**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ADM. NO.\_\_\_\_\_\_\_\_\_STREAM:\_\_\_\_\_\_\_**

**CHEMISTRY FORM TWO.**

**END TERM EXAM – TERM TWO 2015.**

* **Answer all the questions in the spaces provided below each question.**

1. (a) Name two career opportunities open to a chemist. (1 mark)

(b) Explain why most laboratory apparatus are made of glass. (2 marks)

(c) The following diagram represents a non-luminous flame of Bunsen burner.

1. Name the parts of the flame labeled:- (3 marks)

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Name the other type of flame produced by a Bunsen burner. (2 marks)

(d) State what students should do in case of a major accident such as fire outbreak in a

Chemistry Lab. (3 marks)

1. The diagram below shows the shape of the curve obtained by a student when solid X was heated to boiling.

Temp in ᵒC

Time in minutes

1. (i) Determine the melting point of solid X. (2 marks)
2. (ii) State and explain what portion PQ, OR and RS represent. (5 marks)
3. Write a word equation for reaction between:-
4. Carbon and oxygen (2 marks)
5. Sodium and sulphur (2 marks)
6. Spots of pure pigments A and B and a mixture Z were placed of a filter paper and allowed to dry. The paper was then dipped in a solvent. The results obtained were as on the paper chromatogram.
7. Which is the:-

* Base line (2 marks)
* Solvent front (2 marks)

1. Which of the pure pigment was a component Z, explain. (3 marks)
2. (i) Name the solvent that is used in paper chromatography. (2 marks)

(ii) Why is water not a suitable solvent in paper chromatography? (2 marks)

1. Solutions may be classified as strong base, weak base, neutral, strong acid or weak acid. The information below gives some solutions and their PH values. Study it and answer the question that follow:-

|  |  |
| --- | --- |
| **Solution** | **PH** |
| A | 0.5 |
| B | 7 |
| C | 14 |
| D | 9 |

Classify the solution in the table using the stated classifications. (4 marks)

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. (a) Name the particles that are found in an atom. (3 marks)

(b) Atoms are said to be electrically Neutral, explain. (2 marks)

(c) Distinguish between the following:-

1. Atomic number and mass number. (2 marks)
2. Both lead and copper have a valency of a 2 write the formular of:-

* Lead carbonate (2 marks)
* Copper chloride (2 marks)

1. Using dots and crosses diagrams draw the structure of the following molecules.

* NH3 (3 marks)
* NH+4  (3 marks)
* C2H6 (3 marks)

1. Both graphite and diamond are allotropes of carbon; graphite conducts electricity whereas diamond does not. Explain. (3 marks)
2. (a) Explain the meaning of the following term.
3. Deliquence (2 marks)
4. Efflorescence (2 marks)
5. Hygroscopy (2 marks)
6. Conductors (2 marks)
7. Non conductors (2 marks)