can be used to separate iron filling form Sulphur powder……..
(vii) Helium and Argon belongs to the same group in the periodic table ……..
(viii) The oxidation member of the Sulphur SO_4^{2-} is + 4 ……..
(ix) Hydrogen is used in the manufacturing of margarine …….
(x) Studying chemistry it can lead someone to a field of medicine……

SECTION B: 70%

4. (a) Define the following terms:
(i) Chemistry (ii) Element (iii) Catalyst
(b) Give the differences between the following: -
(i) Compound and mixture

Compound	Mixture

(ii) Suspension and solution

Suspension	Solution

(c) Write the chemical symbols for the following
(i) Tin _____
(ii) Lead _____
(iii) Silver _____

5. (a) Define water
(b) Name four different kinds of natural water
(c) Is water a compound? Give four reasons.

6. (a) What do you understand by the following terms
   (i) Energy …….
   ……..…
   (ii) Fuel…….…….
   ……..……
   (iii) Combustions…….……..
   ……..

   (b) Mention any two characteristics of a good fuel
   (i) ……
   (ii) ……

   (c) For each of the class following classes of fire state one burning material
   (i) Class A fire ……...……
   (ii) Class B fire ……
   (iii) Class C fire ……

7. (a) Explain the meaning of the following terms
   (i) Water treatment…….
   ……...
   (ii) Water purification…….
   ……

   (b) State four (4) uses of water in economic activities
   (i) ……...
   (ii) ……...
   (iii)……...
   (iv)……...

   (c) Element Q belongs to period 3 and group vi of the periodic table.
   (i) Draw the atomic structure of Q
   ……
   ……
   …….

   (ii) Give the atomic number of element Q.
   ……
   ……
   ……..

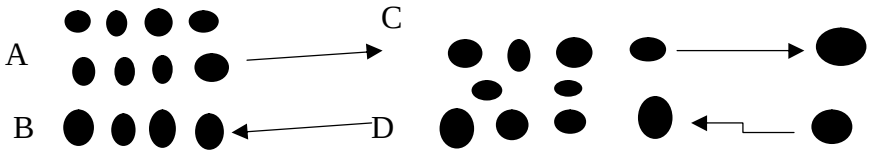
8. (a) Define the following terms:
   (i) Solution ……
   ……
   ……

   (ii) Unsaturated solution.……
   ……..…
   ……..

   (b)Write the name of the following compounds.
   (i) CUO…….
   (ii) Na_2CO_3.....

   (c) Give out the uses of the following apparatus
   (i) Thermometer……..
   (ii) Pipette…….
   (iii) Gas jar……..
   (iv) Tripod stand……

9. The figure below shows the relationship among the three states of matter.



   a) Name the process labelled A to D
   (i) A ……..……
   (ii) B ……..
   (iii)C ……
   (iv)D……

(b) Give two reasons why non luminous flame is more suitable for cooking

(i) ……
……

(ii) ……
……

(c) Write down the chemical formula of following cpds

(i) Sodium sulphide……..……

(ii) Cooper (i) oxide ……..……

10. (a) What do you understand by the following terms?

(i) Empirical formula ……...
……..

(ii) Molecular formula……...
……..

(b) A certain compound k contains 15.8% carbon and 84.2% Sulphur. The molar mass of k is 76 g/mol. Determine its

(i) Simplest formula

(ii) Molecular formula

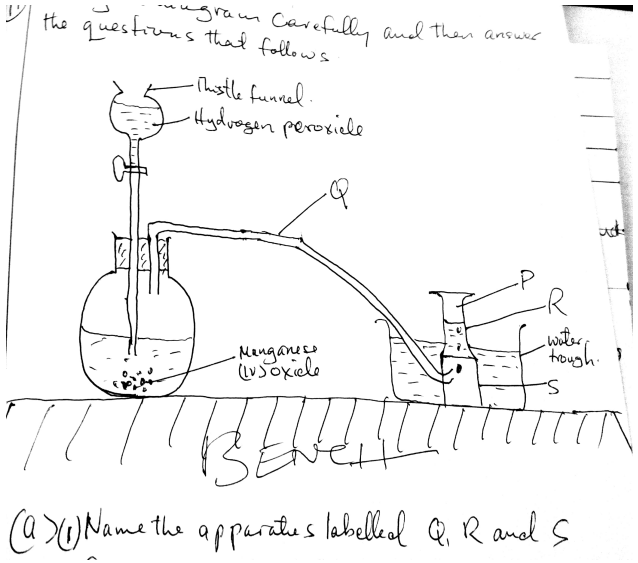
……
……
……
……....

(c) Fill in the missing steps of the scientific produce in the chart below

a
Hypothesis
b
Data colection
Data interpretation
c

(i) a……..……
b……
c……..

11. Study the diagram below carefully and then answer the questions that follows



(a) (i) Name the apparatus labelled QR S

Q……..……..

R……..……

S……..

(ii) Name the gas P……

(iii) What is the test of gas P……...
……..

(b) (i) Mention two properties of gas P……
……

(ii) State two uses of gas P …….
……...