**GATITU MIXED SECONDARY SCHOOL**

**OPENER EXAM 2015**

**TERM I**

**CHEMISTRY FORM 3**

**INSTRUCTIONS**

* ***Answer ALL the questions in the spaces provided.***
* ***Remember to write your name and admission number.***
1. State two differences between luminous and non-luminous flames. (2 marks)
2. Explain how you would obtain pure ammonium chloride from a mixture of lead sulphate and ammonium chloride. (2 marks)
3. Sodium chloride (common table salt) is contaminated with copper (II) oxide. Explain how pure sodium chloride can be obtained from the mixture. (2 marks)
4. State and explain the changes in mass that occurs when the following are heated in separate open crucibles. Write a word equation for each reaction.
5. Zinc metal (2 marks)
6. Zinc carbonates (2 marks)
7. The setup below was used to study some properties of air.



1. Draw another diagram to show the level of water in the test tube after 24 hours. Explain the observation made. ( 2 marks)
2. State and explain the observation made on moist iron after 24 hours. ( 2 marks)
3. State the disadvantage of what was observed in (ii) ( 1 mark)
4. Write a word equation for the reaction between magnesium with; ( 3 marks)
5. Oxygen
6. Chlorine
7. Sulphur (IV) acid.
8. The diagram below represents a set up for the laboratory preparation of oxygen gas.



1. Name solid R ( 1 mark)
2. Write a word equation for the reaction in the flask. (1 mark)
3. Give two commercial uses of oxygen gas. (2 marks)
4. A student set up the experiment below to collect gas K. The glass wool was heated before heating the magnesium coil.
5. Explain why it is necessary to heat the moist glass wool before heating the magnesium. (1 mark)
6. Identify gas K (1 mark)
7. What property of gas K makes it possible to be collected as shown. (1 mark)
8. From the following list of compounds; zinc oxide, solid carbon (IV) oxide, sodium carbonate, nitric acid, iron (III) chloride;
9. Identify two that sublime (1 mark)
10. Identify two that reacts and form salt and water only ( 1 mark)
11. Write word equations for the reaction between; ( 3 marks)
12. Sodium carbonate and nitric acid
13. Calcium metal and steam
14. Oxygen gas and hydrogen gas

**“Hope is waking your Dream.” Mahatma Gandhi……………………………… Success. Mr. Chihi.**