

**THE PRESIDENTS OFFICE**  
**REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**  
**CHEMBA DISTRICT COUNCIL**  
**FORM TWO MOCK EXAMINATION**  
**CHEMISTRY**

**TIME :2:30HRS****Year:2021****Instructions**

1. This paper consists of section s A and B with a total of ten (10) questions.
2. Answer all questions in the spaces provided
3. All writing must be in black or blue ink except diagrams which must be in pencil
4. Cellular phones and any unauthorized materials are not allowed in the examination room.
5. Write your number at the top right corner of every page
6. The following atomic masses may be used :H=1,N=14,O=16,C= 12 ,S=32,Al=27,Na=23,Ar=40.

**SECTION A (20 Marks)**

Answer all questions in this section

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

i. What is the best way of keeping a clean test tube after use?

- A. Keeping it in water  
B. Keeping it on a test tube rack  
C. Keeping it on a test tube holder  
D. Keeping it in a basin for test tubes

ii. Which group and period does the element with 11 electrons belongs?

- A. Group I and Period 3  
B. Group II and Period 1  
C. Group I and Period 1  
D. Group II and Period 3

iii. Which of the following is **not** a component of the First Aid Kit?

- A. Goggles  
B. Dropper  
C. Gloves  
D. A pair of scissors

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- iv. The oxidation state of metallic elements in a compound is always  
A. Negative  
B. Neutral  
C. Positive  
D. Zero
- v. The net charge inside the nucleus of an atom is contributed by  
A. Protons  
B. Neutrons  
C. Electrons  
D. All nucleons
- vi. Consider the following reagents, then state which reagent are involved in the preparation of oxygen gas in the laboratory?  
1.  $\text{H}_2\text{O}_2$  2.  $\text{H}_2\text{O}$  3.  $\text{MnO}_4$  4.  $\text{MnO}_2$   
A. 1 and 2  
B. 3 and 4  
C. 1 and 3  
D. 1 and 4
- vii. Which of the following is the correct sequence of the last two steps you should follow during the scientific procedure?  
A. Hypothesis formulation and conclusion  
B. Observation and problem identification  
C. Interpretation of data and conclusion  
D. Experimentation and conclusion
- viii. Which conditions are necessary for iron nail to rust?  
A. Oxygen and moisture  
B. Carbon and oxygen  
C. Oxygen and nitrogen  
D. Moisture and nitrogen
- ix. Air entering the Bunsen burner barrel can be controlled by  
A. Air hole  
B. Collar  
C. Metal jet  
D. Air ring
- x. Which process is involved when drying wet clothes?  
A. Liquid to solid  
B. Gas to liquid

- C. Solid to gas
- D. Liquid to gas

2 (a). Match each item in **LIST A** with correct response in **LIST B** by writing the letter of the correct response below the corresponding item number provided.

| List A |                                                           | List B |                        |
|--------|-----------------------------------------------------------|--------|------------------------|
| i.     | A statement of how the results relate to the hypothesis   | A.     | Conclusion             |
| ii.    | A series of the investigations                            | B.     | Data analysis          |
| iii.   | A statement that identifies an event ,fact, or situation. | C.     | Data collection        |
| iv.    | A tentative explanation                                   | D.     | Experimentation        |
| v.     | A step in which the researcher explains the results       | E.     | Hypothesis             |
|        |                                                           | F.     | Observation            |
|        |                                                           | G.     | Problem identification |

|        |   |    |     |    |   |
|--------|---|----|-----|----|---|
| LIST A | I | ii | iii | iv | v |
| LIST B |   |    |     |    |   |

- 2 . (b) . i. ....are atoms of the same element having the same atomic number but different mass number.
- ii. Which particles are transferred during chemical reaction?.....
- iii..... is the substance that alter the rate of chemical reaction.
- iv.....tend to display metallic and non metallic characteristic
- v Serum is separated from blood samples by employing a technique called.....

**SECTION B (80 Marks)**

Answer **all** questions in this section.

3 (a). State one use of each of the item (i)-(v) in administering First Aid.

|     | Item            | Use |
|-----|-----------------|-----|
| i   | Soap            |     |
| ii  | Gloves          |     |
| iii | Petroleum jelly |     |
| iv  | Liniment        |     |

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|   |             |  |
|---|-------------|--|
| v | Cotton wool |  |
|---|-------------|--|

(b) Why candles are not suitable for heating in the laboratory? Give two reasons

i).....

ii).....

(c) state three possible causes of vomiting

i).....

ii).....

iii).....

4. (a) State four modern Dalton's atomic theory of matter.

i).....

ii).....

iii).....

iv).....

(b) Classify each of the following elements into their respective groups and periods

|     | Element   | Group | Period |
|-----|-----------|-------|--------|
| I   | Magnesium |       |        |
| ii  | Silicon   |       |        |
| iii | Boron     |       |        |
| Iv  | Hydrogen  |       |        |

5(a) Give two chemical tests of water

i).....

ii).....

(b) (i) Differentiate water treatment from water purification.

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(ii) Why drinking water should be treated and purified? Give two reasons.

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(iii) Gemry 's mother was always complaining about having stomachache by drinking contaminated water ,which ways would Gemry take to avoid having this problem always? Give three point

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1. The position of the element A,B,C,D,F, and G are shown in part of their periodic table below. The letters are not the usual symbol of the elements.

|   |    |     |    |   |    |     |      |
|---|----|-----|----|---|----|-----|------|
| I |    |     |    |   |    |     | VIII |
|   | II | III | IV | V | VI | VII |      |
|   |    |     | E  | F | A  |     |      |
| C |    | D   |    |   |    | B   | G    |
|   |    |     |    |   |    |     |      |

Use the letters to answer the following questions

(a) Write electronic configuration arrangement of atom A,B,C,D, E and F

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 .....  
 .....

(b) State the number of electrons ,protons and neutrons of an atom D,C and G.

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(c) Which is the most reactive metal?

.....

2. (a) Write the names and formulae of the two chemicals that can be used in preparation of oxygen gas

i. ....

ii. ....

(b)(i) State the appropriate method of collecting oxygen gas based on solubility and density of the gas in water. ....

(ii) How can oxygen gas be tested? .....

(c) List four uses of oxygen gas?

i. ....

ii. ....

iii. ....

iv. ....

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

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9. a) What is isotopy: .....

b) If sample X consist of 99.76% of  $^{16}\text{X}$ , 0.04% of  $^{17}\text{X}$  and 0.20%  $^{18}\text{X}$ .

- i) Calculate the relative atomic mass of X
- ii) Name the element X?

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10. Briefly explain five characteristics to be considered when looking for a good fuel

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